

PROGRAM ENVIRONMENTAL IMPACT REPORT 589
(SCH Number 20033021141)

FINAL RESPONSES TO COMMENTS
Volume 2—Responses to Comments

THE RANCH PLAN
General Plan Amendment/Zone Change (PA 010114)

County of Orange
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THE RANCH PLAN ENVIRONMENTAL IMPACT No. 589**

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**VOLUME 3 SUPPORTING DOCUMENTATION PROVIDED BY SHUTE, MIHALY &
WEINBERGER, LLP**

SECTION 1 INTRODUCTION

The purpose of this document is to present public comments and responses to comments received on the Draft Program Environmental Impact Report (EIR) for the Ranch Plan project (State Clearinghouse No. 2003021141) located in unincorporated Orange County, California.

The County of Orange, the lead agency for the EIR, released the Draft Program EIR for public review and comment on June 10, 2004. The public review period ended on August 9, 2004. The public review period was extended to 61-days from the 45-day period required pursuant to California Environmental Quality Act (CEQA) at the request of Supervisor Thomas W. Wilson. Supervisor Wilson believed this allow sufficient time to review the data, while recognizing the complexity of the project. In accordance with the state CEQA Guidelines §15088, the County of Orange, as the lead agency, has evaluated the comments received on the Draft Program EIR and has prepared written responses to these comments.

As required by CEQA Guidelines §15132(d), the final EIR shall consist of:

- (a) The draft EIR or a revision of the draft.
- (b) Comments and recommendations received on the draft EIR either verbatim or in summary.
- (c) A list of persons, organizations, and public agencies commenting on the draft EIR.
- (d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.
- (e) Any other information added by the Lead Agency.

Comments submitted on the Draft Program EIR included questions about conclusions identified in the draft EIR; findings and methodology for preparation of technical analyses; position statements for/against the project; and comments about community issues and issues of a broader regional context. Responses have been provided to comments on significant environmental points describing the disposition of issues, explanations of the EIR analysis, supporting EIR conclusions, and new information or clarifications, as appropriate. The document does not respond to the comments on the merits of the project nor does it attempt to solve regional issues requiring full countywide input and consideration.

The Response to Comments document has been organized as three volumes. Volume 1 contains copies of all the comments received. Volume 2 provides the responses to comments and is divided into five sections: Section 1, provides the introduction; Section 2 provides a list of respondents to the Draft Program EIR; Section 3 contains responses to environmental comments received on the environmental document; and Section 4 identifies modifications and revisions to the Draft Program EIR; and Section 5 provides an evaluation of the County Preferred Alternative. By having it bound in two volumes the reviewer can have both the comment and response open to facilitate easy referencing. Volume 3 contains supporting documentation provided by Shute, Mihaly & Weinberger, LLP as part of the comment on the document.

SECTION 2 LIST OF RESPONDENTS

In accordance with of the state CEQA Guidelines §15132, the following is a list of the persons, organizations, and public agencies that submitted comments on the Draft Program EIR No. 589. The comments included written correspondence, oral testimony at the June 23, 2004 Planning Commission hearing, comment cards submitted at the July 15, 2004 Open House held in San Juan Capistrano, and e-mail correspondence. Comments have been numbered and are provided in Section 3 of Volume 1. Responses have been developed with corresponding numbers and are provided in Section 3 of this volume.

Commenter No.	Commenter	Date of Correspondence	Page Number
<u>Federal Agencies</u>			
1	Department of Homeland Security, FEMA	July 23, 2004	3-213
2	United States Marine Corps, Camp Pendleton	July 25, 2004	3-213
3	United States Department of Commerce National Oceanic and Atmospheric Administration	August 9, 2004	3-217
4	United States Fish and Wildlife Service/ ¹ California Department of Fish and Game	August 9, 2004	3-218
5	Department of the Army Los Angeles District, Corps of Engineers	August 9, 2004	3-223
<u>State Agencies</u>			
6	Department of California Highway Patrol	June 28, 2004	3-236
7	Native American Heritage Commission	July 12, 2004	3-236
8	Department of Parks and Recreation	July 22, 2004	3-237
9	Department of Health Services	July 23, 2004	3-238
10	Department of Justice	August 6, 2004	3-239
11	Department of Toxic Substance Control Teresa Hom	August 6, 2004	3-239
12	United States Fish and Wildlife Service/ California Department of Fish and Game ¹	August 9, 2004	3-239
13	Department of Housing and Community Development	August 9, 2004	3-240

¹ The U.S. Fish and Wildlife Service and the California Department of Fish and Game submitted a joint letter. The letter is filed under federal agencies with a reference page under State Agencies directing the reader to the location of the letter.

Commenter No.	Commenter	Date of Correspondence	Page Number
14	Governor's Office of Planning and Research	June 30, 2004	3-240
15	Office of Planning and Research	August 10, 2004 ²	3-240

Special Districts/Regional Governments

16	The Hydro Company, Inc, Elsinore Valley Municipal Water District	June 29, 2004	3-241
17	Orange County Fire Authority	July 29, 2004	3-242
18	Southern California Association of Governments	August 3, 2004	3-248
19	Transportation Corridor Agencies	August 4, 2004	3-248
20	Santa Margarita Water District	August 9, 2004	3-260
21	Orange County Transportation Authority	August 9, 2004	3-263
22	Capistrano Unified School District	August 9, 2004	3-264
23	San Diego Gas and Electric/ Southern California Gas Company	August 9, 2004	3-267

Local Agencies

24	City of Fullerton	July 23, 2004	3-272
25	City of Lake Forest	July 28, 2004	3-272
26	City of Mission Viejo	August 3, 2004	3-272
27	City of Rancho Santa Margarita	August 5, 2004	3-286
28	City of San Clemente	August 5, 2004	3-287
29	Orange County Sheriff-Coroner	August 6, 2004	3-303
30	City of Laguna Niguel	August 6, 2004	3-303
31	City of San Juan Capistrano	August 9, 2004	3-306

² The public review period closed on August 9, 2004 at 5:00 p.m.; however, comments received by the Office of Planning and Research (the Clearinghouse) by that date are considered on time. Letters transmitted from the Clearinghouse are listed under the agency preparing the letter.

Commenter No.	Commenter	Date of Correspondence	Page Number
<u>Individuals/Organizations</u>			
32	Mr. George Ann Pavliska	June 24, 2004	3-319
33	California Native Plant Society	July 14, 2004	3-319
34	Constance Spenger	July 28, 2004	3-323
35	Ed Schlegel	July 28, 2004	3-324
36	California Cultural Resources Preservation Alliance, Inc.	July 31, 2004	3-324
37	Marni Magda	August 2, 2004	3-324
38	Donna Gould	August 2, 2004	3-325
39	Philip G. Fraser	August 2, 2004	3-327
40	William C. Holmes	August 3, 2004	3-327
41	Dan Lewis	August 3, 2004	3-328
42	Tom and Pauline Faye	August 3, 2004	3-329
43	Marylyn and John Rees	August 3, 2004	3-330
44	Fly Fishers Club of Orange County	August 5, 2004	3-331
45	Jack Eidt	August 5, 2004	3-331
46	Todd Van Etten	August 5, 2004	3-332
47	Talega Associates	August 6, 2004	3-333
48	Alan L. White	August 6, 2004	3-334
49	Lyn Harris Hicks	August 7, 2004	3-335
50	Barbara Rosenbaum	August 7, 2004	3-335
51	Lee Carranza	August 8, 2004	3-338
52	Kim Herkewitz	August 8, 2004	3-338
53	Juaneño Band of Mission Indians, Acjachemen Nation	August 8, 2004	3-349
54	Building Industry Association, Orange County Chapter	August 9, 2004	3-350

Commenter No.	Commenter	Date of Correspondence	Page Number
55	Sea and Sage Audubon	August 9, 2004	3-350
56	The Kennedy Commission	August 9, 2004	3-351
57	Shute Mihaly & Weinberger, LLP Endangered Habitats League Sierra Club Laguna Greenbelt, Inc. Natural Resources Defense Council Defenders of Wildlife Sea and Sage Audubon Society	August 9, 2004	3-353
58	Krag and Linda Ross	undated	3-404

Planning Commission Public Hearing

June 23, 2004

Oral Comments

59	Bill Garwin	3-405
60	Mabel Hill-Garcia	3-405
61	John Nichols, Fish Flyers Club of Orange County	3-405
62	Carol Finazza	3-405
63	Tony Mazeika	3-405
64	Reed Royalty, Orange County Tax Payers Association	3-405
65	Tony Forster	3-406
66	Peter Rock	3-406
67	Ron Strother	3-406
68	Denise Ashton	3-406
69	Hugh Hel	3-406
70	Paul Carton	3-406
71	Michael Hazzard	3-407
71	John Hogan	3-407
72	Debra Portuguez	3-407

Commenter No.	Commenter	Date of Correspondence	Page Number
73	Phillip Frazer		3-407
74	Mike Balsamo		3-407
76	Gary Meredith		3-407
77	Brittany McKee		3-408
78	Michael Ruppard		3-408
79	Celia Kutcher, California Native Plant Society		3-408
80	Brenda Stouffer		3-408
81	Dan Silver, Endangered Habitats League		3-408
82	John Burns		3-409
83	Shannon Hezmalhalch		3-409
84	Lyn Harris-Hicks		3-409
85	Robert Fraser		3-409
86	Marni Magna		3-409
87	Blake Stephens		3-410
88	Jerry Collamer		3-410
89	Jack Eidt		3-411
90	Mary Jane Goodrick		3-411
91	Carol Horowitz, Natural Resources Defense Council		3-411

Comment Cards Received at the Open House

Received July 15, 2004

92	Marinette Mikesell, Foothill Association	3-412
93	Jan Fraser (First of two comment cards)	3-412
94	Jan Fraser (Second of two comment cards)	3-412
95	Janet Bierney, Concerned Resident of San Clemente	3-412
96	Adam R. Collinas	3-412

Commenter No.	Commenter	Date of Correspondence	Page Number
97	Karen Phelps		3-413
98	Jerry Collamer		3-413
99	Andrew Mikesell		3-413
100	Patricia Blanco		3-413
101	Marion Nancy Knipe		3-414
102	Pauline Faye		3-414
103	Jon Berges		3-414
104	Michael Metcalf		3-414
105	Jerry Buckley		3-414
106	Donna Gould (First of two comment cards)		3-414
107	Donna Gould (Second of two comment cards)		3-415
108	Marni Magda (First of two comment cards)		3-416
109	Marni Magda (Second of two comment cards)		3-416
110	Shirley Olson		3-417
111	Rod Rodarte		3-417
112	Matthew O'Malley		3-417
113	Richard Kaupp		3-418
114	Michael Sappingfield		3-418
115	Mark Jimenu		3-418
116	Tori Haidinger		3-418
117	Judy Haidinger		3-419
118	Diane McCue		3-419
119	Randy Sink		3-419
120	Steve Behmerwohld		3-419
121	Paul Carlton, SCORE		3-421

Commenter No.	Commenter	Date of Correspondence	Page Number
122	Ilse M. Byrnes, California Trails and Greenways Foundation		3-423
123	Betty Pappas		3-423
124	Eva-Maria Swedlow		3-423
125	Michael J. Grainger		3-424
126	Mary Grainger		3-424
127	Joseph Lezay		3-424
128	Robyn Osborne		3-424
129	Frank Whitehead Sr. and Jennie Whitehead		3-424
130	Diana Rodgers		3-425
131	Neil and Debbie McNally		3-425
132	James Cummings		3-425
133	Audrey B. Williams		3-425
134	Debra Reed		3-425
135	Jim Carpenter		3-425
136	Barbara Anderson		3-426

E-Mail Comments Received

137	Jack Eidt	July 7, 2004	3-427
138	David McNicholas	July 30, 2004	3-427
139	Arthur Strauss	July 31, 2004	3-427
140	Cara and Brad Todd	July 31, 2004	3-427
141	Leo Connolly	August 2, 2004	3-427
142	John Oberto	August 3, 2004	3-428
143	Brittany McKee, Sierra Club/Friends of the Foothills	August 3, 2004	3-428
144	April Salem	August 3, 2004	3-429
145	Keith Hunter	August 3, 2004	3-429

Commenter No.	Commenter	Date of Correspondence	Page Number
146	Steve Netherby	August 3, 2004	3-430
147	Jerry Andes	August 3, 2004	3-431
148	Nancy A. Jimeno	August 3, 2004	3-431
149	Randle C. Sink	August 3, 2004	3-431
150	Ginger Dunn	August 3, 2004	3-432
151	Mike Kronk	August 3, 2004	3-432
152	Mike and Sheila Ard	August 4, 2004	3-432
153	Barbara Janesick, Sierra Club-Sierra Sage	August 4, 2004	3-432
154	Norman Freestone	August 4, 2004	3-433
155	Pete van Nuys	August 4, 2004	3-433
156	Gabriele Rau	August 4, 2004	3-434
157	Ed Amador	August 4, 2004	3-435
158	Lynn Hillman	August 4, 2004	3-435
159	Peggy Edwards	August 4, 2004	3-435
160	Stuart Kerr	August 4, 2004	3-435
161	Lynda A. Hernandez	August 5, 2004	3-437
162	Joey Racano	August 5, 2004	3-437
163	Len Gardner	August 5, 2004	3-437
164	Sharon Wright	August 5, 2004	3-439
165	Britney Ball and Luke Nichols	August 5, 2004	3-440
166	Margaret McClure	August 5, 2004	3-440
167	Lesley and Austin Sheppard	August 6, 2004	3-441
168	Rosemary Hieber	August 6, 2004	3-441
169	Barbara Anderson	August 6, 2004	3-442
170	Chuck Meece	August 6, 2004	3-442

Commenter No.	Commenter	Date of Correspondence	Page Number
171	Tomi Thayer	August 6, 2004	3-442
172	Rick Kemenesi	August 7, 2004	3-442
173	Erik Parry	August 7, 2004	3-444
174	Michael Hazzard	August 9, 2004	3-445
175	Jeanne O'Grady	August 9, 2004	3-445
176	Stephen and Patricia Burgess	August 9, 2004	3-445
177	John Kaiser	August 9, 2004	3-446
178	Yariv and Kathy Donde	August 9, 2004	3-447
179	Peter Bunge	August 9, 2004	3-448
180	Marion Nancy Knipe	August 9, 2004	3-448
181	Judith M and Thomas A. Gielow, St. Mark Presbyterian Church Ecophilians Environmental Group	August 9, 20043.8-65	3-448

Comments Received After the Public Review Period Closed

182	Grant Hahn	August 6, 2004	3-449
183	Candace Propst	August 9, 2004	3-449
184	California Native Plant Society	August 9, 2004	3-449
185	Richard Gardner, Sr.	undated	3-475
186	Patty Sappingfield (comment card)		3-475
187	Andrew Mikesell (comment card)		3-475
188	Marinette Mikesell (comment card)		3-475
189	Traci Thiele (e-mail)	August 11, 2004	3-475
190	California Department of Transportation	August 11, 2004	3-475
191	Local Agency Formation Commission, Orange County	August 12, 2004	3-479
192	Lori Whalen	August 12, 2004	3-480
193	California Department of Toxic Substances Control	August 20, 2004	3-480

SECTION 3.0 RESPONSES TO COMMENTS RECEIVED ON DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT NO. 589 FOR THE RANCH PLAN

Comments received during the 61-day public review period on Draft Program EIR No. 589 raised a wide array of issues. The comments included written correspondence, oral testimony at the June 23, 2004 Planning Commission hearing, comment cards submitted at the July 15, 2004 Open House held in San Juan Capistrano, and e-mail correspondence. Many of the comments were on common issues or concerns. For this reason, topical responses for each section of the EIR were prepared. This approach reduces redundancy throughout the responses to comments document and provides the reader with a comprehensive response to the broader issue. For these Topical Responses, subheadings have been provided to allow the reader to focus on a specific issue or read the broader response, which may go beyond the specific focus of his or her comment. Fourteen Topical Responses have been prepared. No topical response was provided where no comments or only very minimal comments were provided on the Draft Program EIR. After the Topical Responses, responses are provided for each of the comments received. The following is an overview of the organization of Section 3.

3.1 TOPICAL RESPONSES

3.1.1 PROJECT PROCESSING

- 3.1.1.1 Separation of the Ranch Plan from the Processing of the NCCP/HCP and the SAMP/MSAA
- 3.1.1.2 Programmatic- Versus Project-Level EIR
- 3.1.1.3 Deferral of Mitigation
- 3.1.1.4 Recirculation of a Draft EIR

3.1.2 PROJECT DESCRIPTION

- 3.1.2.1 Level of Detail Required
- 3.1.2.2 Definition and Preservation of Open Space
- 3.1.2.3 Development Agreement
- 3.1.2.4 Governance

3.1.3 LAND USE

- 3.1.3.1 Impact on Security and Operations of Marine Corps Base Camp Pendleton

3.1.4 AGRICULTURAL RESOURCES

- 3.1.4.1 Mitigation for Loss of Agricultural Operations
- 3.1.4.2 Williamson Act Cancellation

3.1.5 POPULATION AND HOUSING

3.1.6 WATER RESOURCES

3.1.6.1 Water Quality Impact Analysis

3.1.6.2 Impacts of Pathogens

3.1.6.3 Impacts on Sensitive Species

3.1.6.4 Cumulative Impacts in San Juan Creek and San Mateo Watersheds, Including Impacts to Trestles and Doheny Beaches

3.1.6.5 Best Management Practice (BMP) Effectiveness and Monitoring

3.1.6.6 Groundwater Impacts

3.1.7 TRANSPORTATION AND CIRCULATION

3.1.7.1 Traffic Forecasts

3.1.7.2 Project Trip Generation and Distribution

3.1.7.3 Toll Roads

3.1.7.4 Impact to Interstate-5 (I-5)

3.1.7.5 Traffic Mitigation Methodology

3.1.7.6 New Ortega Highway

3.1.7.7 Crown Valley Parkway

3.1.7.8 Trip Generation for Age Restricted Housing

3.1.7.9 Caltrans/TCA Non-Compete Issues

3.1.7.10 Development and Traffic Monitoring

3.1.8 AIR QUALITY

3.1.9 BIOLOGICAL RESOURCES

3.1.9.1 Methodology for Determining Biological Resource Impacts

a. Significance of Resources Found within the Study Area

b. Conceptual Framework for the Use of the NCCP/HCP Guidelines and SAMP/MSAA Principles in Connection with Impact Assessment and Mitigation

3.1.9.2 Comments Regarding Impact Assessment in the Draft Program EIR

- 3.1.9.3 Comments Regarding the Proposed Mitigation Program
- 3.1.9.4 Wildlife Linkages/Corridors
- 3.1.9.5 Reserve Design/NCCP Standards
- 3.1.9.6 Indirect Effects
 - a. Habitat Fragmentation
 - b. Fuel Modification
 - c. Edge Effects
 - d. Road Effect Zones
 - e. Infrastructure Impacts
 - f. Increased Fire Frequency
 - g. Pollutants
 - h. Other Indirect Effects
- 3.1.9.7 Impacts to Grasslands
- 3.1.9.8 Impacts to Species
 - a. Coastal California Gnatcatcher
 - b. Thread-leaved Brodiaea
 - c. Arroyo Toad
 - d. Southern Steelhead
 - e. Western Spadefoot Toad
 - f. Golden Eagle
 - g. Burrowing Owl
 - h. Long-eared Owl
 - i. Loggerhead Shrike
 - j. Tricolored Blackbird
 - k. Cactus Wren
 - l. Grasshopper Sparrow
 - m. American Badger

- n. Mountain Lion
- o. Southern Grasshopper Mouse
- p. Least Bell's Vireo
- q. Southwestern Willow Flycatcher
- r. Riverside Fairy Shrimp
- s. San Diego Fairy Shrimp
- t. Bats
- u. Southern Tarplant
- v. Coulter's Saltbush
- w. Many-stemmed Dudleya
- x. Mud Nama

3.1.9.9 Cumulative Methodology for Biological Resources

3.1.10 RECREATION

3.1.10.1 Impacts Associated with Provision of Proposed Parks

3.1.10.2 Compliance of Local Park Ordinance

3.1.10.3 Impacts to Existing Parks

3.1.10.4 Cumulative Recreation Impacts

3.1.11 HAZARDS AND HAZARDOUS MATERIALS

3.1.11.1 Mitigation of Impacts from Hazardous Materials within Planning Area 8

3.1.11.2 Mitigation of Impacts from Hazardous Materials Associated with Ford Aerospace

3.1.11.3.1 Wildland Fires and Consistency Between Wildland Hazards and Public Services and Facilities Evaluations

3.1.12 PUBLIC SERVICES AND FACILITIES

3.1.12.1 Water Supply Assessment

3.1.12.2 Fiscal Implications on Provision of Services and Utilities

3.1.13 ALTERNATIVES

3.1.13.1 Identification of the Environmentally Superior Alternative

- 3.1.13.2 Feasibility of Reduced Development Alternatives
- 3.1.13.3 Scope of Project Objectives
- 3.1.13.4 Alternatives Suggested in Comments
- 3.1.13.5 Proposed Modifications to Particular Aspects of the Project
- 3.1.14 Growth-Inducing Impacts
- 3.2 Responses To Federal Agency Comments
- 3.3 Responses To State Agency Comments
- 3.4 Responses To Special District And Regional Government Comments
- 3.5 Responses To Local Agencies Comments
- 3.6 Responses To Individuals And Organizations
- 3.7 Responses To Comments Made At The Planning Commission Briefing
- 3.8 Responses To Open House Comment Cards
- 3.9 Responses To E-Mail Comments
- 3.10 Responses To Comments Received After The Close Of The Public Review Period

3.1 TOPICAL RESPONSES

3.1.1 PROJECT PROCESSING

3.1.1.1 Separation of the Ranch Plan from the Processing of the NCCP/HCP and the SAMP/MSAA

Theme of Comments: Review, consideration, and approval of the Ranch Plan project in advance of the completion of the NCCP/HCP and SAMP/MSAA programs would be premature. Accordingly, the County should postpone further action on the Ranch Plan GPA/ZC and the Draft Program EIR until these two programs have been completed.

Response: As discussed in Section 2.2 of the Draft Program EIR, the Ranch Plan was initially developed as part of the coordinated planning process established for the GPA/ZC, NCCP/HCP and SAMP/MSAA programs. The Ranch Plan recognizes, acknowledges, and is built upon the conservation and planning precepts embodied within these programs, and is intended to complement the environmental strategies set forth in the individual statutes establishing these programs (i.e., the State NCCP Act, the federal and state Endangered Species Acts, the federal Clean Water Act, and the California Fish and Game Code). Consideration of approval of the Ranch Plan project in advance of the completion of the NCCP/HCP and/or SAMP/MSAA will not frustrate the purposes and goals of these two programs. To the contrary, approval of the Ranch Plan represents the first step in the anticipated completion and implementation of this triad of complementary programs because it integrates the planning concepts and conservation approaches which form the parts of the NCCP/HCP and SAMP/MSAA.

To date coordinated processing of the GPA/ZC, NCCP/HCP, and SAMP/MSAA has produced several benefits. Notably, coordination of these processes has resulted in the establishment and use of consistent guidelines and principles for evaluating environmental data collected within the overlapping study areas/watersheds. Furthermore, the coordinated planning process has allowed for the development of consistent project alternatives to be addressed in each program's respective environmental documentation. Each of these benefits (as well as others) improves the efficiency, accuracy, and consistency of the individual processing programs.

As reflected in Section 2.2 of the Draft Program EIR, each of the three programs represents a very large and complex undertaking. In attempting to develop an integrated processing strategy for the three projects, the individual project proponents understood that concurrent completion of the programs would be difficult and subject to many uncontrollable variables. Despite the best intentions/efforts of the parties, certain events occurred that eroded the ability of the three programs to proceed to completion on a concurrent basis. As explained in the Draft Program EIR, following the issuance of a Notice of Intent (NOI) for each of the NCCP/HCP and SAMP/MSAA programs in 2001, the resource agencies leading each of the two programs experienced certain budgetary and scheduling problems that resulted in processing delays for the two programs. When the County of Orange issued its Notice of Preparation (NOP) for the Ranch Plan EIR in 2003, the collective parties believed that the delay issues would be timely resolved and that the three programs could proceed to concurrent completion. However, additional issues and resource demands were encountered (e.g., prolonged processing of the MSHCP for Riverside County and the occurrence of major wildfires in the southern California area in fall 2003), resulting in further delays in the processing of the NCCP/HCP and the SAMP/MSAA.

The County of Orange and the project applicant have expended considerable time and expense in participating in the coordinated GPA/ZC, NCCP/HCP and SAMP/MSAA processes, and

remain committed to developing and implementing a comprehensive land use and conservation program that is consistent with the statutory tenets and principles established for the federal/state resource programs. Although work on both the NCCP/HCP and SAMP/MSAA programs is continuing, no definite completion dates have been established for either program. Accordingly, in order to prevent further delays in the planning effort for the Ranch Plan, and to protect the significant investment of time and resources to date in that effort, and by virtue of the project applicant's right to define its project and the project objectives, the County of Orange is processing the Ranch Plan GPA/ZC project at this time.

Notwithstanding that the GPA/ZC will be processed before completion of any NCCP/HCP or SAMP/MSAA, the proposed project and the process that has been used to develop and evaluate the proposed project and the other alternatives (1) provides a plan for development and a framework for conservation that will help to achieve the major benefits originally envisioned by those planning programs for the Ranch Plan area; and (2) provides a conservation strategy that would be complementary to any such programs that are completed in the future. Therefore, the proposed Ranch Plan Program EIR can move forward without jeopardizing the preparation of the NCCP/HCP and SAMP/MSAA.

It should also be noted that the NCCP/HCP and SAMP/MSAA programs that are being prepared are voluntary on the part of the landowners and the other participants, including the County. There is no legal obligation to complete the programs, let alone complete them concurrently. To the extent that the project is subject to federal and state endangered species laws and other laws requiring that it obtain permits/approvals before affecting protected resources, these requirements remain applicable whether or not the current NCCP/HCP and SAMP/MSAA processes are completed. Thus, the project cannot be developed until the applicable permits are obtained. A new Mitigation Measure 4.9-42 has been added to clarify these requirements, and is incorporated into the Final Program EIR as follows:

- 4.9-42 The project applicant shall obtain Section 404, 1600, and federal and state Endangered Species Act permits, as applicable.

3.1.1.2 Programmatic- Versus Project-Level EIR

Theme of Comments: The County erred in preparing a programmatic EIR for the Ranch Plan. The Draft Program EIR should have been prepared as a project document that evaluates the impacts of the entire Ranch Plan as an individual action.

Response: As described in Section 3.0 of the Draft Program EIR, the Ranch Plan represents a comprehensive land use, open space, and conservation management program that encompass more than 22,800 acres. The large size of the Ranch Plan area has afforded the County and the applicant with the opportunity to design and evaluate the project in both a local and regional context. At the same time, given the size of the project area, its relative importance in responding to the environmental, recreational and housing needs of southern Orange County, and the fact that the project will be implemented in phases over approximately 20 to 25 years, the landowner and the County have chosen to evaluate the project programmatically.

Pursuant to CEQA Guidelines Section 15165, a Program EIR is required for any project that is to be implemented in phases. As identified in Draft Program EIR, Section 3.0, the Ranch Plan is proposed for phased implementation over a period of 20 to 25 years. Although the project envisions the development of a series of distinct planning areas over the life of the project, the individual development stages collectively represent related activities that are appropriately characterized as *the project* for purposes of CEQA analysis. By adopting this comprehensive

definition and using an expanded analytical framework for considering the environmental effects, mitigation measures and project alternatives associated with development of the larger program, the Draft Program EIR promotes the informational purposes of CEQA and provides a basis from which to evaluate individual and cumulative impacts.

One commenter questioned the sufficiency of the Draft Program EIR's informational content, declaring that the project description and certain elements of the documents are imprecise and should be described/discussed in greater detail. As previously indicated, the Ranch Plan represents a multi-faceted project that will be implemented over a period of many years. The plan for development in the Draft Program EIR includes components that are necessarily conceptual, reflecting the fact that design-level details regarding these aspects of the project will be developed in connection with the processing of later, more specific levels of approvals, such as master area plans, subarea plans, and subdivision maps. However, in order to ensure that the environmental impacts of all phases of development of the Ranch Plan project are fully considered, the Draft Program EIR's environmental analysis uses a worst-case approach for evaluating development impacts. The analysis is based on the assumption that, except as specifically noted, the entire area within the development area boundaries of Planning Areas 1 through 8 will be disturbed by development resulting in the removal of resources within those development envelopes. This approach was designed to ensure that all potential impacts of development are fully accounted for, even though the specific design and location of facilities and structures within these broad development envelopes will be determined through subsequent levels of approval. Please also refer to Topical Response 3.1.2 for additional discussion on this issue.

The initial phase of the Ranch Plan CEQA review process calls for the County of Orange to use the Program EIR in evaluating the potential environmental effects of developing the entire Ranch Plan project in accordance with the first set of discretionary authorizations applicable to the whole of the proposed development project. This first set of approvals includes (i) amendments to the Orange County General Plan; (ii) a zone change, and (iii) approval of a development agreement for the Ranch Plan project. In examining the project as a whole, the Draft Program EIR examines all of the environmental impacts expected to result assuming full development of the Ranch Plan as contemplated by these approvals.

Subsequent activities/actions designed to implement this overall plan for development will be examined at each stage in light of the content and scope of the comprehensive Program EIR to determine what additional CEQA review may be warranted. Consistent with CEQA and its interpretive Guidelines, supplemental environmental documentation and analysis for the Ranch Plan is required under various circumstances, including when, for example, the anticipated environmental effects of a proposed activity were not addressed in the Program EIR; changes have occurred in the Ranch Plan project or circumstances surrounding the project change such that evaluation of new or more severe significant environmental effects is needed; or significant new information relating to the project's impacts becomes available that was not previously known during the preparation of the Program EIR. In all appropriate circumstances, including before acting on a discretionary approval, the lead agency considering the future action/activity shall determine whether additional environmental review is necessary. Id.

Subsequent Project Processing Requirements

The General Plan and Zone Change are the first of many approvals that would be required prior to development of the Ranch Plan. Through the subsequent development approval process, further evaluation and consideration of proposed development would occur. The following is a summary of the wide array of subsequent actions required of the Planning Commission, other

appropriate County of Orange decision makers, and by other public agencies prior to construction of the proposed Ranch Plan development. These include (1) Master Area Plans and Subarea Plans; (2) additional subsequent County development processing approvals; and (a) approvals by other public agencies. Many of these actions will be taken only after further public input, either at public hearings before the Planning Commission, Zoning Administrator, Subdivision Committee, or per decisions by other public agencies accountable to the public.

Master Area Plans and Subarea Plans

The purpose of the Area Plan is to provide a process whereby it can be demonstrated that the intent of conceptual development policies contained in the General Plan and the Ranch Plan PC Program will be realized through more precise discretionary actions. Further, the Area Plan is a process for the refinement of development and open space boundaries and statistical information on an individual Planning Area basis."

The Area Plan process for the Ranch Plan PC Area is divided into two levels, a Master Area Plan and Subarea Plan. The Master Area plan focuses on a Planning Area in its entirety and addresses more regional topics/issues. The Subarea Plan focuses on segments of the Planning Area and community level topics/issues.

If only one Area Plan is filed within a Planning Area, all of the above components listed in Sections II.B.3.a and II.B.3.b of the Ranch Plan Planned Community Program Text shall be provided.

Where required, the Area Plan may provide additional information through text or graphics to demonstrate how the Area Plan complies with the intent and policies contained in the General Plan and the Ranch Plan PC Program. Such additional information may include the following:

- Compatibility with existing, adjacent land uses.
- Scenic highway treatments.
- Proposals for treatment of vegetation, biological resources, or geological features that may be affected.

At a minimum, the Area Plan shall consist of a map and set of statistics describing the location, density and intensity of proposed uses within a Planning Area. For purposes of providing more detailed levels of planning information, particularly regarding development use locations, and residential densities, Planning Areas may be further divided into Planning Subareas, as required by the Director, Planning and Development Services. When necessary, additional information may be required to demonstrate consistency with the policies of the General Plan and the Ranch Plan PC.

In addition, the first Area Plan, also known as a Master Area Plan, filed within each Planning Area shall address the entire Planning Area.

An Area Plan may be used to establish alternative site development standards for the Planning Area in accordance with Section 7-9-150 of the Zoning Code. A separate Planned Community-wide Alternative Development Standards document may also be prepared, not as part of any Area Plan, for a particular planning area.

Master Area Plans. At a minimum, the Master Area Plan shall consist of text, a map, and statistical table identifying and/or providing the following:

- Legal description (meets and bounds) of the overall Planning Area boundary and graphic depiction of each Planning Subarea.
- The general location, acreage, and type of land use for each Planning Subarea.
- Proposed maximum number of dwelling units for each Planning Subarea.
- Proposed maximum number of gross and net acres for non-residential land uses, including community facilities and service stations to be located within Neighborhood Centers, Urban Activity Centers, and/or Business Parks.
- A listing of agricultural and other existing and ongoing uses, per Section III.H of the Ranch Plan Planned Community Program Text and consistent with General Regulation 16.
- Estimated acres of park, recreation and other open space uses will be provided in accordance with General Regulation No. 18, and the provisions of the Orange County Local Park Code as contained in the Park Implementation Plan for the Ranch Plan PC Area.
- Identification of applicable Project Design Features, mitigation measures, and Development Agreement stipulations unique to this planning area.
- Other relevant programs, policies and guidelines contained in the Ranch Plan PC, as may be required for consideration, together with a description of how they are being implemented by the Area Plan.
- Traffic Analysis which contains an evaluation of how any proposed refinements to the circulation system and/or development milestones remain in substantial compliance with appropriate Development Agreement obligations and EIR mitigation measures.
 - Average Daily Trips generated by uses proposed within the Planning Area, as distributed onto the surrounding circulation system (both within the Ranch Plan PC Area, and in the surrounding vicinity) including the peak hour characteristics of those trips.
- Phasing of infrastructure for entire planning area, including roads, sewer, storm drainage and a Runoff Management Plan (ROMP), Master Plan of Drainage (MPD), including the location of water quality facilities.
- For Planning Areas 3 and 4, a broad color palette shall be provided in order to demonstrate that the exterior walls, and particularly the roofing materials, of homes and businesses visible from Caspers Regional Park are compatible with the natural surroundings.
- Demonstrate compliance with Ranch Plan Fire Protection Program, to the satisfaction of the Orange County Fire Authority (OCFA).
- Annual Monitoring Report framework.

- Preliminary conceptual grading at 30-foot-wide contours.
- Utilize the recommendations of the draft "NCCP/HCP Planning Guidelines" (prepared by NCCP/SAMP Working Group, April 2003) developed for the Southern Subregion, Orange County, California and draft "Watershed and Sub-Basin Planning Principles" (prepared by NCCP/SAMP Working Group, February 2003) developed for the San Juan/Western San Mateo Watersheds, Orange County, California, as amended by any applicable NCCP/HCP.
- *Subarea Plans.* In addition to the components listed above for the first Master Area Plan filed within a Planning Area, subsequent Subarea Plans filed within a Planning Area shall consist of text, a map and statistical table identifying or providing the following:
 - Consistency analysis of all components listed required for a Master Area Plan.
 - The specific residential use categories (i.e., senior housing, estate housing, etc.) and other non-residential uses.
 - Locations and more detailed acreage of park, recreation, and other open space uses.
 - Specify Home Based Business Enclave locations, with particular emphasis on compatibility with surrounding land uses.
 - A legal description (metes and bounds) of the edge of development.
 - A listing of agricultural and other existing and ongoing uses.
 - Circulation features, including MPAH arterial highways, collector roadways, walking, riding and hiking trails, and pedestrian facilities.
 - Concept grading plan at 10-foot contours.
 - Conceptual stormwater drainage, water, and wastewater system locations.

Additional Subsequent County Development Processing Approvals

In addition to the approvals identified above, the project would be subject to other review and approvals by the County of Orange prior to implementation. These would include, but not be limited to:

Subsequent County Environmental and Resource Plans. It is intended that the subsequent County of Orange discretionary actions are to be approved based on the following project-wide environmental and resource plans:

- Runoff Management Plan (ROMP), to be approved prior to the approval of the first Master Area Plan.
- Drainage Master Plan, to be approved prior to the approval of the first Master Area Plan.
- Cultural Resources Management Plan, to be approved prior to the approval of the first Master Area Plan.

Water Quality Management Plans. Detailed Water Quality Management Plans (WQMPs) are required for all applicable projects, and are submitted and plan-checked for administrative approval by appropriate County of Orange water quality reviewers. These plans must include all appropriate best management practices as required by appropriate state and San Diego Regional Water Quality Control Board (SDRWQCB) permits. Future WQMPs must also be in compliance with a community-wide Runoff Management Plan and Drainage Master Plan.

Subdivision. Tentative Tract Maps and Tentative Parcel Maps, as approved by the Orange County Subdivision Committee, and approved for recordation as final Tract Maps and Parcel Maps by the Board of Supervisors. These subdivision actions create legal parcels which can then be purchased by builders for further subdivision and future residential and/or commercial development ("A" Maps), or purchased by future homeowners ("B" Maps). The subdivision committee includes representatives of various County departments, as well as the OCFA. Tentative Tract Map and Tentative Parcel Maps are approved based upon conditions of approval required at subsequent levels of project implementation.

Street Improvement Plans. Detailed plans for all public and private streets are submitted and plan-checked for administrative approval by appropriate County of Orange engineering personnel.

Concept Grading Plan. Also known as "rough" grading plans, County administrative approval of this type of permit allows grading to begin upon clearance of conditions of approval, but no permanent structures may be plan-checked or built until "precise" grading permits are approved. Grading plans include erosion control plans and appropriate water quality control features.

Site Development Permit. This type of permit, also termed "site plans," provides for administrative review of detailed development plans for a proposed use. Uses that require a site development permit are regarded as having a relatively low potential for adverse impacts on the subject site or surrounding community due to the nature or magnitude of the use vis-à-vis the sensitivity of the subject site or surrounding community. Per the Ranch Plan PC Text, if the site plan proposes site development standards less restrictive than otherwise stated, such a site development permit shall require a public hearing before the Zoning Administrator. Site development permits are approved based upon conditions of approval required at subsequent levels of project implementation.

Precise Grading Permit. Detailed plans of grading, including all information necessary for construction of all structures and improvements, are termed precise grading permits. As mentioned above under the discussion of concept, or "rough" grading permits, no permanent structures may be plan-checked or built until "precise" grading permits are approved. Grading plans include erosion control plans and appropriate water quality control features.

Building Permits. Detailed building plans for all structures (residential, commercial and recreational, etc.) are submitted and plan-checked for administrative approval by appropriate County of Orange building officials.

Certificate of Use and Occupancy. The final County of Orange approval, a Certificate of Use and Occupancy (CUO) is required prior to a homeowner or tenant occupying a new structure. All approved plans must be implemented, related conditions of approval cleared, utilities installed and appropriate inspections completed prior to issuance of a CUO.

Government Permits

Federal, State, and Regional Environmental and Resource Agency Permits. Implementation of the project requires the following approvals from multiple environmental and resource agencies:

- United States Fish and Wildlife Service—Evaluation and permitting pursuant to the Federal Endangered Species Act.
- United States Army Corps of Engineers—Evaluation and permitting pursuant to Section 404 of the Clean Water Act.
- California Department of Fish and Game—Evaluation and permitting pursuant to Section 1600 (et. seq.) of the California Fish and Game Code, and evaluation and permitting pursuant to California Endangered Species Act and/or the Natural Community Conservation Planning Act of 1991.
- California Department of Conservation—Review of final building plans for those areas where re-abandonment of oil wells may be required due to disturbance during grading.
- San Diego Regional Water Quality Control Board—Section 401 Certification.

Other Governmental Agency Permits. In addition, the following governmental agencies will have permitting or other approval authority over the project:

- Federal Highway Administration—Approval of new interchange with State Route 241 (SR-241) at Cristianitos Road and approval of ramp configuration at New Ortega Highway and SR-241 interchange.
- California Department of Transportation—Encroachment permits for any work or hauling along SR-74 (Ortega Highway), approval of new interchange with SR-241 at Cristianitos Road, approval of ramp configuration at New Ortega Highway and SR-241 interchange, approval of abandonment of the segment of existing Ortega Highway that would be parallel to New Ortega Highway and compliance with Section 106 of the National Historic Preservation Act of 1966 for those areas requiring Caltrans involvement.
- Orange County Transportation Authority—Master Plan of Arterial Highways (MPAH) Amendment for addition of New Ortega Highway and Cristianitos Road to MPAH and the downgrading of Avenida Talega in unincorporated Orange County.
- Transportation Corridor Agencies—Approval of new interchange with SR-241 at Cristianitos Road, and approval of ramp configuration at New Ortega Highway and SR-241 interchange.
- Department of Toxic Substance Control—Approval of school sites prior to acquisition by the Capistrano Unified School District.
- Local Agency Formation Commission—Approval of the formation of County Service Areas and Community Service Districts.

3.1.1.3 Deferral of Mitigation

Theme of Comments: Several of the commenters assert that the Draft Program EIR has impermissibly deferred mitigation in areas such as the Comprehensive Open Space Protection System (PDF 4.9-1) and Long-Term Adaptive Management Program (PDF 4.9-2).

Response: Generally, these comments reflect broad assertions that mitigation measures are being improperly deferred without specifying any particular measures. As made clear in CEQA case law, an agency can rely upon the future refinement of mitigation measures for an impact for which mitigation is known to be feasible if four general conditions are met: (1) due to practical considerations, devising or designing specific measures early in the planning process such as the general plan amendment stage would be impractical or inappropriate; (2) the various types of measures that will ultimately be considered for implementation are described; (3) the agency can commit itself to eventually devising and adopting specific measures; and (4) performance criteria or standards are articulated at the time of project approval.

The commenters generally fail to acknowledge the established case law principles, and do not specify the ways in which they perceive these conditions not to have been satisfied. All of the mitigation measures set forth in the Draft Program EIR, which rely upon future refinement, satisfy these criteria. For example, PDF 4.9-1 establishes an open space area of a specified size, with a commitment to satisfying specific criteria for future management. Likewise, PDF 4.9-2 establishes an adaptive management program that is fleshed out in several hundred pages of the EIR's appendices, which contain detailed description of five implementation plans (addressing plant species translocation, habitat restoration, invasive species control, grazing management, and wildland fire management). These plans in turn contain detailed performance standards (such as the specification at Appendix J-4 page 42 that grazing be managed in such a manner as to leave 750 pounds of dry vegetative matter per acre), monitoring provisions with specific objectives for that monitoring, and commitments to corrective action. These all, in turn, are made a condition of project approval. Additionally, the obtaining of federal wetlands and endangered species permits, and compliance with the conditions in those permits, is a condition of project approval, and those permitting processes in turn contain detailed requirements (such as the prohibition on a net loss of wetlands values). Nothing more is required by CEQA.

Several of the comments claiming impermissible deferral of mitigation also focus on single elements of the mitigation program for an impact, and/or do not address elaborations on those measures set forth elsewhere in the Draft Program EIR. For example, one comment criticizes SC 4.5-7, which requires that "Prior to the issuance of any grading permits, applicant shall submit a Runoff Management Plan...for review and approval." However, this step is preceded by Mitigation Measure 4.5-1, which sets out two pages of detailed requirements for a Runoff Management Plan that is a precondition to the approval of the first Master Area Plan on the Ranch. The Runoff Management Plans, in turn, are just a small subset of the mitigation program for water quality impacts, the full description of which occupies 14 pages in the Draft Program EIR (Draft Program EIR on pages 4.5-81 through 4.5-95). Other mitigation measures are elaborated by reference to existing regulatory programs, such as Standard Condition 4.6-1, which requires submission of a transportation demand management program "consistent with the requirements of the County of Orange TDM Ordinance." By attempting to focus on such narrow excerpts, the commenters appear to ignore the totality of the mitigation program in the Draft Program EIR. The full program will be made a condition of project approval and accordingly that full program must be considered in evaluating whether the Draft Program EIR has satisfied CEQA's mitigation obligations.

3.1.1.5 Recirculation of a Draft EIR

Theme of Comments: Several comment letters stated a need to recirculate the Draft Program EIR to provide more information.

Response: CEQA Guidelines Section 15088.5 addresses recirculation of EIRs prior to certification. The section reads as follows:

"A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation includes, for example, a disclosure showing that:

- (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.*
- (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.*
- (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.*
- (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded."*

The CEQA Guidelines do not require a lead agency to recirculate a draft EIR simply because new mitigation is provided, or proposed improvements to the project are developed in response to comments submitted on the Draft Program EIR.

The final determination of whether recirculation might be warranted under these standards will ultimately be made by the Orange County Board of Supervisors. However, members of the County staff have reviewed the comments on the Draft Program EIR and the response to those comments, and have not identified any significant new information in those comments or responses that would necessitate recirculation under the standards set forth in CEQA Guidelines §15088.5.

3.1.2 PROJECT DESCRIPTION

3.1.2.1 Level of Detail Required

Theme of Comments: There is not enough detail on the project features to approve the project. By not identifying the precise location of facilities the Draft Program EIR does not address the impacts associated with these facilities.

Response: Though precise locations for features such as schools, sheriff facilities, and fire stations have not been identified, approximate locations were identified on the Ranch Plan Planned Community Development Map (Exhibit 3-20). Precise locations would be determined in conjunction with the service providers when facilities are proposed for construction. Additionally, given the 20 to 25 year build out period for the project and the fact that construction would not be initiated in Phase 7 until 2020, the service providers would not be able to know with certainty the optimal location for their facilities. Siting of these facilities can only be conceptual at this time.

To ensure the Program EIR evaluated the full impacts associated with the project, the analysis assumed that the entire area within the development boundaries of each planning area would be disturbed by development for Planning Areas 1 through 8, unless otherwise noted (page 3-23 of the Draft Program EIR). The Project Description (page 3-23) clearly states, "All construction staging, grading, and fuel modification for development would also occur within the limits of development for each planning area." This approach evaluates a worst-case scenario because all resources are assumed to be removed by the development. Since the schools, local parks, sheriff facilities, and fire stations are identified as being constructed within the development areas, the impacts associated with mass grading and impacts to resources are assumed as part of the impacts of the project. The impacts when constructing these facilities could not exceed full removal of all resources. The traffic analysis assumed the conceptual locations for facilities. Additionally, as explained in Section 3, Project Description, the processing requirements for the project include the need for Master Area Plans and Subarea Plans. Pages 3-13 through 3-16 identify what is required to be submitted/reviewed as part of these processes. One of the items listed is verification of compliance with the May 2004 Program EIR traffic study. The approach used in the Draft Program EIR ensures that the environmental consequences of the project have been evaluated at the earliest possible date. As discussed in Topical Response 3.1.1, there are many discretionary approvals still required prior to the initiation of any grading or construction and further review and analysis will occur under CEQA in connection with each such discretionary approval in accordance with the provisions of CEQA Guidelines §15168.

3.1.2.2 Definition and Preservation of Open Space

Theme of Comments: Five primary themes are associated with the comments regarding preservation of open space. These are: (1) the project essentially is fully urbanizing the 22,815 acres in that all of the open space would be available for urban development uses, including infrastructure; (2) the open space that is being preserved is in small parcels and would not be effective for habitat protection; (3) the Draft Program EIR does not commit to an effective, enforceable and perpetual mitigation program; (4) the Draft Program EIR does not set forth mechanisms to ensure permanent protection of the proposed RMV Open Space; and (5) the Draft Program EIR's definition of open space to be established under the Ranch Plan is unclear and does not sufficiently delineate what part of the RMV Open Space will be habitat reserve, existing use or special linkage.

Response: The project is not fully urbanizing the project site. As discussed in the Draft Program EIR, the project proposes to allocate 7,694 acres (34 percent) of the total 22,815-acre land area for "development use" (i.e., for residential and non-residential urban uses, including golf courses) while retaining 15,121 acres or 66 percent of the land area for "open space use" (see Table 3.4-2). These 15,121 acres of open space use is defined in the Draft Program EIR as the "RMV Open Space," and is also referred to as the "gross" open space acreage. After subtracting acreage due to infrastructure impacts (roads, trails/bikeways, drainage facilities and water and sewer) as shown on Exhibits 4.9-11 through 4.9-21 of the Draft Program EIR from the RMV Open Space, there is a "net" open space of approximately 14,640 acres, which would be managed for habitat protection, as described more fully in the Draft Program EIR (see Table 4.9-31). Thus, the 14,640 acres of managed habitat open space does not include developed land uses such as golf courses, residential, neighborhood center, business park or urban activity centers and does not include infrastructure such as roads, median strips, trails/bikeways, sewer, and water facilities and drainage facilities. It also does not include the parks that would be developed in compliance with the Local Parks Code—such parks will be located exclusively within the development use areas. The 14,640 acres of net open space includes the 1,034 acres that was proposed for the Rancho Mission Viejo Regional Park, which was to be limited to passive uses such as picnicking, trail/bikeway use and nature interpretation. However, the County may not be interested in establishing the Rancho Mission Viejo Regional Park; nevertheless, the 1,034 acres would remain as part of the proposed project's managed habitat open space. The habitat types anticipated to be preserved within the net open space are set forth in Table 4.9-31.

Response: The open space area is provided in large blocks and does provide for habitat protection. For example, the 9,272-acre Planning Area 9 provides 8,852 acres of managed habitat open space (i.e., only 420 acres of the 9,272 acres is designated for development). This planning area abuts the Cleveland National Forest (about 64,000 acres, including the San Mateo Wilderness Area) and the 8,100-acre Caspers Wilderness Park. Taken as a whole, this single connected open space unit totals about 81,000 acres of interconnected open space that provides habitat and biological connectivity for a broad suite of species. In addition, three other Planning Areas (10 through 12) range in size from 845 acres to 1,348 acres and contain no development. Planning Area 13 is 912 acres and is proposed as a Regional Park. These planning areas are designed to facilitate wildlife movement, provide buffers to the adjacent regional parks, and protect natural resources, including key locations of threatened and endangered species. The contributions of open space within these planning areas, in combination with already protected open space within the Southern Subregion, are illustrated on Exhibit 4.9-22 which depicts 6 habitat blocks consisting of the: San Mateo habitat block of 5,687 acres; the Donna O'Neill Conservancy habitat block of 1,455 acres; the Lower Chiquita habitat block of 4,184 acres; the Upper Chiquita habitat block of 3,057 acres; and the Arroyo Trabuco habitat block of 1,832 acres.

Several commenters stated that the protection of 66 percent of the project site as open space is insufficient. In south Orange County, when reviewing development projects, particularly those of large scale, the County has made a practice of approving projects which develop approximately 50 percent of the project site and preserve/protect 50 percent of the site in open space. This is in keeping with case law which sets forth the concept that mitigation must be "roughly proportional" to the impacts resulting from the proposed project. *Dolan v. City of Tigard*, 512 U.S. 374 (1994). Where the mitigation measure is an "exaction," it must be "roughly proportional" to the impacts of the project. *Ehrlich v. City of Culver City* (1996) 12 Cal.4th 854. Past actions by the County that illustrate this practice include Ladera Ranch (about 40 percent [1,600 acres] of the 4,000-acre community plan preserved as open space), Newport Coast [4,148.2 acres of open space and 2,502.4 acres of development], Aliso Viejo (about 50 percent

[3,300 acres] of the 6,600-acre property was preserved as open space), and Rancho Santa Margarita (about 58 percent [4,872 acres] of the 8,320 acres within the city boundaries was set aside as open space), to name a few.

Response: The Draft Program EIR does commit to an effective, enforceable, and perpetual mitigation program. In addition to the size and strategic location of the RMV Open Space, it is important to note that the net long-term habitat value of the preserved RMV Open Space also is discussed in the Draft Program EIR, and in Topical Response 3.1.9, Biological Resources—Adaptive Management Program/Mitigation. The project is consistent with General Policy 1 regarding the maintenance of net habitat value over the long term. This policy anticipates maintaining net habitat value through 1) creation of a habitat reserve that includes all major habitat types within the planning area, 2) creation of a habitat reserve that protects habitat supporting listed and selected Planning Species, and 3) creation of a habitat reserve capable of being adaptively managed by a single entity. In keeping with this policy, the Conservation Strategy for the Proposed Project is comprised of 1) the formulation of protected open space (RMV Open Space described above) on the Ranch Plan project site which in the future could form the basis of a future Habitat Reserve in any future NCCP/HCP and SAMP/SMAA; 2) the provision of connectivity through protection of identified wildlife movement corridors and habitat linkages, and 3) the formulation and funding of an Adaptive Management Program (AMP). By identifying a self-contained habitat protection area and mitigation program (the RMV Open Space and a long-term AMP), the proposed project is providing a conservation plan that maintains net habitat value and will be complementary to a future NCCP/CHP and SAMP/MSAA. Project Design Features 9-1 and 9-2 are included within the Ranch Plan Mitigation Monitoring Program brought forward to the County Board of Supervisors as part of its deliberations on the proposed project, and which commit the project applicant to these measures. Compliance with such conditions is a legal requirement enforceable by the County through a wide variety of standard enforcement mechanisms (see also response below).

Response: There are provisions to ensure that the area designated as open space is retained as open space. Project Design Feature (PDF) 9-1 provides that the applicant will enter into a two-part agreement ("Open Space Agreement") with the County regarding the preservation of the RMV Open Space. The first part of the agreement will address the approximately 10,950 acres of non-DSA open space. The second part of the agreement will address the 4,171 acres of DSA open space (non-DSA and DSA open spaces are further discussed below). As set forth in the Draft Program EIR, the Open Space Agreement shall address (for both phases) the following: method of preservation for the open space, permitted uses within the open space, non-permitted uses within the open space, phasing of open space preservation areas and a funding mechanism for implementation of the Adaptive Management Plan. As described below, the permitted and non-permitted uses within the open space are already articulated in the PC Text. In addition, PDF 9-1 requires the project applicant and the County to agree on a mechanism for ensuring the protection of the RMV Open Space. While the precise mechanism will be finally determined at the time of the agreement, the County has, in the past, generally required project applicants to perpetually protect open space required as mitigation for project impacts through the grant of conservation easements. The purpose of a conservation easements is the protection of the habitat and wildlife values associated with the open space in question. An example of this type of easement is the Open Space Conservation Easement for Ladera Ranch. The Ladera Conservation Easement covers 1,600 acres surrounding Ladera Ranch. The purpose of the easement is to protect existing onsite habitat values. Both permitted and non-permitted uses are specified. In addition to defining the mechanism for protection of the open space, the Open Space Agreement must also define the phasing of open space preservation areas. Although no specific phasing of open space has yet been determined, as noted in the Draft Program EIR, phasing will be consistent with development

phasing. Exhibit 3-25 sets forth anticipated phasing of grading for the proposed project, and the placement of open space into easements or similar protective mechanisms would occur generally on the same timeframe as noted in the exhibit. Although the specific geographic area(s) to be dedicated for each phase has not yet been determined, the County anticipates that the development and dedication areas will have a relationship to each other. For example, development in Planning Area 2 would result in the dedication of open space surrounding Planning Area 2. A further factor which the County and project applicant will consider when determining the size and configuration of the phased dedication areas is management. As described in revised PDF 4.9-2 set forth below, and in Appendix J, the project applicant will implement an adaptive management program within the RMV Open Space. The Adaptive Management Program will be implemented as open space areas are dedicated to the RMV Open Space in keeping with the stressor-based approach to management. In order to assure successful implementation of this program, the dedication areas must be dedicated in such a way that they are capable of being managed in an efficient and productive fashion. The revised PDF is incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

PDF 4.9-2 Formulation and Funding of a Comprehensive Long-Term AMP

Upon dedication of land to the RMV Open Space in accordance with the terms of the open space agreement described in PDF 9-1, the project applicant shall implement the Adaptive Management Plan contained in Appendix J on the RMV Open Space, including the following sub-plans: Plant Species, Translocation, Propagation and Management Plan, Habitat Restoration Plan, Invasive Species Control Plan, Grazing Management Plan and Wildland Fire Management Plan.

Response: The Draft Program EIR's definition of open space to be established under the Ranch Plan is clear and does sufficiently delineate what part of the RMV Open Space will be adaptively managed for habitat protection purposes, special linkage areas or existing uses. The Draft Program EIR does delineate open space that will be managed for habitat protection purposes, as described in the Draft Program EIR and further explained above, 14,640 acres of habitat types occur within the areas delineated as RMV Open Space as listed in Table 4.9-31, including 2,627 acres of grassland, 5,657 acres of coastal sage scrub and lesser amounts of other habitat types.

The RMV Open Space can be viewed as being either "DSA open space" or "non-DSA open space." Note: This distinction is a result of the Ranch Plan zoning regulations and has no affect on the acreages of gross or net open space cited above. As discussed on pages 3-18 and 3-19 of the Draft Program EIR, and depicted on Exhibit 3-20, certain areas within the Ranch Plan are designated as Development Sensitive Areas (DSAs). These "overlay" areas are where special attention would be required during the County's review and approval of subsequent entitlement such as Master Area Plans in order to demonstrate compliance with project mitigation measures/conditions of approval, any applicable NCCP/HCP and SAMP/MSAA, and applicable resource and regulatory agency permits. DSAs include both proposed development use areas and proposed open space use areas. The open space within DSAs (i.e., DSA open space) would total approximately 4,171 acres (see Table 3.4-2). Thus, the open space outside of DSAs (i.e., non-DSA open space) would total approximately 10,950 acres (i.e., 15,121 acres less 4,171 acres). Both DSA open space and non-DSA open space are subject to use restrictions as specified in the Ranch Plan Planned Community Program Text (PC Text), which restrictions are summarized in the Draft Program EIR. Note: Certain of the permitted uses in both types of open space have been modified from their original form (as stated in the PC Text and the Draft Program EIR) such that the permitted uses are now more restrictive. These

modifications are summarized as follows: permitted uses subject to Master Area Plan Approval and Sub Area Plan approval within open space—item (b) has been modified to delete fire station(s). Within DSA open space, storm drain, flood control, and active parks have been deleted as a permitted use. Within DSA open space subject to a site development permit, the following uses have been deleted: golf courses and clubhouse facilities, museums and nature centers, and active parks. The modified form of the permitted uses is used herein. Table 1 sets forth the habitat types within the proposed project DSA overlays.

As discussed further below, the permitted infrastructure uses within the two types of open space are similar, except that retention/detention basins (combined control systems) required by water quality management plans (WQMPs) would only be permitted in DSA open space. It should be further noted that, whereas the larger basins (i.e., those in Planning Areas 2 and 3) have been included in the infrastructure acreage cited above, there would be some additional acreage affected by smaller combined control facilities that eventually would be required pursuant to the Conceptual WQMPs. Although these combined control facilities cannot be precisely located at this time, the acres, volume and catchments are described in Appendix B.2 of the Conceptual WQMP. The total area for these systems is approximately 20 additional acres in the San Juan Watershed, and 30 acres in the San Mateo Watershed, could be affected by such facilities. Generally, these facilities will be located within the developed portion of the planning area. However, in Planning Area 2, these facilities may be associated with the golf course. In Planning Area 7, they may also be associated with the existing mining ponds. These facilities would be designed so as to contribute some incidental habitat value (see Exhibit 4.5-16). However, they would not be adaptively managed for habitat protection purposes because of the need to maintain the facilities for their primary functions (i.e., flow duration control and water quality treatment).

As explained in the Draft Program EIR (page 3-20), the Ranch Plan open space use regulations are intended to provide for the protection of valuable environmental resources while only allowing certain specific uses. As further explained in an errata sheet distributed on June 23, 2004, "all the uses within the open space planning areas must (i) comply with the species and habitat avoidance mitigation measures specified and required by this Program EIR and (ii) comply with the relevant guidelines and requirements set forth in any applicable NCCP/HCP and/or SAMP/MSAA (if adopted)."

Permitted uses within non-DSA open space not subject to discretionary land use permits or other approvals are discussed on page 3-20 of the Draft Program EIR and are repeated below. To further explain how these permitted uses relate to the open space, examples are discussed following each use:

- a) *Existing uses (agricultural, residential and non-agricultural) shall be allowed subject to Section III.H [of the Ranch Plan PC Program Text], and per the A1 "General Agricultural" District Regulations (Zoning Code Section 7-9-55).* For example, Planning Area 2 contains existing agricultural uses such as citrus and barley that would be a permitted use in the open space.
- b) *Grazing according to an approved Grazing Management Plan; associated ranching facilities (including barns, corrals and worker housing).* For example, Planning Area 9 is currently used for grazing, and this use would continue subject to the Adaptive Management Plan, in particular, the Grazing Management Plan, Appendix J-4 of the Draft Program EIR.

TABLE 1

Vegetation Community/Land Cover in DSA	Planning Area 2		Planning Area 3		Planning Area 7		Planning Area 8		Planning Area 9	
	Development Acres	Open Space Acres	Development Acres	Open Space Acres	Development Acres	Open Space Acres	Development Acres	Open Space Acres	Development Acres	Open Space Acres
Natural Habitats										
Grassland	4.6	26.3	3.5	1.1	79.7	100.5	268.1	28.3	170.3	514.7
Coastal Sage Scrub	71.1	110.7	44.6	49.7	30.3	259.4	94.5	45.4	101.6	1657.8
Riparian	4.3	34.9	0.0	1.5	0.2	34.5	21.9	13.1	40.8	170.1
Open Water	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Freshwater Marsh	0.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
Slope Wetland	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Watercourses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vernal Pools	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Woodland	0.0	5.5	10.0	21.5	0.0	0.0	4.4	0.0	4.4	26.5
Forest	0.0	9.4	0.0	0.0	0.0	0.0	4.3	23.9	0.0	0.0
Chaparral	5.3	11.7	14.8	14.9	6.1	85.6	52.0	45.5	20.4	538.9
Cliff and Rock	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal: Natural Habitats	87.2	200.1	72.9	88.7	116.3	480.0	445.2	158.6	338.1	2908.0
Non-Habitat Land Covers										
Developed	0.0	0.0	0.0	0.0	11.0	11.6	0.0	0.1	0.1	0.3
Disturbed	0.5	0.0	0.0	0.0	0.9	5.3	0.0	0.0	0.0	0.0
Agriculture	363.0	360.0	66.9	60.0	0.0	0.0	0.0	0.0	0.0	0.7
Subtotal: Non- Habitat Land Covers	363.5	360.0	66.9	60.0	11.9	16.9	0.0	0.1	0.1	1.0
TOTAL	450.7	560.1	139.8	148.7	128.2	496.9	445.2	158.7	338.2	2,909.0

- c) *Horse, cattle and ranching operations, and structures ancillary (including corrals, but excluding feedlot operations).* For example, the area known as the Cow Camp lies within the boundary of Planning Area 13 and includes corrals, feedlots and similar structures and equipment necessary to support RMV cattle, horse, and ranching operations. These existing uses would continue.
- d) *Archaeological and paleontological investigations/excavations, including natural resource study sites.* This permitted use would allow for implementation of any mitigation obligations relating to archaeological and paleontological impacts resulting from the proposed project.
- e) *Existing family cemetery.* This existing use is located within open space within Planning Area 9.
- f) *Fire and emergency access.*
- g) *Infrastructure and public service facilities, including extensions thereof necessary for the development of adjacent urban areas.* These facilities include known utilities, roads, trails/bikeways, sewer and water facilities and drainage facilities as illustrated on Exhibits 4.9-11a through 4.9-21c of the Draft Program EIR, and evaluated in the Draft Program EIR. As explained above, the affected acreage has not been included in the 14,640 acres of net open space.
- h) *Passive recreation.* This use, for example, would include such activities as trail use, picnicking and nature interpretation.
- i) *Resource mitigation sites for the preservation or replacement of native, riparian or other biological habitat, as approved by the appropriate regulatory agency (e.g., Army Corps of Engineers, U.S. Fish & Wildlife Service, California Department of Fish and Game and/or the County).* For example, the Gobernadora Ecological Restoration Area (GERA) is located within open space in Planning Area 12. New mitigation sites would be located in open space areas consistent with the concept of maintaining and enhancing habitat values.
- j) *Temporary signage appurtenant to Ranch Plan uses and located within thirty (30) feet of curbs or other road improvements, provided that said signage is in accordance with a County-approved signage program (per Section III.M of the Planned Community Text).* Temporary directional signs to a specific tract would be an example of this permitted use.
- k) *Wildlife preserves and sanctuaries.* GERA is an example of this type of permitted use.

Principal permitted uses within non-DSA open space subject to further discretionary land use and/or other approvals include:

- a) *Apiaries, upon the following conditions:*
 - (1) *No occupied hives shall be located or maintained within one hundred fifty (150) feet of any street or highway.*

- (2) No occupied hives shall be located or maintained within four hundred (400) feet of any existing dwelling, unless the written consent of the owner of such off-site dwelling is secured.
- (3) *No occupied hives shall be located or maintained within 50 feet of any adjoining property lines unless the adjoining property is home to another apiary.*
- b) *Wildland fire training.* As noted in the Wildland Fire Management Plan (Appendix J-5), controlled burns are part of the overall strategy for managing fires as a natural ecosystem process on the Ranch Plan project site. OCFA will play an integral role in the management of these controlled burns thus wildland fire training is a permitted use in open space. Also note that this use does not allow fire stations, which will all be located within developed areas as generally indicated on Exhibit 3-20.
- c) *Passive parks (when habitable structure involved).* For example, if passive parks are located in open space, such parks would only allow such uses as trail use, picnicking and nature interpretation. Structures necessary to support this use (e.g., ranger station) would be an example of a habitable structure.
- d) *Telecommunications facilities.* For example, cellular towers.
- e) *Public/private utilities regulated by state law and exempt from local land use review and authority.* Some public and private utility uses such as the transmission and distribution of electric power and telephone systems are regulated by the Public Utilities Commission and, as such, are exempt from local zoning and land use authority. Typically these facilities are built in existing easements or rights of way.
- f) *Roads that are a part of the Master Plan of Arterial Highways and that have not been evaluated in this Draft Program EIR (i.e., SOCTIP and the extension of Crown Valley Parkway).*
- g) *Any other use as determined by the Director, PDS, to be consistent with the purpose and intent of these regulations, the overall Ranch Plan PC Program, and NCCP/HCP and SAMP/MSAA, as applicable.* This provision is intended to provide very limited discretion for the County to examine and allow other similar or related uses that may not be listed or exactly described by the listed permitted uses but that fully comply and are consistent with the intent of these regulations and requirements of the overall Ranch Plan Planned Community Program and NCCP/HCP and SAMP/MSAA, as applicable. The determination must take into account whether the impacts were covered in the Program EIR and whether new documentation is required pursuant to CEQA §21166 and CEQA Guidelines §15162.

Page 3-18 of the Draft Program EIR further elaborates on the permitted uses within DSA Open Space and these are repeated below [Note: As with non-DSA open space, all uses would be required to demonstrate compliance with the mitigation measures of this Program EIR, any applicable NCCP/HCP and SAMP/MSAA, and any applicable resource and regulatory agency permits]:

Principal permitted uses not subject to discretionary land use permits or other approvals within the DSA open space include:

- (1) All "Open Space" uses not subject to discretionary land use permits, as listed in Section III.I.a.1 of the Ranch Plan Community Program Text. These are noted above.
- (2) Retention/detention basins for water quality enhancement purposes. Exhibit 3-20 contains areas marked as DSA and shown in cross-hatch pattern in the south-western corner of Planning Area 2 and the north-western corner of Planning Area 3. Water quality basin/flood detention facilities are anticipated to be located here and are shown on Exhibit 4.5-13 (Preliminary Detention Basin Locations). They are accounted for in the biological impacts analysis as infrastructure facilities. Exhibits 4.9-11 through 4.9-21 of Section 4.9 note these facilities in a brown color titled "Drainage Facilities" in the legend. Further water quality treatment systems in the form of the combined control systems described in the Water Resources section of the Draft Program EIR and in the Conceptual Water Quality Management Plan (WQMP) may also be located within the open space portion of a DSA.
- (3) Temporary grading associated with urban development that results in revegetated slopes. No explanation necessary.
- (4) Equestrian facilities, if no site development permit is required (i.e., no proposed permanent structures or parking). As an example of possible equestrian facilities, Planning Area 9 contains certain 2-acre estate lots, of which 1.5 acres of each lot is assumed to be developed for the purposes of the impact analysis. Uses within these 1.5 acres of each lot per lot could include equestrian facilities.

Principal permitted uses subject to further discretionary land use permits and/or other approvals include:

- (1) All "Open Space" uses subject to discretionary permits/approvals under the Open Space designation (see above).
- (2) Private recreation centers and facilities including, but not limited to, parks, swimming pools, tennis courts, lakes (fishing and swimming), clubhouses, stables, and trails. As an example, Planning Area 9 contains certain 2-acre estate lots, of which 1.5 acres of each lot is assumed to be developed for the purposes of the impact analysis. Uses within the 1.5 acres per lot category could include those listed here.
- (3) Security facilities and structures (private). As per the above, an example of such facilities could be private security facilities associated with the estate lots.
- (4) Equestrian centers, provided that any such facilities are located at least one hundred (100) feet from any off-site dwelling unit. As per the above, an example of such facilities could be private facilities associated with the estate lots.

In light of the above, the Draft Program EIR does define what constitutes open space and further defines those habitat types protected within this open space. The uses allowed in open space are clearly articulated and controlled such that almost 14,640 acres of habitat are protected.

Four golf courses are described as having special linkage functions on page 4.9-178 of the Draft Program EIR as follows:

- Cristianitos Creek: (1) wildfire protection for a *key location* of gnatcatchers and to help protect linkages with significant gnatcatcher populations to the south in Camp Pendleton and to the north within the planning area; (2) protection of wildlife movement opportunities by means of vegetated open space within one of the major wildlife movement/habitat linkage corridors identified in the Draft NCCP/HCP Planning Guidelines (Habitat Linkage/Wildlife Movement "N").
- Blind Canyon Mesa: (1) wildfire protection for habitat associated with a *key location* of arroyo toads; (2) protection of wildlife movement opportunities by means of vegetated open space.
- Upper Gabino Canyon: (1) wildfire protection for habitat within the headwaters of Gabino Creek; (2) protection of wildlife movement opportunities by means of vegetated open space within one of the major wildlife movement/habitat linkage corridors identified in the Draft NCCP/HCP Planning Guidelines (Habitat Linkage/Wildlife Movement "O").

While these golf courses provide special linkage functions, as explained above, golf courses are considered a "development" use and are accounted for in the development acreage for each of the planning areas where golf courses are proposed.

Existing uses are also defined in the Draft Program EIR and include such existing facilities as Cow Camp, Amantes Camp, Campo Portola, ranch housing, and the family cemetery.

3.1.2.3 Development Agreement

Theme of Comments: The Draft Program EIR fails to adequately discuss and analyze the terms of the proposed development agreement, and a copy of the development agreement was not made available to the public for review with the EIR.

Response: The purpose of the development agreement is to give assurance to the project applicant that upon approval of the project by the County, and in return for offering specific public benefits, it may proceed with development in accordance with existing policies, rules and regulations. These assurances relate to development of the very same project that is described in the project description and evaluated in the Draft Program EIR. The Draft Program EIR clearly explains that the project applicant is requesting a development agreement in order to vest the project's development approvals (see Section 3.4.8) and that the development agreement would be processed concurrently with the other project approvals (see page 1-2). This straightforward reference to the development agreement alerted the public of its relevance to the decision-making process for the project. CEQA does not require an analysis in the EIR of the terms and conditions of a development agreement; it requires an evaluation of the physical environmental impacts of the development project that is proposed for approval. All environmental impacts of the proposed development project have been assessed in the Program EIR and approval of the proposed development agreement would not change any of those environmental impacts. The concern that approval of the development agreement will freeze the entitlements in a way that might interfere with future modifications of the project that might be necessary to mitigate biological impacts or comply with the provisions of an NCCP/HCP is not valid because (1) the zoning regulations that are being vested by the Development Agreement provide that, in sensitive resource areas, the development footprints would be designed based on consistency with the mitigation measures in this Program EIR and the policies of any applicable NCCP/HCP and SAMP/MSAA, and (2) the project would still be

required to obtain necessary permits from the resource and regulatory agencies. In order to obtain the required permits consistency with an adopted NCCP/HCP would be required.

Although not a part of the Draft Program EIR, the proposed development agreement was on file at the County's Planning and Development Services office for review by the public and was also provided to all those who contacted the lead agency and requested a copy.

3.1.2.4 Governance

Theme of Comments: The Draft Program EIR did not adequately address the issue of governance. The document should address the potential impacts associated with annexation of the project site to other jurisdictions.

Response: The Local Agency Formation Commission (LAFCO) establishes spheres of influence for cities and providers of municipal services (i.e., special districts). A sphere of influence is a plan for the probable physical boundaries and service area for a local agency, as determined by the LAFCO. Typically, a sphere of influence is the territory that a city or district is expected to annex. Therefore, spheres of influence are usually larger in area than the actual boundaries of a city or district, although they can be the same as the city or district boundaries.

The Ranch Plan area is not located in the sphere of influence of any city, nor are there any pending applications to include the site or a portion of the site in any city's sphere of influence. The project is currently located within service boundaries for various public services (e.g., fire, police, and utilities). As such, the project would not require an annexation to provide the necessary services to the project site. Annexation into an existing city is not envisioned as part of the project, at this time. Until the board acts on the General Plan Amendment and zone change the County cannot logically discuss the ultimate disposition of the plan from a governance perspective. There needs to be an understanding of where development will be allowed, the type of development permitted, and fiscal balance of the land uses. Commitment to any one jurisdiction any portion of the Ranch Plan could result in the remainder portion of the plan being unable to be fiscally viable. The size of the project site has provided the opportunity to develop a plan with a balance of land uses and long-range fiscal viability that promotes social sustainability. As such the project would meet the intent of the "new community" concept (see discussion below) and future incorporation would be a viable option.

A Fiscal Impact Report (FIR) has been prepared and is being processed concurrently with the Draft Program EIR that evaluates the fiscal viability of the project to provide sufficient revenues to fund the required services. This document looks at the viability of the project as a whole. To consider piecemeal annexation of parts of the project site into existing cities would potentially result in an imbalance because resources would be split between multiple jurisdictions, which may not reflect an equivalent split of the service demands.

LAFCO and the County do have guidelines that encourage urban development within existing cities, spheres of influence or planned cities. These guidelines recommend annexation occur at the earliest time in the planning process and that initiation of annexation should occur prior to issuance of building permits.

As shown in the comment letters received on the Draft Program EIR, some of the adjacent cities have commented on the possibility of eventual annexation of portions of the project site. However, no established spheres of influence extend to the project site and no proposals to modify spheres of influence have been submitted. Accordingly, potential annexation scenarios are undefined and the consideration at this time of the possibility of piecemeal annexation of the

project site by adjacent jurisdictions would be speculative. The potential impacts of annexation to one or more adjacent cities would be considered if and when formal requests for modification of spheres of influence are filed.

At the time the LAFCO policy on annexation was adopted, it was intended that LAFCO and the County of Orange would jointly develop a process for making a "new communities" designation. This was outlined in a report to the LAFCO board in November 2001. The intent of the "new community" designation was to have a broader and more future-orientation than many of the past planned communities. A "new community," as a future city, would need to have a regional balance of land use and long-range fiscal viability. Although the guidelines for the "new community" designation have not been finalized, these factors were considered in the development of the Ranch Plan.

As indicated in the response to the Local Agency Formation Commission (Commenter 191), since the project site is not within any city's sphere of influence, it would be speculative to evaluate annexation of part or the entire project to other jurisdictions. If the project were to be split between multiple jurisdictions without established spheres of influence or policy direction from LAFCO there would be numerous potential combinations of annexations possibilities, all of which are speculative. At the time incorporation, annexation, or sphere of influence change is proposed, there would need to be an evaluation to determine if the physical impacts associated with the project would change. However, impacts such as cumulative impacts, growth inducing, and provision of public services would not be expected to change with annexation or incorporation and are fully addressed in the Draft Program EIR.

3.1.3 LAND USE

3.1.3.1 Impact on Security and Operations of Marine Corps Base Camp Pendleton

Theme of Comments: The project did not address the security or interface with Marine Corps Base (MCB) Camp Pendleton. The policy analysis of consistency of new development with adjacent uses must be changed because the residential development in Planning Area 8 would be incompatible for MCB Camp Pendleton.

Response: The interface of development with MCB Camp Pendleton is addressed in the Draft Program EIR on page 4.1-20, as part of the land use compatibility evaluation in Section 4.1, Land Use and Related Planning Programs. Impact 4.1-1, as identified in the Draft Program EIR, states there is the potential for residential uses in Planning Area 8 to experience disturbance from helicopter flights and artillery training exercises, especially those occurring during night hours, potentially resulting in incompatible land uses. As indicated in the Draft Program EIR, the Department of the Navy (DON) has adopted several programs to ensure the compatibility of on- and off-site uses to minimize conflict with the ongoing training operations on the Base. As discussed in the Draft Program EIR, the Range Compatibility Use Zone (RCUZ) program for MCB Camp Pendleton was adopted in August 1993 to achieve and maintain, to the extent possible, compatible land uses on-base and in the vicinity of the base as they relate to noise and safety hazards generated from training activities at MCB Camp Pendleton. The existing RCUZ does not identify any of the RCUZ safety zones as extending into areas with proposed development. However, based on discussions with MCB Camp Pendleton (personal communication, L. Rannals, January 30, 2004), there is the potential that an updated RCUZ would identify the area within Planning Area 8 as being subject to impacts associated with training operations. This could lead to residential uses in Planning Area 8 being identified in the RCUZ as sensitive, incompatible uses because of the potential for annoyance associated with helicopter operations and artillery fire at MCB Camp Pendleton. This does not mean, however, that the area would be subject to noise in excess of 65 CNEL¹ or other standards that would be deemed to be incompatible with General Plan policies.

Mitigation Measures 4.1-1 and 4.1-2 were developed to address these impacts. These measures will reduce any potential impacts to less than significant. Mitigation Measure 4.1-2 requires, at the time of Area Plan approval for Planning Area 8, that the Planning Director evaluate the most current RCUZ for MCB Camp Pendleton to ensure that noise sensitive land uses are not constructed in areas that would exceed state noise standards. As indicated in the Draft Program EIR, this measure would ensure that non-compatible uses would not be built, but also recognizes Planning Area 8 is not currently identified on any adopted plan as being an area that would be incompatible with noise sensitive uses. Additionally, this area is not proposed for development until approximately 2020. There is an existing lease that extends until 2018, which would preclude development of the area. Just as the Marine Corps operations may have changed since 1993, the date of the currently adopted RCUZ, which may necessitate the inclusion of portions of Planning Area 8, in an updated RCUZ, training activities may be modified over the next 16 years which would again change the compatibility zone for MCB Camp Pendleton. This mitigation provides sufficient safeguards for both MCB Camp Pendleton and future residents. Mitigation Measure 4.1-1 provides a buyer notification program so future residents are aware of the training operations that are ongoing at the Base. The inclusion of these mitigation measures were found by MCB Camp Pendleton and the County to adequately address land use compatibility between the proposed land uses and existing Marine Corps

¹ The County and state standard for identifying a significant noise impact for residential and other noise sensitive uses is the 65 Community Noise Impact Level (CNEL).

operations (please refer to the response to Comment 15 of United States Marine Corps, Camp Pendleton comment letter).

One commenter states that reliance on adopted noise standards and buyer/renter notification is not sufficient and requests the Program EIR address an alternative without residential development in Planning Area 8. Please refer to Topical Response 3.1.13, Alternatives, regarding these proposals.

SB 1468 and SB 926

Several commenters raised the question if the project complied with the requirements of SB 1468. As approved by Gov. Gray Davis on September 26, 2002, SB 1468 amended Government Code Section 65302 to provide that cities and counties shall consider the impact of new growth on military readiness activities carried out on military bases, installations, and operating and training areas "when proposing zoning ordinances or designating land uses covered by the general plan for land or other territory adjacent to those military facilities." As described by the bill's author, Senator Pete Knight, the purpose of SB 1468 was to address and resolve urban encroachment impacts on military activities. See Letter from Sen. P. Knight to Sen. J. Burton dated August 18, 2003 (reproduced in Appendix A to the Responses to Comments document). However, in order to balance the state's immediate need to address urban encroachment issues while accommodating established local planning processes, the obligation of cities/counties to comply with SB 1468 was expressly conditioned upon the following events:

1. An agreement is entered into between the United States Department of Defense or other federal agency and the State of California, through the Governor's Office of Planning and Research, for the federal government to fully reimburse all claims approved by the Commission on State Mandates and paid by the Controller that cities and counties would be eligible to file as a result of the enactment of this act.
2. Performance/Preparation of the military preparedness impact analysis need not occur until "[t]he city or county undertakes its next general plan revision."

Following passage/enactment of SB 1468, the federal government and the State of California were unable to negotiate/execute a reimbursement agreement meeting the aforesaid terms. Accordingly, the operative elements of SB 1468 remained in flux and inapplicable to the land use planning activities of local government.

During the 2003-2004 legislative term, Senators Knight and Ashburn introduced SB 926. In relevant part, SB 926 proposed the elimination of the reimbursement agreement requirement specified in SB 1468. Notwithstanding, SB 926 left intact the provision that the military preparedness evaluation need not be performed until the city/county commenced preparation of its next general plan revision. According to Sen. Knight, the term "general plan revision" was intended to apply only to large-scale general plan amendments, substantial modifications or significant updates to a local general plan.

On August 26, 2004, SB 926 was passed by the State Assembly and forwarded to the State Senate for consideration and approval. On August 27, 2004, the State Senate passed SB 926 (as amended by the Assembly); the bill was enrolled and sent to Governor Schwarzenegger's office on September 3, 2004 and is presently awaiting consideration/adoption as an urgency measure. Were the Governor to sign SB 926 and cause the immediate elimination of the reimbursement agreement condition attached to SB 1468, the County of Orange would be

obligated to perform the military preparedness analysis in connection with all future large-scale, substantive General Plan amendments. And, by virtue of the location/nature of the proposed project (and its request for substantive amendment of portions of the Orange County General Plan), the military preparedness analysis obligations of SB 1468 would be, presumably, applicable to the Ranch Plan GPA/ZC.

Consistent with the spirit, purpose and intent of SB 1468, the Draft Program EIR specifically evaluates potential project-related impacts upon military operations currently conducted at MCB Camp Pendleton. Specifically, Section 4.1, Land Use and Related Planning Programs, discusses potential impacts from the training operations on Ranch Plan land uses and the associated effect on Marine Corps operations (page 4.1-20). The Department of Defense/United States Marine Corps (USMC) has reviewed the Draft Program EIR and its consideration of potential impacts upon ongoing military training activities conducted on MCB Camp Pendleton. The USMC has concluded land use compatibility between the proposed land uses and existing Marine Corps operations was adequately addressed (please refer to the response to Comment 15 of United States Marine Corps, Camp Pendleton comment letter). In short, the Draft Program EIR provides information and analysis that are consistent with the requirements of SB 1468/SB 926, and USMC has signified its concurrence that the information/analysis sufficiently addresses and mitigates project-related impacts upon military preparedness/training activities conducted at MCB Camp Pendleton.

Restricted Airspace

MCB Camp Pendleton did request that additional detail regarding restricted airspace be added to the Final Program EIR regarding Restricted Airspace. The following information is hereby added to discussion of MCB Camp Pendleton in Section 4.1, Land Use and Related Planning Programs of the Draft Program EIR:

MCB Camp Pendleton has three types of Special Use Airspace (SUA) that have been authorized and approved by the Federal Aviation Administration (FAA) for purposes of supporting the military training operations at the Base. The three types consist of (1) Restricted Areas, (2) Military Operations Areas, and (3) Controlled Firing Areas. Each has been established and is used for different purposes, but are individually authorized by the FAA and all are charted on aviation maps used by military and civilian aviators so that there is an awareness of their existence, their dimensions, and their hours of operation by both military and civilian pilots who fly within this area of southern California. The SUAs provide a safety buffer to civilian aircraft by alerting them of the presence of hazardous military training operations that are occurring on the ground (or water) areas below this airspace. The most restrictive of these three different kinds of SUA at MCB Pendleton is the Restricted Area. Restricted Airspace is used to support hazardous training activities in which "live-fire" training activities are occurring (artillery, mortars, air-to-ground delivery of live bombs, rockets, lasers, etc. all activities that would be hazardous to non-participating civil aircraft). Thus, when activated, Restricted Airspace prevents civil aircraft from entering these airspace areas and over flying these hazardous training activities when such live-fire training operations are ongoing (pers. comm., L. Rannals, August 6, 2004).

Restricted Airspace area R-2503B overlies a portion of Planning Area 8 and extends from the ground surface to an altitude of 15,000 feet above mean sea level. While the area is designated as a Restricted Airspace to support hazardous military training operations, no hazardous training operations occur over Planning Area 8. The

designation provides sufficient clearance for aircraft maneuverability and safety buffer for aircraft not involved in the training exercises.

Since the Ranch Plan does not propose any aviation related activity, the project would not interfere with or impact the viability of R-2503B in anyway. The designation of the Restricted Airspace over Planning Area 8 would indicate that portions of the planning area would be subjected to overflight activities. As identified in Impact 4.1-1, there would be the potential for residential uses in Planning Area 8 to experience disturbance from helicopter flights and artillery exercises, especially during night hours. Mitigation Measures 4.1-1 and 4.1-2 were identified that would reduce this impact to less than significant.

3.1.4 AGRICULTURAL RESOURCES

3.1.4.1 Mitigation for Loss of Agricultural Lands

Theme of Comment: The Draft Program EIR fails to identify and discuss appropriate measures for mitigating Project-related loss of agricultural lands.

Response: As identified in Section 4.2 of the Draft Program EIR (see pages 4.2-8 to 4.2-11), implementation of the proposed Project would result in the loss of approximately 827.2 acres of Important Farmland located within the Project/study area. Whereas Important Farmland is a unique resource with statutorily defined characteristics, the Draft Program EIR specifically acknowledges the permanent conversion/loss of Important Farmland as a significant impact. Id. at 4.2-8.

Consistent with the requirements of CEQA and the CEQA Guidelines, the County has identified certain measures that will decrease the magnitude of the agricultural impacts associated with project development. As reflected in the Draft Program EIR at pages 4.2-14 and -15, the proposed project has been designed to accommodate the continuation of agricultural and ranching activities as interim/approved uses within portions of the project area proposed for development until the time of project implementation. Furthermore, the proposed Ranch Plan project contemplates the planting and interim cultivation (i.e., 15 years) of an additional 100 acres of citrus orchards in order to offset the loss of agricultural lands associated with project development. See Draft Program EIR at 4.2-10. These elements and components have been specifically incorporated into the Project as mandatory design features and mitigation measures. See PDFs 4.2-1 through 4.2-3; MM 4.2-1.

The comments challenge the County's failure to consider two specific concepts/strategies for further reduction of project-related impacts upon agricultural lands. Specifically, the comments request consideration of (i) reduction and reconfiguration of the project to avoid the loss of on-site agricultural lands and (ii) preservation of agricultural lands through conservation programs and fees. For the reasons set forth below, said strategies were deemed inappropriate therefore and not incorporated into the project mitigation program.

Project Reconfiguration

As discussed in Section 4.2 of the Draft Program EIR, the project applicant evaluated the desire/need for retaining on-site farmland in the context of preparing its comprehensive land use, management and conservation program. A primary factor in planning the development, management and conservation mixture was the identification of sensitive habitat and species that may be impacted by implementation of any proposal within the project area. As a result of this identification and analysis, the project applicant was able to delineate usable-versus-sensitive areas within the project boundaries. The delineation then allowed the landowner to comprehensively plan for proposed development, agriculture/grazing, recreation, and open space uses within the Ranch Plan project site. Relocation and redistribution of uses within the project site in order to retain additional Important Farmland on-site would be severely limited due to several factors, including species/habitat issues, suitable soils, topography, and availability of water.

Reduction in development in order to eliminate or reduce the amount of farmland subject to development would have a direct effect on housing units. The identified 827.2 acres of Important Farmland are located within Planning Areas 1 through 4, which areas are identified as the loci for approximately 60 percent of the proposed residential development that will occur

within the project site. Reduction in the size of these development areas in order to retain additional Important Farmland would necessitate the elimination of a large number of proposed housing units. Such an elimination/reduction would directly frustrate the project's objective of providing an economically viable mix of residential, commercial, and urban land uses, and natural open space that addresses, in relevant part, the need for additional housing opportunities in south Orange County.

Preservation Programs

The comments site sample programs adopted by certain northern California jurisdictions concerning conservation of agricultural lands through programs for permanent preservation of agricultural lands. In composite form, the government programs provide for developers to dedicate land, grant conservation easements, and/or pay impact fees used to acquire conservation easements over agricultural land. Notably (yet absent from the proffered comments), these programs are in furtherance of established local general plan and zoning policies reflecting the commitment of the individual local governments to promote and perpetuate agriculture as a viable land use within their respective jurisdictions.

In comparison to these jurisdictions, the County of Orange does not have a general plan or zoning policy declaring a commitment to preservation of long-term agricultural activity/viability. The Natural Resources Component of the County's General Plan Resources Element does reflect the policy of the County to "encourage to the extent feasible the preservation and utilization of agricultural resources as a natural resource and economic asset." *Orange County General Plan* at VI-31 (emphasis added). However, this policy does not require preservation of agricultural lands or otherwise identify agriculture as a long-term, feasible land use in the County. Indeed, the Natural Resources Component specifically recognizes that future prospects for agriculture in the County face serious growth-related and economic challenges:

The Plan recognizes that "the rising costs of irrigation water, agricultural land tax rates, labor costs, and damage from vandalism have increased production costs making it more difficult to have a successful agricultural operation." *Id.* at VI-9. Furthermore, the Natural Resources Component acknowledges that "[g]rowth projections through 2020 indicate the continued urbanization of the County [and that said] urban development will continue to convert agricultural acreage to more intensive uses." *Id.* at VI-12.

In light of the foregoing, the County has not adopted or otherwise implemented any programs designed to provide for the long-term preservation of agricultural lands within the County. Indeed, creation and implementation of such programs would be inconsistent with the County policy that agricultural use be treated as an interim use, not a permanent land use in its planning program. This is reflected in the General Plan and zoning land use classifications.

Adoption of one or more of the agricultural preservation programs identified by the commenters would require an amendment to the General Plan and Zoning Code. Specifically, the General Plan and Zoning Code would need to be revised to reflect a dramatic change in County policy concerning the long-term preservation and use of agricultural lands (i.e., conservation of agricultural lands despite market forces and the trend toward urbanization of undeveloped property in South Orange County). In the absence of such a policy change, development and implementation of an agricultural preservation program would directly conflict with current County objectives concerning the accommodation of foreseeable urban growth.

Conclusion

The mitigation program established for the proposed project will reduce the impacts associated with loss of agricultural lands by (i) providing for the continuation of existing agricultural activities during the interim development period and (ii) creating new citrus and avocado orchards to replace converted/lost orchards. However, and as identified in Section 4.2 of the Draft Program EIR, said measures will not reduce project-related impacts to a level considered less than significant. The additional measures/programs proposed by the commenters are inappropriate and, as such, would not provide for further mitigation of the agricultural land impacts associated with project implementation. Accordingly, and despite the commenters' contrary opinions, development of the proposed project will result in significant, unavoidable impacts vis-à-vis the loss/conversion of Important Farmland.

3.1.4.2 Williamson Act Cancellation

Theme of the Comments: The Draft Program EIR did not analyze the impacts associated with the cancellation of the Williamson Act contract (Agricultural Preserve). The project cannot make a finding of public benefit that is required to cancel the contract.

Response: Appendix G (Subsection II) of the CEQA Guidelines identifies consistency of a project with an existing Williamson Act Contract as an event that can result in an adverse impact to agricultural resources. This Guideline recognizes that lands subject to a Williamson Act Contract may not, consistent with the provisions of the Williamson Act, be removed from the agricultural preserve created by the contract and converted to developed uses during the term of the contract unless early cancellation is approved by the statute. As explained on pages 4.2-11 through 4.2-14 of the Draft Program EIR, implementation of the proposed project would result in the early removal of 1,856 acres from the existing Williamson Act contract and associated agricultural preserve. As for the environmental impacts of removing this land from the Williamson Act contract, as the Draft Program EIR explains, the environmental impact of cancellation, if approved, would be that these 1,856 acres would be available to be converted to non-farming uses from one to four years earlier than they would otherwise be if the applicable contracts were simply allowed to expire. It also should be noted that, in any event, under the expected phasing of development, it is unlikely that a significant amount of land would actually be affected by development prior to the pre-cancellation expiration date.

The Williamson Act provides that a board may grant tentative approval for early cancellation of a preserve contract if either (i) the cancellation is consistent with the purposes of the Williamson Act or (ii) the cancellation is in the public interest. California Government Code Section 51282(a). For each alternative, the Williamson Act identifies a set of criteria that must be found by the board as a condition of early contract cancellation. The Draft Program EIR identifies the impacts pursuant to CEQA and provides additional information on potential findings. As identified on pages 4.2-12 through 4.2-14 of the Draft Program EIR, factual circumstances exist that satisfy the individual criteria and justify early termination of the 1969 Williamson Act contract under either test. The Draft Program EIR does not intended weigh the benefits of agriculture production to the provision of housing.

An argument is made that the public interest in providing additional housing opportunities in south Orange County would not be served by early termination of the Williamson Act contract and development of the proposed project. The commenter's opinion is noted; however, any determination concerning the value of the project as a means of addressing Orange County's needs for additional housing rests with the Board of Supervisors.

While it is still the position of the County that the Draft Program EIR adequately addresses the potential impact associated with the project, the applicant has decided to drop the request for early cancellation of the Williamson Act contract. As a result, Impact 4.2-2, which was identified as a significant unavoidable impact, would no longer be applicable to the proposed project. Project Design Feature 4.2-3 and Standard Condition 4.2-1 would no longer be required to mitigate this impact.

3.1.5 POPULATION AND HOUSING

Project's Contribution to Affordable Housing and the Amount of Housing Provided

Theme of Comments: The project fails to provide affordable housing and sufficient range of housing types and densities that permit a mix of housing opportunities affordable to the County's workforce.

Response: The Draft Program EIR does identify the affordable categories and the share of the region's future housing for the unincorporated Ranch Plan area. The proposed 14,000 dwelling units will provide greater, and much needed, housing opportunities for those individuals living and working in Orange County. Although this amount of housing is less than the 20,468 dwelling units forecast for the Ranch Plan area in the OCP-2000M projections, it is recognized, as reflected on page 4.3-11 of the Draft Program EIR that implementation of the Ranch Plan will do much more toward achieving regional projections than maintaining the status quo. The project's proposal for 14,000 dwelling units, and not a higher number closer to that which was forecasted, was the result of balancing housing goals with other avoidance of environmental resources. The proposed age-restricted senior dwelling units will also provide a mix of dwelling unit types including both single-family and apartment units which will be responsive to projected demographic housing needs for the area.

The proposed General Plan designations and zoning for the Ranch Plan would allow for a range of housing types and densities that permit a wide mix of housing opportunities affordable to the County's workforce. The General Plan "1B" designation would permit up to 18 dwelling units per acre on a gross acreage basis and higher possible densities on a net basis. The proposed Planned Community zoning categories allows for these potential higher net densities as well as special height limits of 45 and up to 75 feet in certain areas allowing for multiple-story residential densities. In addition to the allowable densities, the project proposes a mix of dwelling unit types (i.e., single-family attached and detached units, apartments and multi-family dwelling units) in response to projected demographic housing needs for the area and represents an appropriate balance of housing opportunities across various income and demand sectors.

The project housing is proposed in conjunction with 5.2 million square feet of employment uses in order to create a balanced community along with the benefits of reduced trip lengths and other related impacts.

The timing of specific housing projects, types, and densities will be the subject of additional public hearings as part of subsequent processing of Area Plans for development of the project. (Please refer back to Topical Response 3.1.1.2 regarding subsequent project approvals.) The County's Annual Monitoring Program will monitor housing through zoning statistical table with the Master Area Plan and Subarea Plan approval process. The project applicant's commitment to no-net loss of housing and the relocation of existing housing with the project, which may be displaced during project development, should also be acknowledged (PDF 4.3-2 and MM 4.3-1).

3.1.6 WATER RESOURCES

Regulatory Background

The Orange County NPDES Permit required the co-permittees to address the potential adverse effects of new development on water quality and hydrology. In response the co-permittees, in their Drainage Area Management Plan (DAMP), included a new development control program. The cornerstone of the control program requires the developer to develop a Water Quality Management Plan that lays out what the developer will do to mitigate the potential adverse effects of his/her proposed project on pollutants of concern and hydrologic conditions of concern. Pollutants of concern are pollutants that could adversely affect beneficial uses in receiving waters, whereas hydrologic conditions of concern address the potential for increased flows from new development causing stream channel erosion and/or adversely affecting the habitat in streams that supports aquatic and other species

To aid in the development of the WQMP, the DAMP sets out a sequence of steps that a developer could follow in order to develop a defensible DAMP. These steps include: developing an understanding of the existing conditions at the site; identifying pollutants of concern and hydrologic conditions of concern; selecting appropriate site design, source control, and treatment controls that effectively address the pollutants of concern; and identifying the operation and maintenance activities required to ensure that the implemented control program meets the effectiveness or performance standards described in the WQMP. In addition to the DAMP, each co-permittee also developed a Local Implementation Plan (LIP) that tailored the application of the DAMP requirements to the local jurisdiction.

Rancho Mission Viejo, in response to these requirements, developed a conceptual Water Quality Management Plan that is an appendix to the EIR. The following describes responses to comments received regarding the WQMP and the associated CEQA analysis of water quality and hydrologic impacts assuming the WQMP is a project design feature.

3.1.6.1 Water Quality Impact Analysis

Theme of Comments: Implementation of the Ranch Plan project will result in water quality impacts that were not adequately addressed in the Draft Program EIR. In particular the Draft Program EIR did not adequately examine:

1. Impacts to pathogens
2. Impacts to sensitive species
3. Cumulative Impacts in San Juan and San Mateo Creek Watersheds and to Doheny and Trestles Beaches
4. BMP Effectiveness and Monitoring
5. Impacts to Ground Water

Response: The Ranch Plan Draft Program EIR discussed and evaluated impacts to water resources, including water quality in Sections 4.5, Water Resources and 4.9, Biological Resources, as well as in Technical Appendix C-2 RMV Conceptual Water Quality Management Plan.

To analyze potential impacts which may result from implementation of the proposed project, the Ranch Plan Draft Program EIR addressed potential changes in pollutants of concern and hydrologic conditions of concern in nine sub-basins: Cañada Chiquita, Cañada Gobernadora, Central San Juan north of San Juan Creek, Trampas Canyon and Central San Juan south of San Juan Creek, Cristianitos, Gabino, Blind, Talega, and Verdugo.

The approach involved the development of a continuous hydrologic model that took into account dry and wet rainfall years over a 53-year period, local soils conditions, and vegetation. The modeling was applied to three scenarios: existing pre-development condition, the post-development conditions without any provision of hydrologic or water quality controls, and the post-development condition assuming the implementation of the RMV Water Quality Management Plan. Results from the hydrologic model were used to derive monthly water balance and flow duration relationships. Control facilities were selected and sized in order to match to the extent possible the pre-development water balance and flow duration. In this way, the model replicates, to the extent possible, the pre-development conditions, thereby minimizing impacts to receiving water quality and hydrology. For some pollutants of concern the analysis relied on literature information and professional judgment due to limitations in the data that would be available for modeling.

3.1.6.2 Impacts of Pathogens

Pathogens are the primary pollutant of concern because pathogens have been identified by the San Diego Regional Water Quality Control Board (Regional Water Quality Control Board) as impairing beneficial uses for selected beaches and creeks. As noted in the Draft EIR, the Regional Water Quality Control Board has developed a technical draft "Bacteria-Impaired TMDL Project I for Beaches and Creeks in the San Diego Region". The waters identified as impaired include a short reach of San Juan Creek near its mouth, and adjacent shoreline including Doheny Beach, as well as beaches in the vicinity of the mouth of San Mateo Creek, including Trestles Beach. The pollutants addressed by the Total Maximum Daily Load standard consist of the "indicator bacteria," namely total and fecal coliform, and enterococcus bacteria, some species of which are pathogenic.

The following describes those aspects of the WQMP designed to minimize the impacts of the proposed Ranch Plan project on pathogen levels in San Juan Creek.

Natural Background Levels. Project impacts must take into account existing background levels which establish a baseline condition for the project. This is particularly important for pollutants such as pathogen indicators where existing levels indicate some exceedances of water quality objectives. As noted in the draft EIR, there are numerous natural and anthropogenic sources of pathogen indicators. Natural sources include birds and other wildlife.

The San Diego RWQCB recognizes natural background sources in their development of the draft TMDL. Under the proposed bacteria TMDL, for wet weather conditions, an interim numeric target was established based on a "reference approach" designed to account for uncontrollable natural sources of bacteria. The reference approach ensures that water quality objectives are at least as good as conditions observed in a reference watershed that represents natural conditions. The San Mateo Creek watershed was identified as the best candidate for assessment of natural background sources of bacteria. Monitoring data collected near the mouth of San Mateo Creek and at San Onofre State Beach were analyzed to estimate the percentage of samples that exceeded the water quality objectives. Limited data was available (six samples at San Mateo Creek and five at San Onofre State Beach for fecal coliform, total

coliform, and enterococcus). In this limited reference watershed data set, the pathogen indicator criteria were exceeded in 17 to 50 percent of the samples during wet weather.

Because of the limited data collected at these stations, the Regional Water Quality Control Board chose, as an interim condition, to use the Arroyo Sequit watershed in the Los Angeles region as reference watershed. Data collected at Leo Carillo Beach by the Los Angeles RWQCB indicated that 19 percent of wet weather fecal coliform data were observed to exceed the Water Quality Objectives. This exceedance percentage is proposed by the Regional Water Quality Control Board as the interim reference target in formulating the TMDL until additional data become available from reference locations within the San Diego Basin. Based on selecting 1993 as a critical wet year the number of wet days in the San Juan Creek watershed for 1993 was estimated at 76 days. Applying the 19 percent exceedance allowable for natural sources, the number of days in the San Juan Creek watershed during which fecal coliform could exceed the Water Quality Objectives is 14. It is recognized that this is an interim target that will be modified as additional data and analysis are conducted.

Local monitoring studies have been conducted that illustrate the effect of natural background sources and uncontrolled urban sources of pathogens. The effect of natural and anthropogenic sources on pathogen indicator levels in the San Juan watershed was studied by the Orange County Public Health Laboratory. It conducted a *dry weather* monitoring study in 1998 in the San Juan Creek watershed to help determine the sources of pathogen indicators (Moore et al, 2002). Monitoring stations were located in the ocean, in creeks in the San Juan Creek watershed, and in storm drains. One finding of the study was that "the highest concentrations of fecal coliform and *Enterococcus* were found in the storm drains as compared to the creeks and ocean sampling sites. Samples taken from creek sites distant to human habitat also had low to moderate levels of bacteria, suggestive of fecal contamination by non-human sources." Data obtained in San Juan Creek above the Ortega Highway (SJ30) indicated a log mean concentration for fecal coliform of about 300 colony forming units (CFUs) compared with a storm drain at La Novia Bridge (SJ07) where the concentration was about 1,400 CFUs.

Pathogen indicator concentrations during *wet weather* tend to be higher than during dry weather. The recent wet weather data collected by Wildermuth indicated that the geometric mean concentration of fecal coliform in San Juan Creek ranged from about 2,500 most probable number per 100 milliliters (MPN/100mL) at the more upstream station at Caspers Regional Park (SW-2) to about 3,600 MPN/100mL at the more downstream station near the Oaks/Blenheim Equestrian facility (SW-1). In contrast, in Gobernadora Creek, the geometric mean fecal coliform concentrations just downstream of the Coto de Caza development were about 10,000 MPN/100mL. (The one dry weather fecal coliform sample taken below Coto De Caza was about 300 MPN/100mL.) These data further illustrate the presence of natural background pathogen indicators in the San Juan watershed and the effects of uncontrolled urban runoff on elevating the levels above background.

Controlling Pathogens from the Ranch Plan Project. Anthropogenic sources include domesticated animals and pets, and human sources that may be introduced via poorly functioning septic systems, cross-connections between sewer and storm drains, and the direct utilization of outdoor areas for human waste disposal. Aside from domesticated animals and pets, these types of sources are not expected in conjunction with new development.

Controlling pathogens for the proposed Ranch Plan project will use a comprehensive set of controls including source controls and treatment controls.

Source Controls: The most effective means of controlling pet wastes as a source of pathogens is through source controls. Source controls identified in Section 4.1.3 of the WQMP that would be effective in helping to prevent the introduction of pathogens into runoff include Education for Property Owners, Tenants, and Occupants (Non-structural source control N1), Common Area Litter Control (N11), Common Area Catchbasin Inspection and Cleaning (N14), and Street Sweeping (N15) and providing for materials and containers for collecting and disposing of pet wastes. Details regarding the scope of these activities are included in the WQMP.

Treatment Controls: The proposed combined control system will include one or more of the following treatment control BMPs: a flow duration control and water quality treatment (extended detention) basin, a wetpond, an infiltration basin, a bioinfiltration swale, and/or a storage facility for recycling water for non-domestic supply. The available data on the effectiveness of extended detention basins for treating pathogens and pathogen indicators is limited. It is not assumed that levels of pathogen indicators during storm events will be reduced by detention in the flow duration/water quality basins, although some incidental infiltration will occur in the basins. The combined control system also includes an infiltration basin following the water quality basin, bioinfiltration swales connecting the flow duration/water quality basins to the receiving streams, and storage and recycling of runoff for golf course irrigation.

In formulating of the RMV Conceptual WQMP, infiltration BMPs were only selected for those areas that have suitably well-drained soils, based on the available geologic and soils information and the terrain analysis. Infiltration BMPs were sited in areas with loamy sand. Soils with a saturated hydraulic conductivity less than about 2 inches/hr were considered to be unsuitable for infiltration. In general, suitable soils are found in the canyon floors containing alluvial deposits (e.g., see Figure 1-6, Draft Program EIR Appendix B.2 which illustrates the geomorphic terrain and specifically the infiltrative sands and alluvial deposits.). In the San Juan Creek watershed, alluvial deposits are fairly common, including areas with wide terraces of alluvial deposits in the Gobernadora and Chiquita sub-basins. Therefore, infiltration BMPs are used to a greater extent in the San Juan Creek watershed sub-basins.

In the San Mateo watershed, infiltration opportunities are less available than in the San Juan Creek watershed, but are found in the valley floor areas of the Lower Gabino sub-basin. Due to the more limited nature of these suitable soils, there is more emphasis on recycling stormwater and contributing to the non-potable water supply system in the San Mateo Watershed. Depending on the proposed use (most likely irrigation for golf courses and common landscaped areas) such water would likely evapotranspire with some incidental infiltration. In either case, conditions for bacterial survival and growth would be severely limited. In the Gabino Sub-basin, where adequate soils for infiltration are limited, treatment will be provided using wetponds.

For a detailed discussion of the data used and assumptions regarding the infiltration analysis, please refer to the EIR Appendix B.2 which contains the WQMP, and specifically Appendix A, Section A-2.5 titled "Soil Properties and Infiltration Parameters."

The effectiveness of infiltration basins and wetponds for removal of pathogens is also discussed below.

Pathogen Removal Efficiency in Infiltration Basins. The Ranch Project proposes to utilize infiltration basins for stormwater flow and water quality management in areas where soils are suitable. Infiltration BMPs were sited in areas with loamy sand. Soils with a saturated hydraulic conductivity less than about 2 inches/hr were considered to be unsuitable for infiltration. In general, suitable soils are found in the canyon floors containing alluvial deposits (e.g., see

Figure 1-6, Draft Program EIR Appendix B.2 which illustrates the geomorphic terrains and specifically the infiltrative sands and alluvial deposits.). Infiltration is very effective in treating pathogens (DAMP Appendix E1); therefore, pathogens associated with dry weather flows, small storm flows, and the initial portion of large storm events will be effectively treated in the combined control system.

Infiltration refers to the use of the filtration in soils to remove pollutants. The efficacy of infiltration devices to treat pathogens has been demonstrated by a number of monitoring studies. Data from four sand filters monitoring in Austin, Texas indicated a range of removals from 37 percent to 83 percent for fecal coliform, and 25 percent to 81 percent for fecal streptococci (City of Austin, 1990; CWP, 1996). Research on the use of filtration to remove bacteria also has been conducted in Florida by the Southwest Florida Water Management District (Kurtz, 1998). Significant ($p < 0.05$) reductions in total and fecal coliform bacteria and the other indicators were observed between inflow and outflow samples for sand filtration. Total coliform bacteria removals were less than 70 percent, and fecal coliform bacteria reduction varied from 65 percent to 100 percent. U.S. EPA reported typical pathogen removal for infiltration basins and trenches as 65 to 100 percent (U.S. EPA, 1993).

The infiltration treatment mechanisms (filtration, adsorption, and biological decomposition) are similar to those applicable to land application of wastewater, and therefore the literature on land application is also relevant. In a series of field tests for similarly designed rapid infiltration land treatment systems built for wastewater application, typical bacteria removal rates for infiltration basins and trenches were found to be 98 percent. However, this assumed pretreatment and infiltration of 90 percent of the design flow (Wisconsin Stormwater Manual, 2000). Schueler reviewed wastewater land disposal data, and assuming the infiltration basin was sized to treat runoff from a one inch storm, found that bacteria removal efficiency in infiltration basins was 90 percent (Schueler, 1997). Hultquist et al. found a virus removal of 99.2 percent or 2.1 logs reduction after infiltration of wastewater through 3 meters of sand and sandy loam soils. Infiltration rates were less than 5 m/day (Hultquist et. al., 1991).

In summary, the literature on the effectiveness of infiltration and filtration systems for treating pathogen indicators such as total and fecal coliform indicates that filtration as a treatment mechanism achieves removals in the range of 60 to 90 percent. This removal rate tends to be large relative to other stormwater treatment BMPs (e.g., extended detention basins) and therefore treatment trains which include a filtration component (as proposed in the combined control system) will provide effective removal of pathogen indicators. Since infiltration is an effective BMP up to the point of soil saturation, pathogens associated with dry weather flows, small storm flows, and the initial portion of large storm events will be effectively treated in the combined control system.

However, because there is no feasible method for infiltrating storm water flows from large storms due to saturated soil conditions and the impracticality of providing sufficiently large storage facilities, the Draft Program EIR identifies potential pathogen impacts as a potentially significant adverse impact even after applying all feasible mitigation measures. Through the use of source and treatment controls described above, the Proposed Project does employ BMPs meeting the "Maximum Extent Practicable (MEP)" standard established by the State Water Resources Control Board and accordingly reduces impacts to the maximum extent feasible pursuant to current water quality regulations.

Pathogen Removal Efficiency in Wetponds. The Ranch Project proposes to use a water quality basin sited in existing quarry pond for stormwater water quality management in the Gabino Sub-basin. This type of basin is called a wetpond, which are constructed basins that

have a permanent pool of water throughout the year (or at least throughout the wet season). Wetponds treat incoming stormwater runoff by settling and biological uptake. The primary removal mechanism is settling as stormwater runoff resides in this pool, but pollutant uptake, particularly of nutrients, also occurs to some degree through biological activity in the pond. Wet ponds are among the most widely used stormwater practices. Wetponds are considered by the California Stormwater BMP Handbook for New Development and Redevelopment (CASQA 2003) as having a high removal effectiveness for bacteria. Information contained in U.S. EPA's National Stormwater BMP Database indicates that wet ponds provide a sink for bacteria, rather than a source. GeoSyntec Consultants analyzed information available in the National Database on bacteria levels coming into and leaving wet ponds for four wet ponds. The average levels of bacteria entering the wet ponds was 11,000 colonies per 100 mL; levels were reduced by about 90 percent to a value of about 1,100 colonies per 100 mL at the downstream end of the wet ponds. The analysis was based upon the same methodology as described in Eric Strecker, *et al.*, "A Reassessment of the Expanded EPA/ASCE National BMP Database," Proceedings of the World Water and Environmental Congress 2003 (June 23-26, 2003, Philadelphia, PA).

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3.1.6.3 Impacts on Sensitive Species

The Draft Program EIR (page 4.5-30) sets forth several thresholds of significance for determining impacts to water resources. Of particular relevance to the question of impacts to sensitive species is the following threshold:

“Violate surface and/or ground water quality standards or waste discharge requirements for the receiving drainages, including applicable provisions of:

1. County of Orange SUSMP
2. California Toxics Rule for metals
3. RWQCB Basin Plan Standards”

As part of the analysis contained in the Draft Program EIR and Appendix C-2 Conceptual Water Quality Management Plan, research by Wetlands Research Associates was used to determine whether the proposed project would result in significant impacts using the above thresholds. Wetlands Research Associates (WRA, 2002) identified contaminants that could potentially impact sensitive aquatic species known to be located within, downstream of, or adjacent to the Ranch Plan boundary: the southwestern arroyo toad, the southern steelhead, and the tidewater goby. Contaminants of concern were chosen based on a comparison of benchmark concentrations, including ecological screening values in *Toxicology Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision* (Suter and Tsao 1996), Basin Plan objectives, and California Toxic Rule water quality criteria, to median lethal concentrations (LC50) for amphibians closely related to the arroyo toad and for southern steelhead; there were no published LC50s for the tidewater goby. LC50 are published in the USEPA AQUIRE (AQUatic toxicity Information RETrieval) Ecotoxicology database. LC50 are statistically estimated concentrations based on laboratory testing that are expected to be lethal to 50 percent of a group of organisms tested.

Pesticides. The following pesticides were identified as potential pollutants of concern by WRA: toxaphene, pentachlorophenol (PCP), and glyphosate. Toxaphene is an organochlorine pesticide that was very popular during the 1970s following the banning of DDT. Toxaphene was banned for all uses in 1990 (WRA, 2002). PCP is also a chlorinated pesticide that is primarily used as a preservative for wood products, and as a general herbicide. PCP is currently being phased out and is a Restricted Use Pesticide (RUP) that can only be purchased and applied by certified applicators. Glyphosate is a broad-spectrum, non-selective systemic herbicide commonly formulated as Roundup. (WRA, 2002).

Past and current agricultural practices consisted primarily of ranching, growing barley, and some nursery uses. In order to help identify the presence of legacy pesticides Wildermuth (2003) analyzed a total of 26 stormwater runoff samples taken from nine stations for organochlorine pesticides. Detection limits generally ranged from about 0.01-0.06 ug/l except for toxaphene, where the detection limit was 1.3 ug/l. All samples were below detection. These data indicate that legacy pesticides that were sampled and analyzed for were either not present or were present at levels below detection.

Wildermuth (2003) also collected dry weather samples for organophosphorus pesticides, which for the most part are currently still being manufactured and applied in the United States. Six samples were taken at six sampling stations. Detection limits for the organophosphorus

pesticides ranged between 0.1 to 0.3 µg/L. All samples were reported as being below detection limits.

Information about quantities of pesticides likely to be found in runoff from developed areas can be derived from field studies. Los Angeles County monitored ten common pesticides in stormwater runoff from eight land use characterization stations; two stations were commercial and single family land uses. The majority of laboratory results for the combinations of land uses and pesticides did not detect any concentrations above laboratory detection levels for all of the samples collected. Of the 80 combinations of individual pesticides and land uses within the Los Angeles data set, only 7 of these combinations had any measurable concentrations. The only detected pesticides were diazinon and glyphosate which, as shown in Table 2, were detected in only 3 to 4 percent of the samples. These data indicate that diazinon and glyphosate (roundup) are the most frequently detected pesticides in urban runoff, but the percent of samples above detection are generally less than 10 percent. (It should be pointed out that diazinon use has been phased out since the Los Angeles County data were collected.)

Similar results were found in water quality monitoring downstream of the Coto De Caza residential development bordering the Ranch Plan project site. No pesticides were detected during the monitoring.

TABLE 2
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
PESTICIDE SAMPLING SUMMARY

Pesticide/Group	# Samples	# Detects	Detection Limit (ug/l) percent	Maximum Concentration Criteria MCC (ug/l)
Organochlorine Pesticides & PCBs	242	0	0.05-1%	
Carbofuran	333	0	5%	
Glyphosate	154	5	25%	
Diazinon	302	12	0.01%	0.08 ^a
Chlorpyrifos	302	0	0.05%	0.02 ^a
Thiobencarb	302	0	N/A	
Other N- and P- Containing Pesticides	315	0	1.0-2.0%	
2,4-D	234	0	10%	
2,4,5-TP	234	0	1%	
Bentazon	234	0	2%	
ug/l: micrograms per liter				
a. Maximum Concentration Criteria (1 hr average)				

BMPs that will be implemented to address pesticides include non-structural and structural source control, low flow recycling, and treatment in the combined control system. The U.S. EPA has recently banned the pesticides diazinon and chlorpyrifos (commonly used urban pesticides) for most urban applications (U.S. EPA, June 2002). By virtue of the U.S. EPA's ban, these pesticides (as well as other identified/banned pesticides) may not be used for landscape maintenance within the project site.

Pesticide discharges are of particular concern in golf courses. An Integrated Pest Management Plan will be developed and implemented for the proposed golf courses. Integrated Pest Management is an ecosystem-based strategy that focuses on long-term prevention of pests or

their damage through a combination of techniques such as modification of cultural and mechanical practices and use of resistant varieties. Under Integrated Pest Management damage thresholds are established for greens, tees, fairways and rough for the following pest types: fungal pathogens, annual and perennial grass weeds, perennial broad leaf weeds, aquatic weeds, vertebrate pests, nematodes, insects, and algae. The first response to any identified pest-related damage that exceeds the specified threshold is a modification of mechanical or cultural practices such as hand picking or increasing the height of cut. Chemical controls (i.e., pesticides) are only used when all non-chemical treatments have failed to reduce the pest damage to the specified damage threshold. Dry weather flows and storm flows from the golf course will be treated in the combined control facilities, stored in non-domestic water storage reservoirs, and recycled for irrigation. If pesticides are used in response to uncontrollable exceedances of damage thresholds, pesticides that tend to be in particulate form, such as Glyphosate, will be subject to settling and filtration in the proposed detention and infiltration facilities.

Other source control measures include education programs for owners, occupants, and employees in the proper application, storage, and disposal of pesticides. In addition, pesticides at the golf course will be stored in an enclosure such as a cabinet, shed, or similar structure or will be stored on a paved surface and under cover and protected by secondary containment structures (such as berms, dikes, or curbs) in accordance with local, state and federal regulations, including the requirements of Orange County Fire Authority (OCFA), Occupation Safety and Health Administration (OSHA), and the Environmental Protection Agency (EPA).

Some increase in pesticide use is expected as the result of development due to maintenance of landscaped areas, particularly in the residential and golf portions of the development, based on the combination of source control and treatment strategy described above, potential impacts of pesticides on water quality are considered to be less than significant as set forth in the Draft Program EIR.

Trace Metals. Wetlands Research Associates also identified cadmium, copper, inorganic mercury, silver, and zinc as trace metals of concern with respect to sensitive aquatic species. The analysis of trace metals included modeling aluminum, cadmium, copper, lead, and zinc and compared the predicted concentrations with California Toxics Rule criteria developed to protect sensitive aquatic species.

Although the California Toxics Rule² is not applicable to stormwater discharges as noted in the Draft Program EIR (see Appendix C-2), this standard has been used as a conservative measure of significant impacts. For certain metals the CTR recognizes that hardness affects the bioavailability and therefore the toxicity of the metal and provides equations to determine the effects of hardness on the acute and chronic toxic concentration. The equations indicate that as hardness decreases, the metal toxicity increases (i.e., the criteria are lower). To be conservative, the minimum observed hardness from available monitoring data collected in the receiving stream were used to estimate the CTR criteria. This conservative methodology and approach is similar to the methodology used by EPA in establishing the "TMDL for Toxic Pollutants in San Diego Creek and Newport Bay, California (June 14, 2002). In this regard the determination that CTR criteria are not exceeded and therefore that the potential for impacts associated with trace metals is expected to be less than significant are well supported.

For example, Table 5-11 of Appendix C-2 identifies the predicted mean trace metal concentrations for the Chiquita Sub-basin and California Toxics Rule criteria corrected for hardness based on a hardness of value of 120 mg/L, the minimum value based on available monitoring data from San Juan Creek. This table indicates that projected levels of trace metals are well below California Toxics Rule criteria and the same was found for other sub-basins that were modeled. On this basis, it was concluded that the proposed development, by incorporating the proposed control facilities, would not result in runoff that could contribute to trace metal toxicity in receiving streams and thus would not result in impacts to sensitive aquatic species. The modeling did not include mercury and silver; because these are constituents that are associated with past and current mining activities rather than urban runoff.

Effects on Hydrologic Conditions of Concern. In addition to adverse impacts associated with water quality, sensitive species could potentially be affected by changes in hydrologic regime and associated changes in habitat conditions. Hydrologic requirements for sensitive species were identified in the report: Geomorphic and Hydrologic Needs of Aquatic and Riparian Endangered Species (PCR and Dudek & Assoc., 2002). In addition, the Draft Watershed and Sub-basin Planning Principles Report developed by the NCCP/SAMP Working Group identifies

² Pursuant to section 7(a) of the Endangered Species Act (ESA), U.S. EPA consulted with the U.S. Fish and Wildlife Service and the U.S. National Marine Fisheries Service (collectively, the Services) concerning the California Toxics Rule. The U.S. EPA initiated informal consultation in early 1994, and completed formal consultation in April 2000. As a result of the consultation, the U.S. EPA modified some of the provisions in the final rule. As part of the consultation process, the U.S. EPA submitted to the Services a Biological Evaluation for their review in October of 1997. This evaluation found that the proposed California Toxics Rule was not likely to jeopardize the continued existence of any federally listed species or result in the destruction or adverse modification of designated critical habitat. In April 1998, the Services sent the U.S. EPA a draft Biological Opinion which tentatively found that U.S. EPA's proposed rule would jeopardize the continued existence of several federally listed species and result in the destruction or have adverse effect on designated critical habitat. The Biological Opinion considered 18 species of birds, 29 species of fish, 18 species of reptiles and amphibians, 30 species of invertebrates, and 14 species of mammals. With respect to sensitive regional species, the Biological Opinion found that the Least Bell's vireo and Southwestern willow flycatcher were among species not likely to be adversely affected by the proposed action. The Southern California ESU Steelhead, Tidewater goby, and the Arroyo southwestern toad were species considered likely to be adversely affected by the proposed action. The U.S. EPA subsequently agreed in a Memorandum of Understanding (MOU) with the resource agencies to "develop a revised criteria calculation model" for trace metal toxicity by June 2003 that would take into account factors in addition to hardness. The California Toxics Rule was adopted by the U.S. EPA on May 18th, 2000 (Federal Register Volume 65, Number 97). In November 2003, EPA issued the "2003 Draft Update of Ambient Water Quality Criteria for Copper" (EPA-822-R-03-026) using a biotic ligand model that "explicitly accounts for individual water quality variables that effect toxicity and can address variables that were not factored into the hardness-dependent criteria relationship" (Fact Sheet: Draft Updated Copper Criteria (<http://www.epa.gov/waterscience/criteria/copper/draftupdatefs.htm>)). According to information provided at the website, this work was under scientific review through April 2004. Thus this work is preliminary and will likely be revised in response to scientific and other stakeholder input prior to EPA adoption.

watershed planning principles and sub-basin planning recommendations that explicitly address preservation and enhancement of riparian systems (NCCP/SAMP Working Group, 2003). These principles and recommendations were used to develop the Conceptual WQMP flow and sediment control strategies. For example, Table 4-6 of the Conceptual WQMP lists the planning recommendations for the Chiquita sub-basin and how the Conceptual WQMP meets each of these principles. Also a consistency analysis was conducted to ensure that Conceptual WQMP was responsive to the watershed planning principles and sub-basin planning recommendations.

Modifications to the sediment transport regime also could affect the habitat for sensitive species. In this regard efforts were made to preserve the sources of coarse sediment through avoiding development in coarse sediment supply areas (e.g., portions of Verdugo Sub-basin) and also minimizing the disruption in coarse sediment supply associated with the Conceptual WQMP control basins. (See Baseline Conditions Watershed Planning Principles Consistency Review in the Mitigation Program section of the Draft Program EIR.)

In summary, the potential hydrologic and water impacts on sensitive species took into account the extensive baseline data compiled by the project applicant and recommendations developed by the SAMP/NCCP Working Group and every effort was made to tailor the Conceptual WQMP to meet the specific habitat and flow issues identified in each sub-basin. In this regard, the Conceptual WQMP provides for water quality and flow controls that will maintain or enhance habitat and stream stability conditions throughout each watershed.

3.1.6.4 Cumulative Impacts in San Juan Creek and San Mateo Watersheds, Including Impacts to Trestles and Doheny Beaches

The Conceptual WQMP (Chapter 8) addresses the cumulative effects of the proposed project in the San Juan Creek watershed and the San Mateo Creek watershed.

Cumulative Impacts on San Juan Creek Watershed. Cumulative impacts in the San Juan Creek watershed were assessed by comparing the estimated increases in mean annual flows and pollutant loads generated by the proposed project development with the mean annual flows and loads calculated from monitoring data collected at the downstream gauging station at La Novia Bridge, located about one mile downstream of the project site and just upstream of the I-5 freeway in the City of the San Juan Capistrano.

Potential cumulative impacts on hydrologic conditions were assessed by primarily comparing projected increases in the mean annual volume of runoff with measured data. The average annual stormwater runoff volume at La Novia Bridge, based on available data for Water Year (WY) 1987 to 2002, is approximately 16,000 acre-feet/year. This period is more representative of runoff during above average rainfall conditions. The projected mean annual runoff contributions from the project were estimated for the available precipitation record (WY 1949 to 2001) at about 330 acre-feet/year. Therefore, the proposed development is projected to increase the volume of runoff at the La Novia Bridge by about two percent. This finding is not surprising given the size of the San Juan Creek watershed (approximately 177 square miles) compared to the area of the project site within the San Juan Creek watershed (approximately 5,900 acres, or about 9 square miles).

The project is projected to reduce total suspended sediments (TSS) loads at the La Novia Bridge by about two percent, and reduce concentration by about four percent. Comparable reductions are projected for the nutrients nitrate-nitrogen and phosphate-phosphorus. Predicted increases in dissolved metal loads in San Juan Creek at La Novia Bridge are 5.6 percent for dissolved copper, 5.8 percent for dissolved lead, and 6.9 percent for dissolved zinc. However,

average trace metal concentrations at La Novia Bridge are projected to increase only slightly and are well below the CTR criteria. Water quality downstream of La Novia bridge will be dominated by discharges from the relatively highly urbanized western portion of the San Juan Watershed, including Oso Creek and Trabuco Creek which drains portions of Mission Viejo and San Juan Capistrano, and direct discharges into lower San Juan Creek from portions of Dana Point.

Cumulative Impacts in San Mateo Creek Watershed. The cumulative impacts in the San Mateo Creek watershed were assessed by comparing the estimated flows generated by the project with those calculated from available monitoring data at two U.S. Geological Survey (USGS) gauging stations located in Lower Cristianitos Creek.

Average daily discharge data downstream of the Ranch Plan site are available from three USGS gauging stations. The periods of record for the data at each gauge vary and the records reflect either dry or wet periods. For the purpose of developing a benchmark condition representative of a mix of dry and wet years, annual estimates of runoff from the two gauges in Lower Cristianitos Creek were combined to provide an approximate estimate of average runoff of 2,000 acre-feet/year.

For the 53-year period of rainfall record (1949 to 2001), the hydrologic model predicts an increase in runoff volumes in lower Cristianitos Creek of about 480 acre-feet/year, which is about a 24 percent increase from existing conditions. The primary sub-basin that contributes to this increase is Lower Gabino. This increase does not take into account the fact that the Lower Cristianitos/San Mateo system is a "losing system" in which surface water runoff infiltrates into the stream bed and becomes part of the sub-surface flow system. One cause of this effect is the extensive groundwater pumping conducted at Camp Pendleton. This de-watering of the San Mateo system also has adversely impacted the arroyo toad habitat in the affected reaches. Additional runoff flows from the proposed development would augment in-stream flows and potentially improve arroyo toad habitat in this area. On this basis, the cumulative impact of the proposed development on flows in San Mateo Creek is considered less than significant.

The cumulative impacts of the project on water quality were assessed by comparing the predicted increase in loads with data collected by Wildermuth at Station SW-8 located on Cristianitos Creek below the confluence with Gabino Creek and upstream of the confluence with Talega Creek.

With the implementation of the proposed project, TSS loads in Lower Cristianitos Creek are estimated to remain unchanged. Nutrient loads are predicted to increase by about 10 percent. Concentrations of TSS and nutrients are projected to decrease because of the increased runoff volumes. Estimated changes in metal loads vary from a reduction of 16 percent for dissolved zinc to an increase of about 80 percent for dissolved lead. However, absolute changes in concentrations in Lower Cristianitos Creek are small, and in all cases are well below the CTR criteria calculated at a conservative (low) hardness value of 120 mg/L. Cumulative impacts to lower San Mateo Creek also will be reduced by the elimination of discharges from the Northrop-Grumman site.

In summary, these analyses indicate that the proposed treatment and flow control BMPs would limit cumulative increases in runoff volumes to moderate levels (about 20 to 30 percent) and would effectively control pollutant loads and concentrations.

Cumulative Impacts to Doheny Beach. Mid-Doheny Beach is located just north of the mouth of San Juan Creek and Doheny Beach South extends for a distance of about 2 miles south of

the mouth of San Juan Creek. According to the Technical Draft San Diego RWQCB Bacteria TMDL, these beaches are considered impaired for bacteria. Accordingly, bacteria and, specifically total and fecal coliform and enterococcus, are the primary pollutants of concern for evaluating cumulative impacts of the proposed project.

The effect of the proposed development on bacteria levels on Doheny Beach must be evaluated in context with the size of the San Juan Creek watershed and the considerable urbanized area located in the San Juan Creek watershed downstream of the Ranch Plan project site. Jurisdictions that now generate urban runoff include portions of the cities of Rancho Mission Viejo and San Juan Capistrano. Doheny Beach also is subject to urban runoff from developed areas which discharge directly into the ocean. These areas were developed before regulations regarding controlling urban runoff water quality came into effect, and bacteria levels are, therefore, uncontrolled at this time. Adoption of the 2003 DAMP Local WQMP requirements for both new and existing development should begin to address the cumulative condition.

As explained above, the proposed project includes numerous BMPs for controlling bacteria. These BMPs include source controls such as public education (including education on pet waste control), street sweeping, covered trash receptacles which reduce the amount of bacteria present at the proposed project available to come into contact with runoff. In addition, bacteria in runoff at the proposed project site will be subject to various treatment controls. Bacteria attached to particulates and solids suspended in runoff will be reduced through the combined effects of settling and filtration in the proposed flow control/water quality basins, infiltration basins, and bioinfiltration swales (According to the California BMP Handbook for New Development and Redevelopment, filtration and infiltration are considered effective treatment processes for bacteria.) Solar degradation of bacteria within these facilities also will help reduce bacteria levels.

During dry weather conditions, the Conceptual WQMP is projected to replicate the current hydrologic regime wherein most streams are ephemeral, and thus dry weather bacteria loads are likely to be negligible if not zero. During wet weather, the Conceptual WQMP is designed to treat 80 to 90 percent of the runoff from developed areas and, as discussed above, will achieve bacteria treatment through a combination of source and treatment controls. During large rainfall runoff events, the Conceptual WQMP is designed to treat runoff from the initial portion of the storm. The remainder of flows and associated pollutants will bypass the Conceptual WQMP facilities. These large flows will result in discharges that will likely exceed water quality criteria set forth in the San Diego RWQCB Draft Bacteria TMDL. However, there is provision in the TMDL for occasional exceedances to accommodate natural background levels, many of which are associated with larger runoff events.

Some commenters have expressed concern regarding the potential impacts of pathogens on public health associated with the Ranch Plan. Such impacts would be primarily associated with recreation along the coastal beaches, including Doheny Beach. The impacts to public health would be through potential exposure of swimmers to increased pathogen levels. There are various factors that would mitigate the potential for impacts from the project, including:

- Pathogen indicators are not necessarily considered good indicators of the presence of pathogens,
- Pathogen levels at the coastal beaches include a variety of sources including substantial downstream development in the San Juan watershed,

- Given the distance between the project and beaches, significant reductions in pathogen indicator levels can occur in the intervening stream system, and
- The effects of elevated pathogens is likely to occur primarily during larger storm events when dilution effects are most pronounced.

Cumulative Impacts to Trestles Beach and Trestles Wetland Natural Preserve. Trestles Beach and Reserve are located near the mouth of San Mateo Creek in San Diego County. The beach is included as part of the San Clemente Hydrologic Subarea (HA), which appears on the impaired list of water bodies in the Draft Technical San Diego RWQCB Bacteria TMDL. However, there is concern that the proposed project site could adversely affect bacteria levels along Trestles Beach. As described above, the proposed Conceptual WQMP calls for a comprehensive set of source and treatment controls selected to address the constituents of concern, including bacteria.

In the San Mateo Creek watershed, infiltration opportunities are less available than in the San Juan Creek watershed, and, consequently, more emphasis is placed on recycling stormwater and contributing to the non-potable water supply system. Depending on the proposed use (most likely irrigation for golf courses and common landscaped areas), such water would likely evapotranspire with some incidental infiltration. In either case, conditions for bacterial survival and growth would be severely limited.

Treatment in the San Mateo Creek watershed also will use existing wet ponds in the lower Gabino Sub-basin that have been created by the natural filling of quarry areas. Information contained in U.S. EPA's National Stormwater BMP Database indicates that wet ponds provide a sink for bacteria, rather than a source. GeoSyntec Consultants analyzed information available in the National Database on bacteria levels coming into and leaving wet ponds for four wet ponds. The average levels of bacteria entering the wet ponds was 11,000 colonies per 100 mL; levels were reduced by about 90 percent to a value of about 1,100 colonies per 100 mL at the downstream end of the wet ponds. The analysis was based upon the same methodology as described in Eric Strecker, et al., "A Reassessment of the Expanded EPA/ASCE National BMP Database," Proceedings of the World Water and Environmental Congress 2003 (June 23-26, 2003, Philadelphia, PA).

Runoff from the proposed Ranch Plan project, given the proposed source and treatment controls called for in the Conceptual WQMP, will not adversely affect bacteria levels along Trestles Beach.

3.1.6.5 Best Management Practice (BMP) Effectiveness and Monitoring

Theme of Comments: Commenter have noted concern about the effectiveness of the proposed facilities; to what extent the facilities will be monitored and maintained to ensure that the facilities perform as projected; and lastly if monitoring indicates that the facilities are not meeting the projected performance, what action would be taken?

Response: The proposed Conceptual WQMP calls for a series of source and treatment controls that have been selected and sized to effectively address pollutants of concern and hydrologic conditions of concern. The process of developing the Conceptual WQMP has followed the guidance provided in the Orange County DAMP and the County's Local Water Quality Management Plan (Local WQMP). Selection of the BMPs took into account:

- Current available monitoring data on the performance of similar facilities, as summarized in the California BMP Handbook and EPA's Nationwide BMP database, which includes a number of facilities in California such as those monitored by various countywide stormwater programs and Caltrans;
- Local rainfall, soils, and topographic conditions; and
- Biological considerations regarding the protection and enhancement of habitat for sensitive species.

Chapter 6 of the Conceptual WQMP presents an adaptive management approach to evaluate whether elements of the Conceptual WQMP are functioning as intended and to implement corrective procedures should monitoring or operations and maintenance (O&M) reveal potential impacts to the hydrologic conditions or limitations with the BMPs. The main issues addressed by this management plan are effective water quality treatment and hydrologic source control.

The Adaptive Management Plan includes the following elements:

- *BMP Inspection and Performance Monitoring.* Routine inspection and monitoring of structural BMPs are required to establish that they are properly maintained and functioning as intended.
- *Hydrologic Monitoring.* Routine monitoring of the general hydrologic conditions is needed to ascertain if there are changes in the hydrologic regime or watershed characteristics.
- *WQMP Review and Evaluation.* Annual review of the monitoring and inspection data will be conducted to determine if there is a need for corrective action, to evaluate impacts from changes in the watershed conditions on the hydrologic regime or BMP performance, and, in general, to evaluate if the WQMP is effective in meeting the planning objectives.
- *Corrective Measures.* Corrective measures will be undertaken for specific problems or conditions of concern identified in the review and evaluation. Depending on the nature of the problem, corrective measures could involve modification of the BMP design, operation, or O&M, and/or implementation of additional structural BMPs. The effectiveness of the corrective measures will themselves be evaluated through continued monitoring. Thus, the management approach is adaptive to specific problems or conditions as they arise and are identified through ongoing monitoring, documentation, and evaluation.
- *Documentation and Reporting.* Documentation of all O&M and monitoring activities will establish a continuous record of the condition of structural BMPs and the health of the hydrologic regime. All records will be available to regulatory and resource agencies.

Table 6-1 in Chapter 6 of the Conceptual WQMP provides a summary of the activities to be undertaken for each of the above categories, along with corrective measures to be taken if these activities indicate that the Conceptual WQMP is underperforming.

3.1.6.5 Groundwater Impacts

Groundwater in the San Juan and San Mateo Basins is an important source of municipal and agricultural water supply. Groundwater in the San Juan Basin is used for municipal, nursery, agricultural, and ranching purposes, and groundwater in the San Mateo Basin is the sole source of potable water for the northern half of the Marine Corps Base (MCB) Camp Pendleton.

Infiltration Best Management Practices (BMPs) are planned to help manage dry- and wet-weather runoff from the proposed Ranch Plan development. Because urban runoff can convey a variety of pollutants, there is concern that the use of infiltration BMPs could potentially impact the quality of groundwater resources, especially in the San Mateo Basin where groundwater, as indicated above, is the sole source of potable water for portions of MCB Camp Pendleton.

Infiltration BMPs are often considered a desirable treatment approach because they reduce the volume of runoff to receiving waters, effectively reduce pollutant loads, and help to alleviate the significant changes to the hydrologic regime that typically occurs with urban development. Because of their general widespread use, monitoring and research studies have been conducted to investigate the potential impacts from infiltration BMPs on groundwater quality. Local regulators have also placed restrictions on the use of infiltration BMPs in order to protect groundwater quality. The Conceptual WQMP has been designed to meet these requirements. The following is intended to amplify the groundwater impacts discussion of these topics contained in the Draft Program EIR.

Studies of Groundwater Impacts from Infiltration BMPs. Infiltration is incorporated as a flow and water quality control element in the Ranch Plan where infiltrative and other conditions are suitable. However, there is a concern that infiltration facilities could adversely affect groundwater quality. Results from studies examining the impacts of infiltration BMPs on groundwater have reported that common stormwater constituents are absorbed in the first few centimeters of soils below basins and, therefore, pose low risk to the underlying groundwater. The following literature provides the scientific basis for this conclusion.

Extensive research on the effects of stormwater infiltration on groundwater quality has been conducted in Fresno which operates over 130 infiltration basins designed to infiltrate stormwater into a sole source drinking water supply aquifer. Extensive research lead by Dr. H.I. Nightingale as part of a Nationwide Urban Runoff Program (NURP) Project (Brown and Caldwell, 1984) indicated that "during recharge, basin soils provide a high degree of removal of storm runoff contaminant, thus protecting groundwater quality." Contaminants investigated included trace metals, pesticides, and other organics. In a more recent study by the US Geological Survey of an infiltration basin located in an industrial catchment, "most of the contaminants were found to be absorbed to the upper 4 centimeters of sediment" (Schroeder, 1995).

Barraud et al. (1999) evaluated the impact of two infiltration facilities on soil and groundwater. One facility was 5 years old, one was 30 years old, and both served a road network with "classical" urban development. High concentrations of metals and hydrocarbons were found in the upper four inches of soil. However, concentrations fell off rapidly in the soil column, reaching low levels at depth of about a foot. Groundwater impact was low. Percent removals for the thirty year old facility were 54 to 88 percent for zinc and 98 percent for lead. Removals in the five year old facility were 31 percent for zinc and 30 percent for cadmium.

The Center for Watershed Protection (2000) developed a national database using monitoring studies from 1990 to 2000. The median pollutant removal efficiencies for the six infiltration basins included in the database were as follows: 95 percent removal for total suspended solids,

70 percent for total phosphorous, 85 percent for soluble phosphorus, 51 percent for total nitrogen, 82 percent for nitrate and nitrite, 88 percent for carbon, 98 percent for lead, and 99 percent for zinc. No data were available for hydrocarbons, cadmium, copper or bacteria.

The impact of pollutants on soil and groundwater by infiltration of highway runoff over greened embankments was estimated by Dierkes et al. (1999). The embankments had a substructure of gravels underlain by 4 to 12 inches of sandy, highly permeable soil. The soils had high retention efficiencies; more than 95 percent for cadmium, 84 percent to 94 percent for zinc, and 77 percent to 98 percent for lead. Retention of copper was lower (i.e., 43 percent to 61 percent). This lower efficiency was attributed to high organic content in the soils.

Legret et al. (1999) used the mathematical model LEACHM to simulate 50 years of heavy metal infiltration into soils and groundwater beneath porous pavement. Results indicated that metals were retained in the upper 8 inches of soil, and it was concluded that "long-term pollution risks for both soil and groundwater are low."

Schueler (1987) reviewed wastewater land disposal data and, assuming the infiltration basin was sized to treat runoff from a one-inch storm, found that pollutant removal efficiency in infiltration basins was 99 percent for total suspended solids, 65 percent to 75 percent for total phosphorus, 60 percent to 70 percent for total nitrogen, and 95 percent to 99 percent for metals.

Regulatory Requirements for Infiltration. The policies and restrictions on the use of infiltration BMPs contained in the San Diego RWQCB MS4 Orange County Permit (Order No. R9-2002-0001), Orange County DAMP, and County Local Water Quality Management Plan are intended to protect groundwater resources. These policies and restrictions include:

1. Pretreatment to remove pollutants and particulates that could contribute to clogging of the infiltration basin.
2. Proper site soils. Infiltration systems should only be used in areas where soils with a suitable infiltration capacity.
3. Infiltration BMPs may not be used in areas where the groundwater table is close to the ground surface. There must be at least 10-feet of soil between the ground surface and the seasonal high groundwater.
4. Infiltration BMPs should not be used to treat runoff from areas with a high pollutant potential, such as industrial areas.
5. Infiltration BMPs should not be used to treat dry weather flows.

In the Conceptual WQMP, infiltration BMPs are designed to meet the applicable Regional Board and County requirements for use of infiltration BMPs.

1) Pollutant Reduction and Pretreatment.

Extensive use of site design and source control BMPs described in the Conceptual WQMP will reduce the amount of pollutants in urban runoff. The first line-of-defense, as well as the most effective approach, for reducing the amount of pollutants in urban runoff is to prevent the pollutants from entering the runoff. The Conceptual WQMP specifies an extensive suite of site design and source control BMPs that will limit the introduction of pollutants into project runoff. These measures are listed in Tables 4-1, 4-2, and 4-3 of

the Conceptual WQMP. Measures include: reducing the amount of runoff by reducing imperviousness and disconnecting roof drains, conserving natural area, providing runoff storage in landscape areas, use of native and drought tolerant plants, and use of efficient irrigation systems.

All runoff from developed areas will receive a high level of treatment prior to infiltration. Flow duration/water quality (FD/WQ) basins will incorporate extended detention with a 48-hour draw down time to provide water quality treatment for storm flows. Extended detention basins are designed with outlets that detain the runoff volume from the water quality design storm (e.g., the 85th percentile 24-hour event) for some minimum time (e.g., 48 hours) to allow particles and associated pollutants such as phosphorus, metals, and organic compounds to settle. Laboratory settling column tests indicate that 48 hour settling achieves 70 to 90 percent TSS removal depending on the influent TSS (Grizzard et. al., 1986). According to the data contained in EPA's International BMP Database, the median TSS effluent concentration for extended detention ponds is approximately 30 mg/L (Winer, 2000). TSS effluent concentrations for extended detention basins based on Caltrans studies resulted in a mean concentration of 39 mg/L (DAMP Appendix E1). Fact sheets contained in the California Stormwater BMP Handbook for New Development and Redevelopment (CASQA 2003) provide information on design, operation and maintenance, relative removal effectiveness (high, medium, low), and BMP experience with emphasis on California conditions and where available, experience in Orange County. Dry Extended Detention basins are described in Fact Sheet TC-22, which indicates that the relative removal effectiveness for solids is medium. These fact sheets, along with other data sources, were used to help select appropriate source and treatment control BMPs.

The FD/WQ basins will also incorporate wetland vegetation in a low flow channel along the bottom of the basins for the treatment of dry weather flows and small storm events. Water cleansing is a natural function of wetlands, offering a range of treatment mechanisms. Sedimentation of particulates is the major removal mechanism. However, the performance is enhanced as plant materials allow pollutants to come in contact with vegetation and soils containing bacteria that metabolize and transform pollutants, especially nutrients. Plants also take up nutrients in their root system. These processes are most effective when the wetland is designed to have a retention time for dry weather flows of one to two weeks. The effectiveness of this natural treatment concept has been demonstrated regionally in the Irvine Ranch Water District's (IRWD) San Joaquin Marsh and in the Prado Dam wetlands that treat reclaimed water that ultimately is recharged in the recharge basins in the Santa Ana River. The success of the San Joaquin Marsh has led IRWD to propose a network of constructed wetlands as part of a Natural Treatment System Master Plan (IRWD, 2003). This plan would locate multiple wetlands throughout the 122 square mile San Diego Watershed. Modeling has indicated that the system will substantially meet the ultimate target nitrogen reductions called for in the Upper Newport Bay TMDL. Monitoring data collected by Orange County as part of its Regional Monitoring Program show that interim nutrient targets are already being met. Dry weather flows and small storm flows will tend to infiltrate into the bottom of the basin after receiving treatment in the low flow wetlands.

Effluent quality data for detention basins and wetlands obtained from the ASCE/EPA Nationwide BMP Database (ASCE, 2001) are listed in Table 3.

TABLE 3
MEDIAN STORMWATER EFFLUENT CONCENTRATIONS OF SELECTED BMPs

Parameter	Detention Basins		Wetlands ^a	
	Water Quality Basin Outflow Concentration ^a	Number of Samples	Water Quality Basin Outflow Concentration ^a	Number of Samples
TSS (mg/L)	8.8	366	8.6	224
Total Nitrogen (mg/L)	2.81	38	1.22	351
Total Phosphorus (mg/L)	0.2	176	0.1	227
Total Copper (ug/L)	20	118	3.0	88
Dissolved Copper (ug/L)	14	73	6.5	7
Total Lead (ug/L)	15	113	1.0	22
Total Zinc (ug/L)	94	143	16.3	99
Dissolved Zinc (ug/L)	63	73	15.2	7
Fecal Coliform (MPN/100mL)	900	24	23.0	5
a. Estimates based on data from the National Stormwater Best Management Practices Database outflow concentration data; the median values of outflow data from all available studies for each of the BMPs were used to provide estimates of BMP performance.				
b. Effluent data from wetlands in the BMP database are limited.				

Pollutant concentrations in treated flows directed to infiltration BMPs are expected to meet water quality standards based on results of a water quality model and on available monitoring data.

As part of the analyses conducted for the Conceptual WQMP, a water quality model was developed that estimated constituents in stormwater flows following treatment in the water quality basins and prior to routing to the infiltration BMPs. The modeling approach is discussed in detail in Appendix B of the Conceptual WQMP of the Draft Program EIR. Results of this model are shown in Table 4, where they are compared to drinking water standards. All estimated concentrations are below the drinking water standards, with the exception of total aluminum where projected concentrations may exceed the secondary Maximum Contaminant Level (MCL) (secondary MCLs are not related to the protection of human and/or biological health effects, but rather relate to such issues as taste and odor.) All pollutants that are in the particulate phase or are associated with sediment, such as total metals, would be removed even further in the infiltration BMP, prior to entering ground water. Thus, for the constituents that were modeled, results indicate that the treated stormwater runoff would not pose a threat to potable water supplies.

The findings of the model results are supported by local stormwater monitoring information. The project applicant conducted stormwater monitoring at various locations in the project area. One location is located in Gobernadora Creek, just downstream of a large residential development (Coto de Caza) that borders the Ranch Plan site. This residential development is somewhat representative of portions of proposed project in that it includes low-density residential housing, a golf course, and limited commercial development. However, more protective site design and source control BMPs than currently exist in Coto de Caza are proposed for the Ranch Plan project.

TABLE 4
COMPARISON OF ESTIMATED STORMWATER CONCENTRATIONS AND
WATER QUALITY CRITERIA

	Estimated Mean Annual Concentration in Stormwater After Treatment				Minimum of Cal DHS or USEPA Drinking Water	
	Gabino	Cristianitos	Gobernadora	Chiquita	Primary MCL	Secondary MCL
Nitrate (mg/L)	0.4	0.8	0.7	0.8	10	NL
Dissolved Copper (ug/L)	10	12	9.3	11	1300	1000
Dissolved Lead (ug/L)	2.9	2.1	3.0	2.4	15	NL
Dissolved Zinc (ug/L)	37	62	40	84	NL	5000
Dissolved Cadmium (ug/L)	0.5	0.9	0.3	0.5	5	NL
Total Aluminum (ug/L)	560	530	580	600	1000	50-200
NL = Not Listed						
¹ Acute Criterion calculated at a hardness of 120 mg/L, the minimum value of monitoring data						

Watershed, a relatively undistributed watershed with no major urban development. The monitoring data from both locations are compared to drinking water standards. The results in Table 4 show that constituent concentrations measured in stormwater below the residential development of Coto de Caza are generally in compliance with drinking water standards. Moreover, the ranges observed from the area below the urban development are generally equal to ranges observed in the undeveloped San Mateo Basin.

In addition to the results presented in Table 5, there are considerable monitoring results for other constituents, including a number of pesticides and some organics (see Appendix C of the Ranch Plan Conceptual WQMP). There were no detected pesticides, and organics compounds were detected at very low concentrations at both locations. In general, the available monitoring data suggest that the pesticides and organic compounds in stormwater runoff from urban and undeveloped land uses within the project area would not pose a risk to potable water supplies, including groundwater.

TABLE 5
COMPARISON OF RANCH PLAN STORMWATER MONITORING DATA
AND WATER QUALITY CRITERIA

	Observed Range (Gobernadora downstream of Coto de Caza)	Observed Range (San Mateo Basin)	Minimum of Cal DHS or USEPA Drinking Water		CTR Protection of aquatic health
			Primary MCL	Secondary MCL	
Nitrate (mg/L)	0.58-1.1	0.29-1.1	10	NL	NL
TDS (mg/L)	230-500	310-440	NL	500	NL
Dissolved Cadmium (ug/L)	ND-0.034	ND-0.37	5	NL	5.2 ¹
Dissolved Copper (ug/L)	2.5-4	1.3-4.7	1300	1000	16 ¹
Dissolved Lead (ug/L)	ND-3.9	ND-0.19	15	NL	79 ¹
Dissolved Nickel (ug/L)	1.1-1.3	2-9.6	100	NL	550
Dissolved Zinc (ug/L)	ND-14	ND-26	NL	5000	137 ¹
NL = Not Listed; NM = Not Monitored					
¹ Acute Criterion calculated at a hardness of 120 mg/L, the minimum value of monitoring data					

2) Infiltration BMPs will be used only in areas with suitable soils.

Planning principles for the Ranch Plan were based on a comprehensive terrain analysis. In formulating the Conceptual WQMP, infiltration BMPs were selected only for those areas that have suitably well-drained soils, based on the available geologic and soils information and the terrain analysis. Infiltration BMPs were sited in areas with loamy sand. Soils with a saturated hydraulic conductivity less than about 2 inches/hr were considered to be unsuitable for infiltration. In general, suitable soils are found in the canyon floors containing alluvial deposits (e.g., see Figure 1-6, Draft Program EIR Appendix B.2, which illustrates the geomorphic terrain and, specifically, the infiltrative sands and alluvial deposits.). In the San Juan Creek watershed, alluvial deposits are fairly common, including areas with wide terraces of alluvial deposits in the Gobernadora and Chiquita sub-basins. Such deposits are less common in the San Mateo Creek watershed. Therefore, infiltration BMPs are used to a greater extent in the San Juan Creek watershed sub-basins.

3) Minimum Depth to Groundwater. Infiltration BMPs will be a minimum of 10 feet above the water table. Available groundwater information used in formulating the Conceptual WQMP indicates that the minimum depth to groundwater in the Chiquita and Gobernadora sub-basins is generally 20 to 40 feet or more in the side canyons, and 10-20 feet in the main canyons, except near the main-stem channels. The depth to ground water in the lower reaches of Gabino Canyon is in the range of 8 to 16 feet.

The ultimate location of the planned infiltration basins will be established during final design studies. The final design analyses will include measurements of site-specific depths to groundwater to ensure that infiltration basins are constructed only in areas that have a minimum distance of 10 feet above the water table.

4) Infiltration BMPs will not be used to treat runoff with a high pollutant potential. As described in the Conceptual WQMP, the vast majority of runoff that will be directed to infiltration BMPs will be from residential areas, largely low density single family housing, and from associated parks, schools, transportation land uses, and limited commercial areas. The proposed land uses do not include areas with a high pollutant potential in stormwater runoff, such as industrial or manufacturing areas.

5) Infiltration BMPs will not be used to treat dry weather flows. Available dry weather monitoring data collected below the existing development in Coto de Caza (see Appendix C, Conceptual WQMP, of the Draft Program EIR) show that few detected pollutants exist in the monitored flows. This suggests that any dry-weather flows from the proposed development will similarly have few pollutants, as the proposed development will include a higher level of site design and source control BMPs.

Any dry weather runoff from the proposed development will be routed through the low flow wetlands in the FD/WQ basins for treatment. Treatment wetlands are generally considered to be one of the more effective treatment approaches, as they are effective at removing a variety of dissolved and particulate pollutants. Incidental infiltration and evapotranspiration will occur in the treatment wetlands in dry weather. The only dry weather flows that will flow to the infiltration basins are those that have been fully treated in the low flow wetlands. Thus, the infiltration BMPs will not be used to treat dry weather flows.

Conclusions. Infiltration BMPs used to manage dry and wet weather runoff from the proposed RMV development will not pose a significant risk to groundwater quality because:

- Source control and site design BMPs included in the project will be effective at reducing pollutant levels in runoff.
- All runoff (both dry and wet weather) will be effectively treated in water quality basins that incorporate low flow wetlands prior to infiltration.
- Available dry and wet weather monitoring data collected below an existing development in Coto de Caza, as well as results from a planning level pollutant loads model, indicate that runoff from the proposed development will meet drinking water standards and criteria for protection of aquatic health, prior to infiltration.
- Information in the literature indicates that any pollutants in infiltration flows are generally transported only for short distances in the subsurface. This indicates that compliance with applicable regulations requiring a minimum 10-foot separation between the infiltration basins and the groundwater table will be protective of groundwater quality.

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3.1.7 TRANSPORTATION AND CIRCULATION

3.1.7.1 Traffic Forecasts

Theme of Comments: Several commenters indicated that the Ranch Plan Draft EIR traffic study was not prepared using the County's traffic model.

Response: The South County Sub-Area Model (SCSAM), a traffic forecasting model that is designed to be used for a variety of traffic forecasting applications in south Orange County. Traffic forecasts from the SCSAM are intended for application in the traffic impact assessment of significant land use and transportation projects in that portion of Orange County. The SCSAM is a sub-area derivation of the Orange County Transportation Analysis Model (OCTAM). It is designed as a focused sub-area model that has the capability to forecast peak hour as well as average daily traffic (ADT) conditions and therefore can be used as a traffic forecasting tool for a variety of traffic studies in the model's primary traffic forecasting area. The SCSAM meets the consistency requirements of the Orange County Congestion Management Program (CMP), and provides sub-area model compatibility with OCTAM 3 prepared by the Orange County Transportation Authority (OCTA). As a derivative of OCTAM 3, the SCSAM retains the basic regional forecasting features of OCTAM 3 while producing more refined data within the sub-area model's focus area. For descriptive purposes, the modeling processes in the SCSAM can be divided into the following four general components: 1) Network Definition; 2) Trip Generation; 3) Trip Distribution/Mode Choice; and 4) Traffic Assignment.

The network definition component of the model follows that of OCTAM 3 with network refinements being made to support the higher level of detail (e.g., finer grained zone system and highway network) in the primary traffic forecasting area. Outside the primary area, the SCSAM zone system is based on OCTAM 3 zones or aggregations of OCTAM 3 zones. For areas where OCTAM 3 zones are aggregated, the highway network definition is correspondingly more course-grained. The trip generation component has the ability to use both land use and socioeconomic data. The model primarily uses a socioeconomic database (for County consistency purposes), but land use data can be inserted for selected areas when applications of the SCSAM require the use of land use data. In the trip distribution/mode choice component of the SCSAM, use is made of regional travel forecast data (i.e., trip tables) from OCTAM 3 thereby incorporating regional trip patterns into the subarea model. The regional traffic data is obtained from OCTAM 3 in the form of vehicle trips, and hence also incorporates mode choice relationships established by the OCTAM 3 parent model.

The traffic assignment component of the SCSAM applies procedures that are sensitive to the capacity of the network and which are able to forecast peak hour (a.m. and p.m.) and ADT traffic volumes with reasonable reliability. Due to the prevalence of high occupancy vehicle (HOV) facilities and tollways within and in the immediate vicinity of the SCSAM primary modeling area, HOV and non-HOV trips are assigned separately and toll effects on route selection are taken into account during the traffic assignment process. Procedures are also applied in the SCSAM to refine raw traffic model forecast data using techniques described in the National Cooperative Highway Research Program Report 255 (NCHRP 255) published by the Transportation Research Board (TRB).

The OCTA has developed OCTAM 3.1 based on Orange County Projections 2000 (OCP-2000), the countywide socioeconomic projections that were approved by the Orange County Council of Governments (OCCOG) in June 2000. The OCTAM 3.1 was adopted in June 2001 together with a set of sub-area model consistency guidelines which are outlined in OCTA's Orange County Subarea Modeling Guidelines Manual. This manual provides sub-area modeling

guidelines whose goal is to ensure consistency between local sub-area models and the adopted OCTAM regional model, as well as with the Southern California Association of Governments (SCAG) regional model. The guidelines have also been developed to comply with requirements of state and federal legislation including the Congestion Management Program (CMP), the Transportation Equity Act for the Twenty-first Century (TEA-21), and both state and federal Clean Air Acts. The CMP requires consistency in databases and modeling, while the TEA-21 and Clean Air Acts require improved analytical capabilities to evaluate and monitor transportation improvements, policies, plans and programs. The basic SCSAM modeling procedures have been carefully designed to follow the Orange County sub-area modeling guidelines. The SCSAM has been certified by the OCTA as complying with these guidelines, and OCTA verified that the use of this model is appropriate for evaluating the traffic impacts associated with proposed development projects such as the Ranch Plan. See attached letter from OCTA dated February 10, 2004 and contained in the Appendix B of this Responses to Comments document. A model validation/description report (SCSAM) is available for review at the County of Orange Planning and Development Services.

Information regarding SCSAM is provided below.

Use of the Model

The SCSAM was developed to serve a number of jurisdictions in south Orange County, including the cities of Laguna Niguel, San Juan Capistrano, Mission Viejo, San Clemente, and unincorporated Orange County communities (including Las Flores, Ladera Ranch, and the Ranch Plan area). In each of these cities and communities, the SCSAM has been used for a variety of Transportation Planning Applications. Other public agencies using the SCSAM include the Transportation Corridor Agencies (TCA), for which numerous studies have been carried out, including the South Orange County Transportation Infrastructure Improvement Project (SOCTIIP), and Caltrans, for which the SCSAM has been used for freeway interchange studies.

Demographic Data Projections

The OCTAM 3.1 "parent model" for the SCSAM uses OCP-2000 demographic data within Orange County. These forecasts are prepared by the Center for Demographic Research (CDR) and approved by the Orange County Council of Governments (OCCOG). They provide projections for five-year intervals from 2000 to 2025, and are used as a consistent database for transportation planning in Orange County. By means of the process undertaken by CDR on behalf of the OCCOG, all the cities in the County provide input and approve the final projections. The SCSAM uses the same OCP-2000 demographic data forecasts except for within the cities of Mission Viejo, San Juan Capistrano, and San Clemente, where General Plan data is used. As summarized in the SCSAM model documentation, each of those cities is considered to be built out in 2025. Therefore, the OCP-2000 year 2025 projections and the General Plan data are essentially the same.

Trip Generation/Distribution and Mode Choice

Regionwide trip generation, trip distribution, and mode choice results applied in the SCSAM are taken directly from the OCTAM 3.1 model (refer to the OCTAM 3.1 model description and validation report for a complete description of the OCTAM 3.1 trip generation and trip distribution procedures). The OCTAM 3.1 parent model generates and distributes person trips by eight trip purposes: home-based work, home-based school, home-based college and university, home-based shopping, home-based social-recreational, home-based other, work-

based other, and other-based other. During the OCTAM 3.1 mode choice process (i.e., the conversion of person trips to vehicle trips), these eight trip purposes are condensed to five trip purposes, Home-Based Work/University (HBW/U), Home-Based Other (HBO), Home-Based School (HBSch), Work-Based Other (WBO), and Other-Based Other (OBO). As part of its mode stratification, the OCTAM 3.1 mode choice procedure also subdivides the trips for the five trip purposes into drive alone, carpool (two persons and three or more persons), pay (toll), and free (non-toll) classifications. These OCTAM 3.1 regional model trip generation trip distribution and mode choice results are applied directly in SCSAM, thereby satisfying the consistency requirements that are contained in the Subarea Modeling Guidelines Manual for these three crucial sub-area traffic model processes. Hence, the OCTAM trip distribution process determines key traffic characteristics of the proposed project such as external trip distribution, the project internal capture, and the trip redistribution associated with no project versus project conditions (see later discussion on this important aspect of the traffic modeling).

In using the OCTAM 3.1, vehicle trip tables in actual SCSAM applications, the OCTAM data is converted to the SCSAM traffic analysis zone (TAZ) system for application of the more detailed zone system and network in the subarea model. This is the type of approach recommended in the Subarea Modeling Guidelines Manual when subdividing regional model (OCTAM 3.1 in this case) trip distribution results (i.e., trip tables).

Local Trip Generation

Trip generation estimates for localized areas (such as a proposed project) can be produced from either land use or socioeconomic data and used to replace the corresponding trip generation in the OCTAM (this approach is consistent with the procedures outlined in the OCTA subarea modeling guidelines). The reason that land use is used in some areas is to more accurately depict local databases rather than using OCP-2000 projections (see discussion in previous section under the heading "Demographic Data Projections"). When land use is used, the land use data is converted to socioeconomic data for use in the model through a process accepted by OCTA and jurisdictions in south Orange County. The socioeconomic variables used to generate trips are summarized as follows:

- | | |
|---|------------------------------------|
| 1. Single-Family Dwelling Units (Occupied and Unoccupied) | 6. Retail Employees |
| 2. Multi-Family Dwelling Units (Occupied and Unoccupied) | 7. Service Employees |
| 3. Population | 8. Other Employees |
| 4. Employed Residents | 9. Elementary/High School Students |
| 5. Income (millions of dollars) | 10. College/University Students |

These variables are consistent with those used in OCTAM 3.1 to carry out trip generation procedures, except that OCTAM 3.1 applies "occupied dwelling units" rather than "total dwelling units" as the dwelling unit variable. Total dwelling unit data is applied in the SCSAM because the General Plan land use databases that are incorporated into the SCSAM (i.e., for Mission Viejo, San Juan Capistrano, San Clemente, and Ladera) do not distinguish between occupied and unoccupied units. To be consistent with OCTAM 3.1 trip generation procedures, SCSAM residential trip generation rates are derived to reflect occupancy levels that are indicated in the OCP-2000 socioeconomic data for south Orange County. Therefore, total dwelling unit data available from the OCP-2000 socioeconomic projections or from land use data is used to generate trips using the SCSAM residential trip rates.

Vehicle trips are generated according to the following five trip purposes:

1. Home-Based Work/University (HBW/U)
2. Home-Based Other (HBO)
3. Home-Based School (HBSch)
4. Work-Based Other (WBO)
5. Other-Based Other (OBO)

The trip generation for each purpose is in the form of average daily traffic (ADT) vehicle "trip ends" separated into "productions (P)" and "attractions (A)." Productions represent the trip generation at the resident end of home-based trips or the origins of non-home-based trips. Attractions represent the non-resident end of home-based trips or the destination end of non-home-based trips. Productions are often denoted as P's and attractions as A's. To produce P's and A's by trip purpose, trip ends for each socioeconomic data type within a traffic zone are first generated on an ADT basis. Those ADT trips are then split into productions and attractions by purpose using a set of splitting factors. Vehicle trip rates for each of the ten socioeconomic categories mentioned earlier were derived from regression analysis and relationships embodied in the OCTAM 3.1 regional model. The resulting SCSAM vehicle trip rates are listed in Appendix B, Traffic Resources Material-SCSAM Socioeconomic Vehicle Trip Rates, of the Responses to Comments document, and a detailed discussion on the derivation of these rates is provided in the documentation for SCSAM.

ITE Trip Rates versus Traffic Modeling Trip Rates

Comparison between trip generation rates in OCTAM/SCSAM and those published in the Institute of Transportation Engineers (ITE) Trip Generation Manual show similarities, but the rates are not identical. This is intentional and appropriate, and relates to the overall methodology involved in transportation models such as OCTAM and SCSAM. These models are designed to forecast traffic volumes on the regional and local arterial highway network, whereas the ITE Trip Generation Manual measures driveway counts and is appropriate for traffic studies associated with driveway counts. The ITE rates are not, however, appropriate for traffic models that estimate trips on the arterial roadway system in a regional context. The rates used in the SCSAM are nationally accepted rates for state-of-the-practice traffic modeling just as the ITE rates are nationally accepted rates for driveway count types of analyses.

The primary difference in ITE trip rates versus traffic model trip rates is due to "linked trips" and to a lesser extent, short local trips. The first involves a short trip that is part of a longer trip. Examples include school pick-ups or drop-offs on the way to or from work or a stop at a convenience store or other business establishment on the way to or from some other trip. A linked trip comprises two or more actual trips but only one traffic model trip. The amount of traffic on the roadway is the same in both cases, but the ITE trip generation is double that of the traffic model trip generation. Short local trips include some school trips (those that are short in length), and other localized trips such as to/from after school activities (at a local sports park for example). They place minimal traffic on the major arterial system or freeways and are largely "intrazonal" as far as the traffic model is concerned (i.e., not part of the arterial roadway system assignment process).

Practitioners familiar with traffic modeling fully understand these modeling applications, and understand the relationship between driveway count data such as in ITE, and the traffic modeling process. Traffic modeling in southern California has a technical modeling task force sponsored by the Southern California Association of Governments (SCAG). This task force evaluates such issues, including comparisons between the databases used in the traffic model and those published by ITE. As such, the trip rates contained in these models (including SCSAM) are considered appropriate for these types of applications, and are used on a consistent basis throughout southern California.

Trip Generation Variation

It should be noted that both OCTAM and SCSAM include variables that address the potential for higher or lower trip rates per household depending on the socioeconomic characteristics of an area. Those variables include income and the number of working adults per household. Data from OCP-2000 gives projections for these variables throughout Orange County, and that information is incorporated into SCSAM together with land use data in the project area. The model documentation shows these relationships, as does the Ranch Plan Draft Program EIR traffic study appendix, which shows the conversion of land use to socioeconomic data categories including employed residents, population, and income. Such factors are taken into account in the SCSAM trip generation.

The SCSAM trip rates have evolved from numerous special surveys carried out nationwide over the past 30 years. The federal government continuously supports research to ensure that models such as OCTAM used throughout the country are up-to-date and represent state-of-the-practice for use in transportation planning studies.

Future Traffic Patterns–Trip Redistribution

An important consideration in the traffic modeling for the proposed Ranch Plan project is what is sometimes referred to as the “redistribution effect.” This occurs when a large project with a mix of uses is analyzed in a long-range context and a comparison made between with project and without project conditions. While traffic studies for small projects simply estimate the trip generation from that project and add the project trips to the adjacent or surrounding street system, that approach is not possible for a larger project with a large area of influence (i.e., a large study area and a mix of land uses). In this case, the traffic model is depicting two completely different scenarios for a future point in time, one with the proposed project and one without the proposed project. The scenario with the proposed project depicts how the project will interact with the surrounding area when it is fully built out. The scenario with no land use on the project site assumes that the surrounding land uses remain the same and depicts the corresponding travel patterns made by those land uses absent the project. In this case, trips will still be generated by those surrounding land uses but they will have different geographic and directionality patterns. These two completely different sets of traffic patterns are estimated by the traffic model and depict future travel patterns for each scenario and estimates the resulting volumes on the surrounding roadway system.

An example to illustrate this can be seen from the City of Rancho Santa Margarita. The traffic analysis carried out for this community (over 20 years ago) did not simply estimate the number of trips generated by the community and then add them to the surrounding street system. The traffic modeling at that time estimated how the community would interact with the surrounding area. The interaction was estimated for future trips both into and out of the community. It was predicted that future conditions with and without the project would involve significantly different traffic patterns in the area.

Over the past two decades, Rancho Santa Margarita has evolved much as was predicted at that time. The internal capture (trips internal to the project site) is estimated at around 40 percent of trip ends (25 percent of trips) similar to that estimated for the proposed project, (while Rancho Santa Margarita is slightly larger and hence would be expected to have a somewhat larger internal capture, it is surrounded by more development than the proposed project, particularly to the east).

The City of Rancho Santa Margarita now interacts with the surrounding area in the manner that had been predicted 20 years ago. It obviously would not have been realistic to simply estimate the trips from the project and place them on the roadway network and use that as an estimate of today's trips. The redistribution of traffic patterns predicted back then realistically depicted the actual effect of the project land uses as they interact with the surrounding area.

An example of this redistribution effect, with respect to the proposed Ranch Plan project, can be seen by examining the trips made by a resident of the proposed project going to work outside the project (e.g., Mission Viejo). Without the project, the job to which that person would have traveled will still be in the City of Mission Viejo but will attract a worker from another area. Therefore, the trip will be on part of the roadway system in the study area. The net effect may be no net increase on certain roadway links.

Similarly there will be future residents in surrounding areas such as Mission Viejo that will work in the Ranch Plan area. Without the Ranch Plan, those residents will still travel to work, but to different destinations. They will again use all or part of the study area circulation system and, in some cases, the result will be a reduction in traffic on certain links or no net increase as in the above example.

From this example, it can be clearly seen that the volumes on any particular facility (e.g., Crown Valley Parkway) involve a combination of the two effects. One is the trips from the Ranch Plan traveling to and from the surrounding area thereby adding trips to the roadway network. The second is the reduction in trips on certain roadways due to the interaction with the surrounding area and trips being redirected or "redistributed." The combined effect becomes more pronounced at greater distances from the project and results in smaller and smaller differences between the without and with project volumes. This is because at greater distances from the project the surrounding non-project trip generation is a greater component of the trips and is unchanged with or without the project. The traffic model estimates these redistribution effects by depicting the two different sets of travel patterns (with project versus without project) and then shows the resulting trips on the roadway network.

These trip patterns (derived in the traffic model from trip lengths by trip purpose) are based on empirical data collected during the development of the parent model that is OCTAM 3.1. This trip redistribution is an important consideration in impact analyses such as this because some of the comments appear to be looking for the project trips and their resulting addition to a no project roadway network volume. As noted earlier, that is valid for small projects where the study area is limited, but as with the Rancho Santa Margarita example, the proposed Ranch Plan project will interact with the surrounding area in a manner that can only be predicted by the use of traffic modeling. Therefore, for this scale of development, a simplistic approach of adding project trips onto expected future traffic on the roadway system would not accurately forecast future traffic conditions because it would not account for traffic redistribution effects.

SCSAM Usage and Documentation

Because the SCSAM documentation was prepared for a number of applications, not just the Ranch Plan Program EIR, it was not included in the EIR appendix as a report specific to the Ranch Plan project. For example, the model is used by various cities in south Orange County and was used for the South Orange County Transportation Infrastructure Improvement Project (SOCTIIP). It has also been used for Caltrans interchanges studies in south Orange County. The model has undergone extensive peer review (both the OCTAM and SCSAM sub-area derivation), as well as certification by Orange County Transportation Authority (OCTA). Such review included the appropriate trip rates to be used in the traffic model. Of primary importance is the model validation that is carried out which ensures that the modeling relationships (including trip generation rates) are able to replicate volumes on the study area street system. That verification is contained in the traffic model description, available at the County of Orange, and shows a validation that is well within accepted limits.

3.1.7.2 Project Trip Generation and Distribution

Theme of Comments: Several commenters suggested that the traffic study underestimates the generation of traffic associated with the proposed project and used incorrect trip generation figures.

Response: Trip generation for the proposed project was derived using procedures described in Section 4.6, Transportation and Circulation, of the Draft Program EIR and in detail in Appendix A of the Ranch Plan EIR traffic report. As can be seen in that appendix, the trip generation derivation involves converting land use data to socioeconomic data categories and then applying socioeconomic data trip rates to the socioeconomic data. As discussed in Section 3.1.1.1, the process is carried out within the South County Sub-Area Model (SCSAM) and the trip rates are consistent with the Orange County Traffic Analysis Model (OCTAM) trip generation rates and are verified as part of the SCSAM model validation and accepted by the modeling technical group of Orange County. That model validation is described in a special traffic model report, and the SCSAM procedures and results have been reviewed by Orange County Transportation Authority (OCTA) as part of their certification process for the SCSAM.

Also, as previously addressed, the trip distribution for the proposed Ranch Plan project is derived from the OCTAM parent model and is not changed in the SCSAM, consistent with the sub-area modeling guideline procedures. Therefore, both the internal trip capture and the external trip distribution are derived by OCTAM and are used in the SCSAM for preparing the detailed traffic forecasts for the traffic impact analysis.

As part of the SCSAM traffic modeling work, the internal/external relationships for the project area as derived by the OCTAM parent model were extracted from the traffic model data, and a special summary is contained in the traffic report to demonstrate the various components of the internal capture. In summarizing information relative to internal capture, a distinction needs to be made between "trip ends," and "trips." Trip ends are used in estimating trip generation, whereas trips are used for determining the amount of traffic on a roadway system. The distinction is that trip generation counts each internal trip twice (once at each end), so that two trip ends are counted for every internal trip.

A summary table is provided in the Ranch Plan Program EIR traffic report showing the breakdown of internal/external project trip ends by land use; the report notes that the internal capture is 44 percent of trip ends and 28 percent of trips. Table 6 summarizes the ADT trip generation data from this table and shows the trip capture on a trip basis as well as a trip end basis.

**TABLE 6
PROJECT TRIP GENERATION SUMMARY**

Land Use	ADT Trip Ends	ADT Trips
Residential		
Internal	26,225	13,113
External	61,191	61,191
Total	87,415	74,304
Internal (%)	30.0%	17.6%
Commercial/School		
Internal	42,050	21,025
External	7,421	7,421
Total	49,470	28,446
Internal (%)	85.0%	73.9%
Business		
Internal	13,100	6,550
External	33,354	33,354
Total	46,454	39,904
Internal (%)	28.2%	16.4%
Total		
Internal	81,374	40,687
External	101,965	101,965
Total	183,339	142,652
Internal (%)	44.4%	28.5%

As can be seen in the table, there is a relatively high trip capture rate for local trips such as school and shopping (74 percent) and a relatively low internal capture for business park trips (16 percent). These capture rates are what would be expected from a community of this size which has schools and retail facilities on-site, but which will draw from the surrounding area for a large proportion of the workers. Likewise, the 18 percent internal capture for trips generated by residences reflects the fact that while school trips and some shopping trips will be internal, a large portion of the trips for other purposes such as work will be external.

As noted above, the trip distribution relationships are derived by the countywide OCTAM model that takes into account surrounding residential, retail, and employment based land uses. The internal capture rates for different uses reflect the characteristics of those uses and also the type and general proximity of the project to surrounding development. Because the proposed Ranch Plan project is somewhat remote (e.g., no land uses to the east), the internal trip capture is slightly higher than would occur if it were totally surrounded by development (see Section 3.1.1.1 for prior Rancho Santa Margarita example).

3.1.7.3 Toll Roads

Theme of Comments: A number of the comments received were comments on the merits of the proposed extension of Foothill Transportation Corridor (FTC) South, known as State Route (SR-241).

Response: The County of Orange, the lead agency for the Ranch Plan project, does not have jurisdiction over the alignment or construction of SR-241. The Transportation Corridor Agencies (TCA)³ and Federal Highway Administration (FHWA) have prepared an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) evaluating the impacts associated with the extension of SR-241, as part of the South Orange County Transportation Infrastructure Improvement Program (SOCTIIP).

The first consideration of the potential need for a major transportation corridor to facilitate the efficient circulation of traffic was in the early 1970's in conjunction with land use planning in southeastern Orange County. This need was confirmed in 1976 with the Southeast Orange County Circulation Study and the 1979 Multimodal Transportation Study conducted by the Orange County Transportation Commission. The FTC was placed on the County of Orange Master Plan of Arterial Highways on August 26, 1981. As noted in Section 3, Project Description, of the Ranch Plan Draft Program EIR, SR-241 has been built from SR-91 to Oso Parkway. The roadway terminates at the northern Ranch Plan boundary. Currently, the MPAH, local General Plans, and regional planning documents, such as the Regional Transportation Plan, depict the southern extension of SR-241 traversing the project study area, extending into San Diego County and connecting with I-5 in the vicinity of Basilone Road. The graphics in the Draft Program EIR reflect this alignment for consistency with local and regional planning documents.

The SOCTIIP study assesses the transportation needs in south Orange County. The TCA and FHWA through the NEPA/Section 404 Integration Process have identified the purpose and need for circulation improvements in south Orange County in conjunction with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), U.S. Army Corps of Engineers (USACE), and the U.S. Environmental Protection Agency (U.S. EPA). These agencies also participated in the development of the alternatives to be evaluated as part of SOCTIIP.

Several of the alternatives include the extension of SR-241 through the Ranch Plan area. The selection of a SOCTIIP alternative is anticipated to occur by mid-2005. Should the TCA and FHWA select a SOCTIIP alternative that includes an alignment for the SR-241 extension that is different from what is depicted in the local General Plans, regional planning documents, and Ranch Plan Program EIR, the Ranch Plan project would be modified, as needed, to reflect the adopted alignment and additional environmental review would be conducted. The County of Orange, as a member of the joint powers agreement for the toll road, would be responsible for the preservation and acquisition through dedication of right-of-way for the SR-241 extension.

Because the construction of the toll road is not part of the Ranch Plan project and the Ranch Plan project is not dependent on the completion of the toll road, the Draft Program EIR does not

³ The Foothill/Eastern Transportation Corridor Agency is a joint powers authority composed of the County of Orange and the local cities within the area of benefit of the Foothill Transportation Corridor (FTC) and Eastern Transportation Corridor (ETC) to oversee the planning, design, and construction of the Foothill and Eastern Transportation Corridors. The member agencies are: the cities of Anaheim, Dana Point, Irvine, Lake Forest, Mission Viejo, Orange, Rancho Santa Margarita, San Clemente, San Juan Capistrano, Santa Ana, Tustin, Yorba Linda, and the County of Orange.

evaluate the impacts associated with the toll road to the same extent as the Ranch Plan project. However, Section 7 of this Draft Program EIR does take into consideration the potential environmental impacts of SR-241 as a part of the cumulative analysis. Similarly, the EIS/EIR prepared by the TCA and FHWA considers the Ranch Plan as a cumulative project.

Comments have also been raised about the cost of the toll roads on the local taxpayer. Though not part of the Ranch Plan project, it should be noted that the SR-73 and the SR-241 have been planned, designed and built using developer fees and toll revenue, not taxpayer money. The project would be required to pay fees for the Major Thoroughfare and Bridge Free Program for the Foothill/Eastern Transportation Corridor (Standard Condition 4.6-5).

3.1.7.4 Impacts to Interstate 5 (I-5)

Theme of Comments: Comments were made that the Ranch Plan Draft Program EIR did not use the correct criteria for assessing potential impacts to freeway mainline facilities and that measures should be imposed on the project to mitigate impacts.

Response: The Ranch Plan Program EIR traffic analysis defines significance criteria for impacts to I-5 based on Congestion Management Plan (CMP) criteria. The traffic report also contains a section in which project traffic shares on mainline freeway segments are calculated using the formula given in the Caltrans guidelines for traffic studies. Under the stated significance criteria, the project does not have significant project-specific impacts to the I-5 mainline. However, the Draft Program EIR does identify that the proposed project would contribute to cumulative impacts to the I-5 mainline.

With respect to Caltrans guidelines, an introductory statement to the traffic share section in the Caltrans guidelines notes that *"the methodology below is neither intended as nor does it establish a legal standard for determining equitable responsibility and cost of the projects' traffic impact."* In this regard, it should be noted that the mitigation program does include improvements and/or funding to various Caltrans facilities. Currently, Caltrans has no established mechanism to mitigate. However, the Draft Program EIR states: "Improvements to the I-5 mainline are a part of regional transportation programs with associated timing and funding sources. If the responsible agencies establish a cumulative mitigation program, the project applicant shall participate on a fair share basis." Please also refer to Topical Response 3.1.7.5, which addresses mitigation for the Ranch Plan project in further detail.

3.1.7.5 Traffic Mitigation Methodology

Theme of Comments: Several commenters suggested that the traffic impacts associated with the proposed Ranch Plan project will not be mitigated by the mitigation program set forth in the Program EIR.

Response: The impact analysis in the Ranch Plan Draft Program EIR traffic report follows the required CEQA procedures in which the stand-alone impacts of the project are first identified (existing conditions versus existing plus project conditions) and then cumulative projects are added to those existing plus project conditions. The cumulative setting in the Draft Program EIR is year 2025 which includes demographic data projections from the surrounding areas as described in the Draft Program EIR and the EIR traffic report.

The project impacts on the circulation system are determined by a set of performance criteria and thresholds of significance included in Section 4.6.1 of the Draft Program EIR and Section 1.0 of the Ranch Plan traffic study. These performance criteria and thresholds are consistent

with those established by the County of Orange and affected jurisdictions in southern Orange County.

The transportation improvement program mitigates impacts of cumulative development, including the proposed project. Those impacts are identified for year 2025 as "long-range cumulative deficiencies," and a comprehensive mitigation program has been established accordingly. This is somewhat more comprehensive than the methodology used in some jurisdictions whereby the long-range analysis simply evaluates the project impacts by comparing 2025 with and without project conditions and then requiring the project to mitigate those locations where there is a significant project impact. The mitigation program in the Draft Program EIR is a comprehensive program of improvements for south Orange County that addresses all future land uses, including the proposed project.

In accordance with CEQA, the project's share of future traffic at locations requiring mitigation is identified. However, as noted in the Draft Program EIR and the traffic report, this share does not necessarily constitute the sole basis for project participation in the funding mechanism that will implement these improvements. Such a program will consider a number of factors, including the amount of participating and non-participating development (i.e., some future development may be exempt due to existing development agreements or conditions of approval), regional traffic, and specific funding programs in the individual cities.

The means of implementation of transportation improvements is being set out in the South County Roadway Improvement Program (SCRIP). The SCRIP defines the Ranch Plan's responsibilities, and the responsibilities of other participants, and describes the administrative mechanisms and protocols that will be applied with the goal of having improvements made as development occurs.

3.1.7.6 New Ortega Highway

Theme of Comments: Comments were made that if the New Ortega Highway were not accepted as a state route, the traffic analysis for the Ranch Plan project would be deficient.

Response: In deference to Caltrans concerns and due to time constraints to achieve a mutual resolution, the County is not pursuing the proposal to add New Ortega Highway to the State highway system at this time and is only proposing that the 'New Ortega Highway' be added to the County Master Plan of Arterial Highways (MPAH) as an arterial highway. Therefore, the County is requesting the Orange County Transportation Authority to consider the following, with respect to New Ortega Highway:

- Modify request to realign Ortega Highway and instead add "North River Road" (New Ortega Highway) as; 1) a major arterial to the Master Plan of Arterial Highways between Antonio Parkway and an interchange with FTC-South (if Corridor Extension is approved), 2) alternatively, as a major arterial between Antonio Parkway and "F" Street (an arterial along the alignment of the FTC-South) if FTC-South is not approved, and 3) and to a primary arterial highway between existing Ortega Highway and the Foothill Transportation Corridor (or "F" Street if FTC-South is not approved).

The issue as to whether New Ortega Highway becomes a state highway is not critical to the traffic analysis. The traffic analysis assumes a worst-case scenario with respect to traffic impacts; namely that through traffic would use New Ortega Highway rather than Old Ortega Highway. This means that through traffic bound for the City of San Juan Capistrano or the I-5/Ortega Highway interchange would make a jog from New Ortega Highway down Antonio

Parkway to existing Ortega Highway. The impacts and capacity needs are analyzed accordingly. If the state retains existing Ortega Highway as a through route, then the thru-traffic volumes on New Ortega Highway would be less and the impacts on this section of Antonio Parkway would be commensurately lower.

3.1.7.7 Crown Valley Parkway

Theme of Comments: Many commenters noted their opposition to the proposed request for deletion from the County Master Plan of Arterial Highways (MPAH) of the extension of Crown Valley. Many of the same commenters also recommended that the County require the applicant to construct the Crown Valley Parkway extension as a part of the Ranch Plan project.

Response: On October 3, 2002, the County of Orange requested the initiation of a cooperative study process to amend the County Master Plan of Arterial Highways (MPAH) in the Rancho Mission Viejo area of the County. Specifically, the County requested the deletion of Crown Valley Parkway east of Antonio Parkway from the MPAH and the realignment of the existing Ortega Highway between Antonio Parkway and the Foothill Transportation Corridor. The Orange County Transportation Authority (OCTA) and the County conducted several meetings on this request pursuant to the "Guidance for the administration of the Orange County Master Plan of Arterial Highways". The County provided traffic analysis and data for all circulation scenarios requested by the Technical Advisory Committee. However, the Technical Advisory Committee could not reach consensus in support of the County's request. Therefore, the County is requesting OCTA to consider a modification to the October 3, 2002 request, with respect to Crown Valley Parkway:

- Withdrawal of request to delete Crown Valley Parkway from MPAH east of Antonio Parkway

The proposed Ranch Plan project does not provide for the extension of Crown Valley Parkway easterly of Antonio Parkway to a future connection with the Foothill Transportation Corridor (SR-241) and/or an extension to the existing street system in Coto de Caza. The primary factors influenced the decision to delete this portion of Crown Valley Parkway:

- The current plans of the Transportation Corridor Agency (TCA) do not include a potential interchange of Crown Valley Parkway with SR-241;
- The concentration of proposed Ranch Plan land uses southerly and easterly of the location of an interchange of Crown Valley Parkway and SR-241, thereby minimizing the need for roadway improvements in this area.
- Minimize impacts to sensitive habitat/species in Chiquita Canyon.

The Ranch Plan project, as originally proposed, included a number of proposed amendments to the Master Plan of Arterial Highways (MPAH), one of which was the deletion of the Crown Valley Parkway extension. Amendments to the MPAH are subject to a "Cooperative Process" led by the Orange County Transportation Authority (OCTA), which has responsibility for the consistency and continuity of the MPAH. Participants in the Cooperative Process also include the County of Orange, the cities of Mission Viejo, San Juan Capistrano, San Clemente, Laguna Niguel, and Rancho Santa Margarita, as well as Caltrans and TCA. During that process (still to be concluded), significant attention was accorded to the proposed deletion of Crown Valley Parkway. Comments received during the Cooperative Process and subsequent comments received during the public comment period for the Ranch Plan Program EIR indicate that

substantial opposition remains to the proposed deletion of Crown Valley Parkway. In consideration thereof, and with the recognition that the County's Circulation Element must conform to the MPAH, the County is withdrawing its proposed amendment to delete the extension of Crown Valley Parkway with the following stipulations and findings:

1. The Ranch Plan's proposed associated circulation system is adequate to serve the proposed project and existing traffic;
2. The extension of Crown Valley Parkway is not an element of the proposed project or the associated mitigation measures;
3. There are no proposed connections from the project's circulation system to a future extension of Crown Valley Parkway; and, there is no nexus between the development of the Ranch Plan and the need for the extension;
4. Any future extension of Crown Valley Parkway is deemed to be for regional circulation purposes and the permitting, funding, and implementation would be the responsibility of others. Nonetheless, the County shall ensure that the development of the proposed project does not preclude the ability of others to extend Crown Valley Parkway.

However in an effort not to preclude the MPAH extension per the Measure M guidelines, the following Condition of Approval is hereby incorporated into the Final Program EIR as follows:

- Prior to the approval of any subdivision map within the vicinity of the Crown Valley Parkway as shown on the Master Plan of Arterial Highway (MPAH), between Antonio Parkway and the Foothill Transportation Corridor (FTC), the Director, Resource & Development management Development (RDMD), County of Orange in consultation with Manager Programming/Planning of Orange County Transportation Authority (OCTA) shall make a finding that said subdivision map does not preclude implementation of CVP as an MPAH facility.

The traffic report contains a comparison of future cumulative with-project traffic conditions with and without this extension of Crown Valley Parkway. The results include a comparison of deficiencies at study area intersections and also freeway ramps and freeway mainline. Additional data is also provided in Appendix B, Traffic Resource Material-Crown Valley Parkway Extension Deletion, of the Responses to Comments document.

3.1.7.8 Trip Generation for Age-Restricted Housing

Theme of Comments: Commenters indicated that the trip generation rate associated with senior housing is too low.

Response: The trip generation used for senior housing is comparable to trip generation data for that type of housing from sources such as Institute of Transportation Engineers and other studies of retirement communities (please refer to Appendix B, Traffic Resource Material-Senior Housing Trip Rates, of this Responses to Comments document). The actual trip generation used in the SCSAM traffic forecasting is derived as part of the socioeconomic data conversion process in which senior housing is depicted in terms of the socioeconomic variables. Of specific importance is the number of workers per household (lower than for non-senior housing) and population per dwelling unit (also lower than for non-senior housing).

Trip generation studies show senior housing to have substantially lower trip generation than single family housing, and the trip generation derived from the application of trip rates to the socioeconomic data is considered an appropriate procedure for establishing trip generation estimates for that use. It is recognized that in a senior housing project, there will be a range of ages and activity levels, resulting in the averages which have been recorded in various studies and which are comparable to the rates derived herein.

3.1.7.9 Caltrans/TCA Non-Compete Issues

Theme of Comments: Comments were made by the Transportation Corridor Agencies (TCA) and Caltrans regarding an assessment of the feasibility of proposed mitigation measures in light of the "Non-Compete" provisions between the two agencies relative to the impact on toll revenues for the San Joaquin Hills Transportation Corridor (SJHTC) and the Foothill Transportation Corridor (FTC) as a consequence of the implementation of select mitigation measures (Saddleback/I-5 Connectors, I-5/Ortega Highway Improvements et. al.).

Response: Notwithstanding the concerns, and based on discussions with TCA, the County believes that these issues are between the respective parties to those agreements (Caltrans, TCA, and OCTA) for the following reasons:

1. The non-compete provisions only apply in the event of a declared default by the tolling authority in its ability to meet its debt service obligations and there is no such declaration at this time (even though the SJHTC has projected a future potential default condition);
2. The identified mitigation measures are for regional improvements that mitigate the cumulative impacts identified in the Draft Program EIR (although the project will have a "fair-share" obligation towards those improvements).
3. The structure of the tolls and the debt service requirements of each separate toll-road authority (jointly administered by TCA) may result in competing objectives. In the absence of a declared default, and a statement of consolidated objectives for each facility, it is difficult to assess the impact;
4. There is not a methodology and/or approach that allows for a comprehensive analysis of the proposed benefits and/or impacts to toll roads. Past practice indicates that the resolution of these issues is the result of negotiation between OCTA and TCA on a case-by-case basis.

Based on the foregoing, consideration of the economic consequences to the toll-road authorities is not an appropriate consideration of the Ranch Plan Program EIR. To the extent that OCTA and TCA agree to a negotiated sum for the cumulative effects, it is the responsibility of OCTA to satisfy the obligation as a part of its regional transportation responsibilities.

3.1.7.10 Development and Traffic Monitoring

Theme of Comments: Comments were made concerning how the levels of development assumed in the traffic study were derived and how these would be monitored during project development. The concern is whether assumptions regarding uses in the traffic study are consistent with Ranch Plan entitlements.

Response: Development uses including numbers of residential units permitted and the maximum square footages for nonresidential uses as categorized by the planned community

district are established in the Ranch Plan Statistical Table. Maximum allowed levels of usage for the Ranch Plan overall and for individual planning areas are set forth in the statistical table which is adopted by resolution. Although there is some flexibility with regard to the specific uses that may be allowed within each use category, maximum levels of development cannot exceed those in the statistical table. The traffic study assumed a specific set of uses indicated by the project applicant to constitute the reasonably foreseeable uses. There is no requirement under CEQA to perform a "worst-case analysis;" nevertheless, increased levels of development have been evaluated as part of alternatives evaluated in the Draft Program EIR.

Levels of development will be maintained and monitored in a variety of ways. First, each Master Area Plan is required to provide a statistical table estimating the proposed uses for residential (including senior housing) and nonresidential uses by planning subarea. Each subarea plan then is required to specify the location and number of dwelling units and other uses within the subarea boundaries. PDF 4.1-3. An Annual Monitoring Report (per General Note 11 of the PC Text) will be prepared each year as an inventory of dwelling units and other uses. These monitoring reports are also incorporated as part of the monitoring required pursuant to the proposed SCRIP program. As the established development milestones are reached, traffic mitigation funding would be triggered pursuant to the SCRIP and the project development agreement.

Second, prior to the approval of each Master Area Plan, a traffic analysis which supplements *The Ranch Plan EIR Traffic Report* (Austin-Foust Associates, Inc., May 2004) shall be submitted for review and approval to the County, Director of Planning and Development Services. The traffic study shall include:

- a. An evaluation of how any proposed refinements to the circulation system and/or milestones remain in substantial compliance with appropriate Development Agreement obligations and Program EIR mitigation measures.
- b. Average Daily Trips generated by uses proposed within the planning area, as distributed onto the surrounding circulation system (both within the Ranch Plan PC Area, and in the surrounding vicinity) including the peak hour characteristics of those trips.

As described in Topical Response 3.1.1.2, at each subsequent stage of discretionary approval, additional CEQA review pursuant to CEQA Section 21166 and CEQA Guidelines Sections 15162 and 15168, would be conducted. Once established through the subsequent entitlement process use, the numbers of senior units would be assured through provisions in the project CC&Rs. The numbers of senior housing units will be monitored along with other housing units and nonresidential units as part of the Master Area Plan approval process as described above and is outlined in PDF 4.1-3. Please refer to Topical Response 3.1.7.8 for discussion of generation rates for senior housing.

3.1.8 AIR QUALITY

Theme of Comments: Some commenters have suggested that the long-term vehicular air quality emissions associated with the proposed Ranch Plan project have been underestimated in the Draft Program EIR because the traffic analysis has underestimated traffic generation associated with the proposed project.

Response: The project would not create significant adverse impacts on air quality that were not disclosed in the Draft Program EIR. Please refer to Topical Response 3.1.6, Transportation and Circulation.

Theme of Comments: Some commenters have indicated that additional air quality mitigation should be applied to the proposed project. The Draft Program EIR identifies that the proposed project would exceed South Coast Air Quality Management District's (SCAQMD) thresholds for VOC, NO_x, CO, and PM₁₀ during both short-term construction periods and long-term project operation. The project would not exceed SCAQMD thresholds for PM_{2.5} since no significance thresholds for PM_{2.5} have been established by the SCAQMD. While most commenters indicated that more mitigation was required, only one commenter provided any additional suggested measures. Specifically, Shute, Milhaly Weinberg (Commenter 57) identified/provided a compendium of fugitive dust controls in use throughout the nation. However, this compendium did not include listings from SCAQMD's Rule 403 and Rule 403 Implementation Handbook, which apply to this project. SCAQMD Rule 403 is one of the most comprehensive fugitive dust control rules in the nation.

The Draft Program EIR contained the following statement: "SCAQMD Rule 403, last amended April 2, 2004, governs fugitive dust emissions from construction projects. This rule sets forth a list of control measures that must be undertaken for any activity or man-made condition capable of generating fugitive dust to prevent, reduce or mitigate fugitive dust emissions. The rule applies to all construction projects with a disturbed area of five or more acres. In addition, large projects, which are defined as active operations on property which contain in excess of 50 acres of disturbed surface area or any operation which exceeds a daily earth-moving or throughput volume of 5,000 cubic yards three times over a 365-day period, must file a fully executed Large Operation Notification Form (Form 403N) to the SCAQMD Executive Officer within 7 days of qualifying as a large operation under the rule. The rule sets forth a number of requirements regarding record keeping, as well as specific mitigation measures that must be contained in an approved dust-control plan. Recommended dust control measures are incorporated in the URBEMIS model. Because the proposed project would exceed 50 acres and would move at least 5,000 cubic yards of dirt three or more times in a year during construction, the proposed project would be required to file a 403N form." Rule 403 was incorporated by reference into the Draft Program EIR and, as such, all of the provisions/requirements of Rule 403 apply. The mitigation measures listed in the construction section of the Draft Program EIR are contained in URBEMIS 2002 and represent summary statements of the major provisions of Rule 403.

To clarify the fugitive dust controls that will apply to the project, the complete requirements of Rule 403 (as specified in Tables 7, 8, and 9 within the rule) are shown below:

TABLE 7
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	<input type="checkbox"/> Mix backfill soil with water prior to moving <input type="checkbox"/> Dedicate water truck or high capacity hose to backfilling equipment <input type="checkbox"/> Empty loader bucket slowly so that no dust plumes are generated <input type="checkbox"/> Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities, and 02-3 Stabilize soil immediately after clearing and grubbing activities.	<input type="checkbox"/> Maintain live perennial vegetation where possible. <input type="checkbox"/> Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	<input type="checkbox"/> Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	<input type="checkbox"/> Follow permit conditions for crushing equipment <input type="checkbox"/> Pre-water material prior to loading into crusher <input type="checkbox"/> Monitor crusher emissions opacity <input type="checkbox"/> Apply water to crushed material to prevent dust plumes
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	<input type="checkbox"/> For large sites, pre-water with sprinklers or water trucks and allow time for penetration <input type="checkbox"/> Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition—mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	<input type="checkbox"/> Apply water in sufficient quantities to prevent the generation of visible dust plumes

TABLE 7 (Continued)
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	<input type="checkbox"/> Limit vehicular traffic and disturbances on soils where possible <input type="checkbox"/> If interior block walls are planned, install as early as possible <input type="checkbox"/> Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	<input type="checkbox"/> Grade each project phase separately, timed to coincide with construction phase <input type="checkbox"/> Upwind fencing can prevent material movement on site <input type="checkbox"/> Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	<input type="checkbox"/> Use tarps or other suitable enclosures on haul trucks <input type="checkbox"/> Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage <input type="checkbox"/> Comply with track-out prevention/mitigation requirements <input type="checkbox"/> Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	<input type="checkbox"/> Apply water to materials to stabilize <input type="checkbox"/> Maintain materials in a crusted condition <input type="checkbox"/> Maintain effective cover over materials <input type="checkbox"/> Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes <input type="checkbox"/> Hydroseed prior to rain season

TABLE 7 (Continued)
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Road shoulder maintenance	011-1 Apply water to unpaved shoulders prior to clearing; and 011-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance	<input type="checkbox"/> Installation or curbing and/or paving of road shoulders can reduce recurring maintenance costs <input type="checkbox"/> Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening,	<input type="checkbox"/> Dedicate water truck or high capacity hose to screening operation <input type="checkbox"/> Drop material through the screen slowly and minimize drop height <input type="checkbox"/> Install wind barrier with a porosity of no more than 50 percent upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	<input type="checkbox"/> Limit size of staging area <input type="checkbox"/> Limit vehicle speeds to 15 miles per hour <input type="checkbox"/> Limit number and size of staging area entrances/exits
Stockpiles/Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	<input type="checkbox"/> Add or remove material from the downwind portion of the storage pile <input type="checkbox"/> Maintain storage piles to avoid steep sides or faces
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	<input type="checkbox"/> Apply gravel/paving to all haul routes as soon as possible to all future roadway areas <input type="checkbox"/> Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities,	<input type="checkbox"/> Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching <input type="checkbox"/> Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment

TABLE 7 (Continued)
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	<input type="checkbox"/> Empty loader bucket such that no visible dust plumes are created <input type="checkbox"/> Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	<input type="checkbox"/> Haul waste material immediately off-site
Unpaved roads/parking lots	19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	<input type="checkbox"/> Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
Vacant land	20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	
Source: South Coast Air Quality Management District, Rule 403, Amended April 2, 2004.		

TABLE 8
DUST CONTROL MEASURES FOR LARGE OPERATIONS

Fugitive Dust Source Category	Control Actions
Earth-moving (except construction cutting and filling areas, and mining operations)	<p>(1a) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations, or</p> <p>(1a-1) For any earth moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.</p>
Earth-moving: Construction fill areas:	<p>(1b) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D22 16, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.</p>
Earth-moving: Construction cut areas and mining operations:	<p>(1c) Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.</p>
Disturbed surface areas (except completed grading areas)	<p>(2a/b) Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.</p>
Disturbed Surface areas: Completed grading areas	<p>(2c) Apply chemical stabilizers within five working days of grading completion; or</p> <p>(2d) Take actions (3a) or (3c) specified for inactive disturbed surface areas.</p> <p>(3a) Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; or</p> <p>(3b) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; or</p> <p>(3c) Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; or</p> <p>(3d) Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.</p>
Unpaved Roads	<p>(4a) Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; or</p> <p>(4b) Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; or</p> <p>(4c) Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.</p>
Source: South Coast Air Quality Management District, Rule 403, Amended April 2, 2004.	

TABLE 9
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

Fugitive Dust Source Category	Control Measures
Earth-moving	(1A) Cease all active operations; or (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed Surface Areas	(OB) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; or (Apply chemical stabilizers prior to wind event; or (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; or (3B) Take the actions specified in Table 8, Item (3c); or (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved Roads	(1C) Apply chemical stabilizers prior to wind event; or (2C) Apply water twice per hour during active operation; or (3C) Stop all vehicular traffic.
Open Storage Piles	(1D) Apply water twice per hour; or (2D) Install temporary coverings.
Paved Road Track-Out	(1E) Cover all haul vehicles; or (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

With respect to long-term operational air quality emissions, several of the suggestions provided to the County can be applied to the proposed project. However, other measures that were identified are not included because they are not cost effective at this time, are outside the County's jurisdiction, or are not within the project applicant's purview. The requests to require the project to provide for alternative fuel distribution or charging stations are not appropriate because electric vehicles are not likely to be in widespread use at any time in the future. This is an area in great flux at the present time. Most automobile manufacturers are concentrating on hybrid vehicles that run on both gasoline and electricity, but generate electricity while in use rather than through recharging. The County will determine at the Master Area Plan stage whether new developments in this project need support facilities recommended by the SCAQMD or CARB. The County will work with the developer to determine the feasibility of specific measures at that time. However, it should be noted that there is nothing in the project that would preclude the establishment of these uses should there be sufficient demand to make them cost effective. To address this request, the following mitigation measure has been incorporated into the Final Program EIR as follows:

MM 4.7-2 With the submittal of each Master Area Plan, the project applicant shall identify locations where alternative fueling facilities could be sited.

Similarly, measures pertaining to the provision of transit services, including bus service, bus turn-outs, and Dial-a-Ride, are the responsibility of the Orange County Transportation Authority, not the County of Orange. OCTA regularly evaluates the provision of transit services and modifies their routes to optimize the distribution of services to maximize effective use of resources. At the tentative tract map stage for each phase of the project, the County and the

developer will consult with OCTA to determine the feasibility and potential location of local transit service lines to the newly developed area. At this time, the two agencies will determine whether the developer should be required to incorporate support facilities such as bus benches and bus turnouts in the project design to facilitate transit usage. Again, there is nothing about the project that would preclude transit services from being provided to the Ranch Plan should OCTA determine that this is an effective use of resources. The project has committed to provide for bikeways and trails as a component of the project (Mitigation Measure 4.12-1).

3.1.9 BIOLOGICAL RESOURCES

3.1.9.1 Methodology for Determining Biological Resource Impacts

3.1.9.1a Significance of Resources Found in the Study Area

Theme of Comments: The Draft Program EIR ignores the global and regional significance of this geographic area to biodiversity conservation and ecosystem health.

Response: The County of Orange respects the ecological significance of southern Orange County. The analysis of biological resources in the Draft Program EIR both reflects and incorporates several subregional planning efforts undertaken in conjunction with the southern California NCCP coastal sage scrub program, an effort that has been undertaken in recognition of the importance of these resources. Among these efforts are the following:

- In 1996 and 1997, the County and the project applicant fully supported The Nature Conservancy's work with the Orange County Southern NCCP Subregion Science Advisors. The results of this effort are contained in the 1997 report titled "Principles of Reserve Design, Species Conservation and Adaptive Management" which applies the NCCP Program Conservation Guidelines to the conditions and issues presented for conservation planning in southern Orange County.
- The County and the project applicant have worked closely with the NCCP/SAMP working group in the formulation of the NCCP landscape level (the General Policies) and sub-basin guidelines that have been applied in both the Biological Resources impact assessment and mitigation sections, as well as in the Biological Resources Alternatives Analysis in Appendix M to the Draft Program EIR.
- In 1999 and 2000, the County and the project applicant worked with the U.S. Army Corps of Engineers and the California Department of Fish and Game to undertake a comprehensive watershed planning process that will be coordinated with the NCCP program.
- An enormous array of field survey data has been assembled documenting the locations of sensitive species and vegetation communities allowing for the preparation of an extensive set of graphics depicting species and vegetation locations and potential project impacts and conservation (see Draft Program EIR Exhibits 4.9-1a through 4.9-21c).

Given both the level of effort involved in the conservation planning activities summarized above and the direct application of the results of those conservation planning efforts throughout the Biological Resources section of the Draft Program EIR, it is clear that the Draft Program EIR both acknowledges the biological significance of the study area and rigorously applies the wide array of field studies, reports, and guidelines/principles prepared for conservation planning in the study area to substantive analyses in the Draft Program EIR.

The biological significance of the site is reflected in the special status afforded many of the species on the site, the associated regulatory protections, and the NCCP/HCP and SAMP/MSAA planning processes. It should be noted that the reference in some literature to the project area as comprising a portion of a "biodiversity hotspot of global significance" varies in its meaning and generally refers to a much broader geographic area. For example, the California Floristic Province has been cited as a "global hotspot" in some publications. However, this

region extends from old growth redwoods and the Bay Delta in northern California to the Los Padres National Forest and the southern San Joaquin Valley where five bio-regions meet to the border with Mexico and Otay Mesa. The State of California NCCP Coastal Sage Scrub Program, a unique regional planning effort, attests to the significance of conservation planning within this region. The County of Orange has already demonstrated its recognition of the importance of this planning effort through its role as a co-lead agency in the formulation, review and approval of the County of Orange Central and Coastal Subregion NCCP/HCP.

3.1.9.1b. Conceptual Framework for the Use of the NCCP/HCP Guidelines and SAMP/MSAA Principles in Connection with Impact Assessment and Mitigation

Theme of Comments: The NCCP and SAMP are basically regional mitigation programs and the EIR is assessing compliance with this mitigation program. But assessing compliance with a mitigation program is not the same as assessing the significance of the impacts of the proposed project that are to be mitigated.

Response: This comment, as well as a number of other comments addressed in the Biological Resources Responses, inaccurately implies that the NCCP and SAMP guidelines and principles can serve only one function in the Draft Program EIR. Further, this comment and other comments do not accurately portray the purpose and content of the draft NCCP and SAMP guidelines and principles.

Given their overarching nature, these guidelines and principles inform and provide guidance for several facets of the Draft Program EIR's analyses.

- First, the currently proposed Ranch Plan design, which serves as the foundation for the project description in the Draft Program EIR, was guided and informed by the draft guidelines and principles prepared as a central element of the NCCP and SAMP processes.
- Second, by including conformance with the guidelines and principles as additional standards of significance for the evaluation of avoidance and minimization of impacts to significant biological resources, the analysis of impacts reflects the most current survey information and scientific knowledge available on a geographic-specific basis regarding the location and significance of species and associated habitats.
- Third, many of the mitigation measures in the Draft Program EIR apply the guidelines and principles as CEQA performance standards for mitigation measures requiring further application as subsequent discretionary actions are to be taken with respect to future developments associated with implementation of the proposed project.
- Fourth, the guidelines and principles can reasonably be anticipated to serve as the foundation for future regulatory agency reviews of the project, which, in turn, will help assure consistency with other state and federal requirements and have a mitigation effect on project impacts.
- Finally, since the NCCP and SAMP have a broader scope than the Ranch Plan, they can be anticipated to guide the mitigation for other cumulative projects.

By focusing on only a few of these facets, the comment inaccurately portrays the approach taken in the Draft Program EIR.

The Legislative Findings set forth in the NCCP Act and the provisions of the 4(d) rule for the gnatcatcher establishing the Southern California NCCP Coastal Sage Scrub Program make clear that the NCCP program is a subregional conservation planning program that focuses on providing long-term protection and management of significant natural communities and associated resources. Similarly, the SAMP program is a watershed scale conservation planning program. The *focus* of NCCP and SAMP programs is on identifying, protecting and managing significant resources in order to maintain net habitat value over the long-term (e.g., see Statewide NCCP Conservation Guidelines). The fact that the substantive standards contained in the draft Southern NCCP/HCP guidelines and the SAMP/MSAA principles can be applied for both impact assessment and mitigation purposes does not reduce their usefulness or appropriateness in carrying out either or both of these purposes.

Appendix G of the CEQA Guidelines explicitly references consistency with adopted plans as an issue to be addressed in impact analysis and extending this principle to include draft plans results in a more thorough approach that helps ensure consistency with the NCCP and SAMP elements of the coordinated planning process and takes full benefit of the knowledge gained to date in these processes. The reference in the CEQA Guidelines Appendix G checklist to a potential “[c]onflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local regional or state habitat conservation plan” confirms that consideration of draft guidelines and principles based on statewide guidelines and derived from a regional conservation planning program confirms that such consideration is an appropriate role in the evaluation of impacts under CEQA.

3.1.9.1c. Elements of the NCCP/HCP and SAMP/MSAA Guidelines and Principles Used in Assessing the Significance of Potential Impacts on Species and Habitats and in Evaluating the Proposed Mitigation Program

Theme of Comments: Several commenters have made comments questioning the different elements of the NCCP/HCP Guidelines and SAMP/MSAA Planning Principles and their role in the different aspects of the CEQA analysis presented in the Draft Program EIR.

Response: The draft elements of the NCCP/HCP Guidelines and SAMP/MSAA Planning Principles (“NCCP Guidelines and SAMP Principles”) represent a synthesis of the extensive field survey information gathered within the study area and important principles of conservation planning referenced in Responses “a” and “b” above. The main elements of the NCCP Guidelines and SAMP Principles employed in the Biological Resources Project Impacts (4.9.4) and Mitigation Program (4.9.5) sections of the Draft Program EIR are the following:

- **Species Accounts**—The “Species Accounts” are analyses of significant populations of listed species and other sensitive species found within the study area and the broader NCCP planning subregion.
- **NCCP and SAMP Sub-Basin Guidelines and Principles**—The “Sub-Basin” Guidelines and Principles are geographic-specific analyses of significant resources found within the study area, including planning, management and restoration recommendations for protecting specific resources (both species and physical resources).
- **NCCP and SAMP Landscape Scale Guidelines and Principles**—The “Landscape Scale” Guidelines and Principles are broad conservation planning/resource protection principles intended to guide and assess the assemblage of larger scale open space/habitat areas and to help define long-term prescriptions for managing these lands in order to maintain habitat value.

Each of these elements is briefly reviewed below in order to provide a framework for later Responses to Comments and to help clarify any misunderstandings reflected in several comments.

Species Accounts

As reviewed in the Draft Program EIR, certain sensitive species, termed “planning species,” have been selected to serve as “conservation planning surrogates under the NCCP and SAMP Programs to help define which portions of the study area should be protected over the long term (Draft Program EIR, p. 4-9-100). By documenting the populations and distribution of planning species within the study area, areas potentially important for inclusion in a future habitat reserve program can be identified. Such habitat areas would generally be considered significant resource areas for CEQA purposes.

The selected Planning Species comprise the listed species found within the NCCP planning subregion as well as a wide range of other plant and animal species, including all CNPS, List 1B, and List 2 sensitive plant species known from the NCCP planning area. The NCCP guidelines and SAMP principles indicate that it is important to assess potential impacts on Planning Species both in terms of their importance as sensitive species and in terms of their importance as conservation planning surrogates for considering lands to be included in a habitat reserve on the project site. Accordingly, both types of impact and mitigation assessment are used in the Draft Program EIR.

For the above reasons, the draft Southern NCCP/HCP Planning Guidelines (NCCP Guidelines) have attempted to define significance criteria for populations and locations of Planning Species. The NCCP Guidelines describe the elements of the analyses that were used to determine the significance of Planning Species populations in particular locations:

“In order to prepare and implement sub-basin guidelines for NCCP/HCP Planning Species, it is necessary to gain an understanding of each of the species’ regional and subregional distribution, specific habitat affinities...and the life history characteristic of each species. In this context, the following issues need to be addressed:

- The species’ regional and subregional distribution;
- The relative importance of the Southern Subregion for the continued survival or recovery of the species;
- Key and important habitat characteristics of the species;
- Key and important life history characteristics; and
- Response to management (including enhancement and restoration).

With the above information, major populations and important populations of the Planning Species will have been identified. *Major populations* are those considered sufficiently large to be self-sustaining with a minimum of active or intensive management intervention or that at least support enough breeding individuals to contribute reliably to the overall metapopulation stability of the species. *Important populations* may not meet the relative size standards of *major populations*, but may nonetheless be important to the species’ long-term survival. For example, a smaller population in a key habitat linkage may be important for breeding success and exchange of genetic material and

thus would be considered to be an *important population*, even though it would not be considered a *major population*.

To facilitate reserve design, *key locations* will be defined for some Planning Species. The identification of a *key location* within a major or important population ***defines that portion of the population that is necessary for conservation of the species in the subregion*** (emphasis added). (Draft Program EIR, page 4.9-101)

Thus, areas designated as *key locations* are considered habitat areas essential to the long-term conservation of the particular species and constitute areas where impacts should be avoided or otherwise minimized as specified in the NCCP guidelines.

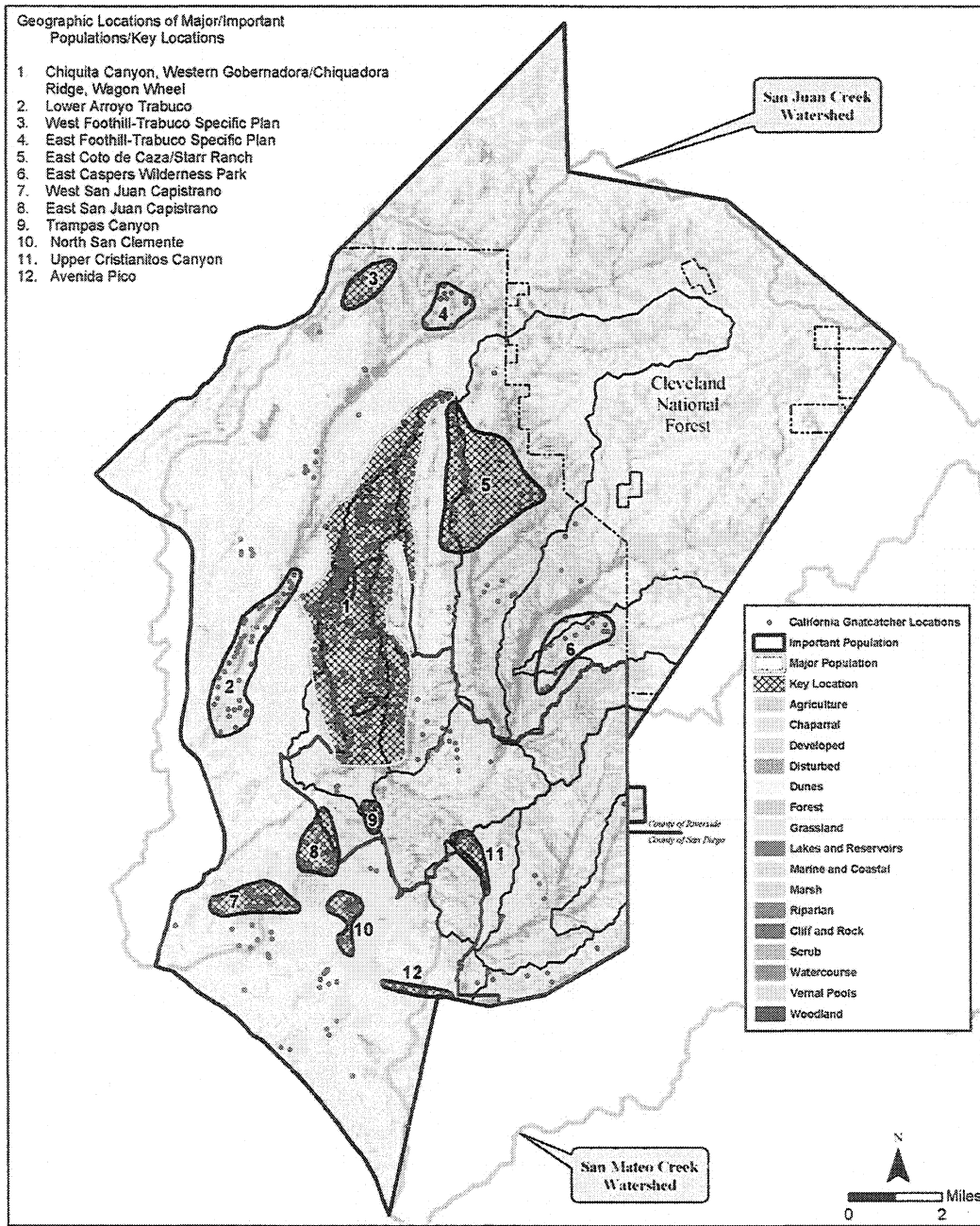
The analyses presented in the Biologic Resources impact and mitigation assessment sections of the Draft Program EIR reflect the “significance” analyses in the Species Accounts, both in a regional and subregional context. Figure 4-1 from the NCCP Guidelines has been reproduced to illustrate the manner in which *major* and *important populations* have been identified on a geographic basis and how *key locations* have been mapped.) Therefore, the Draft Program EIR employs comprehensive species evaluations that define the significance of species and habitats on a geographic-specific basis. Other sensitive species not selected as “planning species” are also addressed in the Draft Program EIR.

NCCP and SAMP Sub-Basin Guidelines and Principles—CEQA Avoidance and Minimization Criteria

The Species Accounts, as well as other information based on extensive field surveys and scientific review, were carried forward into the preparation of geographic-specific NCCP and SAMP guidelines that identify significant resources within each “sub-basin” found within the study area (“sub-basins” are hydrologic drainage areas generally forming canyons or broad streamcourses; see Figure 1 from the Watershed and Sub-basin Planning Principles). The NCCP and SAMP “sub-basin guidelines and principles” both identify significant resources and prescribe measures for protecting, managing, and restoring these resources (see Figures 5-2 and 5-6 from the NCCP Guidelines. Accordingly, these geographic-specific “sub-basin guidelines and principles” provide a comprehensive set of measures and standards for assessing potential biological impacts to species, habitats, and important hydrologic and geomorphic processes that shape and affect habitat systems (see Figure 25 from the Watershed Planning Principles. The portions of the Draft Program EIR’s impact analyses that are based on the NCCP guidelines and SAMP principles therefore apply a refined, site-specific standard of significance to the CEQA avoidance/minimization and impact determination analysis.

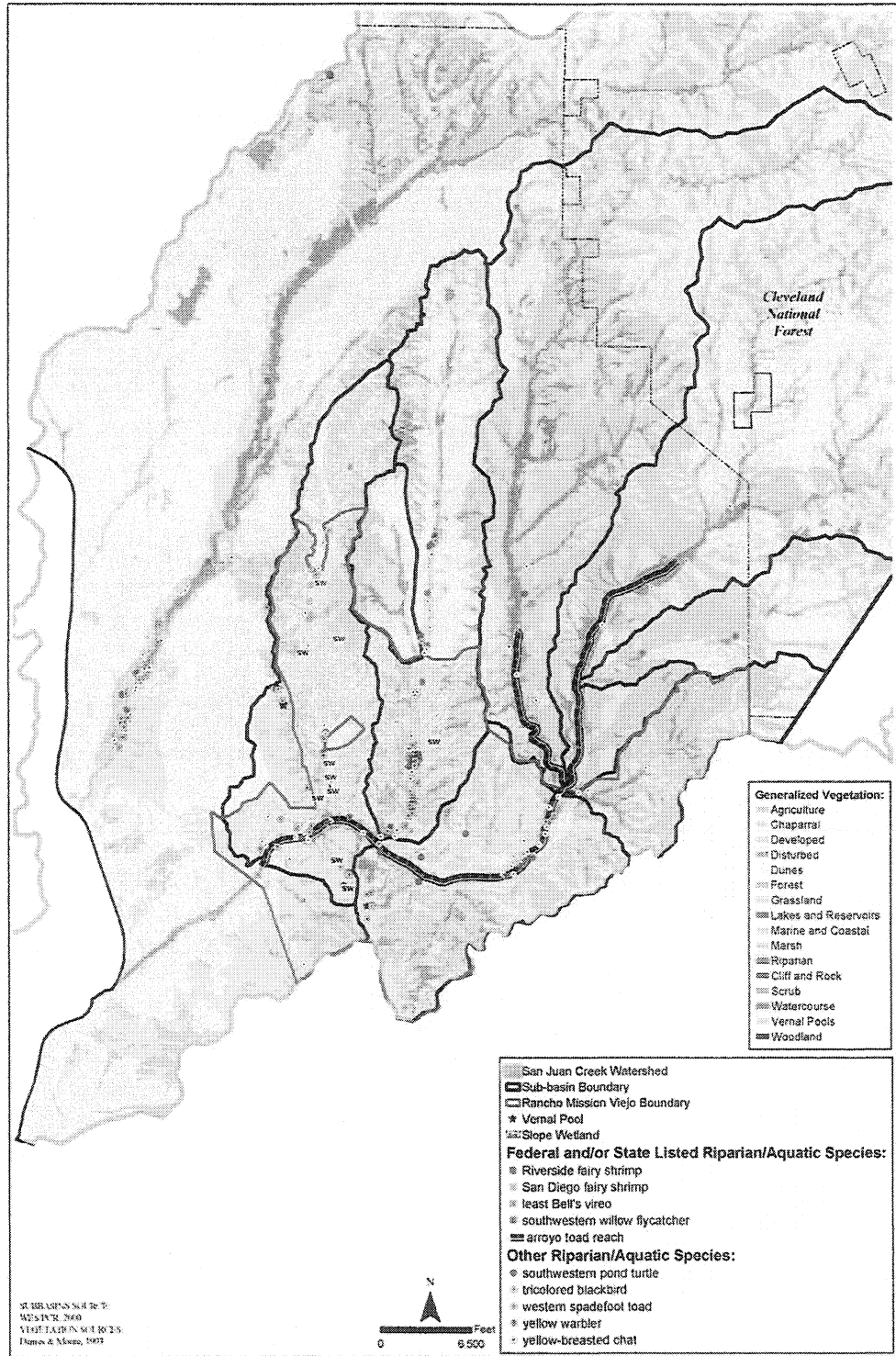
Use of NCCP and SAMP Landscape-Scale Guidelines—CEQA Mitigation Criteria

Through many years of planning, certain NCCP and SAMP tenets and principles have been formulated to guide large-scale planning for habitat reserve lands and the preparation of an Adaptive Management Program (see prior response “a”). The NCCP SRP/Science Advisors Tenets of Reserve Design, the SAMP Tenets and the Baseline Conditions Watershed Planning Principles provide guidance as to the formulation and assessment of mitigation measures intended to provide for the NCCP conservation goal of maintaining “net habitat value” within the study area over the long term. Under the NCCP Guidelines, potential impacts to species and habitats can be offset through: (a) the creation of a Habitat Reserve that includes blocks of habitat containing all major habitat types found within the planning area in a manner consistent with the landscape scale guidelines and (b) implementing a funded adaptive management

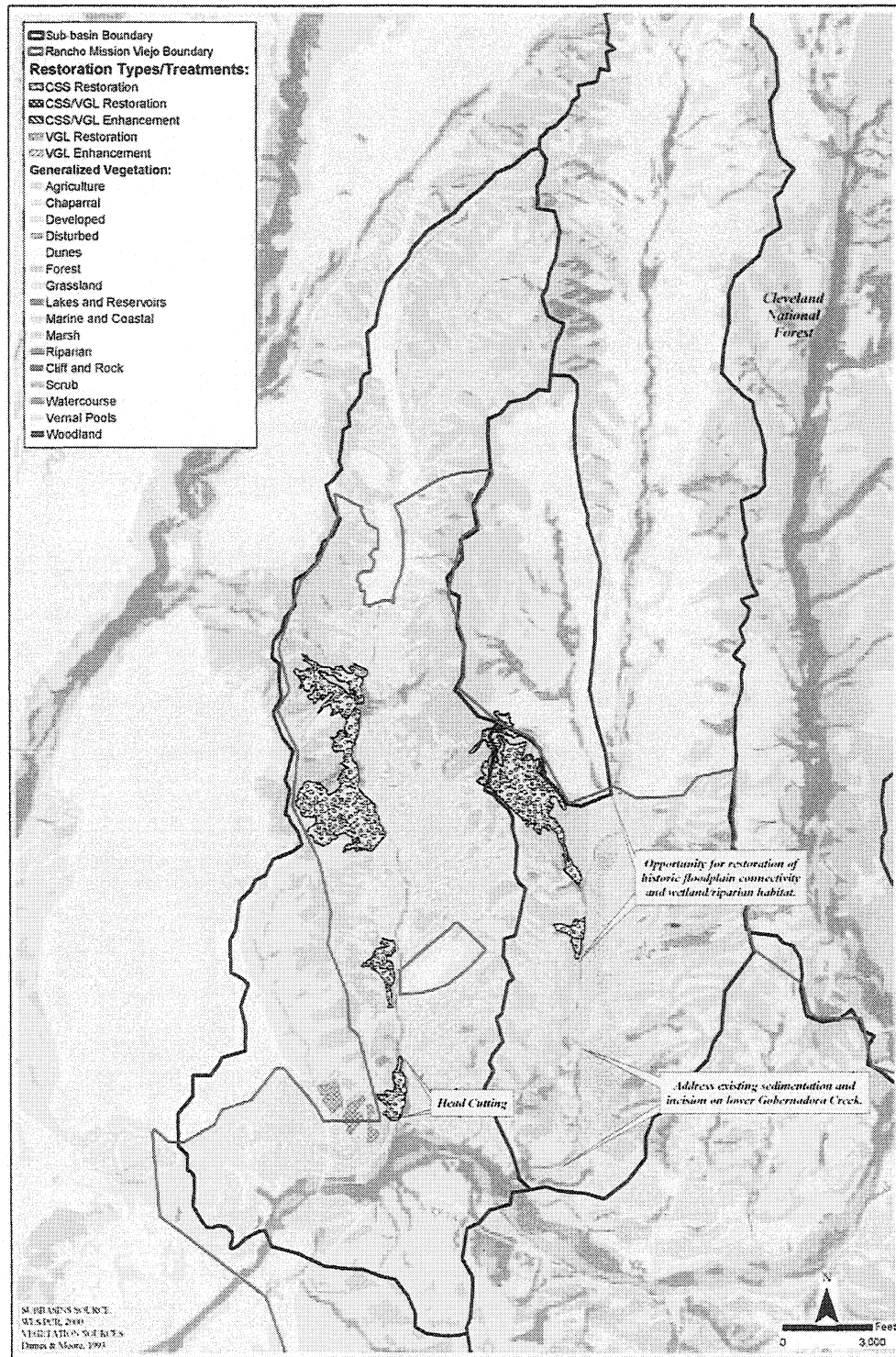


Draft NCCP/HCP Planning Guidelines
California Gnatcatcher Distribution Map

FIGURE
4-1



Draft NCCP/HCP Planning Guidelines **FIGURE 5-2**
San Juan Creek Watershed - Riparian/Aquatic Wildlife Species



Draft NCCP/HCP Planning Guidelines **FIGURE 5-6**
 CSS/VGL and Creek Restoration for Canada Chiquita/Narrow Canyon & Canada Gobernadora Sub-basins

program designed to protect and enhance habitat values over the long term (see Draft Program EIR at pages 4.9-156 to 4.9-159). Accordingly, the "landscape-scale" NCCP and SAMP tenets and principles provide a comprehensive set of measures and standards both for the preparation and the assessment of potential mitigation measures. (For example, see Exhibit 4.9-8 from the Draft Program EIR depicting wildlife movement areas identified for long-term protection by the NCCP Guidelines. These larger-scale conservation planning and long-term management considerations allow for an assessment of the efficacy of proposed mitigation measures (e.g., the proposed protection of RMV Open Space and the proposed Adaptive Management Program) on a species-specific, as well as overall habitat systems level (see Draft Program EIR at pages 4.9-174 to 4.9-175).

3.1.9.2 Comments Regarding Impact Assessment in the Draft Program EIR

Theme of Comments: The Draft Program EIR avoids direct analysis of impacts to the physical environment by comparing the proposed project's impact to the physical environment and its corresponding effect on biological resources. Instead, the Draft Program EIR avoids direct analysis by comparing the project's consistency with Draft Southern NCCP/HCP Guidelines. However, these Guidelines merely set forth policies and principles for the creation of biological reserves and have no bearing on an analysis of project impacts. The Guidelines are a means to mitigate impacts from development and do not themselves measure impacts to a particular resource.

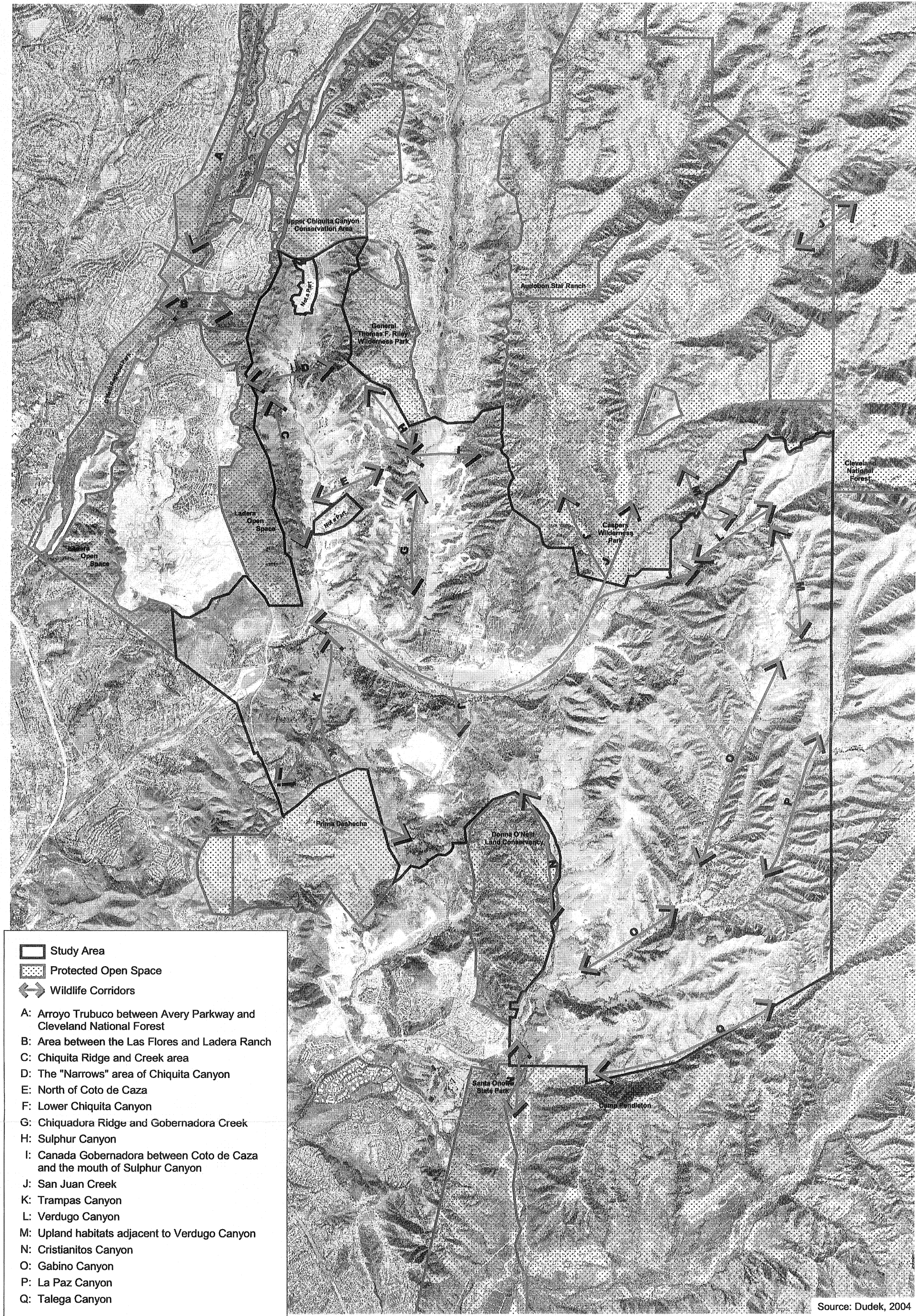
Response: Contrary to the assertion in the comment, the Draft Program EIR contains a detailed quantitative analysis of potentially significant impacts of the proposed project on species and vegetation communities. Starting on p. 4.9-129 through 4.9-153, all impacts are presented both in terms of conflicts with the sub-basin guidelines and principles and in absolute quantitative measures fully reflective of the CEQA Appendix G Guidelines. These quantitative analyses are further supported by 22 detailed graphics identifying both impacted and protected species and vegetation communities (see Exhibits 4.9-11a through 4.9-21c). By analyzing all impacts in the Draft Program EIR, both with respect to consistency with the sub-basin guidelines and principles and in relation to other CEQA standards of significance, the Draft Program EIR takes a comprehensive approach that ensures that all impacts are fully considered.

The comment fails to account for all of the stages in the CEQA process where the NCCP guidelines and SAMP principles can be applied to assess the project's impacts. First, the geographic-specific avoidance and minimization measures set forth in the NCCP sub-basin Guidelines and the SAMP sub-basin planning principles establish a framework for the avoidance of significant impacts to biological resources that has been considered in the project design. If a particular significant resource is avoided, then it is not impacted. Thus, it is essential first to identify significant resources on a geographic-specific basis and then to indicate how impacts on a particular resource can and should be avoided ("The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems "CEQA Guidelines §15126.2).

For each sub-basin, the sub-basin guidelines and principles identify, on a geographic specific basis, the location and significance of "significant" biologic, hydrologic and geomorphic resources and what is required to achieve protection of each identified resource. This is the same as the feasible avoidance of significant impacts required by CEQA. If a particular sub-basin protection recommendation is followed, potential impacts to that resource will be avoided or minimized. As reviewed in the Draft Program EIR "Potential impacts on species that have been selected as NCCP/SAMP Planning Species (see discussion below regarding Species Accounts for NCCP/SAMP Planning Species) are addressed in the same way. Thus, the NCCP



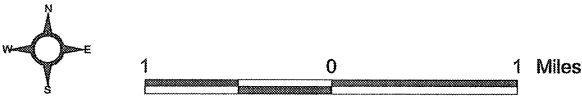
Figure 25
Sub-basin Geomorphic/Hydrologic Features Canada Gobernadora
Opportunities for Restoration/Stabilization and
Water Quality Natural Treatment Systems



Wildlife Movement – Impact Areas

Exhibit 4.9–8

The Ranch Plan



Sub-Basin Guidelines and Watershed Sub-Basin Planning Principles provide comprehensive, geographic-specific criteria for determining whether the proposed project can avoid or minimize significant impacts on biological and related resources [emphasis added in response].” (Draft Program EIR, pages 4.9-98 to 4.9-99)

The role of an impact analysis is to determine if there are any potential *significant* environmental impacts that could be caused by the proposed project. In undertaking an impact assessment, it is important to determine: (a) whether impacts will potentially occur, and (b) whether those potential impacts are significant. Given the wide array of biological resources present in any natural landscape, there is a need to identify which resources have environmental significance. As reviewed in the Draft Program EIR,

“Each of the first six thresholds of significance criteria (i.e., the CEQA Guidelines Appendix G Significance Criteria) is reflected and addressed in the NCCP/HCP Planning Guidelines and the SAMP/MSAA Watershed Planning Principles: (1) listed species and other sensitive species (the first two CEQA Appendix G Guidelines) are comprehensively addressed by the NCCP/HCP Planning Guidelines and SAMP Watershed Planning Principles; (2) the NCCP/HCP and SAMP/MSAA sub-basin guidelines and principles and species accounts derive from the coordinated planning process and are directed at protecting geographic specific biological resources; (3) wetlands and riparian habitats are addressed comprehensively in both sets of guidelines and principles; (4) wildlife movement is also comprehensively addressed through general principles and geographically specific guidelines; and (5) woodlands habitats are one of the major vegetation communities addressed in the NCCP Guidelines.” (Draft Program EIR, page 4.9-97)

Since the primary purpose of the Guidelines and Principles is to identify significant resources within the NCCP Planning Subregion and to provide guidance for measures that would assure long-term conservation of these resources through avoidance, minimization and long-term management measures (including habitat restoration), they also serve an appropriate basis for determining the significance of those impacts under CEQA.

In addition, starting on page 4.9-129 of the Draft Program EIR, all impacts are presented both in terms of conflicts with the sub-basin guidelines and principles and in absolute quantitative measures fully reflective of the CEQA Appendix G Guidelines. By analyzing all impacts in the Draft Program EIR both with respect to consistency with the sub-basin guidelines and principles and in relation to other CEQA standards of significance, the Draft Program EIR takes a comprehensive approach that ensures that all impacts are fully considered.

Theme of Comments: The Draft Program EIR evaluates species impacts on the basis of the percentage of these unapproved Guidelines that are consistent with the proposed project. The analysis of consistency with the sub-basin guidelines and principles assumes equal weighting of all impacts, regardless of their nature or degree of ultimate effect on resources of concern. The consistency analysis artificially weights many “easy” guidelines that happen to apply in multiple sub-basins. This results in frequent “double counting” of these easy measures relative to more difficult landscape-level measures. Many of the guidelines include the clause, “to the extent feasible,” leaving it up to the EIR preparer to determine whether the guideline has been met. Many of the guidelines are clearly mitigation and management guidelines, not resource avoidance guidelines. Finally, the consistency analysis is subjective and poorly explained.

Response: The consistency analysis includes both qualitative and quantitative conclusions. Twenty-nine pages of detailed qualitative consistency analysis are set forth in Appendices G-5

and G-6. That analysis is then distilled into the quantitative summary figures in order to make the information more accessible to decision makers and the public. Such summaries are entirely appropriate under CEQA.

Next, CEQA does not require infeasible mitigation, so the qualification of some of the measures by their feasibility is permissible.

Third, the County considers Appendices G-5 and G-6 to clearly set forth the consistency analysis and the commenter has identified no specific consistency finding for which additional explanation is necessary.

The manner in which protection recommendations set forth in the NCCP/SAMP sub-basin guidelines and principles are reviewed in the Draft Program EIR's impacts section is set forth in the following excerpt from the Draft Program EIR:

"As each sub-basin Protection Recommendation is reviewed in the following subsection of this Project Impacts assessment, a determination is made as to whether the proposed project is "Consistent," "Could be Consistent," or "Not Consistent." Findings of "Consistent" reflect a determination that a potentially significant impact has been avoided. Any finding of "Could be Consistent," is a determination that there is a potentially significant impact that could be avoided with additional specified avoidance/minimization measures that appear to be potentially feasible. A "Not Consistent" finding is a determination that the proposed project is in conflict with a particular sub-basin Protection Recommendation and that further avoidance/minimization measures would likely conflict with the Project Purposes. Thus, the difference between a "Could be Consistent" finding and a "Not Consistent" finding is that additional minimization measures can be identified for "Could be Consistent" findings that would achieve "avoidance" or "minimization" of impacts to below a level of significance whereas a "Not Consistent" finding reflects a determination that there are no further minimization measures that appear to be potentially feasible. All "Could be Consistent" findings are further reviewed under the Mitigation Section to determine whether the specified avoidance/minimization measures are feasible and can be determined to constitute further mitigation to help reduce potential impacts to below a level of significance." (Draft Program EIR, page 4.9-99)

Therefore, every protection recommendation is evaluated individually, including protection recommendations for each sub-basin that address "Planning Species."

With regard to the analysis of species impacts, a portion of the Planning Species consistency analysis uses a percentage summary of Planning Species Consistency Analysis with the NCCP/SAMP sub-basin guidelines and principles directed toward species. However, this analysis is intended as one way of summarizing a complex set of results of the analysis of each sub-basin protection recommendation set forth in Appendices G-5 and G-6 for the proposed project and Tables M-4 and M-5 of Appendix M for each of the "B" Alternatives. Equally importantly, quantitative and *key location* assessments are presented for each of the Planning Species in Table 4.9-28 (see discussions of the Species Accounts for NCCP/SAMP Planning Species at Draft Program EIR on pages 4.9-100 to 4.9-101 that summarizes the manner in which the Species Accounts define significance criteria for populations and locations of Planning Species).

The purpose of the sub-basin guidelines and principles is to identify resource protection, management and restoration guidance on a geographic basis rather than to define standards

that are “easy” to meet or “difficult” to meet. The County disagrees that the quantitative summaries were biased toward easy guidelines or that they double counted mitigation benefits, and the commenter identifies no specific instance in which that is claimed to have occurred.

Theme of Comments: The impact analysis never comprehensively addresses the expected direct and indirect impacts to any species or other sensitive resource either before or after mitigation.

Response: The comment does not appear to acknowledge the introduction to the “SUMMARY OF PROJECT IMPACTS RESULTING FROM PROPOSED PROJECT” or any of the analyses set forth at pages 4.9-129 through 4.9-153 of the Draft Program EIR.

As an example of the type and extent of the impact assessments presented in the “Summary of Impacts on Sensitive Species,” the following is the Draft Program EIR impact assessment summary for the California gnatcatcher, a federally listed species:

“Discussion of the California Gnatcatcher

There are 243 gnatcatcher locations in the study area concentrated in two locations, Chiquita Canyon and Cañada Gobernadora, and in more scattered locations in Cristianitos and Trampas canyons. The study area supports the southern portion of the California gnatcatcher *major population* in a *key location* in Lower and Middle Chiquita Canyon and along Chiquadora Ridge. The study area portion of this *major population* includes 188 of 404 gnatcatcher locations in the population. The study area also supports all or most of two *important populations* in *key locations* south of San Juan Creek. The Trampas Canyon *important population* supports seven gnatcatcher locations and is in a *key location* for north-south habitat connectivity. The Upper Cristianitos Canyon *important population* in the study area includes 12 of 13 gnatcatcher locations, with one location in the Donna O'Neill Land Conservancy. This *important population* also is in a *key location* for north-south habitat connectivity. In the East San Juan Capistrano *important population*, only one of 28 locations is in the study area, with the remainder located west of the Ranch Plan project site. Thirty-five locations occur in the study area that are not associated with either a *major* or *important population*.

Project Impacts

Impact 4.9-70: *The proposed project would result in significant impacts on suitable habitat and locations for the California gnatcatcher.*

Implementation of the land uses associated with the proposed project will result in impacts to 72 locations of California gnatcatchers and 2,024.8 acres of coastal sage scrub. In addition, construction and maintenance of infrastructure facilities within the RMV Open Space would temporarily impact 50.6 acres of coastal sage scrub and one gnatcatcher location. These impacts are considered significant. As noted above, the NCCP/HCP has defined *major populations*, *important populations*, and *key locations* for the Southern Subregion. The study area supports the southern portion of the California gnatcatcher *major population* in a *key location* in Lower and Middle Chiquita Canyon and along Chiquadora Ridge. The study area portion of this *major population* includes 188 of 404 gnatcatcher locations in the population. The proposed project would impact 45 gnatcatcher locations within the Ranch Plan project site's portion of this *major population*. The study area also supports all or most of two *important populations* in *key locations* south of San Juan Creek. The Trampas Canyon *important population* supports

seven gnatcatcher locations and is in a *key location* for north-south habitat connectivity. The proposed project will result in impacts to one location within this *important population*.

An additional 35 gnatcatcher locations in the study area fall outside the identified *major and important populations*. Of these, the proposed project will impact 25 locations, with most of these impacts occurring in Planning Area 3." (Draft Program EIR, page 4.9-138)

The text of the Draft Program EIR clearly assesses potential impacts to animal and plant species and vegetation communities—both in terms of the “important population/major population/key location” criteria used in the draft NCCP/SAMP guidelines and principles and in terms of total quantitative impacts. The Draft Program EIR graphics depict the locations of sensitive animal and plant species and vegetation communities, as well as potential impacts of the proposed project, on a detailed, geographic-specific basis. The following is a list of graphics portraying animal/plant/vegetation communities locations:

- 4.9-1a Vegetation Communities (North)
- 4.9-1b Vegetation Communities (South)
- 4.9-2a Sensitive Wildlife: Threatened and Endangered Birds (North)
- 4.9-2b Sensitive Wildlife: Threatened and Endangered Birds (South)
- 4.9-3a Sensitive Wildlife: Threatened and Endangered Invertebrates and Amphibians (North)
- 4.9-3b Sensitive Wildlife: Threatened and Endangered Invertebrates and Amphibians (South)
- 4.9-4a Sensitive Wildlife: Birds (Non-Threatened/ Endangered and Planning Species) (North)
- 4.9-4b Sensitive Wildlife: Birds (Non-Threatened/ Endangered and Planning Species) (South)
- 4.9-5a Sensitive Wildlife: Birds (Non-Threatened/ Endangered and Non-Planning Species) (North)
- 4.9-5b Sensitive Wildlife: Birds (Non-Threatened/ Endangered and Non-Planning Species) (South)
- 4.9-6a Sensitive Wildlife: Raptors (North)
- 4.9-6b Sensitive Wildlife: Raptors (South)
- 4.9-7a Sensitive Wildlife: Amphibians, Reptiles and Mammals (Non-Threatened/ Endangered) (North)
- 4.9-7b Sensitive Wildlife: Amphibians, Reptiles and Mammals (Non-Threatened/ Endangered) (South)
- 4.9-8 Wildlife Movement

- 4.9-9a Threatened/ Endangered and High Priority (CNPS List 1B and 2) Sensitive Plants (North)
- 4.9-9b Threatened/ Endangered and High Priority (CNPS List 1B and 2) Sensitive Plants (Middle)
- 4.9-9c Threatened/ Endangered and High Priority (CNPS List 1B and 2) Sensitive Plants (South)
- 4.9-10a Sensitive Plants: CNPS List 3 and 4 and Local Concern (North)
- 4.9-10b Sensitive Plants: CNPS List 3 and 4 and Local Concern (Middle)
- 4.9-10c Sensitive Plants: CNPS List 3 and 4 and Local Concern (South)

Importantly, the following list of “impacts” graphics portray geographic-specific detail the potential impacts of each of the proposed planning areas and associated infrastructure for all of the sensitive animal and plant species and vegetation communities addressed in the narrative summaries of the Draft Program EIR referenced and quoted above:

- 4.9-11a Impacts to Vegetation Communities (North)
- 4.9-11b Impacts to Vegetation Communities (South)
- 4.9-12a Impacts to Sensitive Wildlife: Threatened and Endangered Birds (North)
- 4.9-12b Impacts to Sensitive Wildlife: Threatened and Endangered Birds (South)
- 4.9-13 California Gnatcatcher Protection within Chiquita Canyon Major Population
- 4.9-14a Impacts to Sensitive Wildlife: Threatened and Endangered Invertebrates and Amphibians (North)
- 4.9-14b Impacts to Sensitive Wildlife: Threatened and Endangered Invertebrates and Amphibians (South)
- 4.9-15a Impacts to Sensitive Wildlife: Birds (Non-Threatened/Endangered and Planning Species) (North)
- 4.9-15b Impacts to Sensitive Wildlife: Birds (Non-Threatened/Endangered and Planning Species) (South)
- 4.9-16a Impacts to Sensitive Wildlife: Birds (Non-Threatened/Endangered and Non-Planning Species) (North)
- 4.9-16b Impacts to Sensitive Wildlife: Birds (Non-Threatened/Endangered and Non-Planning Species) (South)
- 4.9-17a Impacts to Sensitive Wildlife: Raptors (North)
- 4.9-17b Impacts to Sensitive Wildlife: Raptors (South)

- 4.9-18a Impacts to Sensitive Wildlife: Amphibians, Reptiles and Mammals (Non-Threatened/ Endangered) (North)
- 4.9-18b Impacts to Sensitive Wildlife: Amphibians, Reptiles and Mammals (Non-Threatened/ Endangered) (South)
- 4.9-19 Impacts to Wildlife Movements
- 4.9-20a Impacts to Threatened/Endangered and High Priority (CNPS List 1B and 2) Sensitive Plants (North)
- 4.9-20b Impacts to Threatened/Endangered and High Priority (CNPS List 1B and 2) Sensitive Plants (Middle)
- 4.9-20c Impacts to Threatened/Endangered and High Priority (CNPS List 1B and 2) Sensitive Plants (South)
- 4.9-21a Impacts to Sensitive Plants: CNPS List 3 and 4 and Local Concern (North) Areas
- 4.9-21b Impacts to Sensitive Plants: CNPS List 3 and 4 and Local Concern (Middle) Areas
- 4.9-21c Impacts to Sensitive Plants: CNPS List 3 and 4 and Local Concern (South) Areas

All impacts are defined graphically in relation to the type of activity causing the potential impact as follows: (1) development grading (the "planning area"); (2) roads; (3) trails/bikeways; (4) sewer and water facilities; and (5) drainage facilities.

Given the detailed information provided in the narrative impact summaries and the level of site-specific detail provide in the "impacts" graphics, the County of Orange considers the Program EIR's analysis to be adequate.

With regard to the comment regarding the asserted omission of an impact analysis "after mitigation," the Draft Program EIR contains extensive summaries of the combined effects of avoidance/minimization and mitigation measures that form the basis for "level of significance" conclusions. As indicated in the topical outline for the Mitigation Program (at pages 4.9-154 through 4.9-155), the categories of analyses for combined minimization/avoidance and mitigation measures are as follows:

- Assessment of the Extent to Which Proposed Minimization/Avoidance and Mitigation Measures Reduce Impacts to Below a Level of Significance
 - (1) Minimization/Avoidance and Mitigation Measures for Potential Direct Impacts to the Five Major Vegetation Communities
 - (2) Minimization/Avoidance and Mitigation Measures for Potential Direct Impacts to Listed NCCP/HCP Planning Species and to Other Listed Species
 - (3) Minimization/Avoidance and Mitigation Measures for Potential Direct Impacts to Unlisted NCCP/HCP Planning Species and Other Sensitive Species
 - (4) Mitigation for Potential Impacts Resulting from Conflicts with the NCCP Sub-Basin Guidelines ("Not Consistent" Findings)

- (5) Mitigation for Potential Impacts Resulting from Conflicts with the Watershed Sub-Basin Planning Principles ("Not Consistent" Findings)
- (6) Summary of Mitigation Measures for Potential Impacts to Habitat Linkages and Wildlife Movement Corridors
- (7) Overall Conclusions Regarding Net Habitat Value

E. Mitigation for Potentially Significant Indirect Effects

- (1) Short-term Effects
- (2) Long-term Effects"

Summaries are provided for: (1) the five major vegetation communities that encompass all of the NCCP vegetation communities and associated species habitats; (2) listed Planning Species and other listed species; (3) unlisted Planning Species and other sensitive species; (4) impacts resulting from conflicts with NCCP sub-basin guidelines; (5) impacts resulting from conflicts with the Watershed sub-basin principles; (6) impacts to habitat linkages and wildlife corridors; and (7) overall conclusions regarding net habitat value. Indirect effects are addressed under both short-term and long-term indirect effects (quantification of "indirect effects" is addressed in Topical Response 3.1.9.6. Given the extent and scope of the impacts and mitigation analyses, the Program EIR's presentation satisfies CEQA requirements.

Theme of Comments: The analysis in the Impacts Assessment section ignores the big picture by focusing immediately on the sub-basin guidelines without comprehensively assessing consistency with the broad tenets and principles of reserve design. A holistic analysis would start with a landscape-level assessment and then step down to more detailed sub-basin analyses to determine population level impacts on each species.

Response: The commenter is incorrect that the Draft Program EIR's analysis at a sub-basin level excludes a landscape level assessment, since the Draft Program EIR contains both. The fact that the two levels are interrelated does not undermine the approach. Specifically, the sub-basin guidelines provide the "analytic building blocks" upon which the broader landscape level analyses in the Mitigation Program section are based. For instance, SRP Reserve Design Tenet 1 advises to "conserve target species throughout the Planning Area." The analysis of consistency with Tenet 1 at the "landscape" (i.e., study area) level requires geographic-specific assessments of the impacts of the proposed project and the "B" alternatives on Planning Species that is most appropriately done at the sub-basin level. Similarly, the analysis of consistency with SRP Reserve Design Tenet 3 (Keep Reserve Areas Close/Link Reserves with Corridors) requires a geographic-specific analysis of each of the Habitat Linkage/Wildlife Movement Corridors identified in Exhibit 4.9-8 at the sub-basin level to provide the analytic basis for this landscape level consistency review of habitat connectivity issues.

Since the NCCP Conservation Guidelines identify the "habitat reserve" and "adaptive management program" as the key elements of an NCCP Conservation Strategy to maintain "net habitat value over the long-term," it is appropriate that the broader landscape level guidelines that address reserve design at a much larger scale than the sub-basin guidelines would be provided in the Mitigation Program section. The County considers this approach to be holistic.

Theme of Comments: Use of the Draft NCCP/HCP Planning Guidelines as a CEQA Threshold of Significance is not appropriate as the Guidelines are not a final product and are subject to

future changes. The NCCP/HCP Guidelines have not yet been approved or endorsed by any wildlife agency. Without finalization and approval by state and federal wildlife agencies, the Draft Guidelines do not provide a legitimate basis under which to evaluate project impacts.

Response: The comment regarding the use of the Draft NCCP/HCP Planning Guidelines correctly notes that the Draft Program EIR describes the Draft NCCP/HCP Planning Guidelines as a “work in progress” (page 4.9-5, Draft Program EIR) and that “new planning information and analyses could modify the assessment of significance of specific resources, including the initial protection, management and restoration recommendations. Therefore, the specific language in the NCCP/HCP Guidelines will continue to be reviewed and modified as appropriate.” (Page 1-2, Appendix G-2, Draft Program EIR). As noted in the Draft Program EIR, the Planning Guidelines were initially drafted in 2003 and updated in 2004 to: (1) add species accounts for 14 additional unlisted Planning Species in Section 4 (the draft of the 2004 update was submitted to the resource agencies for review in June 2003); and (2) revise the species accounts for the arroyo toad, thread-leaved brodiaea, and many-stemmed dudleya based on new information. Therefore, as contemplated by FWS and the County, the guidelines have changed over time, and may continue do so as the NCCP/HCP process moves forward. However, the current (2004) version of the guidelines represent both the most currently available information regarding the resources within the Draft Program EIR study area and the most current thinking regarding protection, restoration, and management priorities for the resources within the study area. For this reason, the NCCP/HCP Planning Guidelines are appropriately used in the Draft Program EIR as one of several metrics to determine the level of potential impact to biological resources. Nothing in CEQA precludes this more comprehensive approach. As previously addressed, this consideration of draft NCCP and SAMP subregional guidance documents is not required by CEQA, but serves to provide a more thorough analysis of all of the substantive review topics identified in Appendix G of the CEQA Guidelines. Nothing in CEQA precludes this more comprehensive approach.

3.1.9.3 Comments regarding the Proposed Mitigation Program/Adaptive Management Program

Theme of Comments: Since adoption of the NCCP/HCP Guidelines is uncertain, mitigation based on those guidelines is not assured. The EIR needs to assume the worst case that the guidelines will not be adopted, or alternatively to provide contingency mitigation measures that would apply in the event that the NCCP/HCP is not adopted.

Response: This comment reflects a mischaracterization of the mitigation program in the Draft Program EIR incorrectly implying that anticipated future compliance with the guidelines is the exclusive source of mitigation. It also inappropriately discounts the likely effectiveness of the guidelines in the mitigation program.

The guidelines and principles serve several roles in the mitigation program. First, several of the mitigation measures either directly reference the guidelines, or apply them as performance standards for future mitigation refinements. In this role, regardless of whether they remain subject to change, the guidelines and principles set forth an approach that is reasonable and that reflects the current best thinking of the regulatory agencies. This role is not undermined by the fact that continuing evolution of the guidelines and principles can be anticipated. Second, the guidelines serve as a basis for predicting the results of future permitting processes, which in turn will have a mitigating effect on project impacts. The fact that the guidelines and principles may change does not undermine this role in the analysis of impacts, and the current version reflects the best available information in this regard.

The comment ignores the multiple facets of the mitigation program, which includes two major components: (1) project design features, in particular PDF-1 requiring creation of a comprehensive open space protection system, and PDF-2 requiring formulation and funding of a comprehensive long-term Adaptive Management Program, and (2) the numerous impact-specific mitigation measures listed in Table 4.9-32. The adaptive management program in turn contains multiple key components summarized in Appendix G-7, and elaborated in Appendices J-1 through J-5, including a Plant Translocation, Propagation and Management Plan, a Habitat Restoration Plan, an Invasive Species Control Plan, a Grazing Management Plan, and a Wildland Fire Management Plan. This multi-faceted mitigation program does not rely solely on the guidelines and principles, but instead provides several levels of protection. In particular, the five plans incorporated into the Adaptive Management Program contain quantitative and qualitative performance standards and require monitoring and additional measures to ensure achievement of those standards, resulting in a reliable mitigation program with adequate contingency.

Additionally, as recognized in the Draft Program EIR, the project will require permits, at minimum, from the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game. The requirements of these permits will further help ensure that significant impacts to biological resources will be mitigated to less than significant levels. It is reasonable to assume that the project proponents will comply with all applicable laws, and it is a general condition of project approval that they do so. It is also reasonable to assume that the resource agencies will integrate any changes to the guidelines and principles into these permitting processes, which will address the concern reflected in the comment that those guidelines and principles may continue to evolve.

Theme of Comments: The Draft Program EIR is unclear as to whether the applicant will be required to implement the open space plan, Adaptive Management Plan, and other mitigations.

Response: All of the project design features, including the open space plan and adaptive management plan (and its five sub-plans), as well as all of the numbered mitigation measures identified in the Draft Program EIR, are intended to be binding and enforceable on the project applicant. The project applicant is also bound to comply with all applicable laws, including the limitations and conditions of future permits anticipated to be issued by the resource agencies.

Theme of Comments: The Draft Program EIR does not mitigate the project's impacts to biological resources. The mitigation program is confusing and deficient. The proposed mitigation is convoluted and ineffective. It repeats language out the NCCP and SAMP guidelines, and from the consistency analysis, but is unclear on what actually it proposes as the mitigation program. What exactly is mitigating for what?

Response: The Draft Program EIR describes the Conservation Strategy for the proposed project as consisting of two key components: 1) the RMV Open Space referred to in PDF 9-1 (page 4.9-159), and 2) the RMV Open Space Adaptive Management Program (AMP) referred to in PDF 9-2 (page 4.9-160) and contained in Appendix J to the Draft Program EIR, both of which measures are essential to maintaining "net habitat value over the long-term" on Ranch Plan project site lands.

The Draft Program EIR summarizes the concept of "net habitat value over the long-term" as the central conservation concept that allows for the creation of a smaller, but actively managed habitat reserve, as a way in which both habitat conservation and compatible development goals can be attained. As stated in the Southern NCCP Guidelines:

"The combination of a properly formulated Habitat Reserve and a comprehensive Adaptive Management Plan "AMP" will allow the NCCP/HCP program to maintain *net habitat value* on a *long-term basis* for species ultimately receiving regulatory coverage under the program. As broadly defined in the 1993 NCCP Conservation Guidelines, "no net loss of habitat value means no net reduction in the ability of the subregion to maintain viable populations of target species over the long-term." (Conservation Guidelines, page 9). Specifically defined, *net habitat value* takes into account habitat gains and losses due to a particular activity, such as reductions in habitat area (impact) and increases in habitat quality (mitigation through restoration and management). The Habitat Reserve and AMP will allow for the mitigation of impacts of proposed incidental take such that the *net habitat value* of the subregion for Identified Species will be maintained on a long-term basis.' <http://pdsd.oc.ca.gov/socccpp/index.htm>

The above guidance provided by the finally adopted 1993 NCCP Guidelines is reviewed and applied in the Draft Program EIR as summarized in the following excerpt:

"The purpose of the Conservation Strategy of the proposed project is to address the elements of the NCCP/HCP strategy that assure the long-term protection of habitat values within the five major vegetation communities supporting the Draft NCCP/HCP Planning Guidelines Planning Species. These five major vegetation communities, (coastal sage scrub, chaparral, grasslands, wetlands/riparian, and woodlands) encompass the major habitat types found on RMV lands and analyzed in the impacts section. The Conservation Strategy for the proposed project strategy is comprised of (1) the formulation of protected open space on RMV lands which could form the basis of a future Habitat Reserve in any future NCCP/HCP and SAMP/MSAA, (2) the provision of habitat connectivity (through the protection of Habitat Linkages and Wildlife Movement Corridors identified in the draft NCCP/HCP Planning Guidelines), and (3) the formulation of and provisions for the funding of a long-term AMP. By assuring the long-term protection of habitat values of the Planning Species through the three major elements of the proposed Conservation Strategy, the proposed project intends to mitigate impacts that cannot be avoided or minimized to below a level of significance and thereby reduce such impacts to below a level of significance. By setting aside significant open space (RMV Open Space) and formulating an AMP consistent with the Draft NCCP/HCP Planning Guidelines and Watershed Principles, it is a further goal of the proposed project to protect and manage habitat for a wide range of sensitive species (in addition to the Planning Species) in a manner that will mitigate, entirely or in significant part, impacts of the proposed project on such species. In that way, the proposed project would address CEQA mitigation requirements for impacts to sensitive species and associated habitats that cannot be feasibly avoided or minimized. The proposed project will thus provide for a self-contained habitat protection and long-term AMP that is not dependent on a future larger scale subregional NCCP/HCP and/or SAMP/MSAA while at the same time providing a conservation plan that would be complementary to future NCCP/HCP and SAMP/MSAA planning per the revised NOP." (Draft Program EIR, page 4.9-158)

Although framed as a conservation planning concept, the above excerpt from the Draft Program EIR summarizes how the concept of "maintaining net habitat value over the long-term" also serves as the central mitigation concept for the portion of the Southern NCCP subregion considered to be the essential private lands involved in the ultimate formation of a long-term subregional Habitat Reserve.

PDF 9-1 and PDF 9-2 are the primary means of assuring net habitat value over the long-term. PDF 9-1 describes the process by which the applicant and the County will enter into an agreement regarding the approximately 15,121 acres of open space. Table 4.9-31 on page 4.9-161 sets forth the vegetation communities anticipated to be conserved within the RMV Open Space. The difference in acreage between 15,121 and 14,640.1 cited in Table 4.9-161 is the deduction of acres of vegetation communities impacted by infrastructure allowed in open space per the PC Text (this is further discussed in Topical Response 3.1.6). The following vegetation communities will be conserved in the RMV Open Space:

**TABLE 4.9-31
SUMMARY OF CONSERVATION OF VEGETATION COMMUNITIES*/
LAND COVERS IN THE STUDY AREA**

Vegetation/Land Cover	Existing (acres)	Open Space (acres)	Percent of Vegetation/Land Cover in Open Space
Grassland	5,040.9	2,627.3	52%
Coastal Sage Scrub	7682.0	5,657.2	74%
Riparian	1,920.3	1,507.4	78%
Open Water	135.7	63.1	46%
Freshwater Marsh	25.2	16.3	65%
Watercourses	13.2	13.2	100%
Vernal Pools	19.9	19.9	100%
Woodland	275.9	180.1	65%
Forest	311.9	184.8	59%
Chaparral	3,792.9	3,081.1	81%
Cliff & Rock	6.2	2.1	34%
Developed	534.7	111.8	21%
Disturbed	501.2	152.4	30%
Agriculture	2,554.8	1,023.4	40%
Total	22,814.8	14,640.1	64%
Net open space acreage including infrastructure. Gross open space acreage is 15,121. Source: Dudek 2004			

PDF 9-2 summarizes the Adaptive Management Program (set forth in full in Appendix J). The Draft Program EIR describes the manner in which the AMP provides the essential management mechanism by which "the goal of no net loss of habitat value may be attainable even if there is a net loss of habitat acreage."

"The NCCP Conservation Guidelines define the manner in which the creation and long-term adaptive management of reserves provide for assuring no net reduction, over the long term, in the ability of the subregion to sustain populations of Identified Species (termed "target species" in the Conservation Guidelines) and their associated habitats:

...subregional NCCPs will designate a system of interconnected reserves designed to: (1) promote biodiversity, (2) provide for high likelihoods for persistence of target species in the subregion, and (3) provide for no net loss of habitat value from the present taking into account management and enhancement. No net loss of habitat value means no net reduction in the ability of the subregion to maintain viable populations of target species over the long-term.

With improved techniques for management and restoration, the goal of no net loss of habitat value may be attainable even if there is a net loss of habitat acreage. (NCCP Conservation Guidelines, November 1993, CDFG, page 9)" (SRP Draft Program EIR at page 4.9-207)):

The final EIR/EIS for the County of Orange Central and Coastal NCCP/HCP further elaborates on the concept of net habitat value as the conservation strategy for reducing habitat impacts to below a level of significance as follows:

"Habitat value' can be defined as the ability of a unit of habitat to support an animal, which is usually expressed as the produce of area and an index of habitat quality (area multiplied by a 'habitat quality index' between 0 and 100). 'Net habitat value' is a term that takes into account habitat gains and losses due to a particular activity, such as reductions in habitat area impact) and increased habitat quality (mitigation through management). 'Net habitat value over the long-term refers not only to current habitat value, *but also to likely* future increases and decreases. Accordingly, 'net habitat value over the long term' means, in functional terms, the ability of a unit of habitat to support an animal, taking into account particular activities and likely future increases and decreases in habitat value. As stated in the above excerpt from the NCCP Conservation Guidelines, 'with improved techniques for management and restoration, the goal of no net loss of habitat value may be attainable even if there is a net loss of habitat acreage.' The converse for the CSS ecosystem, according to the NCCP Conservation Guidelines, is that 'a status quo strategy for "benign neglect" management is likely to result in substantial further losses of CSS biodiversity.'

Thus, as indicated by the NCCP Conservation Guidelines, a Reserve System that consists of smaller, appropriately managed habitat areas could have a greater likelihood of maintaining CSS habitat values and biodiversity under adaptive management than a system of larger habitat areas that are unmanaged or ineffectively managed." (Central/Coastal EIR/EIS, at pages 8-3 to 8-4)

An example of "benign neglect" is the spread of invasive plant and animal species causing severe impacts on listed species (the large expanses of Arundo in San Juan Creek affecting water supply and breeding habitat for the arroyo toad, as well the presence of bullfrogs causing substantial reductions in arroyo toad populations). The comprehensive control of invasive species is a central element of the AMP. An example of the ability to maintain net habitat value through habitat restoration is the AMP proposal to restore 348 acres of coastal sage scrub in areas with important and major gnatcatcher populations, thereby offsetting the reduction of occupied habitat in these areas by the proposed project.

As reviewed in the Draft Program EIR:

"Establishing the RMV Open Space is clearly key to maintaining net habitat value and for enhancing net habitat value over the long-term. However, it is the AMP that creates the implementation mechanism for both protecting and increasing net habitat value on a long-term basis. The RMV Open Space AMP is premised on concepts presented in the NCCP Conservation Guidelines and in the Southern Orange County NCCP Science Advisors Report. As stated in the latter Report:

Adaptive management assumes that managers will take actions (including leaving habitats undisturbed) that modify present ecosystem structure and function with the aim of moving the system towards a more desirable state or keeping it within some

acceptable limits. This process takes advantage of the information generating opportunities that management activities create. The process is based on a feedback loop in which individual management activities are flexible and can be changed as new information becomes available or as conditions or priorities change. Adaptive management is iterative, meaning that managers constantly monitor and evaluate the consequences of their activities and refine them. (Science Advisors Report, pages 22-23; cf. Fish & Game Code Sections 2805(a) and 2852)

This management focus is necessarily embodied in the monitoring program for the RMV Open Space. As stated in the Science Advisors Report:

The biological monitoring program should be developed specifically to measure and evaluate the effects of management activities. It should identify and measure variables that permit iterative refinement of the management program. (Science Advisors, Principles for Adaptive Management, pg. 4, emphasis added)

Appendix J describes the RMV Open Space AMP focus on “environmental factors known or thought to be directly or indirectly responsible for ecosystem changes.” Appendix J goes on to indicate, “These factors, called ‘environmental stressors,’ may have both adverse and beneficial effects on ecosystem characteristics such as vegetation communities and species.” By addressing “environmental stressors,” the AMP focuses on factors that influence the habitat value of the RMV Open Space. The “environmental stressor” approach to managing and monitoring natural resources “provides a conceptual method, along with an applied management system for testing concepts that is amenable to an enhanced understanding of causal relationships that can be addressed through management actions” (Page 9, Appendix J, Draft Program EIR).

Appendix J describes the methodology used to prioritize management measures and strategies for the RMV Open Space vegetation communities and site-specific resources. Appendix J also reviews the adaptive management models that will be used in carrying out the management program.” (Draft Program EIR, p. 4.9-207 to -209)

As noted in the above quote from the Draft Program EIR, Appendix G-7 contains an extensive discussion of the “Adaptive Management Program as Mitigation,” including a summary of actions intended to increase net habitat value for listed species, and, in so doing, contribute to the recovery of the seven Planning Species that are also listed species.

Draft Program EIR, pages 4.9-209 through 4.9-211, explains the various substantive elements of the overall management program in relation to the manner in which these program elements contribute to maintaining and increasing net habitat value on a long-term basis within the framework of three broad habitat management goals. As reviewed in the Draft Program EIR, Appendix J identified three broad goals for the AMP, each of which is related to the objective of maintaining, and where feasible, increasing net habitat value of the RMV Open Space over the long term:

- Goal 1 addressed by the AMP is to “Ensure the Persistence of a Native-Dominated Vegetation Mosaic in the RMV Open Space.” The AMP is comprised of four steps to ensure the persistence of a native-dominated vegetation mosaic in the RMV Open Space (Goal 1) consistent with the NCCP Guidelines: (1) preparation of conceptual stressor models and conceptual management plans for vegetation communities; (2) periodic assessment of the vegetation communities; (3) management of the vegetation communities; and (4) evaluation of the effect of the management action.”

- Goal 2 addressed by the AMP is to “Restore the Quality of Degraded Vegetation Communities and Other Habitat Types.” Habitat restoration is broadly defined as the process of intentionally altering a degraded area or creating new habitat to re-establish a defined pre-existing habitat or ecosystem. The goal of restoration is to generally emulate the structure, function, diversity, and dynamics of the habitat or ecosystem. Goal 2 will be achieved through implementation of several coordinated and integrated restoration plans and related management actions, including:
 - Plant Species Translocation, Propagation and Management Plan (*Appendix J-1*);
 - Habitat Restoration Plan (*Appendix J-2*);
 - Invasive Species Control Plan (*Appendix J-3*);
 - Grazing Management Plan (*Appendix J-4*); and
 - Fire Management Plan (*Appendix J-5*).
- Goal 3 addressed by the AMP is to “Maintain and Restore Biotic and Abiotic Natural Processes, at All Identified Scales.” Goal 3 will be achieved through the combination of applied restoration actions and management actions and prior baseline studies and comparative information assembled for other managed open space areas with a particular emphasis on maintenance and restoration of fire and hydrologic/erosional processes.

Beginning on page 4.9-217, the Draft Program EIR discusses the contributions of the Conservation Strategy (i.e., the RMV Open Space and the Adaptive Management Program) to mitigate the significant impacts identified, including impacts to: (1) the five major vegetation communities, (2) listed Planning Species and non-Planning Species, (3) non-listed Planning Species, and (4) other sensitive species. The following is an example of how the Draft Program EIR analyzes minimization/avoidance and mitigation measures for impacts identified as significant in the first category—five major vegetation communities.

- First, the Draft Program EIR identifies the significant impact— “Impact 4.9-62. The proposed project would significantly impact 2,024.8 acres of coastal sage scrub. In addition, construction and maintenance of infrastructure facilities within the RMV Open Space would temporarily impact 50.6 acres of coastal sage scrub.”
- Second, the Draft Program EIR identifies the minimization/avoidance proposed by the project— “The proposed project would conserve 5,657.2 acres (74 percent) of coastal sage scrub through implementation of PDF 9-1.”
- Third, the Draft Program EIR identifies the mitigation proposed by the project (i.e., the contributions of the AMP to Maintaining Net Habitat Value and/or any resource specific mitigation measure) “Refer to the prior summary discussion and Appendix G-7 how the Conservation Strategy (PDF 9-1 and 9-2) contributes to the mitigation of significant impacts and helps maintain and enhance net habitat value of resources protected through the creation and adaptive management of the RMV Open Space. In particular, refer to Coastal Sage Scrub Vegetation Community—Goals, Objectives, Potential Stressors and Management, Enhancement and Restoration Actions. Please also refer to the Habitat Restoration Plan regarding restoration of upland habitat types including coastal sage scrub. The proposed project would implement 348 acres of recommended

coastal sage scrub restoration and 60 acres of coastal sage scrub/native grassland restoration.”

- Fourth, the Draft Program EIR identifies the level of significance after avoidance/minimization and mitigation, in this case Impact 4.9-62 is mitigated to a level “less than significant.” (Draft Program EIR at page 4.9-217)

In this way, all impacts identified as significant are reviewed in the Draft Program EIR and avoidance/minimization and mitigation for all identified significant impacts are set forth. All identified impacts are mitigated with the following exceptions as noted on page 4.9-261 of the Draft Program EIR “The proposed project will result in significant, unavoidable impacts to two slope wetlands in the Chiquita sub-basin, linkages K and G, and fecal coliform pathogen impacts.”

The commenter provides no information regarding which species in particular they are concerned about; however, the Draft Program EIR identifies 40 mitigation measures related to the minimization and avoidance of impacts to specific species. For example, Mitigation Measure 4.9-35 calls for the applicant to avoid all vernal pools in the Trampas sub-basin to protect populations of San Diego and Riverside fairy shrimp. For a discussion of the mitigation provided for specific species, refer to Section 3.1.9 Impacts to Species below.

Theme of Comments: The mitigation program inappropriately takes mitigation credit for already conserved lands. The mitigation program takes credit for lands not managed for biological values as mitigation land, such as golf courses.

Response: Table 4.9-28 sets forth the conservation of Planning Species within the RMV Open Space. Conservation mitigation on RMV lands only is further reviewed in Table 4.9-32, Table 4.9-33, Table 4.9-34, Table 4.9-35, Table 4.9-41, Table 4.9-42, Table 4.9-43, Table 4.9-44, and Table 4.9-45. The information set forth in Table 4.9-28 is repeated in Table 4.9-36 to give the reader an understanding of the proposed project’s contribution towards the conservation of Planning Species within the overall Southern Subregion study area that is also reviewed in Table 4.9-36. This information is consistent with statements at the beginning of the Biological Resources section which emphasize that “a fundamental premise of the proposed project is that land use planning within the study area for both open space and development should build upon the significant open space planning, protection, and management efforts on the part of local government, state, and federal agencies, and private and quasi-public landowners that have already taken place within the Southern Subregion” (Draft Program EIR, page 4.9-1). Therefore, for the proposed project, the SRP Tenets consistency analysis is based on both the protection of habitats and species within the RMV Open Space set forth in Section 4.9 including but not limited to Table 4.9-28, Table 4.9-3, and then is presented in Table 4.9-36 for both “RMV Only Open Space” and for the subregion as a whole under the heading of “Planning Areas Open Space.” All alternatives addressed in Section 5 and Appendix M are similarly examined.

As described in Topical Response 3.1.2, Project Description–Definition and Preservation of Open Space, the 14,640 acres of open space to be managed as protected habitat does not include golf courses. All golf courses are assumed to be within the developed uses set forth in Table 3.4-2; specifically, all golf course acres are assumed within the gross residential acres column of this table and were calculated as an impact on this basis. No “credit” for golf courses as either open space or mitigation is assumed. However, although considered a “developed” use, the Draft Program EIR (page 4.9-176) does describe four golf courses as having special linkage functions as follows:

- Chiquita Creek; (1) wildfire protection for the *major population* of gnatcatchers in a manner comparable to the fire break functions performed by the Newport Coast Golf Course during the 1993 wildfires; (2) protection of wildlife movement opportunities by means of vegetated open space within one of the major movement/habitat linkage corridors identified in the Draft NCCP/HCP Planning Guidelines (Habitat Linkage/Wildlife Movement "C").
- Cristianitos Creek: (1) wildfire protection for a *key location* of gnatcatchers and to help protect linkages with significant gnatcatcher populations to the south in Camp Pendleton and to the north within the planning area; (2) protection of wildlife movement opportunities by means of vegetated open space within one of the major wildlife movement/habitat linkage corridors identified in the Draft NCCP/HCP Planning Guidelines (Habitat Linkage/Wildlife Movement "N").
- Blind Canyon Mesa: (1) wildfire protection for habitat associated with a *key location* of arroyo toads; (2) protection of wildlife movement opportunities by means of vegetated open space.
- Upper Gabino Canyon: (1) wildfire protection for habitat within the headwaters of Gabino Creek; (2) protection of wildlife movement opportunities by means of vegetated open space within one of the major wildlife movement/habitat linkage corridors identified in the Draft NCCP/HCP Planning Guidelines (Habitat Linkage/Wildlife Movement "O").

The approved County of Orange Central and Coastal NCCP/HCP Implementation Agreement describes "Special Linkage Areas" as: "Lands which contain CSS, Target Species or provide connectivity functions between habitat areas within the Reserve System, between the Central/Coastal Subregion and other subregions, or between the Reserve System and outlying Identified Species populations" (Implementation Agreement Section 1.52) and then designates three golf courses as providing Special Linkage Area functions (Implementation Agreement Section 6.1(b)). The same wildlife movement/connectivity functions considered to be Special Linkage functions under the Central/Coastal NCCP/HCP Implementation Agreement are reflected in the above descriptions of the four proposed golf courses. Again, the proposed golf courses support habitat uses and thus provide mitigation functions but the golf courses are not included in the RMV Open Space.

Theme of Comments: As mitigation for biological impacts, the Draft Program EIR proposes to survey the site for listed species. However, this measure does not address habitat value for non-listed species or the value of the site as a larger wildlife corridor. Nor does the measure insure that the surveys will be conducted during the appropriate time of year for conducting such surveys in accordance with accepted protocols. No specific mitigation measures are proposed in the event that species are in fact found as a result of surveys specified in the mitigation measures, and thus there is no evidence that impacts to the species could be avoided.

Response: The commenter is not correct in stating that mitigation for biological impacts is simply to survey the site for listed species without more. As explained above, the mitigation program for the proposed project consists of a conservation strategy that 1) protects 14,640 acres of open space (RMV Open Space) to be managed for habitat protection purpose and 2) implements an Adaptive Management Program (Appendix J) over the RMV Open Space to maintain net habitat value within the RMV Open Space for both listed and unlisted species. Wildlife movement corridors are specifically addressed in the Draft Program EIR and also in Topical Response 3.1.9.4 Wildlife Linkages/Corridors.

Surveys for both listed and unlisted species will occur within the context of the Adaptive Management Program. For example the Adaptive Management Program identifies a suite of candidate focal species for coastal sage scrub that include ten (10) early warning indicator species, four (4) biodiversity indicator species and three (3) umbrella species. The survey methods used for focal species would be tailored to the species and management issue(s) being addressed in relation to the identified or potential environmental stressor. Stressors for coastal sage scrub are identified as human collection/harassment, exotic plants, exotic animals, meso-predators, overgrazing, pesticides, too frequent fire, too infrequent fire, and roads/trails.

Pursuant to mitigation measure 4.9-30, pre-construction surveys are also required as construction-related minimization measures.

Theme of Comments: The Alternatives Analysis overemphasizes the importance of funding an adaptive management program. The Draft Program EIR employs circular logic in identifying a need for intensive adaptive management of preserved open spaces. Most of the “need” for intensive ongoing habitat management results from the Ranch Plan’s aggressively intrusive proposed patterns of development. Consider that the natural lands on RMV have conserved biological diversity exceptionally well over the long term and have done so without a complicated and expensive adaptive management program.

Response: To begin with, the formulation and funding of an adaptive management program is one of the two key elements of an NCCP Conservation Strategy for “maintaining net habitat value over the long term” (the other being the designation and assemblage of a subregional Habitat Reserve)—see the discussion of the significance of and Adaptive Management Program in the topical response. It is also fair to say that the scope of an Adaptive Management Program derives in part from the nature and extent of both prior urban development and of proposed future development. However, it is also important to recognize those elements of the Adaptive Management Program designed to help maintain and increase net habitat value over the long term that are independent of the specific development footprint, and address project impacts generally without regard to the specific project configuration.

One element of the Adaptive Management Program designed to help maintain an increase in net habitat value over the long term is the proposed habitat restoration program. Potential habitat restoration areas were identified without regard to specific alternatives. An important part of the consistency analyses in the Biological Resources impact assessment and the Biological Resources Alternatives Analysis Appendix M sections involves the review of the extent to which proposed development bubbles would or would not allow for the implementation of specific elements of the Habitat Restoration Plan (i.e., environmental “feasibility” under CEQA). Funding for habitat restoration is the obvious corollary to avoiding the development of such areas. And, in a CEQA context, the “feasibility” of a mitigation measure is assessed in economic, as well as environmental terms. Another element of the Adaptive Management Program that presently exists independent of the specific footprint of the development in the study area is the Invasive Species Control Program.

As noted in the comment, it is true that the habitat values of the natural lands on the Ranch Plan project site have been managed so that these lands “have conserved biological diversity exceptionally well over the long term.” However, it should also be noted that the project applicant has carried out an extensive artichoke thistle removal program, as well as managed grazing, to achieve these results. But invasive species control of giant reed and other plant species (e.g., pampas grass) are outside the control of a particular landowner (e.g. giant reed spreads from upstream areas) and other types of invasive species (bullfrogs) are present and require funding for long-term control. Giant reed has a particularly devastating impact on

riparian resources both by direct displacement of vegetation and by consumption of large amounts of water that would otherwise be available for arroyo toad breeding and plant species such as willow important to least Bell's vireo. Invasive species control is costly and requires steady, reliable funding.

Finally, some aspects of the Adaptive Management Program, such as the proposed soils stabilization programs for the clay mining pits in Cristianitos Canyon and the eroded areas in upper Gabino are important to reduce the excessive generation of fine sediments in the San Mateo watershed. The ability to reduce the generation of fine sediments is important for protecting the habitats of aquatic species and for stream geomorphology (see "Baseline Conditions Watershed Planning Principles Consistency Review" in the Mitigation Section of the Draft Program EIR. Without adequate funding, very limited measures can be undertaken to remediate these existing conditions (see the low cost proposal in the Grazing Management Plan component of the Adaptive Management Program).

Therefore, the comment does not reflect aspects of the Adaptive Management Program important to maintaining net habitat value over the long-term that have little or no correlation with the intensity and location of development, and which will require substantial funding regardless of the ultimate project footprint.

Theme of Comments: The project applicant fails to commit to funding the AMP. The Draft Program EIR's mitigation program relies on uncertain funding sources.

Response: Funding for the AMP is discussed on page 4.9-162 of the Draft Program EIR. As discussed several sources of funding are identified including: 1) fees generated from individual assessment programs, 2) contributions for incidental impact mitigation, and 3) funds received from government agencies/other sources. The fact that multiple sources of funding are identified should not be interpreted to mean that the applicant would not fund the AMP. Rather multiple sources are identified to disclose the fact that the applicant in addition to fees generated from individual assessments programs intends to seek funds from other sources, including funds from state and federal programs. Providing the applicant meets the eligibility requirements for state and federal grant programs, there is no law or regulation that prohibits the applicant from seeking these types of funds. The project's approval will be conditioned upon the applicant's obligation to fully fund the adaptive management program from one or more of these sources.

Theme of Comments: The Habitat Reserve in the plan has not been properly formulated, which would require concentrating development in a limited number of carefully selected areas, preferably ones that are already ecologically degraded, and preferably ones clustered to minimize habitat fragmentation and edge effects. The plan embodies the opposite planning approach, which large-scale development envelopes and numerous estate style residences scattered across the landscape in violation of NCCP/HCP principles. Adaptive management cannot compensate for the lack of a properly formulated habitat reserve.

Response: The commenter disagrees with the location and amount of development and open space proposed by the Ranch Plan project. The commenter does not identify which areas are of concern. However, to respond to the general assertion that development should be concentrated "in a limited number of carefully selected areas, preferably ones that are already ecologically degraded, and preferably ones clustered to minimize habitat fragmentation and edge effects" the Draft Program EIR analyzes several alternatives to the proposed project which vary the amount and location of development and open space within the study area. Specifically, as discussed in Section 5 of the Draft Program EIR, Alternatives B-5, B-8, B-9, B-

10, and B-11 in addition to the required "No Project" and "No Action" Alternatives. Each of the alternatives carried forward for evaluation in the Draft Program EIR depict alternative development/open space configurations designed in the case of the those alternatives developed for the NCCP/HCP and SAMP/MSAA, to respond the biologic resources on the site. For further discussion on this topic, refer also Topical Response 3.1.9.5–Reserve Design/NCCP Standards.

3.1.9.4 Wildlife Linkages/Corridors

Theme of Comments: The project did not adequately consider wildlife movement corridors.

Response: The proposed project considered habitat linkages and wildlife corridors from four perspectives:

4. Consistency with the Scientific Review Panel (SRP) Tenet 3: Keep Reserve Areas Close/Link Reserves with Corridors.
5. Consistency with planning recommendations from the Draft Southern NCCP/HCP Planning Guidelines (Draft Planning Guidelines), particularly General Policy 3 and General Policy 4.
6. Project design features that would allow consistency with the sub-basin and General Policy 3 protection recommendations of the Draft Planning Guidelines, including consideration of infrastructure requirements.
7. Mitigation/avoidance measures that would reduce potentially significant impacts to habitat linkages and wildlife corridors to a level less than significant.

The Draft Program EIR contains an extensive discussion of "Wildlife Movement" conservation planning concepts, the functional definitions of the terms "Habitat Linkages" and "Wildlife Corridors," summaries of prior wildlife movement studies within the NCCP planning subregion in proximity to the proposed project and the list and descriptions of specific habitat linkages and wildlife corridors taken from the draft NCCP/HCP Guidelines that are depicted graphically in Exhibit 4.9-8 (see Draft Program EIR text discussion at pages 4.9.90 to 4.9.94).

As reviewed in the above-referenced section of the Draft Program EIR, the majority of the existing study area is undeveloped and currently provides for unconstrained wildlife movement and dispersal. The proposed project will necessarily restrict movement patterns within the study area and to the already protected open space adjacent to the study area (e.g., Caspers Wilderness Park, O'Neill Regional Park). An important consideration in designing the RMV Open Space therefore was to provide for wildlife movement and dispersal and retain ecosystem function (e.g., ensuring that top predators can move throughout the system and that other mobile species such as birds are able to effectively disperse).

NCCP/HCP General Policy 3 and the SRP Tenet 3 provided the conceptual framework for the design of the proposed RMV Open Space in relation to already protected open space with the overall goal of functionally interconnecting all large habitat blocks within the RMV Open Space and to protected habitat blocks outside the study area. Using SRP Tenet 3 as the guiding principle, as noted above General Policy 3 of Section 3 of the Draft Planning Guidelines identified 16 habitat linkage and wildlife movement corridor functions within general wildlife movement areas that appear to be important for retaining ecosystem function in the study area. Identification of these linkage and corridor functions was based on field studies of wildlife

movement within the study area (e.g., Beier and Barrett, 1993; Dudek, 1995; MBA, 1996, Padley, 1992), as well as existing species distributions, habitat affinities, animal behavior and local geography. These identified linkage and corridor functions were reviewed and commented upon by the wildlife agencies and revisions were based on this agency input. The identified linkage and corridor functions were then used to generate a set of Planning Guidelines for each of the sub-basins in the study area, as well as the study area as a whole for highly mobile species such as mountain lions and mule deer.

The consistency analysis of the proposed project with the sub-basin guidelines and principles includes specific consistency reviews of the linkage and corridor guidelines, as applicable (Section 4.9.4 of the Draft Program EIR, pages 4.9-105 to 4.9-129). Where there might be a conflict between the proposed project and protection of an important habitat linkage or wildlife corridor function (e.g., arterial crossings that could block wildlife movement or dispersal), the consistency analysis identified project design features that would achieve consistency with the protection guideline. These findings are the "could be consistent" consistency findings because consistency with the protection recommendation would depend on implementation of the project design features (e.g., setbacks) or mitigation/avoidance measures (e.g., wildlife-compatible bridge or culvert construction, fencing, lighting, etc.).

Of the 26 protection recommendations that directly address habitat linkage and wildlife corridor functions in the study area (e.g., dispersal habitat for birds, movement corridors for larger species such as mountain lion, coyote, mule deer, and bobcat), the proposed project is consistent with 21 of the recommendations, "could be consistent" with three recommendations, and not consistent with two recommendations. Two of the "could be consistent" findings (Guidelines 2 and 27) pertain to linkage G along Chiquadora Ridge and the third (Guideline 88) pertains to linkage N that runs north-south along Cristianitos Creek. The proposed project would be consistent with Guidelines 2 and 27 if wildlife movement across the proposed extension of Cristianitos Road along Chiquadora Ridge is addressed with a wildlife culvert and possibly fencing to direct wildlife under the roadway. The proposed project would be consistent with Guideline 88 by minimizing impacts to linkage N along Cristianitos Creek in upper Cristianitos through flexible golf course design and setbacks from the proposed development in the canyon of typically about 500 feet, with a minimum of 200 feet. Consistency with Guidelines 2, 27 and 88 will be ensured through mitigation measures applicable at the design stage, and the remaining impact will be less than significant.

The two "not consistent" findings are for Guidelines 29 and 68. Guideline 29 recommends a 2,500-foot protected area along the southern boundary of Coto de Caza. The project proposes a 1,000-foot protected area and limited low-density estate housing extending another 2,500 feet south of the protect area. Thus, while the proposed project is not literally consistent with this guideline, the estate area will provide additional movement habitat in this area and should not pose a significant hindrance to wildlife movement through the area.

Guideline 68 recommends maintaining an upland east-west linkage K south of the Trampas Canyon dam to connect Prima Deshecha, Talega Open Space, and other habitat to the west with the Donna O'Neill Land Conservancy and the Gabino, La Paz and Talega movement corridors. The proposed project would not be literally consistent with this Guideline because this linkage would be constrained to about 600 to 700 feet in width in two locations between proposed development in Trampas Canyon and Talega development to the south. However, the 600 to 700 foot corridor width will not substantially restrict the ability of species to move through the area, and the resulting impact is less than significant.

In addition to the general consistency analysis, the Draft Program EIR identified potentially significant impacts on habitat linkages and wildlife corridors C (Chiquita Ridge), G (Chiquadora Ridge), J (San Juan Creek), N (Cristianitos Creek), O (Gabino Creek) and K (upland link south of Trampas dam) due to construction of infrastructure (see Draft Program EIR, pages 4.9-58 to 4.9-60). Generally potentially significant impacts to these habitat linkages and wildlife corridors were identified for construction of the proposed circulation system in the case of linkages C, G, J, N and O, and ground water tanks in the case of linkages G and K. The Draft Program EIR identified minimization/avoidance measures to reduce potential circulation system significant impacts to a level less than significant including construction criteria such as: minimum bridge height of 20 feet; installation of 10-foot high chain link fencing within 100 feet of the approaches to bridges and culverts to deter wildlife from crossing the highway; shielding of lighting on bridges and culverts, where required for public health and safety, to avoid spillover into habitat areas; minimum culvert sizes of 15 x 15 feet; natural substrates in culverts; visible light from one end of the culvert to the other; and use of low growing native vegetation at each end of the culvert to reduce "lie-in-wait" and stalking predation. As discussed below, studies have demonstrated the adequacy of the proposed approach.

For the proposed groundwater tanks that could significantly impact linkages G and K, the Draft Program EIR specifies that prior to design, alternative locations for siting tanks will be reviewed by the Project Applicant and the Santa Margarita Water District (SMWD) that would avoid impacts to these linkages, but still meet the needs of water storage and delivery needs of the SMWD. In the case that alternative sites cannot be identified, several mitigation/avoidance measures were identified, including: fencing sensitive habitat and implementing erosion control during construction, and post-construction native habitat restoration and restricted and shielded lighting.

Further discussion of habitat linkages/wildlife corridors is set forth below with regard to "Reserve Design" NCCP standards.

Theme of Comments: Over evolutionary time before human encroachment, roughly 20,000 feet of the San Juan Creek between its confluence with Canada Gobernadora and its confluence with Verdugo Canyon had unimpaired connectivity with the uplands south of San Juan Creek with eventual access to Gabino or Cristianitos Canyons. After implementation of the Ranch Plan, the dispersal window between the San Juan Creek watershed and the San Mateo Creek watershed is a single 3,000-foot wide area between Planning Area 4 and Planning Area 6. This narrowing of the window from 20,000 feet to 3,000 feet would seem to limit the dispersal of these semi-aquatic amphibians and reptiles from the San Mateo Creek Watershed to the San Juan Creek Watershed and vice versa. More comfort would be provided if redundancy was achieved through several dispersal windows or if detailed justification was provided regarding the adequacy of the existing single dispersal route.

Response: While landscape level connections exist on the Ranch Plan project site between San Juan Creek and San Mateo Creek, the potential for dispersal by southwestern pond turtles, arroyo toads, or spadefoot toads is hindered due to unsuitable habitat features. Because each of these species has different dispersal abilities, each will be discussed separately.

Southwestern Pond Turtle

There is a distinction between typical movements of pond turtles for nesting and occasional long-distance dispersal that serves as genetic interchange between local populations. With

regarding to nesting behavior, Jennings and Hayes (1994)⁴ noted that turtles could travel considerable distances (400 meters or more) from aquatic sites to nest. Rathbun et al. (1992)⁵ observed females traveling up to 1.9 kilometers (1.2 miles) along a waterway to lay their eggs. However, Rathbun et al. noted that typically nests are located along stream or pond margins, but sometimes may be located over 100 meters (328 feet) from water on adjacent hillsides. In southern California, Goodman (1997) found that nest sites were an average of 16.2 meters (53.1 feet) from the watercourse (range: 1.5 to 58.2 meters [4.9 to 158.1 feet]) at Aliso Creek in Chino Hills State Park and an average of 28.7 meters (94.1 feet) from the watercourse (range: 18.3 to 47.3 meters [60.0 to 155.2 feet]) along the West Fork of the San Gabriel River.

Long distance dispersal is much more infrequent. The most likely dispersal route (and only route currently offering any potential for success) from San Juan Creek into the Cristianitos/Gabino watershed areas, leading to San Mateo Creek originates between Planning Areas 4 and 5, and would use the alkali wetland/drainage that is located along the eastern boundary of Planning Area 6. This drainage would allow movement between San Juan Creek and the confluence with Gabino Creek and/or San Mateo Creek. This would also allow dispersal into high quality habitat areas in the Donna O'Neill Conservancy for foraging. Other north-south dispersal routes seem unlikely because of extremely rugged terrain and dense vegetation that would inhibit dispersal movement.

In the post-project condition, this dispersal route would remain viable as this potential pathway is being preserved along the east side of Planning Area 6 (in accordance with Minimization/Avoidance Measures 4.9-7 and 4.9-8) for movement to the confluence with Gabino Creek and/or San Mateo Creek which provide dispersal routes to areas with suitable habitat.⁵ Furthermore, creation of a proposed golf course in Planning Area 6 would substantially enhance the movement path described above as areas with permanent water with adjacent upland sites suitable for use by turtles could be expanded to the north from the current wetland areas, increasing both the linear extension and total acres of usable habitat.

While the commenter suggests that redundancy is desirable, the biology of the pond turtle suggests that no other likely north south routes occur on the Ranch Plan project site under existing conditions. Development associated with the proposed Ranch Plan project would not change these conditions and the ability of pond turtles to potentially move between these watersheds.

Arroyo Toad

Frequent or even occasional arroyo toad movement between the San Juan and San Mateo Creek populations (including Talega Canyon and Gabino Canyon populations) is highly unlikely due to the lack of suitable habitat features and substrates associated with the watercourses that drain to San Juan Creek to the north and to Gabino and Cristianitos Creeks to the south. Telemetry studies conducted by Ramirez (2003) did not find dispersal from the San Juan Creek watershed to the San Mateo Creek watershed; the vast majority of activity was confined to the flood prone areas of San Juan Creek.⁶ This lack of long-distance dispersal is expected because arroyo toads favor sandy channel substrate, adjacent sandy terraces, and braided channels. As

⁴ Jennings, M.R. and M.P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Final report submitted to California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California, under Contract 8023. pp.54-58.

⁵ Rathbun, G.B., N. Siepel, and D. Holland. 1992. Nesting Behavior and Movements of Western Pond Turtles, *Clemmys marmorata*. The Southwest Naturalist 37:319-324.

⁶ Ramirez, R. 2003. Arroyo Toad (*Bufo Californicus*) Radiotelemetry Study, San Juan Creek. Prepared for Rancho Mission Viejo. 64 pp.

documented in the Terrains Analysis, the substrate between the two watersheds is largely clay and is unsuitable substrate for the Arroyo toads, including rare instances of long-distance dispersal (see Topical Response 3.1.9.8c Impacts to Species, Arroyo Toad, which addresses the 80-foot contour). Given that travel between these watershed areas would require that toads move through unsuitable substrates, generally steep terrains and well above the 80-foot contour it appears to be highly unlikely even when considered in evolutionary time scales as suggested by the commenter. Nevertheless, while dispersal events of this sort are expected to be highly unlikely and probably would have little, if any, impact on population viability, landscape linkages will be in place and the corridor discussed above would be the most viable of the potential routes, exhibiting the highest potential for very rare dispersal events should they occur at all.

Western Spadefoot

Movement between the San Juan Creek Watershed and San Mateo Creek Watershed for western spadefoot toad is also very limited under the existing conditions; however, it has a higher likelihood of success than for the pond turtle and arroyo toad. Western spadefoot toads⁷ prefer areas of grassland, scrub, and clay substrates, which will be preserved in large blocks at a landscape level. Furthermore, western spadefoot toads use ephemeral ponds and can burrow to escape unfavorable conditions during periods of dispersal. Typical distances traveled during dispersal are short (probably less than 300 meters from breeding pools); however, during periods of wet weather, dispersal distances can increase. Preservation of the landscape linkages noted above will ensure that western spadefoot toads will have sufficient opportunity to move between the subject watersheds.

Theme of Comments: Mitigation for impacts to wildlife movement is inadequate. The Draft Program EIR relies on culverts or similar measures to accommodate wildlife movements, but culverts do not accommodate cross-road movement of numerous species of greatest concern, such as mountain lion and mule deer, and undercrossings are as yet untested for numerous other species for which habitat fragmentation and road effects will be significant impacts. The mitigation has been inappropriately deferred.

Response: The comment that culverts do not accommodate cross-road movement of numerous species of greatest concern, such as mountain lion and mule deer is not true. Box culverts of the minimum dimensions provided for by the proposed project (15 x 15 feet) have been demonstrated to accommodate many species in the Orange County region, including mountain lion (Beier, 1995; Beier and Barrett, 1993) as well as mule deer, bobcat, coyote, and smaller species (Haas and Crooks, 1999; Dudek, 1995).^{8,9,10,11} For example, Beier and Barrett (1993) observed a mountain lion use a 10 feet wide and 8 to 12 feet high culvert under SR-91 on 18 of 22 crossings. Although they concluded that bridge underpasses are preferable to culverts, lions will use culverts if they are available. Similarly, Florida panthers use culvert-like underpasses of

⁷ Touré, T. A., S. L. Compton, A. R. Backlin, R.N. Fisher. 2004. Habitat Enhancement for the western spadefoot toad (*Spea hammondi*) and western pond turtle (*Emys marmorata*) on the Irvine Ranch Land Reserve, Orange County, California, 2003. U.S. Geological Survey Final Report. 51 pp.

⁸ Beier, P. 1995. Dispersal of juvenile cougars in fragmented habitat. *Journal of Wildlife Management* 59:228-237.

⁹ Beier, P. and R.H. Barrett. 1993. The cougar in the Santa Ana Mountain Range, California. Final Report, Orange County Cooperative Mountain Lion Study, 104 pp + Appendices.

¹⁰ Haas, C. and K. Crooks. 1999. Carnivore abundance and distribution throughout the Puente/Chino Hills. Prepared for The Mountains Recreation and Conservation Authority and State of California Department of Transportation. 64 pp. + Appendices

¹¹ Dudek. 1995. Southern Subregion NCCP Wildlife Corridor Survey. Prepared for the Santa Margarita Company.

a divided highway as low as 2.1 meters in height (under 7 feet) (Foster and Humphrey, 1995).¹² Dudek (1995) found that several species used a 10-foot-high, 12-foot-wide, and 46-foot-long concrete box culvert under Ortega Highway that drains Trampas Canyon into San Juan Creek, including bobcat, mule deer, gray fox, coyote, long-tailed weasel, striped skunk, opossum, deer mouse, and desert woodrat (the latter rodents were documented using the culvert by live-trapping). An orange-throated whiptail was observed at the entrance to the culvert, but was not observed in the culvert. Generally, it can be assumed that larger culverts will accommodate a larger number of species, although there may be exceptions such as relatively sedentary species with very specific habitat requirements that are unlikely to transit quickly through unsuitable habitat. Fencing along roadways on either side of the culverts to help funnel wildlife to culverts is important to deter them from attempting to cross at grade.

Minimization/Avoidance Measure 4.9-23 in Table 4.9-35 provides design guidelines for road culverts over upper Cristianitos Creek and Blind Canyon to accommodate wildlife movement. Mitigation Measure 4.9-23 specifies that culverts shall have minimum dimensions of 15 x 15 feet, the bottom of the culvert shall be a natural substrate, light shall be visible from one end of the culvert to the other, vegetation installed at either end of the culvert shall be native low-growing species to prevent predator-prey stalking, chain link fencing 10 feet in height shall be installed within 100 feet of either side of the culverts to deter wildlife from crossing roadways, and any required lighting for public health and safety shall be shielded to prevent indirect spill-over effects.

Given the demonstrated efficacy of properly designed culverts for wildlife movement and dispersal, potential effects of new roads on wildlife are less than significant.

3.1.9.5 Reserve Design/NCCP Standards

Theme of Comments: The Ranch Plan proposes development throughout the project site. For example, every sub-basin watershed identified in Exhibit 4.5-2 contains proposed development. Fragmentation has not been sufficiently minimized and adjacent open space areas were not used effectively for enhancing the areas proposed for conservation in the Ranch Plan. For example, the estates and golf course proposed in upper Gabino and Verdugo watershed sub-basins would occur in a relatively pristine area surrounded by open space on Caspers Regional Park, Cleveland National Forest, rural Riverside County land, and the large open spaces on Camp Pendleton. This creates wildlife movement constraints and edge effects not only to the surrounding open space areas mentioned above but also to the proposed conservation area between the golf course and estate houses and development in Planning Areas 4, 6, 7, and 8. Similarly, the existing Donna O'Neill Conservancy would be completely isolated by development in Planning Areas 5, 6, 7, and 8. Contrary to the NCCP/HCP principles the project claims to "complement," the project would spread development throughout designated Development Sensitive Areas (DSAs) and permit an assortment of uses, including golf-courses, ranching, active recreation, water basins, and clubhouses, in the project's purported "open space," much of which would be little more than private backyards. Meeting the criteria of significance per CEQA (through the Planning Guidelines as Thresholds of Significance) would not necessarily meet the standards required to develop an NCCP.

Response: As described in Section 3 of the Draft Program EIR, the actions under consideration by the County of Orange do not include adoption of an NCCP at this time. Nevertheless, the

¹² Foster, M.L. and S.R. Humphrey. 1995. Use of highway underpasses by Florida panthers and other wildlife. Wildlife Society Bulletin 23:95-100.

Draft Program EIR does examine the proposed project in light of NCCP standards. As stated on page 4.9-220:

"At whatever subsequent time as any NCCP/HCP covering the Ranch Plan property is completed and considered for adoption, the proposed Conservation Strategy would be subject to the provisions of the NCCP Act of 2002. Accordingly, the plan approval criteria from the 2002 NCCP Act are employed as a CEQA analytic tool in this Draft Program EIR embodying the endorsement of the State of California rather than as actual plan approval standards when the Conservation Strategy is ultimately under formal review by CDFG. The following are the substantive criteria for the review of NCCP plans under the 2002 Act followed by consistency summaries referencing analysis presented in this draft EIR" Pages 4.9-220 through 4.9-224 of Draft Program EIR provide a consistency analysis with the 2002 NCCP standards." Draft Program EIR Page 4.9-220

According to CEQA Guidelines §15126.6(b): "Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment, the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project..." In addition to evaluating the proposed project in light of NCCP standards that will be applied to the proposed Conservation Strategy at a future date, the coordinated planning process has allowed for the development of consistent project alternatives to be addressed in this GPA/ZC EIR and the future environmental documentation for the NCCP/HCP and SAMP/MSAA. Section 5 of the Draft Program EIR addresses alternatives to the proposed project, including alternatives considered and rejected and alternatives carried forward. The alternatives carried forward for further analysis in Section 5 include B-5, B-6, B-9, B-10, and B-11 in addition to the required "No Project" and "No Action" alternatives. Each of the alternatives carried forward for evaluation in the Draft Program EIR depicts alternative development/open space configurations designed, in the case of those alternatives developed for the NCCP/HCP and SAMP/MSAA, to reflect different conservation strategies for addressing the biologic resources on the site. Therefore, some of the concerns expressed in the comments on the Draft Program EIR regarding development in specific sub-basins or planning areas are addressed through alternative development/open space configurations as follows:

- Within Planning Area 2 (Chiquita sub-basin), the development/open space configurations vary from no development under alternatives B-6 and B-8 to reduced development in middle Chiquita under B-10, to acquisition of middle Chiquita under B-9 to 1,740 acres of development under Alternative B-5.
- Within Planning Area 6, the open space/development configurations vary from no development (B-5, B-6, B-8, B-9, and B-11) to 61 acres of development under B-10 and no golf course, to 263 acres of development under the proposed project.
- Within Planning Area 7, the development/open space configurations vary from no development (B-5, B-8, B-9, to 473 acres of development and a golf course under B-10) to 1,350 acres under the B-11 Alternative.
- Within Planning Area 9, the development/open space configurations vary from no development under the B-5, B-8, B-9, B-10 and B-11 Alternatives to 580 acres under the B-6 Alternative

In response to the Wildlife Agencies' concerns regarding biological resources within the Chiquita and Cristianitos sub-basins while still striving to meet the project purposes regarding the

provision of much needed housing opportunities, the County developed the B-10 Alternative. The B-10 Alternative would provides 1,009 acres of development within Planning Area 2 in a development/open space configuration that avoids habitat linkage D while still providing some housing opportunities above the reclamation plant; 61 acres of development within Planning Area 6; and 473 acres of development within Planning Area 7 specifically designed to avoid and minimize impacts to sensitive species and habitats. The County has also developed the concept of "Planning Reserve" and applied this concept to the B-10 and B-11 Alternatives such that applications for subsequent development entitlements (i.e., Master Area Plans) within the Planning Reserve area A (Planning Area 2 above the Chiquita Reclamation Plant), B (Planning Areas 6 and 7 as applicable), and C (Planning Area 8) would be tied to a specific timeframe (5 and 14 years, respectively) or confirmation of the alignment of the proposed SR-241 extension, whichever occurs first. The Planning Reserve would essentially put subsequent development entitlements for Planning Areas 2 above the Chiquita Reclamation Plant and Planning Areas 6, 7, and 8 on hold for 5 to 14 years or confirmation of the alignment of the proposed SR-241 extension, whichever occurs first. Any future plan for development proposed within the Planning Reserve areas would be required to incorporate, and would be evaluated for consistency with, the guidelines and principles (including planning, management and restoration recommendations) that are applicable to the specific area(s) proposed for development and/or conservation. The guidelines and principles for each Planning Reserve area are those set forth in Section 4.9, Biological Resources, for the affected sub-basins.

The inclusion of these alternatives and the analyses set forth in Appendix M, in addition to the avoidance, minimization, and mitigation measures for the proposed project, provides a full range of analyses in response to the comments addressed in this subsection.

Specific concerns regarding development proposed by the Ranch Plan project within Planning Area 2 above the Chiquita Reclamation Plant, Planning Area 6, Planning Area 7, Planning Area 9 and Planning Areas 3 and 4 were raised and are addressed both here, and under Responses to Comments regarding Impacts to Species, Wildlife Linkages/Corridors and Adaptive Management Plan/Mitigation.

- Planning Area 2 above the Chiquita Reclamation Plant

Theme of Comments: The major population in a key location identified in the Draft Program EIR for the gnatcatcher on the Ranch Plan project site surrounding Chiquadora Ridge is an area that the Wildlife Agencies have repeatedly discussed with the County and the project applicant through the NCCP/HCP process to prioritize for avoidance/conservation. Chiquita Canyon contains almost all of the Planning Species identified in the Draft Program EIR on page 4.9-6 including the largest number of locations for gnatcatcher and highest concentrations of southern tarplant, Coulter's saltbush, and grasshopper sparrow. As a species diversity hotspot and as a location that contains the largest gnatcatcher population in the southern subregion planning area, Chiquita Canyon should receive higher priority for avoidance and conservation than is proposed in the Ranch Plan. Specifically, the elimination of the golf course and housing north of the sewer treatment plant would minimize impacts to sensitive species.

Response: Alternatives to the proposed project are reviewed in the Draft Program EIR thereby providing for different development/open space configurations within Planning Area 2. Specifically the alternatives vary from No Development under Alternatives B-6 and B-8 to 1,740 acres of development under Alternative B-5. Alternative B-9 specifically addresses the comment regarding a preference for no development above the Chiquita Reclamation Plant. As also noted above, Alternatives B-10 and B-11 provide for both a different development/open space configuration than that proposed by the proposed project and also include the Planning

Reserve concept which would put on hold any subsequent development entitlements for 5 to 14 years or confirmation of the alignment of the proposed SR-241 extension, whichever occurs first.

Theme of Comments: In addition to loss of habitat and many important plant and gnatcatcher locations in Planning Area 3, a primary concern of the Wildlife Agencies is the narrow width between Planning Areas 3 and 4 for general wildlife movement. It appears that this corridor is only 300 to 400 feet wide in some areas. This corridor needs to be substantially widened and adequately buffered. Similarly, the linkage and corridor between Planning Area 3 and Coto de Caza for general wildlife movement should be substantially widened.

- Planning Areas 3 and 4–Linkage J

Response: Habitat linkage J along San Juan Creek (shown in Exhibit 4.9-8 of the Draft Program EIR) narrows to approximately 338 feet in width at its narrowest point between Planning Areas 3 and 4, widens immediately to approximately 500 in width on either side of this point, and reaches 1,000 feet to the south and 1,300 feet to north. The narrowest point encompasses the existing active floodplain in this area and is bound on either side by steep bluffs overlooking the creek. Existing land use along the northern boundary at the narrowest point is irrigated pasture land (Exhibit 4.1-5) and land uses south of this point are the RJO Horse Ranch, Ortega Highway and barley fields (South Forty) (Exhibit 4.1-6). Proposed development (i.e., impervious surfaces associated with either residential or commercial development) is sited on the terraces above the floodplain that would be offset by at least 300 feet south of the 100-year floodplain and an average of 300 feet north of the 100-year floodplain. This additional 300-foot buffer would provide for a minimum width of the linkage of 938 feet, which is adequate to maintain connectivity at this location.

According to the wildlife agencies, the wildlife movement corridor between PAs 3 and 4 appears to be only 300 to 400 feet wide in some places and needs to be widened and adequately buffered. However, it is important to assess the adequacy of this Linkage J in terms of: (1) dimensions of the San Juan Creek floodplain; the scale of the proposed 300 foot setback area when added to the size of the existing floodplain (i.e., adding a total lateral dimension of 600 feet to the scale of the 100 year floodplain); (2) other conditions affecting aquatic species such as the arroyo toad with regard to live-in, habitat linkage functions; and (3) other conditions affecting aquatic, small and large mammal and avian species movement along the San Juan Creek corridor. These issues are summarized below:

- (1) Dimensions of the San Juan Creek floodplain and a 300 ft setback on either side of the floodplain; at its narrowest point the distance between Planning Area 3 and Planning Area 4 is 338 feet. An additional 300 feet of setback from the 100-year floodplain in Planning Area 3 and Planning Area 4 (i.e., a total of 600 feet of setbacks) would expand this point to provide a movement corridor 938 feet wide. North and south of this location the distance between the two planning areas is as large as 1,323 feet.
- (2) Other conditions affecting habitat linkage functions for aquatic species—For most aquatic riparian species, the 100-year floodplain defines the area providing live-in, habitat linkage functions. According to the prior critical habitat designation for the arroyo toad (which has been incorporated by reference into the new proposed critical habitat designation):

“The width of the upland component of critical habitat varies based on topography. The habitat widens in broad alluvial valleys and narrows in places where streams run through constricted canyons or between surrounding hills.” (Fed. Reg. Vol. 66, 2/7/01, 9420)

"Although the upland habitat use patterns of this species are poorly understood, activity probably is concentrated in the alluvial flats (areas created when sediments from the stream are deposited) and sandy terraces found in valley bottoms of currently active drainages (Service 1999, Griffin et al. 1999, Sweet in litt., 1999, Ramirez 2000, Holland and Sisk 2000)." (lb. 9415)

Thus, in broad alluvial valleys such as the San Juan Creek streamcourse, arroyo toad "activity probably is concentrated in alluvial flats and sandy terraces found in valley bottoms of currently active drainages," as confirmed in a recent study of San Juan Creek arroyo toad movement (Ramirez 2003). Almost all locations of yellow warblers and yellow-breasted chats are found within these areas of San Juan Creek. For these species, not only is the additional 600 feet of setback from urban development areas provides additional protection, which is further enhanced by the invasive species control program. As shown on Figures 7 and 8 in Appendix J-3 (Invasives Species Control Plan), extensive areas of the San Juan Creek streamcourse are presently characterized by large-scale infestations of giant reed (arundo). As a consequence, both water-supply for arroyo toad breeding and riparian vegetation important to aquatic/riparian species has been and is being displaced both as a result of the presence and continuing expansion of giant reed vegetation and as a result of the tremendous water consumption demands of giant reed. The Invasive Species Control Plan is key to enhancing and restoring live-in and foraging habitat for all aquatic/riparian species found within the San Juan Creek floodplain.

- (3) Other conditions affecting aquatic, small and large mammal and avian species movement along the San Juan Creek corridor. In terms of wildlife movement and arroyo toad lateral foraging and estivation, the southern side of San Juan Creek is currently impacted by Ortega Highway and attendant noise and road kill impacts; the Ranch Plan Project proposal to relocate the Ortega Highway functions to the north side of the Creek would eliminate a very extensive barrier to movement by species and thereby significantly reduce species mortality caused by moving vehicles. The responses to comments addressing mountain lion movement details the manner in which mountain lion movement and other mammal movement will be protected through bridge designs and the 300 foot setbacks on both sides of the 100 year floodplain. As reviewed in the responses to comments addressing the gnatcatcher, avian species such as the gnatcatcher move along corridors with riparian and other vegetation as well as habitat such as coastal sage scrub (e.g., extensive lengths of Linkage N through the Cristianitos sub-basin contain grasslands, riparian habitat and chaparral rather than coastal sage scrub).

For the above reasons, it is concluded that the dimensions of Linkage J along San Juan Creek are adequate for habitat linkage and wildlife movement functions, and thus are consistent with the NCCP landscape level and sub-basin guidelines.

Additionally, the USACE has questioned the adequacy of the portion of Linkage J extending from the San Juan Creek watershed to the San Mateo watershed in terms of the dispersal of aquatic amphibians and reptiles over extended time periods. This is discussed in detail under the previous Topical Response related to Wildlife Linkages/Corridors.

- Planning Area 3 between development and Coto de Caza-Linkage I

Response: Regarding the distance between the boundary of Coto de Caza and the boundary of Planning Area 3, the Draft Program EIR identifies this habitat linkage as "I" on Exhibit 4.9-8 and as noted on page 4.9-238 of the Draft Program EIR, the project proposes a 1,000-foot protected area and limited low-density estate housing extending another 2,500 feet south of the protect

area. The 1,000-foot fully protected corridor, limited low-density estate type development coupled with the restoration of coastal sage scrub and grassland in Sulphur Canyon should not pose a significant hindrance to wildlife movement through the area. In addition, the Adaptive Management Program (Appendix J) provides for monitoring of key wildlife movement corridors, including linkage I.

While the proposed project does address the continued function of this linkage, as noted above, alternatives to the proposed project also provide different development/open space configurations for Planning Area 3 that in some instances address the comment that the area between Coto de Caza and future development of Planning Area 3 should be wider. In particular, alternatives B-8, B-9, B-10, B-11, and B-4 Reduced Density respond to this concern.

- Planning Area 6 and 7

Theme of Comments: The Wildlife Agencies believe that, even with the proposed mitigation measures, the proposed development in Planning Areas 6 and 7 would be inconsistent with the Reserve Design Principles. Habitat that supports major populations/key locations of thread-leaved brodiaea and many-stemmed dudleya would be subject to fragmentation and indirect effects. The proposed project would locate residential development and a golf course on an area that currently connects gnatcatcher and grasshopper sparrow populations from the north in Chiquita Canyon and populations to the south. Development of PA 6 and 7 would channel their movement through a golf course and along a narrow band of low-elevation habitat along the Donna O'Neill Conservancy. This remaining corridor would be subject to numerous edge effects from the golf course and adjacent residential uses that may eventually diminish its functional value.

Response: Under the proposed project, development of 263 acres is proposed for Planning Area 6 including as shown on Exhibit 3-21 a golf course and a maximum of 110 dwelling units (Table 3.4-2, Page 3-15, Draft Program EIR). 853 acres of development is proposed for Planning Area 7 including residential and a neighborhood center. Planning Areas 6 and 7 also include 513 acres of open space. Specific concerns raised relative to development proposed in these two planning areas focus on connectivity, in particular gnatcatcher and grasshopper sparrow connectivity, from the Chiquita sub-basin south to populations in the south and impacts to specific species, namely many-stemmed dudleya, southwestern pond turtle and thread-leaved brodiaea.

Regarding gnatcatcher connectivity from the Chiquita sub-basin southward, there are two generally recognized wildlife movement linkages/corridors, one of which is located within the proposed project study area and described in the Draft Program EIR as follows:

"Local gnatcatcher populations in the San Mateo Watershed are relatively small, compared with the remainder of the study area, and are concentrated along the Cristianitos Creek corridor and overlooking lower Talega Creek. Although there is the potential for gnatcatcher dispersal through coastal sage scrub patches throughout the San Mateo Watershed, an important habitat linkage for gnatcatchers within this watershed appears to be Cristianitos Canyon (N), which links San Juan Creek with local populations in lower Gabino Creek and MCB Camp Pendleton along lower Cristianitos/San Mateo Creek." (Draft Program EIR, page 4.9-93)

The other connection is located in existing protected open space located within the cities of San Juan Capistrano and San Clemente. Figure A shows both connections. This figure shows that

there are more gnatcatcher locations in the San Juan Capistrano/San Clemente linkage/corridor suggesting that more suitable habitat exists in this corridor.

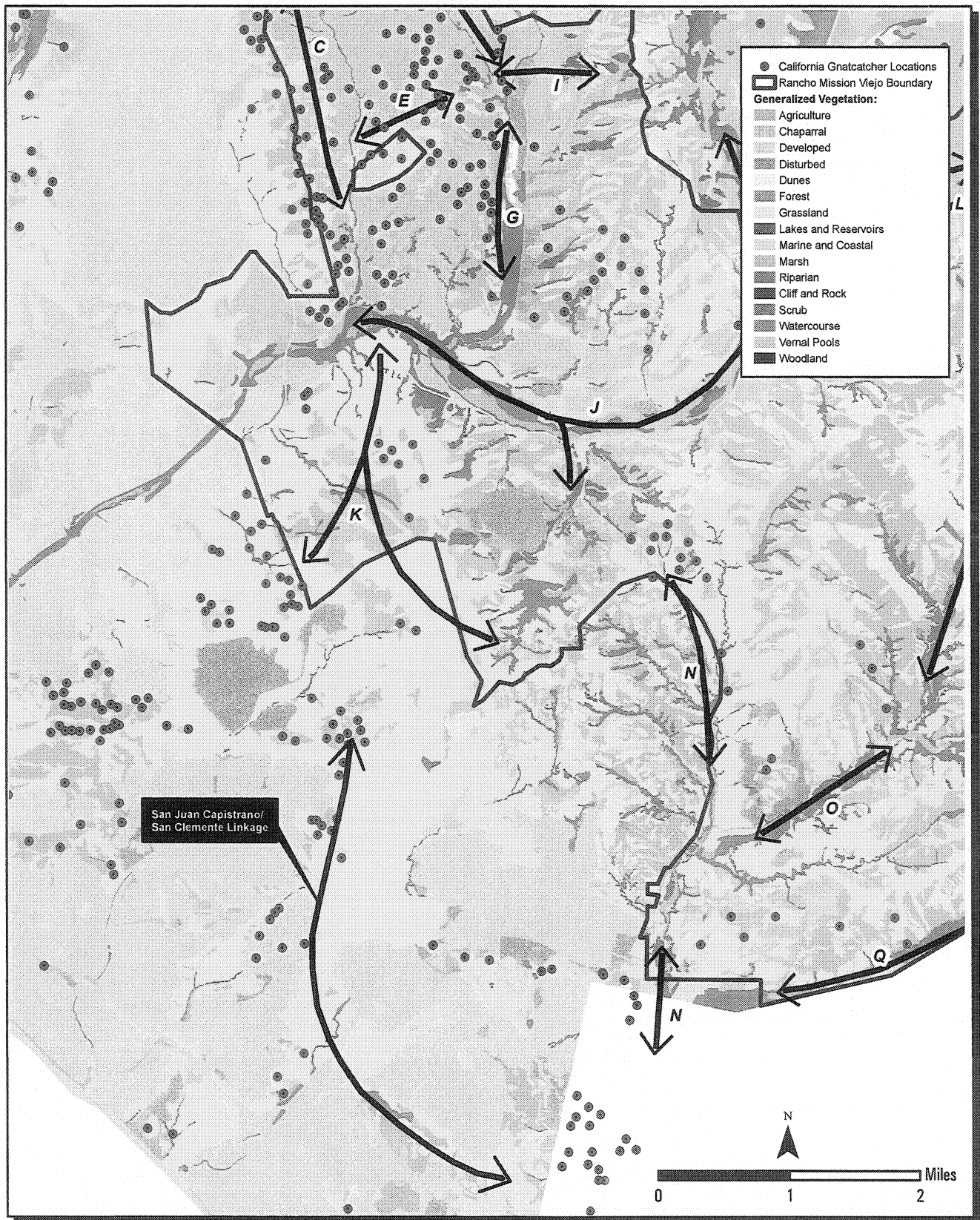
Notwithstanding the significance of the western gnatcatcher linkage/corridor, the Draft Program EIR examines the potential effect of the proposed project on Linkage N. Connectivity functions through the upper portion of the Cristianitos sub-basin would be maintained through partial restoration of coastal sage scrub and native grasslands recommended by the Habitat Restoration Plan (Appendix J-2, Draft Program EIR) discussed in the Draft Program EIR (page 4.9-241, Draft Program EIR) and implementation of Mitigation Measure 4.9-32 which requires native grassland plantings be included in the golf course landscaping. The proposed golf course in Planning Area 6 is intended to function as a Special Linkage Area comparable to golf courses included as Special Linkage areas in the Central/Coastal NCCP/HCP. See the Coastal/Central IA that defines Special Linkage Areas as "lands which contain CSS, Target Species or provide connectivity functions between habitat areas within the Reserve System, between the Central/Coastal Subregion and other subregions, or between the Reserve System and outlying Identified Species populations" Coastal/Central IA Section 1.52). In addition to native grassland plantings, similar to the Arroyo Trabuco Golf Course recently issued a Biological Opinion by the USFWS, a proposed golf course in Planning Area 6 would include native plantings such as CSS, native grassland and southern willow scrub which would contribute habitat capable of supporting gnatcatchers moving through the Cristianitos habitat linkage (the Arroyo Trabuco Golf Course planted an additional 31.1 acres of native plantings in addition to the coastal sage scrub, southern willow scrub and native grasslands required by permit obligations).

In addition to providing habitat and connectivity benefits, golf courses can also function as refugia from wildfires as described in the Final EIR/EIS for the Coastal/Central NCCP/HCP.

"The October 1993 wildfires in the Laguna/San Joaquin Hills were and are a vivid statement of the impelling need to fashion short-term and long-term fire management policies and programs for the NCCP subregion. Although urban development over time has reduced CSS habitat, some aspects of urban development provide a counterbalance to these effects when wildfires do occur. In the case of the Coastal Subarea wildfire, urban development and urban infrastructure helped create a number of "refugia" where target species literally took refuge from the fires. The Irvine Coast golf course and Newport Coast Drive clearly protected the target species populations on the coastal shelf. Given the locations of large source populations of target species in the Central and Coastal planning areas, such refugia functions play an important role in designing fire control and fire management measures." (Final EIR/EIS for Coastal/Central NCCP/HCP, page 7-70)

Specifically the golf course proposed in Planning Area 6 could be expected to provide a wildfire buffer for the *key location* of gnatcatchers in the upper Cristianitos sub-basin, wildlife movement habitat in the vicinity of Cristianitos Creek, and the gnatcatcher *key location*. Most importantly the proposed golf course would provide a wildfire buffer for the Donna O'Neill Land Conservancy, the most important feature of Linkage N (see Wildfire histories map in Exhibits 4.14-2a through 4.14-2j, depicting major wildfires that have occurred in the San Mateo watershed in the last 80+ years).

Connectivity through Planning Area 7 would be provided via a minimum 200 feet (average 500 feet) setback from Cristianitos Creek for the development, low-elevation habitat within the Donna O'Neill Conservancy adjacent to Cristianitos Creek and suitable habitat east of the



**California Gnatcatcher Habitat Linkage
Outside GPA/ZC Project Area**

**FIGURE
A**

developed portion of the planning area Based on the study below by Dudek regarding the persistence of gnatcatcher adjacent to development, it is likely that the current gnatcatcher population in the Cristianitos sub-basin would persist over time.

"A study of coastal California gnatcatcher (*Polioptila californica californica*) populations in southern Orange County in areas proximate to urban development was conducted in 2001 by Dudek & Associates, Inc.¹³ The main focus of the study was to compare 2001 population levels at eight selected survey sites that are near areas that have been developed for relatively long periods of time (10 to 30 years) with gnatcatcher data for the same survey sites collected in 1994.

Eight discrete survey areas were selected for the surveys. Seven of the eight sites are located within the gnatcatcher survey area for the Central and Coastal NCCP/HCP, with the remaining site—Coto de Caza—located in the Southern Subregion NCCP/HCP study area.

With the exception of the Turtle Rock/Strawberry Farms and Anaheim Hills survey areas, there were only slight decreases or no detectable differences in gnatcatcher populations between years 1994 and 2001. Three survey areas showed declines of one location (Dana Point, Salt Creek, and Golden Lantern), and two had declines of two locations (Back Bay and Panorama Heights). One survey area showed no change (El Modena) and one site had an increase of one location (Coto de Caza). The apparent decline in populations at the Turtle Rock/Strawberry Farms and Anaheim Hills survey areas from 1994 to 2001 may have been an artifact of abnormally high populations in 1994 as a result of birds extirpated by the 1993 San Joaquin Hills fire temporarily using nearby habitat areas.

Although this study cannot address long-term population trends, the results indicate that California gnatcatchers recruitment is occurring and birds are persisting in relatively small and isolated habitat patches that are within urbanized settings in southern Orange County." (Dudek, 2004)

Other specific species impacts are addressed as a part of Topical Response 3.1.9.8, Biological Resources—Impacts to Species, (e.g., western spadefoot toad, grasshopper sparrow, thread-leaved brodiaea) or in 3.1.9.4 Wildlife Linkages/Corridors for responses to comments regarding southwestern pond turtle, arroyo toad, and western spadefoot toad, and California Native Plant Society (CNPS) comments regarding Coulter's saltbush, small-flowered morning glory, paniculate tarplant, and many-stemmed dudleya.

- Planning Area 9

Theme of Comments: The proposed development of Planning Area 9 would be inconsistent with Reserve Design Principles, including minimizing additional fragmentation, increasing existing habitat blocks and minimizing distance between habitat blocks. Additionally, Reserve Design Principles include the development of "linkages that follow landscape features and respond to species considered in reserve design" and "only open space linkages that are native vegetation serve as truly effective landscape linkages" and the caution that "reserve design should not impose artificial linkages on the landscape at the expense of natural linkages." The Wildlife Agencies maintain that these principles cannot be met through golf course design and

¹³ Dudek & Associates, Inc. 2004. Southern Orange County California Gnatcatcher Study: Selected Comparison of 1994 and 2001 Populations. Prepared for Rancho Mission Viejo. 38 pp + appendices.

the scattered residential development as proposed. Given the importance of this area to sensitive species, movement and connectivity, we recommend avoidance of development in this area.

The high-quality foraging habitat provided by native grasslands in upper Gabino would be impacted due to development of estate homes and a golf course. The scattered estate homes would also fragment habitat and impede the use of these areas by wildlife. Wildlife movement through corridors O, P, M, and J (as identified on Exhibit 4.9-19) would be compromised from direct impacts, including grading and fuel modification zones, and indirect impacts including light, noise and pets. Connectivity to large blocks of undisturbed habitat would be compromised as well. We recommend avoidance of the Verdugo/Upper Gabino sub-basins.

Response: Planning Area 9 would include a 218-acre golf course, 120 residential casitas on a 20-acre site contiguous with the northeast end of the golf course, and 100 1-acre estate residential lots in the Verdugo Canyon sub-basin, upper Gabino Canyon, and upper La Paz Canyon (four lots adjacent to the sub-basin boundary with Gabino) (see Draft Program EIR at page 3-29 and Exhibit 3-21). These areas are recognized as important habitat linkages and wildlife corridors (linkages L, M, O, and P shown in Exhibit 4.9-19) to support dispersal and movement of both small, relatively sedentary species such as the cactus wren and large, mobile species such as mountain lion, mule deer, and bobcat. For the smaller species such as cactus wren, contiguous patches of coastal sage scrub are needed to support dispersal and for large species, uninterrupted linkages/corridors along drainages or ridgelines are desirable to allow for unhindered movement.

The scattered estate lots in upper Verdugo, Gabino, and La Paz canyons are configured in such a way that provides for interstitial "live-in" and dispersal habitat for smaller, sedentary species; primarily a mosaic of coastal sage scrub, grassland, and some chaparral that will maintain north-south habitat connections. For example, in the western portion of Verdugo Canyon, there are 1,000- and 500-foot-wide separations between estate lots that would provide for "live-in" habitat for species such as cactus wren and north-south dispersal through these areas. To the east near the boundary between the Verdugo and Gabino sub-basins, there are 1,000-, 500-, and 600-foot-wide separations between lots providing "live-in" and north-south dispersal habitat for smaller species. It is important to understand that these minimum width "linkages" only narrow down for a few hundred feet before they expand back out to undisturbed habitat (i.e., they are "pinch points"). A general principle of linkage/corridor design is to avoid long, narrow corridors that have high perimeter to area ratios. As an example, two 1-acre square parcels separated by 1,000 feet would be 208 feet on a side so the "pinch point" would be 208 feet long and 1,000 feet wide. Such a pinch point will not be a hindrance to wildlife dispersal and movement because dispersing animals could move through the pinch point very quickly and the linkage is wide enough to support species with home ranges/territories that typically are less than 1,000 feet wide (e.g., a typical 5-acre cactus wren circular territory would be about 525 feet wide and a 0.1 acre circular orange-throated whiptail territory would be only 75 feet wide). To the east of the estate lots, golf course, and residential casitas, there is uninterrupted coastal sage scrub, grassland, and chaparral that connects to upper La Paz Canyon east of the Ranch Plan project site boundary. The estate lots directly east of the golf course in upper Gabino Canyon provide minimum separations of 700 to 800 feet between estate lots that support a mosaic of coastal sage scrub and grassland.

Verdugo Canyon, itself, would not be directly impacted by the estate lots, and upper Verdugo Canyon would not be developed, thereby allowing for continued movement along the canyon floor by larger species such as mountain lion, bobcat, and mule deer. The four estate lots in La Paz Canyon would be well above the canyon floor and would not disrupt wildlife movement

through the canyon. The golf course and residential casitas in upper Gabino likely would cause disruption of local movement of mountain lions and perhaps bobcats, but probably would not have much effect on mule deer. However, with the extensive open space that would remain in the area, including the Cleveland National Forest and Caspers Wilderness Park, wildlife movement, including mountain lion, would be accommodated in the region.

While the proposed project does address the continued function of wildlife dispersal and movement through Planning Area 9 by siting development in a way that maintains habitat connectivity and provides for continued wildlife movement along major drainages (except for upper Gabino), alternatives to the proposed project provide different open space configurations that address the concern of habitat connectivity in the area. Alternatives B-5, B-8, B-9, B-10, and B-11 do not propose development in upper Gabino and La Paz canyons. Alternative B-6 proposes limited development in upper Gabino, no residential estates, and only limited development at the mouth of Verdugo Canyon.

The definition of open space and allowed uses therein is discussed in Topical Response 3.1.2, Project Description–Definition and Preservation of Open Space.

3.1.9.6 Indirect Impacts

Theme of Comments: The Draft Program EIR fails to analyze indirect impacts resulting from habitat fragmentation, edge effects, road effects, increased fire frequency, fuel modification zones, exotic invasions, infrastructure, and pollutants. There is a discussion about short-term indirect effects but there is no discussion about long-term indirect effects. Issues that should be discussed include the affects of clearing for fire control in wildlands adjacent to development, increased invasion by weedy plant species, effect of chemicals (residential pesticides, herbicides, etc.) that may drift or drain on to adjacent lands and into water systems, changes in hydrology both from removing more water from the water table and increased runoff during unseasonable periods.

Response: Please refer to the sub-sections below for specific responses regarding indirect effects.

3.1.9.6a Habitat Fragmentation

Theme of Comments: No attempt is made to quantify or even fully qualify the nature and extent of fragmentation effects on the various species, ecosystem processes, and other resources of interest in the study area. A number of species, notably mountain lions, badgers, golden eagles, and other wide-ranging species, will likely be extirpated from the study area due to fragmentation effects, a significant impact.

Response: Habitat fragmentation is the disruption in the continuity of habitat and generally is considered to have long-term adverse impacts on the viability of species as a result of isolation of populations (i.e., lack of immigration/emigration and gene flow) and alterations in the quality of remaining habitat in the fragment, especially along edges that can be invaded by exotic plants and animals, and native “edge species” and experience microclimate changes (e.g., increased radiation and wind). There is no accepted standard for what constitutes a fragmented landscape in terms of size thresholds, shapes, or connectivity requirements because each landscape has its own characteristics and requirements in terms of the suite of species and habitats under consideration. As a result, there is no consensus on quantitative measures for fragmentation. What is a habitat fragment for one species is perfectly adequate habitat for another species as long as the habitat patch can support a viable population by meeting the life

history needs of the species, including adequate habitat (shelter, breeding and foraging habitat), a sufficient number of breeding individuals, and adequate immigration/emigration. Natural islands, for example, are "habitat fragments" in the general sense of the term because they are isolated (except for the most mobile of species, such as marine mammals or migratory birds, or through intentional or accidental introductions by humans), but often exhibit extraordinarily diverse endemic biota precisely because they are islands (e.g., Madagascar) (i.e., evolutionary processes have occurred without the genetic swamping effect of mainland species or direct competition for ecological niches).

Virtually all new development in natural landscapes will introduce some level of habitat fragmentation. It is a matter of the degree of habitat fragmentation, its specific effects on the landscape and local species, and mitigation and management measures that can be implemented to reduce the effects of the habitat fragmentation. These potential fragmentation effects can be generally categorized as impacts to habitat areas, impacts to habitat connectivity (i.e., the exchange of individuals between habitat patches), and impacts resulting from increased edge along open space areas.

Five SRP Tenets are directly relevant to the issue of habitat fragmentation at a landscape level:

2. Larger reserves are better
3. Keep reserve areas close/link reserve with corridors
4. Keep habitat contiguous
5. Reserves should be biologically diverse
6. Protect reserves from encroachment

The Draft Program EIR at pages 4.9-187 through 4.9-194 presents extensive analyses of the proposed project in the context of these five SRP tenets. In addition, Tenet 6 is addressed in the context of Infrastructure Consistency Analysis presented at Draft Program EIR pages 4.9-114 through 4.9-123. Edge effects as they relate to Tenet 6 are addressed below.

The effects of habitat fragmentation on specific sensitive species are generally addressed under the topical responses for these species contained within Section 3.1.9.8 (i.e., mountain lion, badger, golden eagle) and in specific responses to comments regarding other species from the USACE and California Native Plant Society (CNPS).

While the analyses addressing these tenets described in the Draft Program EIR demonstrate that the proposed RMV Open Space and associated Adaptive Management Program would adequately mitigate for fragmentation effects caused by the proposed project, other alternatives provide for development and open space scenarios that also would address comments regarding habitat fragmentation. The B-5 Alternative would leave the San Mateo Creek Watershed undeveloped, but include more fragmentation in the San Juan Creek Watershed than the proposed project due to the expansion of development in Chiquita Canyon, Gobernadora and into Verdugo Canyon. The B-6 Alternative generally would have less fragmentation in the San Juan Creek Watershed by eliminating development in Chiquita Canyon, but would expand the Gobernadora development area and affect connectivity through Sulphur Canyon (linkage H) and along linkage I between Gobernadora development and Coto de Caza. The San Mateo Creek Watershed would be less fragmented compared to the proposed project with the elimination of Planning Area 6 (Cristianitos Meadows) and due to

smaller development areas in upper Gabino, Cristianitos Canyon, and Northrop Grumman. The B-8 Alternative would have less fragmentation in the San Juan Creek Watershed by eliminating Planning Areas 2 and 4 and the San Mateo Creek Watershed would be undeveloped. The B-9 Alternative would be less fragmented in the San Juan Creek Watershed with the elimination of development above the Chiquita treatment plant and less fragmented in the San Juan Creek Watershed with the elimination of development in Planning Area 6 (Cristianitos Meadows), Planning Area 7 (Cristianitos Canyon) and Planning Area 9 (Upper Verdugo/Upper Gabino Canyon). The B-10 Alternative would have slightly less fragmentation than the proposed project in the San Juan Creek Watershed with the elimination of residential above the "Narrows" in Chiquita Canyon and less fragmentation in the San Juan Creek Watershed by reduced development in Cristianitos Meadows and Cristianitos Canyon and no development in upper Gabino Canyon. The B-11 Alternative would have increased habitat fragmentation in the San Juan Creek Watershed compared to the proposed project due to expansion of conventional residential in middle Chiquita Canyon and in the northern portion of the Gobernadora development area (as opposed to estates). The B-11 would have less habitat fragmentation in the San Juan Creek Watershed compared to the proposed project due to elimination of development in Cristianitos Meadows and upper Gabino. However, the conventional development in Cristianitos Canyon and east of Northrop Grumman would be expanded compared to the proposed project.

3.1.9.6b Fuel Modification

Theme of Comments: The Draft Program EIR contains no descriptions or analyses of required fuel modification actions and their impacts. Fuel modification actions must be undertaken in perpetuity, such that the land will never recover to an intact natural community.

Response: As part of the RMV Open Space Adaptive Management Program (Appendix J, Draft Program EIR), a Wildland Fire Management Plan (WFMP) has been prepared (Appendix J-5, Draft Program EIR). The WFMP, as described in Draft Program EIR Section 4.14 (page 4.14-24), recommends a fuel modification zone of 110 feet for the proposed project based on a worst-case assessment of a Fuel Model 4 vegetation type on the study area (the current fuel model on Rancho Mission Viejo is FM 2). The Draft Program EIR notes in Table 3.4-2 on page 3-15 and discusses in Section 4.14 that the development area is inclusive of fuel modification zones. In other words, all fuel modification zones will be located inside the development boundary indicated for each planning area. Therefore, in terms of impact analysis, physical impacts to vegetation and species associated within fuel modification zones have been assessed as part of the overall impact analysis for the proposed project discussed in Section 4.9.4 of the Draft Program EIR. A 110-foot-wide fuel modification zone would include the following zones:

- Zone A—irrigated setback 20 feet from structures
- Zone B—50 feet of irrigated, thinned and pruned landscaping
- Zone C—40 feet of 50 percent thinned and pruned landscaping

To address the concern regarding invasive species being introduced via landscaping adjacent to open space, Mitigation Measure 4.9-27 is modified and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline)

- 4.9-27 All plants identified by the California Exotic Pest Plant Council as an invasive risk in southern California shall be prohibited from development and fuel

management zones adjacent to the RMV Open Space. The plant palette for fuel management zones adjacent to the RMV Open Space shall be limited to those species listed on the Orange County Fire Authority Fuel Modification Plant List. Plants native to Rancho Mission Viejo shall be given preference in the plant palette.

Prior to issuance of fuel modification plan approvals, the County of Orange shall verify that: 1) plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California are not included in plans for fuel management zones adjacent to the RMV Open Space and, 2) the plant palette for fuel management zones adjacent to RMV Open Space is limited to those species listed on the Orange County Fire Authority Fuel Modification Plant List.

Prior to the recordation of a map for a tract adjacent to the RMV Open Space, the County of Orange shall verify that the CC&Rs contain language prohibiting the planting of plants identified by the California Exotic Pest Plant Council as an invasive risk in southern California in private landscaped areas.

As noted above Zones A and B will be irrigated. The Conceptual WQMP (Appendix C-2) sets forth Best Management Practices (BMPs) including site design BMPs, such as the planting of native or drought tolerant trees and large shrubs, and source control BMPs, such as the use of efficient irrigation to minimize runoff from excessive irrigation. Both of these BMPs, native or drought tolerant plantings within fuel management zones and efficient (i.e., ET-based irrigation systems) are anticipated to minimize the effects of fuel management zones on adjacent native habitats within the RMV Open Space. Regarding the potential for Argentine ants to colonize irrigated fuel management zones, in addition to the BMPs mentioned previously the Adaptive Management Program also includes an Invasive Species Control Plan (Appendix J-3, Draft Program EIR) that addresses both the Argentine and Red Imported Fire ant. Methods of control for these species include sprays, insecticidal baits, granules, and dusts applied in accordance with the manufacturer's directions.

3.1.9.6c Edge Effects

Theme of Comments: Various classes of deleterious edge effects should be assessed separately as indirect impacts for each species or resource. They should be quantified to the degree feasible. Such measurements exist for a variety of edge effects (e.g., distances that noise, light pollutants, and exotic species extend from roads or other development.).

Response: Please refer to the sub-sections below for responses on edge effects.

3.1.9.6d Road Effect Zones

Theme of Comments: Roads create broad edge effects that can be at least roughly quantified. Roads cause increased invasions by exotic weeds, direct mortality via road kill, disruption of natural migration or movement patterns, interference with species communication, changes in water runoff and flow patterns, and air, water, and soil pollution. Accumulating scientific evidence is making it possible to quantify the width of "road-effect zones" for impact assessment.

Response: Generally it is known that roads have several adverse effects, such as increasing road kill of wildlife, modification of animal behavior, disruption of the physical and chemical

environments, noise, and invasive plant species (Trombulak and Frizzle, 2000).¹⁴ However, quantifying these effects for any given roadway is a formidable task. As the commenter correctly notes, “numerous assumptions are required” to estimate how far indirect impacts would extend from newly constructed roads. The County disagrees, however, that, as the commenter suggests “it is possible to reasonably measure or estimate how far impacts extend from newly constructed roads” at the programmatic project level. The estimate of road-effect zones depends on several variables, including location, width, surface (e.g., which can affect noise levels), traffic levels, and type of ecosystem (Hourdequin, 2000),¹⁵ as well as all the project design features and mitigation measures that would reduce the effect. The Draft Program EIR provides information on location, width and traffic levels of proposed new roads. However, key quantitative information on road effects for the southern California ecosystem and species is lacking from the scientific literature, making any potential quantitative analyses meaningless. For example, California gnatcatchers are known to frequently use highway rights-of-way (Famolaro and Newman, 1998),¹⁶ and thus there appears to be some compatibility between roads and gnatcatcher occupation, but there are no data on densities and reproductive success of birds adjacent to highways compared to birds located away from highways that would allow quantification of a road effect on this species. Data on the effects of species in other ecosystems in other geographic regions (e.g., forests or grasslands) are not appropriate for generalizing quantitative effects to coastal sage scrub species. As stated by Hourdequin (2000), “We cannot generalize the effects of roads in one place to all others.”

The Draft Program EIR acknowledges that road effects will occur in the study area, both in terms of specific impacts to habitat linkages and wildlife movement corridors (Impacts 4.9-58 and 4.9-59) and in terms of general indirect edge effects, such as noise (Impact 4.9-96), invasive species (Impact 4.9-98), water quality (Impact 4.9-99), night lighting (4.9-1000 and human activity (4.9-100). The draft Southern NCCP/HCP Guidelines General Policy 4 states that “Roads that are necessary to serve approved land and water uses located inside and outside the Habitat Reserve shall be designed and sited to minimize impacts on designated Identified Species, to accommodate wildlife movement to the maximum extent feasible, and to minimize impacts to habitats and species.” Therefore, the language of the NCCP Guidelines provides for the design and construction of roads that avoids and minimizes indirect impacts to the extent feasible. Guidelines for bridge and culvert construction and lighting to accommodate wildlife movement are included as mitigation measures in the Draft Program EIR (e.g., Mitigation Measures 4.9-22 and 23). All landscaping along roadways will follow prohibitions on plants identified by the California Exotic Pest Plant Council as invasive risks in southern California (MM 4.9-27), and the Adaptive Management Program will include monitoring of the road/open space interface to control invasive plant species (PDF-2). Mitigation measures for water quality impacts are identified in Section 4.5 of the Draft Program EIR and addressed under PDF 4.5-3 Water Quality Management Plan (WQMP), which includes Site-design BMPs, Source Control BMPs, Urban Runoff and Stormwater Control Elements, a Stormwater BMP Operation and Maintenance Program and a Stormwater Monitoring Program. Under the Conceptual WQMP, all runoff from roadways would be properly drained to protect the Open Space and impacts would be reduced to a level less than significant. For significant lighting impacts, Mitigation Measure 4.9-28 specifies that lighting, that is necessary to ensure public health and safety, shall be shielded or directed away from RMV Open Space habitat areas through the use of low-sodium or similar intensity lights, light shields, native shrubs, or shielding methods. Significant impacts from human activity are addressed by Mitigation Measure 4.9-29

¹⁴ Trombulak, S.C. and C.A. Frissell. 2000. Review of ecological effects of roads on terrestrial and aquatic communities. *Conservation Biology* 14:18-30.

¹⁵ Hourdequin, M. 2000. Special section: ecological effects of roads. *Conservation Biology* 14:16-17.

¹⁶ Famolaro, P. and J. Newman. 1998. Occurrence and management considerations of California gnatcatchers along San Diego highways. *Western Birds* 29:447-452.

whereby access to RMV Open Space will be managed and directed as specified in the Open Space Agreement between the County and the applicant, and would include fencing, signs, etc. to direct the public to public access points within RMV Open Space.

Implementation of these project design features and mitigation measures to minimize and avoid indirect road effects impacts would substantially reduce the road-effect zone to a level less than significant.

3.1.9.6e Infrastructure Impacts

Theme of Comments: The Draft Program EIR does not assess indirect impacts of infrastructure improvements, such as access roads, pipelines, and power lines.

Response: As previously addressed, it is not possible to accurately quantify indirect edge and other adverse effects from roads due to the lack of available data in the scientific literature regarding quantitative information on road effects for the southern California ecosystem and species. However, access roads to pipelines and power lines are generally unpaved, unlit, of limited width (typically about 20 feet maximum) and are only traveled occasionally for patrols, inspections, maintenance and repairs. The majority of species' movements are not deterred by unpaved utility and low-density residential access roads. Indirect impacts of access roads would be limited to exotic invasive plants along road edges, some risk of erosion and unauthorized access by the public. Through implementation of the Adaptive Management Program required by PDF 9-2, the Invasive Species Control Plan would be implemented, erosion effects will be managed through standard BMPs, and patrols and locked, tamper- and crash-proof gates at identified intrusion points will limit public access, thus reducing indirect impacts to a level of less than significant.

3.1.9.6f Increased Fire Frequency

Theme of Comments: Increasing human population results in an increase in fire frequency, which in turn results in ecological degradation in wildlands near human communities. California gnatcatchers are affected by fire, since they are largely dependent on "old growth" coastal sage scrub. Coastal cactus wrens are also affected by fires, since the species require cactus patches at least one meter tall, and cactus takes many years to reach this height.

Response: A Wildland Fire Management Plan (WFMP) (Appendix J-5, Draft Program EIR) has been prepared as part of the RMV Open Space Adaptive Management Plan whose stated purpose is "to guide the management of fire on lands belonging to Rancho Mission Viejo..." such that the following key goals on RMV Open Space can be accomplished:

- Ensure the persistence of currently extant native-dominated vegetation communities and habitat types,
- Restore or enhance the quality and extent of degraded vegetation communities and other habitat types, and
- Maintain and restore biotic and abiotic processes.

The WFMP proposes to accomplish these goals through implementation of 1) a Short-term Tactical Fire Suppression Plan which focuses on minimizing the impacts of unplanned fire events and associated suppression activities; 2) a Long-term Strategic Fire Protection Plan which identifies those specific natural resource areas that will require enhanced fire protection

through fuel management and treatment including the planned use of prescribed fire to manage habitat; and 3) a Prescribed Fire Program which describes the use of fire on a planned and controlled basis to maintain ecosystem health. For more information on the WFMP, see topical response 3.1.9.8k for the cactus wren in regard to increased wildfire frequency.

3.1.9.6g Other Indirect Effects

Theme of Comments: Other indirect impacts, including encroachment by humans and their pets, invasion by exotic species, night lighting, and increased traffic mortality are unaddressed.

Response: The Draft Program EIR analyzes long term indirect effects including noise, invasive exotic plants, water quality, lighting and human activities and finds these impacts to be potentially significant prior to mitigation. With the implementation of Mitigation Measures 4.9-27 (as revised per response 3.1.9.6b above), Mitigation Measure 4.9-28 and Mitigation Measure 4.9-29, impacts are reduced to a level of less than significance.

3.1.9.7 Impacts to Grasslands

Theme of Comments: Minimization/avoidance and mitigation of impacts to grasslands are inadequate. Impacts to 1,531 acres of agricultural fields are inappropriately excluded from this impact. The substantial elimination of grasslands will result in significant impacts which can only be mitigated through increased preservation of grasslands. The replacement orchards also would eliminate valuable grasslands necessary for foraging.

Response: Implementation of the proposed project would result in direct impacts to 2,413.6 acres of grassland, including 1,908.5 acres of non-native annual grassland and 505.1 acres of native grassland. In addition, construction and maintenance of infrastructure facilities within the proposed RMV Open Space would temporarily impact 41.3 acres of grassland, including 36.1 acres of annual grassland and 5.2 acres of native grassland. Although non-native, annual grasslands themselves are not considered a sensitive vegetation community, they provide breeding and foraging habitat for grassland wildlife species and foraging habitat for a variety of raptors. Direct permanent impacts on 1,908.5 acres of annual grassland, in terms of loss of wildlife habitat, were considered potentially significant (Impact 4.9-61) prior to application of the draft Southern NCCP/HCP Planning Guidelines and associated Minimization/Avoidance Measures. Native grasslands are considered a sensitive vegetation community due to their limited distribution and their potential to support sensitive plant species, as well as wildlife species. Direct permanent impacts to 505.1 acres and temporary impacts to 5.2 acres of native grassland were considered significant impacts (Impact 4.9-61) prior to application of the draft Southern NCCP/HCP Planning Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures would result in the conservation of 2,627.3 acres (52 percent) of grassland, including 2,157 acres (53 percent) of annual grassland and 470 acres (48 percent) of native grassland. Implementation of the Adaptive Management Program (Appendix J) and the associated Habitat Restoration Plan (Appendix J-2) would provide for adaptive management of grasslands and restoration of 82 acres of native grassland and 60 acres of coastal sage scrub/native grassland (which provides similar wildlife habitat values as pure grasslands and for some species such as grasshopper sparrow, higher habitat value because of the greater habitat diversity). Minimization/Avoidance Measures 4.9-41 and 4.9-32 require the Project Applicant to restore an additional 60 acres of native habitats including native grasslands in the Cristianitos sub-basin and Blind sub-basin as part of the golf course landscaping which will further contribute to the restoration of grassland within the study area. Additional case-by-case restoration will be undertaken during the course of long-term adaptive management of the RMV Open Space and will focus on: (1) existing areas of degraded or low

quality native grasslands that are not naturally recovering through passive management; (2) areas that are degraded or disturbed by future natural events and it is determined that they will not, or are unlikely to, recover naturally; (3) areas that have been temporarily disturbed either by authorized uses (e.g., approved infrastructure) or unauthorized uses (e.g., an illegal trail); and (4) specific adaptive management research involving restoration treatments. The general adaptive management activities for existing grasslands focus on the enhancement of habitat value of grasslands through various management actions such as managed grazing, prescribed burning, and artichoke thistle control to contribute to maintaining and enhancing long-term net habitat value, as described in Appendix G-7. The specific impacts to, and conservation and management of, sensitive grassland species and raptors are discussed in the topical responses for each species. It was determined that through the conservation and adaptive management actions for grasslands provided for by the Adaptive Management Program, that sensitive grassland species in the study area will be maintained. For these reasons, the impacts on grasslands are reduced to a level less than significant.

By way of comparison with other large-scale conservation plans in southern California, the Western Riverside County MSHCP completed in 2004 conserves 28 percent of grasslands (42,820 acres);¹⁷ the Preferred Project Alternative for the North San Diego County MHCP completed in 2003 conserves 31 percent (1,597 acres) of grasslands (the Biological Core and Linkage Area Alternative, the MHCP biologically preferred alternative, which would have conserved 63 percent [3,295 acres] of grasslands was not selected by the Wildlife Agencies);¹⁸ the San Diego MSCP completed in 1998 conserves 34 percent (9,770 acres) of grasslands;¹⁹ and the Orange County Central and Coastal Subregion NCCP completed in 1996 conserves 34 percent of grasslands (including 6,100 acres in reserve and 1,450 acres in non-reserve open space).²⁰ Therefore, the proposed project would conserve within the RMV Open Space a substantially greater percentage of grassland than the other completed conservation plans in southern California. When combined with already protected grasslands within the Southern Subregion NCCP Planning Area, the conservation and management actions will result in the conservation of more than 9,400 acres (61 percent) of grassland in the planning area, an amount similar to that of the MHCP biologically preferred alternative.

Like annual grasslands, agriculture itself is not a sensitive vegetation community, but can provide valuable foraging habitat for a variety of species. Impacts to 1,531.4 acres of agriculture, in combination with grasslands, therefore were considered on a species by species basis as foraging habitat for raptors and other species that forage in agricultural fields on the Ranch Plan project site, including Swainson's hawk, merlin, sharp-shinned hawk, burrowing owl, ferruginous hawk, prairie falcon, long-eared owl, red-shouldered hawk, northern harrier, barn owl, loggerhead shrike and tricolored blackbird. The topical responses for the burrowing owl (Section 3.1.9.8g), loggerhead shrike (Section 3.1.9.9i) and tricolored blackbird (Section 3.1.9.8j) expand on the discussion of conservation of habitat for these species. For the grasshopper sparrow, impacts to agriculture are addressed in the topical response for this species (Section 3.1.9.8l).

Impacts of future citrus on grassland and agricultural foraging habitat have already been accounted for because they primarily are proposed for Planning Area 7 and eventually would be

¹⁷ Draft Western Riverside County MSHCP, Volume I, The Plan. Table 3-1, p. 3-20, November 2002.

¹⁸ Final Environmental Impact Statement/Environmental Impact Report for Threatened and Endangered Species Due to the Urban Growth within the Multiple Habitat Conservation Program Planning Area, SCH. NO. 93121073, Table 2.2-2, p. 2-33, March 2003.

¹⁹ Final Multiple Species Conservation Program, Table 3-3, p. 3-19, August 1998.

²⁰ Draft Natural Community Conservation Plan & Habitat Conservation Plan, County of Orange, Central & Coastal Subregion, Part III: Joint Programmatic EIR/EIS, Table 3-1, p. 3-9, December 1995.

replaced by residential development in this area (Exhibit 4.2.-1). As described in the Draft Program EIR (page 4.2-4), a 200-acre area in the Cristianitos sub-basin has been identified within which 100-acres of future citrus will be planted, subject to soil type, exposure and water availability. Two small-proposed areas of approximately 3 acres and 11 acres are located in proposed RMV Open Space north of San Juan Creek. The smaller site is located on a disturbed area with very limited weedy vegetation adjacent to the existing Chiquita lift station and thus does not provide foraging habitat. The larger site is located south of the St. Augustine Training Center in a pasture currently used for year-round horse grazing. This area also would not provide foraging habitat for grassland species. No significant impacts would occur as a result of the proposed citrus expansions.

3.1.9.8 Impacts to Species

3.1.9.8a Coastal California Gnatcatcher

Theme of Comments: The Draft Program EIR does not clearly and adequately analyze the impacts of the proposed project on the coastal California gnatcatcher.

Response: Implementation of the land uses associated with the proposed project would result in impacts to 72 locations (30 percent) of the California gnatcatcher (federally-listed Threatened, California Special Concern Species) and 2,024.8 acres (26 percent) of coastal sage scrub. Construction and maintenance of infrastructure facilities within the RMV Open Space would temporarily impact 50.6 acres of coastal sage scrub and one gnatcatcher location. These impacts were determined to be significant (Impact 4.9-70) prior to application of the draft Southern NCCP/HCP Planning Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures would result in conservation of 171 locations (70 percent) and 5,657.2 acres (74 percent) of coastal sage scrub, including 143 of 188 locations (76 percent) and 1,012 acres (77 percent) of coastal sage scrub within the *major population/key location* in the Chiquita and Wagonwheel sub-basins and Chiquadora Ridge portion of the Gobernadora sub-basin, the single location on the Ranch Plan project site in the East San Juan Capistrano *important population/key location*, and six of the seven (86 percent) locations in the Trampas Canyon *important population/key location*. Under new Minimization/Avoidance Measure 4.9-41 and revised Measure 4.9-32 set forth below, a site-specific project design would be implemented to avoid and minimize impacts to the 12 gnatcatcher locations within the Cristianitos *important population/key location* and associated coastal sage scrub adequate to support the 12 locations, including revegetation of sage scrub if necessary. New Mitigation Measure 4.9-41 and revised Mitigation Measure 4.9-32 have been incorporated into the Final Program EIR as follows:

- 4.9-41 Prior to the issuance of a grading permit for Planning Area 6, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the 12 gnatcatcher locations and adequate habitat are protected.
- 4.9-32 Prior to the issuance of grading permits for the proposed golf course in Cristianitos sub-basin, the County's Director of Planning Services/designee shall verify that the landscape plans for the golf course include native habitats which could contribute to the restoration of grasslands in the sub-basin. A minimum of sixty acres of native habitats shall be included in the landscape plans.

The Adaptive Management Program (Appendix J) includes enhancement/restoration of 348 acres of coastal sage scrub in Chiquita Canyon and Sulphur Canyon in areas that would enhance carrying capacity and connectivity for the *major population/key location* in this area. Overall, coastal sage scrub in the RMV Open Space would be adaptively managed to maintain existing high quality coastal sage scrub and enhance existing disturbed coastal sage scrub through fire, grazing and exotic species management. The potential for success of these restoration and management strategies is well supported by scientific literature and applied, on-the-ground programs (see reviews of restoration and management studies of coastal sage scrub in Appendix C of the Responses to Comments document). The Adaptive Management Program (see Appendix J) will include monitoring of coastal sage scrub, gnatcatcher populations, and other coastal sage scrub focal species to track the long-term habitat value of the coastal sage scrub system. Implementation of the Minimization/Avoidance Measures and the Adaptive Management Program set forth in the Draft Program EIR and reviewed above will reduce significant impacts to the California gnatcatcher to a level less than significant.

Theme of Comments: The Draft Program EIR does not adequately analyze the effects of habitat fragmentation on viability and dispersal of gnatcatchers in Chiquita Canyon north of the SMWD wastewater treatment plant. There is no analysis of the size of patches of coastal sage scrub remaining between developed areas and whether these would remain viable as habitat conservation and/or mitigation.

Response: A detailed conservation analysis was conducted for the California gnatcatcher *major population/key location* in Chiquita Canyon that considered habitat fragmentation effects, as illustrated in Draft Program EIR Exhibit 4.9-13. The fragmentation analysis assumed that for habitat patches to support a breeding pair of the California gnatcatcher it must be (1) at least 5 acres in size and (2) contiguous with adjacent natural habitat that would allow for dispersal between patches. With regard to the first assumption, there is ample evidence that 5-acre patches of coastal sage scrub are adequate to support breeding pairs of the California gnatcatcher in coastal southern California. For example, Atwood et al. (1998)²¹ found that six of 16 "entire season" gnatcatcher use areas on the Palos Verdes Peninsula were less than 5 acres, with a mean of 5.6 acres for the 16 observed nesting pairs. With regard to the second assumption, given that California gnatcatchers have been documented to traverse highly man-modified landscapes, at least for short distances (Bailey and Mock, 1998)²², the assumption that habitat patches must be contiguous with natural habitat to remain viable is conservative.

Exhibit 4.9-13 shows that several gnatcatcher locations mapped in open space north of the reclamation plant are considered impacted because the remaining habitat patches following development would not meet the 5-acre criterion. Based on the amount of remaining coastal sage scrub in this area, it was determined that at least two locations above the treatment plant would remain viable. The commenters note correctly that several "conserved" locations appear to be in mapped in development areas. First, it should be noted that the gnatcatcher locations are not precise. The survey methodology typically records a point location where a gnatcatcher was actually observed. Use areas in coastal southern California may range from a few acres to more than 10 acres (e.g., Atwood et al. 1998), so discrete locations mapped in proposed development (or conservation) areas do not reflect the entire use area of a breeding pair. With this in mind, any locations mapped in proposed development were determined to be conserved if (1) the location was at the edge between development and open space, thus allowing for utilization of adjacent habitat, and (2) adequate habitat (i.e., more than five acres) would remain

²¹ Atwood, J.L., S.H. Tsai, C.H. Reynolds, J.C. Luttrell, and M.R. Fugagli. 1998. Factors affecting estimates of California gnatcatcher territory size. *Western Birds* 29:269-279.

²² Bailey, E.A. and P.J. Mock. 1998. Dispersal capability of the California gnatcatcher: a landscape analysis of distribution data. *Western Birds* 29: 351-360.

to support the location. For example, a “conserved” location mapped within the proposed alignment of Cristianitos Road was considered conserved because it is adjacent to substantial adjacent coastal sage scrub immediately to the east and there is no reason to believe that this location would not remain viable.

In addition, several sites located east of Gobernadora Creek were in error depicted as conserved on Exhibit 4.9-13 of the Draft Program EIR. These locations are not within the Chiquita *major population/key location* and were not part of the analysis. Exhibit 4.9-13 has been revised and incorporated into the Final Program EIR. The revised exhibit is included in Section 4.

Theme of Comments: The Draft Program EIR is not clear about what impacts and conservation are occurring for the gnatcatcher in the study area within the Chiquita Canyon *major population/key location*. There are inconsistencies in the reported numbers of gnatcatchers impacted and conserved.

Response: The Draft Program EIR does clearly state what impacts and conservation are occurring for the gnatcatcher in the study area within the Chiquita Canyon *major population/key location*. Using the detailed analysis method described above, and as described for Impact 4.9-70 on page 4.9-138, it was determined that 45 gnatcatcher locations would be directly impacted by the proposed development in Planning Area 2 and construction of Cristianitos Road and new Ortega Highway and 143 locations would be conserved within the Chiquita Canyon *major population/key location*. The apparent inconsistency with the impact and conservation numbers reported for the Chiquita Canyon *major population/key location* in Table 4.9-28 on page 4.9-115 of 150 of 188 locations conserved (i.e., 38 locations impacted) occurred because the Consistency Analysis did not include infrastructure impacts. The construction of Cristianitos Road and the new Ortega Highway would result in direct impacts to an additional seven gnatcatcher locations, bringing the total to the 45 impacted locations reported for Impact 4.9-70. Infrastructure impacts were not included in the Consistency Analysis because conceptual infrastructure facilities were not designed for all of the alternatives and thus could not be used for the comparison of alternatives. As noted in the Draft Program EIR (Page M-2, Appendix M), additional infrastructure impacts for each alternative would be proportional to the impacts of the development areas for each alternative.

Theme of Comments: The Draft Program EIR does not address “indirect” edge effects on the California gnatcatcher in Planning Area 2, such as the effect of a watered golf course on dry coastal sage scrub increasing the presence of the Argentine ant.

Response: Indirect edge effects will be addressed in overall design of the urban/wildlands interface zone separating the RMV Open Space and non-open space/urban areas, including residential and golf course areas in Planning Area 2. General Policy 5 described in Section 3.5 of the Draft Southern NCCP/HCP Planning Guidelines includes several design and management guidelines for urban/wildlands interface zones to address long-term indirect effects, including: creating fuel management zones within the development area boundaries (i.e., not within the Habitat Reserve) that combine irrigated and non-irrigated native plantings between the Habitat Reserve and urban uses (native plantings will be selected to support native species to the extent possible, such as cactus plantings for the cactus wren); prohibiting the use of plants identified by the California Exotic Pest Plant Council as an invasive risk in southern California from development and fuel management zones; managing pesticide and herbicide use and fertilizer application techniques in landscaped areas, including golf courses, adjacent to the Habitat Reserve and providing comprehensive water quality treatment prior to discharge of urban runoff into the Habitat Reserve; shielding and/or directing lighting away from habitat areas

through the use of low sodium or similar intensity lights, light shields, native shrubs, berms, and other shielding methods; and providing barriers, fencing, signs, walls, etc. to manage and direct public access and control domestic animals (e.g., pets) to control sensitive habitat and species.

As part of the Adaptive Management Program described in Appendix J of the Draft Program EIR, an Invasive Species Control Plan (Appendix J-3) was prepared. Through the Invasive Species Control Plan, edge species such as the Argentine ant and the Red Imported Fire Ant will be addressed in two ways: (1) nest/mound treatment; and (2) broadcast applications. In addition to direct controls on non-native ants, the conceptual golf course layout in Chiquita Canyon has relatively little direct interface with coastal sage scrub (less than 900 feet). By using drought-resistant native vegetation such as valley needlegrass grassland in the restoration zone between the golf course and RMV Open Space, in combination with the site-specific treatments noted above, potential impacts from non-native ants can be minimized.

Theme of Comments: The Ranch Plan proposes development throughout Cristianitos Canyon and the western portion of Gabino Canyon (Planning Area 7) eliminating most of the coastal sage scrub patches on the project site between the *key location* north of the Donna O'Neill Land Conservancy and the gnatcatcher locations on TRW (Northrop Grumman) and the area between the San Onofre State Park and the Talega development. The Wildlife Agencies have consistently identified Planning Area 7 for avoidance/preservation in NCCP/HCP discussions with the County and the project applicant. In addition, while the Draft Program EIR states that impacts to the *key location* north of the Donna O'Neill Land Conservancy will be minimized through project design features, it does not provide any information how these impacts will be minimized or how many functional locations would remain.

Response: The comment that most of the coastal sage scrub patches on the Ranch Plan project site between the *key location* north of the Donna O'Neill Land Conservancy and the gnatcatcher locations on TRW and the area between the San Onofre State Park and the Talega Development would be eliminated is inaccurate. Development of Planning Area 7 would impact 192 acres (42 percent) of coastal sage scrub and 259 acres (58 percent) would be in proposed RMV Open Space east of the conventional residential development. Without avoidance, the proposed development in Planning Area 7 would directly impact two of five gnatcatcher locations in the lower Gabino Canyon area (Exhibit 4.9-12b). The three conserved locations are in a canyon tributary to Gabino Creek and the northernmost two locations are on steep slopes below proposed estate lots. The potential impact to the two gnatcatcher locations in lower Gabino Canyon was identified as a "could be consistent" in the Consistency Analysis and as a potentially significant impact. As such, Minimization/Avoidance Measure 4.9-15 was identified in Table 4.9-32 on page 4.9-168 of the Draft Program EIR. Measure 4.9-15 states that "Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all five locations of the California gnatcatcher locations [sic] in the Lower Gabino subunit are protected." It should be noted that avoidance of the two gnatcatcher locations in the Lower Gabino subunit also would result in additional protection of coastal sage scrub and thus the impact estimate of 192 acres overestimates the actual loss of coastal sage scrub. The majority of coastal sage scrub and all five gnatcatcher locations in Planning Area 7 would be conserved.

With regard to the Upper Cristianitos *important population/key location* of the California gnatcatcher north of the Donna O'Neill Land Conservancy, 7 of the 13 locations would be in proposed RMV Open Space, one is in the Donna O'Neill Conservancy, and 5 locations are within Planning Area 6 (Cristianitos Meadows). As noted in the Draft Program EIR in the Consistency Analysis for the gnatcatcher in Table 4.9-28 on page 4.9-115, impacts would be minimized through project design features. The proposed land use in Cristianitos Meadows is

golf course and residential housing (Exhibit 3-21). Although a conceptual golf course layout has not been prepared, the golf course design provides flexibility for avoiding sensitive resources areas (e.g., as was achieved with the Arroyo Trabuco Golf Course which avoided 12 least Bell's vireo locations in Trabuco Creek and 15 gnatcatcher locations in coastal sage scrub located on the site) and it is reasonable to assume that the large majority of the gnatcatcher locations and coastal sage scrub within Planning Area 6 could be conserved. In addition, the proposed residential portion of Planning Area 6 generally is west of the gnatcatcher locations and sage scrub. Any unavoidable impact to gnatcatcher locations and sage scrub habitat on the site would be mitigated through restoration (i.e., enhancement or revegetation) as recommended in the Habitat Restoration Plan and inclusion of native plantings within the golf course landscaping as was done at the Arroyo Trabuco Golf Course such that net biological function of the area for the gnatcatcher would be retained. A new Mitigation Measure 4.9-41 has been provided to ensure that these gnatcatcher locations and adequate habitat are protected. This mitigation measure is incorporated into the Final Program EIR as follows:

- 4.9-41 Prior to the issuance of a grading permit for Planning Area 6, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the 12 gnatcatcher locations and adequate habitat are protected.

The biological connectivity between the Upper Cristianitos *important population/key location* and gnatcatcher locations in the lower Gabino Subunit, the Avenida Pico *important population/key location* south of the Talega development, and populations to the south on Marine Corps Base (MCB) Camp Pendleton would be retained. Intact coastal sage scrub would remain north of Planning Area 7 to connect the Upper Cristianitos *important population/key location* with the five locations in the Lower Gabino Subunit. Adequate habitat would remain along Cristianitos Creek and to the west of the creek in the Donna O'Neill Conservancy to provide dispersal habitat for the gnatcatcher. Planning Area 7 would be offset typically 500 feet from the creek, with a minimum of 200 feet, providing a buffer between urban development and gnatcatcher dispersal habitat along the creek. It is important to note that dispersing gnatcatchers are not limited to using coastal sage scrub and are capable of dispersing through a variety of vegetation types such as chaparral and riparian, as well as highly modified urban landscapes (Bailey and Mock, 1998). Thus, the riparian habitat along Cristianitos Creek and the sage scrub and chaparral in the Donna O'Neill Conservancy will provide suitable dispersal habitat for the gnatcatcher.

Theme of Comments: The Ranch Plan would impact at least six California gnatcatchers in the Northrop Grumman area (Planning Area 8) that represent the easternmost locations on the project site and represent a local northeastern limit of gnatcatcher distribution. The Reserve Design Principles suggest that target species, in particular listed species, should be conserved throughout the planning area throughout their native range. By impacting most of the locations in the San Mateo Watershed, the Ranch Plan does not meet the intent of the Reserve Design Principles.

Response: The comment is inaccurate in the statement that six gnatcatcher locations would be impacted in Planning Area 8. Five locations would be impacted. The sixth location actually is within proposed RMV Open Space at the edge of development (see Exhibit 4.9-12b of the Draft Program EIR). The development boundary was set to avoid this location. The comment also is inaccurate about impacting most of the gnatcatcher locations in the San Mateo Watershed. There are 25 documented gnatcatcher locations in the San Mateo Watershed and, assuming avoidance of the locations in Planning Areas 6 and 7, only 5 (20 percent) of the 25 locations would be impacted. Even assuming less than 100 percent avoidance in Planning Area 6, the majority of locations in the San Mateo Watershed would be avoided. Furthermore, the three

conserved locations within the Talega sub-basin, along with the single conserved location in the upper La Paz sub-basin, are the easternmost of the locations (see Exhibit 4.9-12b). Therefore, contrary to the comment, the geographic range of the gnatcatcher within the study area would be preserved.

Theme of Comments: The proposed project impacts to gnatcatcher populations in the Chiquita and San Mateo watersheds, and linkages among those populations, would result in significant, unmitigated impacts to the gnatcatcher and would preclude completion of a viable NCCP/HCP.

Response: The overall conservation of the California gnatcatcher (factoring in infrastructure impacts) in proposed RMV Open Space is 70 percent of mapped locations and 74 percent of suitable habitat. When combined with already protected open space, total conservation of gnatcatcher locations in the NCCP Planning Area is 80 percent of mapped locations and 84 percent of suitable habitat. For the *major population/key location* in Chiquita Canyon conservation of mapped locations in proposed RMV Open Space is 77 percent and conservation of suitable habitat is 74 percent and overall conservation of gnatcatcher locations and suitable habitat when combined with already protected open space is 86 percent. The overall conservation numbers that combine proposed RMV Open Space with already protected open space are substantially higher than other comparable large-scale habitat conservation planning programs that have been approved by the wildlife agencies. There is no feasible alternative that would significantly increase these conservation percentages.

As discussed and under the topical response for Wildlife Corridors/Linkages (Section 3.1.9.4), the proposed project would provide for adequate habitat linkages throughout the study area for the California gnatcatcher. In addition, the Draft Program EIR Consistency Analysis of the NCCP Sub-basin Guidelines addressed the extent to which the proposed project protects or impacts each of the identified habitat linkages or wildlife corridors located in whole or in part within the study area. All *major* and *important populations* in *key locations* in the study area are directly and functionally connected. The Chiquita *major population/key location* is internally connected through the "Narrows" (Linkage D), to Arroyo Trabuco via Linkage B, to the Chiquita Conservancy and Coto de Caza to the north and northeast, to Caspers Wilderness Park via Linkage I, and to San Juan Creek via Chiquita Ridge (Linkage C), Sulphur Canyon (Linkage H) and Chiquadora Ridge (Linkage G) (see Draft Program EIR, Exhibit 4.9-8). From San Juan Creek, direct habitat linkages extend north to *important populations* in Caspers Wilderness Park and NAS Starr Ranch and south to *important populations/key locations* in Trampas Canyon (Linkage K) and Upper Cristianitos (Linkage J) in the San Mateo Watershed. North-south dispersal between the San Mateo Watershed portion of the study area and MCB Camp Pendleton is mediated by Linkage N along Cristianitos Creek.

The Consistency Analysis identified two instances where the proposed project would not be consistent with the Planning Guidelines in regard to habitat linkages and wildlife corridors: (1) The proposed project would not protect a 2,000 to 2,500 foot wide area along the southern boundary of Coto de Caza in the Gobernadora sub-basin to provide for functional east-west wildlife movement from Sulphur Canyon to Bell Canyon (Impact 4.9-24) the proposed project would provide for a 1,000-foot wide area; (2) the proposed project would constrain the east-west portion of habitat linkage K south of the Trampas dam (Impact 4.9-28). Neither of these "not consistent" findings will particularly constrain movement by the California gnatcatcher. This species is capable of dispersing through highly modified urban landscapes (Bailey and Mock 1998). The 1,000-foot linkage in Gobernadora is more than adequate for this species, as is the linkage south of the Trampas dam, which is still 600 to 700 feet wide at its narrowest sections.

Given the very high conservation percentages of gnatcatcher locations (80 percent) and coastal sage scrub habitat (84 percent) in the proposed RMV Open Space and already protected open space, conservation of the *major and important populations in key locations*, and the provision of adequate habitat linkages throughout the study area to support gnatcatcher dispersal, the proposed project would not result in significant, unmitigated impacts to the gnatcatcher or preclude completion of a viable NCCP/HCP.

3.1.9.8b Thread-Leaved Brodiaea

Theme of Comments: Minimization/avoidance and mitigation of impacts to thread-leaved Brodiaea are inadequate. Only 31 percent of this population, and 12 out of 20 locations will be preserved, a low level of conservation that is inadequate to mitigate significant impacts to this listed plant species. The EIR should require additional preservation of brodiaea, and possibly a relocation program. Measures 4.9-8 and 4.9-9, regarding the thread-leaved brodiaea in Cristianitos Canyon are inadequate. The measures should specify that the golf course in upper Cristianitos Canyon preserve 10 of 13 small populations of thread-leaved brodiaea and maintain a continuous connection of suitable natural habitat between them. Potential impacts on pollinators, habitat connectivity issues, and edge effects, are not adequately analyzed.

Response: Implementation of the land uses associated with the proposed project would result in a direct impact on 21 locations of thread-leaved brodiaea (federally listed Threatened, State-Listed Endangered, and CNPS List 1B) totaling 6,792 flowering stalks. This impact was determined to be significant (Impact 4.9-66) prior to application of the draft Southern NCCP/HCP Planning Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures will result in substantial avoidance with conservation of 8,632 flowering stalks and 18 of 30 locations. Mitigation Measure 4.9-1 states "Prior to issuance of a grading permit for Planning Area 2, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that two of the four thread-leaved brodiaea populations are protected." Mitigation Measure 4.9-8 states "Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all three locations of thread-leaved brodiaea that contribute to protection of a major population are protected." Mitigation Measure 4.9-9 states "Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all three locations of thread-leaved brodiaea that contribute to protection of a major population in a key location are protected." Mitigation Measure 4.9-17 states "Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all three locations of thread-leaved brodiaea that are the major population in a key location in the Lower Gabino subunit and Cristianitos sub-basin are protected." Mitigation Measure 4.9-20 states "Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the four known locations of thread-leaved brodiaea that constitute an important population are protected." Implementation of the Adaptive Management Program (Appendix J) will include monitoring thread-leaved brodiaea populations, development of management tools to control proliferation of non-native species (including grazing management, prescribed burns, mowing, and selective weeding), control of public access and translocation of impacted individuals as set forth in the plant species translocation, propagation, and management plan (Appendix J-1). The combination of avoidance of the brodiaea, adaptive management, and translocation of impacted flowering stalks will reduce impacts to the thread-leaved brodiaea to a level less than significant.

Impacts to Major Populations

Thread-leaved brodiaea has been subject to detailed analysis including incorporation of substantial avoidance. In accordance with the Minimization/Avoidance Measures set forth in Table 4.9-32 and the Planning Species Consistency Analysis summarized in Table 4.9-36, there would be no impacts to *major populations* of thread-leaved brodiaea associated with the proposed Ranch Plan project. Rather, 93 percent of flowering stalks would be preserved which represents a very high protection standard. The planning issues for brodiaea including pollinators/connectivity and edge effects are discussed below.

Potential Project Impacts on Pollinators

In regard, to effects on pollinators, Glenn Lukos Associates (GLA) has been conducting pollinator studies for the thread-leaved brodiaea on the Ranch Plan project site in support of the permit compliance associated with the Arroyo Trabuco Golf Course (ATGC). In addition to the thread-leave brodiaea population at the ATGC, thread-leaved brodiaea populations in Cristianitos are being monitored as "control sites" relative to pollinators. One season of monitoring has been completed and the data analyzed. A summary of the monitoring results is provided in summary Table 10. The data show for example that visitation time was higher in late season as was the average time spent per visit by the pollinators and average time spent per flower. As discussed below in more detail, Appendix J of the Draft Program EIR is the Adaptive Management Program that sets forth strategies for managing RMV Open Space. Pollination data such as that collected for the ATGC and in Cristianitos Canyon will be used to develop more precise management strategies for thread-leaved brodiaea.

**TABLE 10
SUMMARY OF 2003 BRODIAEA MONITORING**

	Cristianitos Mid-Season	Cristianitos Late-Season	ATGC Mid-Season	ATGC Late-Season
# Flowers Observed	10	20	34	15
Average # Of Visits Per Hour	1.1	3.3	11.6	3
Average Time Spent Per Visit(s)	9.0	13	2.8	21
Total Visitation Time(s)	36	300	227	252
Average Visit Time Per Flower(s)	3.6	15	6.7	16.8
Average # Of Visits Per Flower	0.4	1.2	2.4	0.8
Source: Glenn Lukos Associates, 2003.				

The three most common families observed on thread-leaved brodiaea flowers were Anthophoridae (Burrowing Bees), Halictidae (Sweat Bees), and Syrphidae (Flower-loving Flies). Individuals of the two bee families were observed to gather pollen and move between flowers, most likely contributing to pollination. Although the flower-loving flies visited quite frequently and for extended periods of time, they spend the majority of their visit feeding on nectar. They may incidentally contribute to pollination, but are not likely meaningful contributors to reproduction in the thread-leaved brodiaea. Several other species were observed to infrequently feed on brodiaea, including an Anna's hummingbird and a fiery skipper and these also are not expected to contribute to the reproduction in the brodiaea. Table 11 summarizes the seasonal variation in visitors observed using the two populations. Generally, Anthophorid bees appear to be more significant pollinators at the golf course population while Halictid bees appear to be more significant pollinators in the Cristianitos population.

TABLE 11
SUMMARY OF INSECT FAMILIES OBSERVED

Cristianitos Mid-Season		Cristianitos Late-Season		ATGC Mid-Season		ATGC Late-Season	
Rank	Family	Rank	Family	Rank	Family	Rank	Family
1	Halictidae	1	Halictidae	1	Anthophoridae	1	Syrphidae
2	Syrphidae	2	Anthophoridae	2	Halictidae	2	Anthophoridae
2	Lycaenidae			3	Syrphidae	2	Halictidae
						3	Muscidae
Source: Glenn Lukos Associates, 2003.							

The ATGC population exhibited a higher proportion (73 percent) of flowers that developed fruit compared to the Cristianitos population (49 percent). Although this may in part reflect a delay in flowering, it at least indicates that the population is being effectively pollinated and was not affected by construction or operation of the golf course, including potential affects from herbicides and pesticides.

These data were collected during a season with high numbers of brodiaea flowering plants and, therefore, greatly expand the state of knowledge regarding the reproductive biology of this species. First, they confirm that Halictid bees are a primary and likely important pollinator for the thread-leaved brodiaea. They also indicate that Anthophorid bees are a primary pollinator and may be more effective in pollination than Halictid bees given the higher fruit development at the ATGC population where Anthophorid bees were more prevalent. These data are also important in showing that grading/development in areas adjacent to brodiaea (i.e., ATGC) does not have adverse effects on pollinators, as long as sufficient habitat for native bees is preserved in proximity to the thread-leaved brodiaea to ensure persistence of the pollinator populations. Development of the ATGC on two sides of the thread-leaved brodiaea is within approximately 40 feet (to the west) and 100 feet (to the east), with extensive contiguous grassland to the north and south that provide habitat and resources for native pollinators.

A number of factors have been considered in considering potential impacts to potential pollinators including the status and ecology of Halictid and Anthophorid bees, the area affected by proposed grading and development within the vicinity of the brodiaea populations, along with other management considerations. First, it should be noted that Halictid bees (sweat bees) are very common and are able to tolerate at least moderate levels of human disturbance and occupation. Powell and Hogue (1979) note that sweat bees are common and can coexist in the presence of human occupation:

*Sweat bees received their common name because they are often attracted to perspiring skin, for example at swimming pools, and sometimes give a sharp but harmless sting. These are among California's most common bees because there are more than 70 species, and many are somewhat social in habits, producing a large number of worker females which are similar to the queen...many kinds of flowers are used by each colony.*²³

In reviewing bee populations within different habitats throughout California, (Dobson 1993) found that Halictid bees comprise approximately 20 to 25 percent (total numbers present) of all

²³ Powell, J. and C. Hogue. 1979. *California Insects*. U.C. Press, Berkeley, CA.

pollinating bees (including honey bees and other non-natives).²⁴ Some halictids (e.g., *Nomia melanderi*) are reared and encouraged to populate cultivated areas because of their usefulness in pollinating crops, a point that underscores the flexibility of this group of native bees and also their compatibility with artificial landscapes.²⁵

Similarly, Anthophrid bees in California include about 300 species and some species such as the urban anthophora (*Anthophora urbana*), are tolerant of development and widespread and common across foothill areas in low elevation California.

Given these factors, along with the consideration that all the *major* and *important* thread-leaved brodiaea populations that are subject to preservation in RMV Open Space will have large blocks of contiguous open space that would support the pollinators (i.e., primarily Halictid and Anthophrid bees), it is clear that areas of adjacent development would not adversely affect pollination of this species. Potential impacts to pollinator movement, between plant populations and nest sites would not be affected as long as there are blocks of undisturbed native habitat that encompass the population and extend into adjacent open space with no blockages or impediments. Such local connectivity would be achieved by the proposed project.

Habitat Connectivity/Genetic Exchange

In addressing movement of pollinators between or among the thread-leaved brodiaea populations on the Ranch Plan project site, a number of factors must be addressed. In considering such movements between populations, the populations (both on-site and off-site) are divided into the following groupings:

- Cristianitos: Location 1 on NCCP Planning Guidelines Map 4-7
- Southern Cristianitos/Lower Gabino: Location 2 on NCCP Planning Guidelines Map 4-7
- Talega Sub-Basin boundary Gabino/Blind: Location 3 on NCCP Planning Guidelines Map 4-7
- Trampas and Middle Populations: Locations 6 and 7 on NCCP Planning Guidelines Map 4-7
- Chiquadora Ridge/Lower Chiquita: Location 4 on NCCP Planning Guidelines Map 4-7
- Arroyo Trabuco Golf Course: Location 5 on NCCP Planning Guidelines Map 4-7
- Offsite in Talega Development: due west of location 1 and 2 on Guidelines Map 4-7
- Off-site in San Onofre State Park: Not shown on map but directly south of Population 1 and 2.

A key consideration in the role that Halictid bees will serve in effecting genetic exchange between or among thread-leaved brodiaea populations on the Ranch Plan project site is their home range. According to Roubik (1989), Halictid bees typically do not travel more than 100

²⁴ Dobson, H. 1993. Bee Fauna Associated with Shrubs in Two California Chaparral Communities. In: *Pa Pacific Entomology*, Volume 69 #1, pages 77-94.

²⁵ Arnett, Jr. R.. 2000 (2nd edition) *American Insects. A Handbook of the Insects of America North of Mexico*. CRC Press LLC, Boca Raton, FL.

meters from nest sites to forage.²⁶ As such, potential connections between or among these populations must consider the following factors: Halictid bees have an average home range with a 100 m radius (i.e., 300+ foot radius); and Anthophorid bees are ground nesting bees with similar sizes and expected home ranges as the Halictids (i.e., estimated 300 foot radius). Under existing conditions (i.e., the absence of development), given the small home range of the primary pollinators for thread-leaved brodiaea, there is at best only limited connectivity between these various locations. In general, it is expected that that long-distance exchanges (e.g., 1,000 feet or more) are very rare if they occur at all. Making a conservative assumption, it can be expected that exchanges at shorter distances (300 to 1,000 feet) are uncommon, but probably occur occasionally.

Given these (conservative) assumptions the following conclusions can be drawn regarding potential genetic exchange between the various populations of thread-leaved brodiaea on the Ranch Plan project site.

1. The Arroyo Trabuco Golf Course population is completely isolated and not connected to the Lower Chiquita population, which is the nearest population, 17,000 feet to the east.
2. The populations in Lower Chiquita and Chiquadora are more than 20,000 feet from the nearest populations to the south in Cristianitos, or those further to the south in lower Cristianitos or Gabino.
3. The population in Trampas is more than 14,000 feet from the populations in Lower Chiquita and Chiquadora and more than 3,000 feet from the populations in upper and middle Cristianitos and exhibits little if any connection to these populations. The grouping of small populations in middle Cristianitos is more than 2,000 feet from the population groups in southern Cristianitos/lower Gabino and has low potential for genetic exchange. Furthermore, these populations are small, ranging from a few individuals per stand to one stand of 120 flowering stalks.
4. The Ranch Plan/Talega population is approximately 8,000 feet from the nearest Ranch Plan project site population (southern Cristianitos/lower Gabino) and has low potential for genetic exchange with these populations. The middle Gabino population is over 4,000 feet to the nearest population in middle Cristianitos and exhibits low potential for genetic exchange.
5. The populations near the eastern boundary of Northrop Grumman are approximately 8,000 feet from the nearest Ranch Plan project site population (southern Cristianitos/lower Gabino) and have low potential for genetic exchange with these populations.
6. The offsite Talega populations were located within 7,000 feet from the population groups in middle Cristianitos. However, these populations have been translocated to the west and are now approximately 12,000 feet from the Ranch Plan project site/Talega population and this have low potential for genetic exchange with the Ranch populations.
7. The offsite populations in San Onofre State Park are approximately 5,500 feet from the Ranch Plan/Talega population and nearly 14,000 feet from the southern Cristianitos/lower Gabino population group, thus having low potential for genetic exchange.

²⁶ Roubik, D. 1989. *Ecology and Natural History of Tropical Bees*. Cambridge University Press, NY.

While landscape-level habitat connections between thread-leaved brodiaea populations on the project site (with the exception of the population associated with Arroyo Trabuco Golf Course and other populations) the potential for genetic exchange is low due to the limited range of potential pollinators. Similar landscape-level connections exist with the San Onofre State Park populations. In the post-developed condition, the landscape level connections will remain intact, though in some cases reduced to discrete corridors with widths generally at least 1,000 to 2,000 feet. Therefore, the likelihood of genetic exchange between the population groups described above will remain low. More importantly, the proposed project will not significantly reduce the potential for genetic exchange between these groups because of the pre-existing isolation. There is potential for reducing some of the gaps between the population groups during translocation by choosing locations between widely separated groups and moving populations of impacted brodiaea to these areas.

As noted, the proposed project will result in avoidance of 93 percent of the thread-leaved brodiaea across the Ranch Plan project site landscape and the proposed project would also provide for translocation of affected populations. With the requirement for translocation there is an associated potential for translocation of affected populations to areas that would enhance genetic exchange between populations on the Ranch Plan project site and between project site populations and off-site populations thus improve population connectivity compared to existing conditions. Such enhancements would provide potential long-term benefits to this species. As such, the Reserve Design Principle "to conserve target species throughout the planning area" has been fully achieved and with appropriate translocation, this plan will exceed the threshold of "conservation."

Edge Effects

The Adaptive Management Program (AMP) (Appendix J) addresses edge effects on pages 20 through 22 including potential effects from herbicides and pesticides: "(m)anage pesticide and herbicide use and fertilizer application techniques in landscaped areas, including golf courses, located adjacent to RMV Open Space..." Furthermore, as summarized in Appendix G-7 (Elements of the Adaptive Management Program for the RMV Open Space That Contribute to Maintaining and Enhancing Long-Term Net Habitat Value), the AMP is comprised of four steps that ensure persistence of native-dominated habitats in RMV Open Space. The AMP provides for an iterative monitoring process that considers potential stressors and responds with appropriate management actions. As an example, use of pesticides and fertilizers is identified as a potential stressor on page 6 of Appendix G-7 that would be subject to ongoing evaluation, as would all other potential stressors identified in the AMP. The potential effects of all pertinent stressors on special-status plants, including thread-leaved brodiaea would be addressed by the AMP. With implementation of the AMP, any potential indirect impacts associated with pesticide or herbicide use would be reduced to less than significant levels.

3.1.9.8c Arroyo Toad

Theme of Comments: The Draft Program EIR does not clearly state the proposed project's impacts on the arroyo toad, including an analysis of upland habitats adjacent to breeding areas. Permanent and temporary direct impacts to the toad need to be adequately discussed.

Response: The arroyo toad is federally-listed as Endangered, and is a California Special Concern Species. As explained in the Draft Program EIR, implementation of the land uses associated with the proposed project would result in 100 percent conservation of arroyo toad breeding sites along floodplains and creek bottoms, including *major* and *important populations* in *key locations* in San Juan Creek, lower Gabino Creek, lower Cristianitos Creek and Talega

Creek. The majority of upland habitats adjacent to breeding areas that provide foraging and over-wintering (estivation) habitat would also be conserved. The amount of potential upland foraging and over-wintering habitat that would be impacted by the project was not quantified, but this impact is not considered to have a substantial adverse impact on the arroyo toad because the impacted areas likely are not commonly used by the toad in the study area. Toad activity in San Juan Creek largely is confined to the flood prone areas of the creek (Ramirez, 2003) in which no development would occur. Development adjacent to the lower Gabino, lower Cristianitos, and Talega populations (i.e., Planning Areas 7 and 8) would be above the 80-foot contour, below which the majority of toad activity most likely occurs, as cited in the 2001 designation of critical habitat for the arroyo toad (Federal Register 66 9420), and incorporated by reference into the new 2004 proposed critical habitat designation (Federal Register 82 23255). Permanent and temporary direct impacts to the toad may result from construction of the circulation system that includes construction of bridge crossings of lower Cristianitos Creek, lower Gabino Creek, and San Juan Creek. Construction of these bridges likely includes placement of bridge piers in the active stream channel and potentially bridge abutments above the creek channel and adjacent terraces. Potential indirect effects include hydrologic changes such as erosion and sedimentation and the generation of pollutants of concern such as heavy metals. These impacts were determined to be potentially significant (Impacts 4.9-20, 4.9-69) prior to application of the draft Southern NCCP/HCP Planning Guidelines and Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures include a development offset along San Juan Creek between Planning Areas 3 and 4 by at least 300 feet south of the 100-year floodplain and an average of about 300 feet north of the 100-year floodplain. The Adaptive Management Program (Appendix J) would implement habitat restoration and enhancement along San Juan Creek and in lower Cristianitos to control invasive exotic plant species such as giant reed, tamarisk, and pampas grass and invasive aquatic predators such as bullfrogs and crayfish. Arroyo toad reproduction will be monitored in relation to these restoration/enhancement activities. These actions will help maintain and enhance arroyo toad populations in the study area and will mitigate short-term direct impacts resulting from bridge construction to a level less than significant. Potential significant indirect impacts due to hydrologic and water quality impacts for the lower Cristianitos, lower Gabino and Talega populations will be reduced to a level less than significant by Mitigation Measure 4.9-19, which states that "Prior to issuance of a grading permit for Planning Area 8, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the facilities specified in the Water Quality Management Plan to address pollutants of concern are shown on project plans." The federal and state permitting processes will also ensure that significant impacts to the arroyo toad are avoided. After application of these mitigation measures, the Draft Program EIR concluded that the project would not substantially reduce the number, substantially restrict the range, or substantially reduce the habitat of the arroyo toad, and that the project's impact on the arroyo toad would be less than significant.

Theme of Comments: Development adjacent to existing arroyo toad breeding areas in San Juan Creek may affect the persistence of the population. Although minimum setbacks are proposed in the Draft Program EIR, these setbacks may be insufficient to avoid upland impacts to habitat for this species. It is unclear how the proposed minimum and average 300-foot setbacks south and north of San Juan Creek were developed for the Draft Program EIR. The Draft Program EIR states that impacts to the toad would be less than significant after mitigation, including implementation of the 300-foot minimum and average setbacks, control of exotic species, and implementation of the Adaptive Management Program. The Draft Program EIR is deficient in its analysis of impacts to upland habitats. The proposal to develop within Planning Areas 3 and 4 along San Juan Creek could fragment upland habitat. There is concern that even

with proposed mitigation and minimization measures, significant, unmitigated impacts to estivation and foraging habitat adjacent to San Juan Creek will occur.

Response: The NCCP Planning Guidelines for the arroyo toad include the protection recommendation of providing upland foraging and estivation habitat within the upland terraces in the floodplain of San Juan Creek, with a particular focus on the south side of the creek, to maintain the existing population levels of arroyo toad. This recommendation was based in large part on the arroyo toad radio telemetry study conducted by Ramirez (2003) during the 2001 breeding/non-breeding season to determine the activity patterns, habitat use and spatial distribution of the toad in the portion of San Juan Creek on the Ranch Plan project site. Although general descriptions of toad movements within and adjacent to breeding areas based on studies in different areas are important (hence the references to lateral movements up to 1.2 miles from stream courses), site-specific information is more useful in assessing specific impacts and conservation needs. Ramirez (2003) found that arroyo toads use all habitats located within the flood prone area of San Juan Creek and that core activity areas also were concentrated within this area. Ramirez states, "The majority of individuals tracked during the study were located immediately adjacent to the active channel or within the bench habitats located within the San Juan Creek flood prone area. A single arroyo toad was documented within the upland terrace north of San Juan Creek burrowed in loam substrate within annual grassland" (page 2). Therefore, based on the Ramirez study, it was assumed that protection of the floodplain, including terraces above the active channel, would conserve the vast majority of the occupied arroyo toad habitat along San Juan Creek. The 300-foot setback from the San Juan Creek 100-year floodplain would provide additional buffering from the floodplain where the majority of toad activity occurs in the portion of San Juan Creek on the Ranch Plan project site. It is also important to note that the arroyo toad population in this reach of San Juan Creek is small (in the tens of counted adults) compared to the upstream population in Caspers Wilderness Park that numbers at least in the hundreds. Therefore, the habitat requirements to sustain existing levels of this population will be less than for larger populations (e.g., availability of suitable breeding, foraging and estivation sites). Although there is no definitive cause of the small population in this portion of San Juan Creek, it appears that a lack of water to support breeding pools throughout the breeding season and recruitment of juveniles is a strong limiter on the size of the population. During the Ramirez study, the only successful breeding and recruitment of juveniles occurred just downstream of the drainage from Trampas Canyon where there was a consistent flow of water to support pools through the breeding season. Upstream areas were too dry to support breeding pools. From the Ramirez study, it appears that the floodplain habitat is adequate to sustain this small arroyo toad population. In addition, the existing habitat will be maintained and enhanced through control of giant reed (which consumes enormous amounts of water), control of exotic predators such as bullfrogs and crayfish, and protection of upstream sediment sources in Verdugo Canyon necessary for maintaining suitable breeding habitat. Furthermore, the proposed change in the classification of existing Ortega Highway through the Ranch Plan project site from a state highway to a local/recreational access road would reduce volume of traffic and decrease the risk of arroyo toad road kill south of the creek. The Draft Program EIR thus concluded that impacts to the arroyo toad in San Juan Creek, with conservation of the entire floodplain that meets the toads life history requirements, the 300-foot setbacks from the 100-year floodplain, upstream management of coarse sediment transport to maintain suitable breeding habitat, habitat restoration, exotics controls and the reclassification of Ortega Highway, along with other adaptive management measures, would not be significant.

The commenters also make a logical error in equating any impacts to potential upland foraging and estivation habitats with significant unmitigated impacts. While the Ramirez study showed that almost all of the toad activity was confined to the flood prone areas that will be conserved, it

is likely that toads occasionally venture in the upland terraces above the floodplain, and in fact, one toad did so during the study. There are numerous areas above the floodplain that contain friable soils and vegetation characteristics suitable for estivation that will be impacted by proposed development in Planning Areas 2 and 3. However, the fact that impacts will occur to suitable upland habitat does not mean that the toad population will be significantly impacted (i.e., reduced to an unsustainable level). Under the CEQA standards for assessing impacts on biological resources described on page 4.9-96 of the Draft Program EIR, for a significance finding for a state- or federally-listed Threatened or Endangered species, the project impact would have to have a "Substantial adverse effect, either directly or through habitat modification, on any species state- or federally-listed as Threatened or Endangered." If the project is protecting all of the habitat that supports the vast majority of arroyo toad activities in San Juan, and enhancing habitat quality through exotics control and maintaining sediment sources, the impact would not be considered a "substantial adverse effect" and thus should be considered not significant.

Theme of Comments: The Draft Program EIR states that impacts to the toad would be less than significant after mitigation, including implementation of the 80-foot contour setback above the Talega Canyon, Cristianitos, and lower Gabino breeding populations, control of exotic species, and implementation of the Adaptive Management Program. Impacts to upland toad habitat from development in Planning Area 8 would preclude even infrequent use of upland habitat between the Gabino and Talega populations. The Draft Program EIR is deficient in its analysis of impacts to upland habitats. There is concern that even with proposed mitigation and minimization measures, significant, unmitigated impacts to estivation and foraging habitat adjacent to the San Mateo breeding populations will occur.

Response: According to the 2001 critical habitat designation for the arroyo toad (which has been incorporated by reference into the new 2004 proposed critical habitat designation [Federal Register 82 23255]):

"The width of the upland component of critical habitat varies based on topography. The habitat widens in broad alluvial valleys and narrows in places where streams run through constricted canyons or between surrounding hills." (Federal Register 66 9420)

Although the upland habitat use patterns of this species are poorly understood, activity probably is concentrated in the alluvial flats (areas created when sediments from the stream are deposited) and sandy terraces found in valley bottoms of currently active drainages (Service 1999, Griffin et al. 1999, Sweet in litt., 1999, Ramirez 2000, Holland and Sisk 2000)." (Id. 9415)

The 80-foot contour was cited in the 2001 designation of critical habitat for the arroyo toad because studies had consistently shown that the majority of toad activity adjacent to breeding areas is in areas below 80 feet above the stream courses and that areas below 80 feet "were most likely to contain primary constituent upland habitat elements that are essential to arroyo toads." (Federal Register 66 9420) That is, where stream courses are bound by steep slopes, toads should tend to limit their activity to areas near the stream course. Where breeding areas are bounded by flatter terrain, toads may move much farther from the stream course. Because the breeding areas in Talega and Gabino canyons are bounded by steep slopes that rise more than 80 feet above the stream courses, it was appropriate to use the 80-foot contour as a planning guideline for siting development that would avoid and minimize impacts to upland foraging and estivation habitat. In addition, soil conditions above Talega, Cristianitos, and Gabino creeks generally are unsuitable as estivation habitat for the arroyo toad, which typically uses friable soils that facilitate burrowing. Exhibit 4.5-10 in the Draft Program EIR shows that

soils above the creeks are primarily Type C and D soils. Overall, the San Mateo Watershed is 79.8 percent comprised of Type C and D soils. As described on page 4-5-11 of the Draft Program EIR, Type D soils are likely to contain a less permeable restricting clay, with Type C slightly more permeable than Type D, but still with a significant clay component. Friable soils suitable for arroyo toad estivation are more likely to be Type A and B soils that contain a higher proportion of sand and gravel.

It is possible that toads will occasionally move above the 80-foot contour or find microhabitats supporting suitable estivation soils within proposed development areas above Talega, Cristianitos and Gabino creeks. Based on the elevations above the creeks and the dominance of Type C and D soils in proposed development areas, it is reasonable to conclude that these areas are not crucial for maintaining the existing San Mateo arroyo toad populations. In addition, adaptive management, focusing on controlling exotic plant and wildlife species, will maintain and enhance habitat quality in these areas. Therefore, the comment that development will result in significant unmitigated impacts to upland foraging and estivation habitat for the San Mateo toad populations is not supported.

Theme of Comments: It is unclear what uses are proposed within Rancho Mission Viejo Regional Park and if these uses could result in impacts to toads. Trail crossings of tributaries may impact breeding habitat and improvements such as trails, picnic areas, and active recreational facilities near the floodplain may result in impacts to foraging, estivation and dispersal habitat.

Response: The County may not be interested in establishing the Rancho Mission Viejo Regional Park. If this were the case, the 1,034 acres previously identified for inclusion in the Rancho Mission Viejo would be part of the RMV Open Space and would be subject to the RMV Open Space Adaptive Management Program.

Under a "with park" scenario, no active uses (i.e., sports fields, etc.) are proposed within Rancho Mission Viejo Regional Park. As previously noted, development and other active uses above the floodplain will have minimal impacts on foraging and estivation habitat actually used by the arroyo toad in San Juan Creek because, based on the Ramirez (2003) radio telemetry study, these areas are little used by the toad. Passive uses such as picnicking, nature interpretation, and trail use will occur within the proposed regional park. As noted in Section 3 of the Draft Program EIR, a Class I Bikeway is proposed within the Rancho Mission Viejo Regional Park north of San Juan Creek and a regional riding and hiking trail is proposed south of San Juan Creek (Draft Program EIR at page 3-30). These facilities are included in the infrastructure category and depicted on the impacts exhibits in the Biological Resources Section (see Exhibits 4. 9-11a through 4.9-21c). Therefore, impacts resulting from these facilities to species and vegetation communities are discussed in the Draft Program EIR.

First, it should be noted that conservation of endangered, threatened, and other sensitive species is not necessarily inconsistent with public use of conserved areas, as evidenced by the large toad population in Caspers Wilderness Park. The recreational activities in the Rancho Mission Viejo Regional Park can be consistent with conservation of the arroyo toad with appropriate safeguards and management to protect the toad. Breeding ponds will need to be protected during the breeding season through the use of signs and possibly fencing where needed to prevent direct disturbance. Interpretative signs and other information regarding the arroyo toad and its sensitivity will be made available to the public to discourage impacts such as disturbing breeding pools and harassing toads. Breeding areas will be monitored and any evidence that toad populations are being significantly impacted by human activities (e.g., direct

disturbance of breeding pools) will result in temporary or potentially permanent closure of the area to the public.

Under a "without park" scenario, the proposed bikeway and riding and hiking trail discussed above would remain a use within this area; however, the passive uses such as picnicking and nature interpretation would not occur. As noted above, use of the bikeway and trail would not necessarily be inconsistent with conservation of resources particularly if management actions to protect such resources as the arroyo toad are taken.

3.1.9.8d Southern Steelhead

Theme of Comments: The Draft Program EIR fails to acknowledge the sensitive status of the steelhead in the vicinity of the project site and should address the potential of the project or alternatives to adversely impact this species.

Response: Southern steelhead within the San Juan and San Mateo watershed are discussed in detail in Appendix G-9 titled *Geomorphic and Hydrologic Needs of Aquatic and Riparian Endangered Species. San Juan and Western San Mateo Watersheds.*

The following information regarding the potential habitat information is from the Appendix G-9 of the Draft Program EIR:

The habitat requirements of southern steelhead are similar to those of more northern steelhead stock. However, Higgins (1991) suspected that southern steelhead have greater physiological tolerances of warmer and more variable conditions commonly encountered in southern California streams.

1. *Major streams in southern California originate in the coastal mountains and often cross broad alluvial areas before flowing into the sea. Low-elevation alluvial flats are characterized by intermittent, warm surface waters with fluctuating temperatures, making them inhospitable as spawning areas for southern steelhead. Historically, these areas may have been important to steelhead for spawning and rearing in wet years when temperatures remained low late into the year. Today, only the higher elevation headwaters that are characterized by perennial flow are the primary spawning and rearing areas for steelhead (Moyle et al. 1995). CDFG (2000) reported that the best habitat for steelhead is considered to be within the Cleveland National Forest from the upper San Mateo Creek gauging station to a point approximately 4 km (2.5 mi) upstream (there is no hydrologic connection between this area and the sub-basins within the study area).*

Many historic steelhead spawning areas have been degraded by excessive sedimentation from upstream agricultural runoff, surface water impoundments or diversions, or groundwater pumping that consequently increases infiltration and storage and leaves reaches of the streambed dry (Moyle et al. 1995). Individually, the production capability of small coastal streams such as San Mateo Creek may be relatively small compared to large, perennial river systems, but collectively they provide a means to ensure a greater diversity of subpopulations, and for range expansion and recovery after drought or other perturbations have reduced population numbers. Thus, utilization of these habitats increases the likelihood of the long-term persistence of the metapopulation and is even more critical now that habitat of many southern California streams has become severely impacted or eliminated due to water development and adverse land-use practices.

Southern steelhead typically migrate as two-year-old juveniles from freshwater to the ocean and then reside in marine waters from two to three years before returning to their natal, freshwater stream to spawn as four- to five-year-olds (NMFS 1997). This behavior of anadromy separates this species from the commonly occurring freshwater rainbow trout.

Information from Appendix G-9 and other information regarding steelhead within San Mateo Creek and San Juan Creek are summarized below:

SAN MATEO CREEK

San Mateo Creek watershed historically supported steelhead runs from the creek mouth up to 13 km (8 mi) upstream. At one time, San Mateo Creek was an important steelhead producing stream to the extent that it supported significant local fisheries of both juveniles and adults (Hubbs, 1946). Through the late 1940s, steelhead populations likely exceeded 10,000 individuals and adults as large as 9 kg (20 lbs) were observed. A February 2000 report prepared by CDFG for NMFS entitled *Steelhead Rainbow Trout in San Mateo Creek, San Diego County*, describes changes in habitat conditions since the 1940s as follows: There were fewer observations of juvenile steelhead/rainbow trout in San Mateo Creek after 1950. Trout were found from the lagoon to the headwaters at Los Alamos Canyon during a Department survey on September 1, 1979. Woelfel (1991) reported anecdotes of juvenile steelhead/rainbow trout presence in pools in the upper drainage during the early 1980's, and of a few steelhead adults captured by a local resident in the lower creek in 1986. However, no juvenile steelhead/rainbow trout were found in San Mateo Creek by Woelfel during surveys in 1987 and 1988.

The San Mateo Creek steelhead population was probably reduced periodically by natural episodes of sediment input from within the watershed. However, increased groundwater extraction in the lower creek area since the mid-1940s is responsible, both directly and indirectly, for the inability of steelhead to use the system as they have historically (Lang et al. 1998). Riparian vegetation has been lost, stream channel width has increased, and surficial flow has been eliminated during most years. Thus, the migration corridor for immigrating adult steelhead and emigrating smolts has become very unreliable. Recent human-caused fires farther upstream resulted in large sediment inputs which filled in pools and the lagoon, both of which are important rearing habitats for juvenile steelhead. Fish faunal surveys in San Mateo Creek in 1995, 1996, and 1997 failed to find steelhead (Lang et al. 1998).

San Mateo Creek: Lower San Mateo Creek (within MCB Camp Pendleton) contains runs, low gradient riffles, mid-channel pools, and lateral scour pools associated with bedrock throughout the drainage network (Lang et al. 1998). Suitable spawning and rearing habitat occurs on San Mateo Creek and in Devil Canyon located within the Cleveland National Forest (Lang et al. 1998), in an area with granitic bedrock that sustains springs and base flows more effectively than other terrains in the San Mateo Creek watershed. Between March 3 and September 3, 1999, CDFG biologists observed 78 steelhead in San Mateo Creek. The majority of these observations occurred in the reach between the upper gauging station and the confluence with Devil Canyon Creek. Four steelhead trout were observed in San Mateo Creek above the confluence with Devil Canyon Creek, one of which was observed 4 km (2.5 mi) above the confluence. Four steelhead trout were observed in Devil Canyon Creek (CDFG 2000). CDFG did not conduct mark-and-recapture studies, so the precise population size cannot be estimated; however, it is believed to be quite low (CDFG 2000). The best habitat for

steelhead is considered to be from the upper gauging station to a point approximately 4 km (2.5 mi) upstream, as this area typically contains numerous perennial pools connected by surficial flow (CDFG, 2000).

Nehlsen et al. (1991) classified the San Mateo Creek steelhead population as extinct. Although the County agrees that conditions in the lower creek system, as described above, renders the stream conducive to anadromy on a less frequent basis than it was prior to extensive groundwater pumping and development, the Department recognizes the upstream spawning and rearing areas as functional for steelhead production, and that they are still used when sufficient flow allows passage of immigrating adults.

Cristianitos, Gabino, La Paz, and Talega creeks are the main tributaries within the western portion of the watershed that are within in the SAMP/MSAA and NCCP/HCP study areas. None of these creeks has historically or currently supports steelhead runs (Lang et al. 1998). Furthermore, sub-basins in the upper, western portion of San Mateo Creek, such as Gabino and La Paz, are underlain by bedrock formations that yield low amounts of base flow. The dry nature of these sub-basins, combined with their steep slope (which promotes rapid runoff), makes it unlikely that they can retain flow late enough into the summer to support steelhead spawning.

SAN JUAN CREEK

The CDFG has performed some fieldwork focused on the presence of native fish (including arroyo chub and three-spine stickleback) in the San Juan Creek watershed during recent years. However, no southern steelhead individuals were found during these previous surveys.

The potential presence of southern steelhead has been documented in the Arroyo Trabuco, a tributary to San Juan Creek, south of the Interstate 5 underpass, which is approximately 31,680 feet (6 miles) from the boundaries of the proposed project study area (California Department of Fish and Game, November 25, 2003 letter to NOAA). The CDFG letter acknowledges the barrier of the I-5 underpass as a "complete barrier to upstream migration of steelhead" at this location. It is the County's understanding that genetic studies are currently underway to confirm the initial identification of steelhead in the Arroyo Trabuco; however the results of these studies are not available at this time. Steelhead have not been documented in San Juan Creek within the study area limits during decades of various biological surveys along San Juan Creek, including surveys specifically designed to detect fish species. In addition, there is no anecdotal information from fishing records within San Juan Creek in RMV for the steelhead.

The County acknowledges that if certain environmental conditions occur (i.e., storm flows eliminate natural sediment barriers and provide for adequate water resources within stream course), the steelhead could occur within San Juan Creek in the study area, but is not expected due to lack of recent detection, limited historical occurrences, and possible barriers to upstream movement to the study area from the ocean.

If steelhead were to return to the upper reaches of San Juan Creek, including those portions within the study area, the proposed project would not directly preclude the return of the steelhead to the area because the project does not include project features that would stop, alter, or significantly modify the creek bottom of San Juan Creek and the associated riparian vegetation. Any proposed crossings of San Juan Creek will be done so by bridge. Please refer to pages 4.9-119 and 4.9-20 of the Draft Program EIR regarding the proposed crossing

of San Juan Creek by new Cristianitos Road and new Ortega Highway. Please also refer to Exhibit 3-23. In the event, and to the extent that steelhead will be adversely affected by the project, the consultation process with the National Marine Fisheries Service will help ensure that no significant impacts result.

For a discussion of the potential water quality impacts on the steelhead potentially within or downstream from the proposed project, please refer to Topical Response 3.1.6.

The proposed Adaptive Management Program (AMP) for the RMV Open Space will provide for habitat protection and management which will, in the long-term, provide a potential benefit to the steelhead potentially within or downstream from the proposed project, similar to those protection/management measures that benefit the arroyo toad and other aquatic species in the planning area. The AMP establishes three broad land management goals as the foundation for the AMP for the RMV Open Space:

1. Ensure the persistence of a native-dominated vegetation mosaic in the RMV Open Space.
2. Restore or enhance the quality of degraded vegetation communities and other habitat types (e.g., removal of *Arundo* from San Juan Creek).
3. Maintain and restore biotic and abiotic natural processes, at all identified scales for the RMV Open Space.

The Invasive Species Control Plan (Appendix J-3), an integral part of the AMP, will provide for the methods of control for both exotic invasive plants and animals (including but not limited to giant reed, bullfrog, and crayfish). Implementation of this plan will both maintain potential steelhead habitat and overtime enhance this area for future occupation. In addition, the existing habitat will be maintained through protection of upstream sediment sources in Verdugo Canyon.

Although the steelhead was not included as a Planning Species, and agreed to by the USFWS and CDFG, the proposed project is consistent with the General Policies of the Draft NCCP/HCP Planning Guidelines as they relate to the conservation of potential habitat for the steelhead within the study area. It is anticipated that the proposed project would not hinder the species survival and recovery in the southern portion of the Evolutionary Significant Units (ESUs) range for this species. Due to 1) absence of the species from the study area 2) limited modifications to San Juan Creek in the form of bridge piers for bridge crossings, 3) lack of apparent barriers within the study area and 4) benefits of the management actions such as giant reed removal through implementation of the Adaptive Management Program no significant impacts to steelhead will occur as a result of implementation of the proposed project.

The County acknowledges the Proposed Listing Determinations for 27 ESUs of West Coast Salmonids published in the Federal Register on June 14, 2004 (Volume 69, Number 113). The impact analysis of the Biological Resources section of the Draft Program EIR addresses critical habitat designations currently in effect and proposed designations. Because the critical habitat designated for the southern steelhead was vacated, it was not appropriate to include within the document.

3.1.9.8e Western Spadefoot Toad

Theme of Comments: The Draft Program EIR does not clearly state the proposed project's impacts on the western spadefoot toad and does not take into consideration the need for upland

habitats adjacent to breeding pools. The Draft Program EIR's finding that the proposed project would potentially result in significant impacts on suitable habitat for the spadefoot toad is unnecessarily vague and not supported by a coherent analysis.

Response: Implementation of the land uses associated with the proposed project would result in impacts to seven of 15 locations of the western spadefoot toad (California Special Concern Species and federal Species of Concern) in the study area, including two locations in Planning Area 2, one in Planning Area 4, three locations in vernal pools in Planning Area 5 and one location in the stockpond in Planning Area 6. All of these locations are *important populations*. These impacts were determined to be significant (Impact 4.9-73) prior to application of the draft Southern NCCP/HCP Planning Guidelines and Minimization/Avoidance Measures. Under PDF 9-1, four of the impacted locations—the three vernal pool locations in Planning Area 5 and the stockpond in Planning Area 6—would be conserved through site-specific avoidance measures, resulting in the conservation of 12 of the 15 locations (80 percent) in the study area. All conserved breeding locations would have at least a 650-foot buffer from proposed development to support all life stages of the spadefoot toad. This recommendation of a 650-foot (200 meters) buffer is based on the understanding that toads do not move far from breeding pools during the year, with movements within a few hundred meters (Zeiner *et al.* 1990). Grading for development in Planning Area 5 would avoid the vernal pools and their local contributing hydrological sources. Avoidance in Planning Area 5 would be assured by MM 4.9-35, which states “Prior to issuance of a grading permit for Planning Area 5, the Project Applicant shall demonstrate to the satisfaction of the County’s Director of Planning Services Department or his/her designee that all vernal pools in the Trampas Sub-basin have been avoided.” To ensure that the stockpond and adjacent upland habitat in Planning Area 6 are avoided, Mitigation Measure 4.9-5 has been revised and incorporated into the Final Program EIR as follows:

MM 4.9-5 Prior to issuance of a grading permit for Planning Area 7 6, the Project Applicant shall demonstrate to the satisfaction of the County’s Director of Planning Services Department or his/her designee that impacts to the western spadefoot toad breeding and estivation habitat associated with the stockpond in the Cristianitos sub-basin have been substantially avoided.”

The Adaptive Management Program (Appendix J), which focuses on environmental stressors that adversely affect the spadefoot toad, includes restoration, management and monitoring activities that will benefit this species. Within San Juan Creek, which supports an *important population*, habitat restoration/enhancement activities will include giant reed, tamarisk and pampas grass control. In addition, bullfrog and crayfish control will be implemented in San Juan Creek and elsewhere where needed (e.g., lower Gabino Creek area) to benefit the spadefoot toad. The vernal pools on Radio Tower Road mesa in the Trampas sub-basin will be managed and monitored to ensure appropriate hydrological regimes to support spadefoot breeding by maintaining the existing contributing hydrological sources, grazing management to avoid impacts when pools hold water, development of management tools to control proliferation of non-native species (including grazing management, prescribed burns, mowing and selective weeding), water quality management to emulate baseline conditions, and control of public access to prevent disturbance of pools and collecting of toads. Direct monitoring of spadefoot toad populations also will be conducted as part of the Adaptive Management Program. The combined 100 percent avoidance of the *important populations* of the spadefoot toad in the Trampas, Cristianitos and lower Gabino sub-basins, substantial avoidance of the San Juan Creek *important population*, and adaptive management will reduce impacts to the spadefoot toad to a level less than significant.

Tables 4.9-36 and 4.9-43 have been revised and incorporated into the Final Program EIR as follows:

**TABLE 4.9-36
PLANNING SPECIES CONSISTENCY ANALYSIS OF THE
RMV OPEN SPACE AND ALREADY PROTECTED OPEN SPACE**

Western Spadefoot Toad	19 locations (86%) and all of four <i>important populations</i> (Chiquita Ridge, Radio Tower Road, Upper Cristianitos, Lower Gabino Creek) would be conserved, assuming that golf course design in Upper Cristianitos would avoid the stockpond and adjacent upland habitat. A portion of the fifth <i>important population</i> along San Juan Creek would be conserved. All conserved breeding locations would have at least a 650-ft upland buffer zone from proposed development to support all life stages.	43 <u>12</u> locations (87%) (80%) and all of three <i>important populations</i> on RMV (Radio Tower Road, Upper Cristianitos, and Lower Gabino Creek) would be conserved, assuming that golf course design in Upper Cristianitos would avoid the stockpond and adjacent upland habitat. A portion of the fourth <i>important population</i> along San Juan Creek would be conserved. All conserved breeding locations would have at least a 650-ft upland buffer zone from proposed development to support all life stages.
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**TABLE 4.9-43
MINIMIZATION/AVOIDANCE AND MITIGATION MEASURES FOR
DIRECT IMPACTS TO UNLISTED SPECIES IDENTIFIED AS SIGNIFICANT**

Significant Impact	Minimization/Avoidance	Contributions of AMP to Maintaining Net Habitat Value/Mitigation Measure	Level of Significance After Minimization/Avoidance and Mitigation
Planning Species			
Impact 4.9-73: The Proposed Project would result in significant impacts on suitable for the western spadefoot toad.	The Proposed Project, through implementation of PDF 9-1, would conserve 43 <u>12</u> locations (87%) (80%) and all of three <i>important populations</i> (Radio Tower Road, Upper Cristianitos, Lower Gabino Creek) if site-specific avoidance and minimization measures required by the NCCP Guidelines were implemented to avoid the stockpond and adjacent upland habitat. A portion of the fifth <i>important population</i> along San Juan Creek would be conserved. All conserved breeding locations would have at least a 650-ft upland buffer zone from proposed development to support all life stages. See also Mitigation Measure 4.9-5.	Refer to the prior summary discussion and Appendix G-7 for a detailed discussion of how the Conservation Strategy (PDFS 9-1 and 9-2) contributes to the mitigation of significant impacts and helps maintain and enhance net habitat value of resources protected through the creation and adaptive management of the RMV Open Space. In particular refer to Riparian Vegetation Community – Goals, Objectives, Potential Stressors and Management, Enhancement and Restoration Actions.	Less than Significant

Theme of Comments: Western spadefoot toads are unlikely to breed in golf course “water features” and unlikely to survive in golf course turf.

Response: The spadefoot toad occupies a stock pond in Planning Area 6 that was identified as an *important population*. The NCCP Planning Guidelines thus recommend protecting wetlands and adjoining upland habitat to support all life stages of the spadefoot toad in this area. A golf course is planned for this portion of Planning Area 6. In principle there is no reason to conclude that construction of a golf course in Planning Area 6 would be inconsistent with protection of the spadefoot toad. The golf course would be designed to protect the breeding pond and upland habitat within 650 feet of the pond to provide for all life stages of the toad. The reference to a golf course “water feature” may be misleading in the context of the spadefoot toad. The breeding pond specifically will be maintained as habitat for the spadefoot toad (as well as the

southwestern pond turtle) and would not be a typical maintained golf course "water feature." Prior to final design of the golf course, a study of the stock pond will be made to determine the key features of the pond and adjoining habitat that are necessary conserve the toad. It is expected that maintaining appropriate hydrology and water quality and protecting the pond from exotic predators (bullfrogs and crayfish) will be the key issues,

Theme of Comments: While the Draft Program EIR's mitigation measures for the spadefoot toad seem to provide assurance that the project would generally avoid significant impacts, it is actually quite vague and unenforceable. Because of the lack of cohesion and specificity, one must conclude that potentially significant impacts to the spadefoot toad will remain after mitigation.

Response: At a programmatic level, the Draft Program EIR is as clear as possible about how impacts to the western spadefoot toad would be avoided and minimized. The avoidance and minimization measures for potential impacts to vernal pools and spadefoot toads along Radio Tower Road require that pools be avoided and that a buffer between proposed development and grading in Planning Area 5 of at least 650 feet to allow for sufficient upland habitat to support the toad's life stages be provided. As described above, the design of the golf course in Planning Area 6 would include avoidance and management of the stock pond and no turf would be allowed within 650 feet of the stock pond to provide natural upland habitat for all life stages of the toad. With regard to enforceability, prior to issuance of a grading plan for Planning Area 6, the project applicant, shall demonstrate to the satisfaction of the County's Director of Planning Services Department of his or her designee that impacts to the western spadefoot toad breeding and estivation habitat associated with the stock pond in the Cristianitos sub-basin have been substantially avoided (MM 4.9-5). Again, at a programmatic level, this statement of enforcement of the mitigation measure is quite clear. How exactly the avoidance will be achieved at the project level will need to be analyzed during the golf course design phase. With the proposed mitigation, 80 percent conservation of all locations and 100 percent conservation of three of the four *important populations* on the Ranch Plan project site will reduce the potential significant impact to a level less than significant.

3.1.9.8f Golden Eagle

Theme of Comments: Although project implementation would impact approximately 49 percent of the project site's grassland and foraging habitat for the golden eagle, including substantial impacts in all five sub-basins recommended for protection, the Draft Program EIR inexplicably concludes that the project is 100 percent consistent with the Draft Guidelines. Two experts on golden eagles and other raptors have stated their opinion that the type of development proposed by the Ranch Plan would extirpate the last remaining nesting pair of golden eagles that forages over the project site, a clearly significant impact. Potential effects of collisions with power lines need to be acknowledged. The Draft Program EIR's conclusions are inconsistent with CEQA's mandatory thresholds of significance with respect to the Golden Eagle.

Response: Implementation of the land uses associated with the proposed project would result in impacts to 3,945 acres (52 percent) of grassland and agricultural foraging habitat for the golden eagle (California Special Concern Species, California Fully Protected [nest sites], Fish and Wildlife Service Bird of Conservation Concern). It is important to note that no nesting pairs of the eagle occur in the project study area so the impact analysis is limited to foraging habitat. Under PDF 9-1, 3,651 acres (48 percent) of foraging habitat would be conserved in RMV Open Space. The impact to grassland and agriculture was considered less than significant because of the amount of foraging habitat loss in the project study area relative to the availability of foraging habitat in the Santa Ana Mountains and Foothills region (e.g., 11,500+ acres of

grassland and agriculture protected in the NCCP planning area and approximately 40,000 acres of grassland on Camp Pendleton²⁷) and the ability of the remaining foraging habitat to support eagles nesting in the Cleveland National Forest in the Santa Ana Mountains. About 10,300 acres of grassland also occur in Riverside County in the Santa Ana Mountains Bioregion, as defined for the Western Riverside County MSHCP, of which approximately 5,000 acres would be conserved (agriculture in this Bioregion was not included because much of it is avocado groves).²⁸ The loss of 3,946 acres of the approximately 63,784 acres of remaining grassland and agricultural foraging habitat in the Santa Ana Mountains and Foothills region (assuming 5,000 acres conserved by the Riverside County MSHCP) represents about a 6 percent loss of foraging habitat in these areas and long-term protection of about 59,800 acres. Although golden eagle territories are variable throughout their range (22 square miles in Idaho to 48 square miles in northern California), golden eagles in southern California were found to have territories of about 36 square miles (23,000 acres).²⁹ The remaining 59,800 acres of grassland and agriculture in the region thus should be adequate to support at least two pairs of golden eagles. It should be noted also that the estimated impact on foraging habitat for the Program EIR analysis was limited to grassland and agriculture in the project study area, as is the estimate of protected foraging habitat in the region. Golden eagles also forage in sparse shrub habitats, but because the vegetation database used for the analysis does not distinguish between sparse and dense coastal sage scrub, sage scrub was not included in the estimates. Thus the protected foraging habitat estimate is conservative and there is substantially more foraging habitat in the region than estimated. In addition, under PDF 9-1, implementation of the Adaptive Management Program would include management of grassland habitats in order to roughly maintain the existing proportion and quality of grassland in the RMV Open Space through activities such as grazing management, prescribed burning, and artichoke thistle control. Based on this evaluation of foraging habitat loss and protection and implementation of PDF 9-1, it was concluded the proposed project would not significantly affect the viability of nesting golden eagles in the Cleveland National Forest and that adequate foraging habitat would be protected in the study area to support occasional foraging. As a result, the impact to golden eagle foraging habitat would be less than significant.

The determination that the proposed project is 100 percent consistent with the recommendation for protecting foraging habitat for the golden eagle is based on the premise stated in the Draft Southern NCCP/HCP Guidelines on page 5-60 and in the protection recommendation that "Golden eagles are an uncommon resident in the subregion. They are known to nest in the Cleveland National Forest, and although not known to nest on the project site, they occasionally forage in grasslands and agricultural areas throughout much of the project site, but especially grasslands and agricultural areas in the Chiquita, Gobernadora, upper Gabino, Cristianitos, and Talega sub-basis." The consistency determination acknowledges that foraging habitat in these sub-basins would be impacted under the proposed project. The key issue for the consistency determination is whether the proposed project would preclude "occasional" foraging by the golden eagle in the planning area (including areas beyond the project boundary). It was determined that the eagle likely would continue foraging in areas such as upper Gabino Canyon and upper Chiquita Canyon (outside the study area). In a personal communication to RMV staff on May 23, 2002, P. Bloom, one of the experts cited in the comment, characterized the golden eagle's use of the Ranch Plan project site. Bloom indicated that the site provides for a modest amount of foraging habitat for the eagle and that recent observations have been of a few

²⁷ Source: Dudek. 1994. GIS database for MCB Camp Pendleton.

²⁸ Western Riverside County Multiple Species Habitat Conservation Plan, Vol. I. The Plan, Figure 2-13, November 2002.

²⁹ Western Riverside County Multiple Species Habitat Conservation Plan, Vol. II, Golden Eagle Species Account, p. B-217, November 2002.

wintering birds and a few juveniles from the Santa Ana Mountains. His conclusion, as stated to RMV staff, was that the project site is not integral to the golden eagle.

If the Ranch Plan project site and surrounding lands will continue to support occasional foraging by the golden eagle and the site is not integral to the viability of nesting pairs in the Cleveland National Forest, it is reasonable to conclude that the proposed project will not have a significant impact on the golden eagle. As discussed on page 4.9-145 of the Draft Program EIR, the 30 percent refers to habitat for all three species (golden eagle, mountain lion, and mule deer), while the 51 percent in Table 4.9-28 refers to the golden eagle only.

Impacts to suitable habitat for this species are considered less than significant due to the amount of habitat loss relative to the availability of habitat for this species in the region and the habitat areas that will be conserved and managed as part of the AMP for the proposed project. In addition, as shown in Table 4.9-26 of the Draft Program EIR, the consistency percentage under the proposed project for this species is 100 percent. This consistency finding was considered in the evaluation of impacts on this species.

The County acknowledges the concern for raptors and the potential for increased collisions with transmission lines. San Diego Gas & Electric (SDG&E) will be responsible for the design, location, and installation of the transmission lines within the study area. SDG&E is in the process of preparing an Avian Protection Plan (APP) to reduce the potential for the loss of hawks, eagles, waterfowl, and other migratory birds (<http://www2.sdge.com/tariff/COS/sdge/pdf/ORA99externalfinal.pdf>). With respect to biological resources, SDG&E expects implementation of the APP to comply with federal and state laws, decrease the potential for electrocutions of raptors and other bird species, identify and isolate where bird-caused outages occur in order to minimize future electrocutions, and develop revised distribution line construction guidelines to reduce the potential for electrocution of birds. It is anticipated that SDG&E will use the information with the APP and The Ranch Plan Final Program EIR in the planning and installation of the transmission lines to avoid potential issues relative to electrocution of bird species (including the golden eagle) within the study area.

3.1.9.8g Burrowing Owl

Theme of Comments: The EIR preparer should have based the Draft Program EIR's findings on focused, multi-season surveys conducted within the past few years. Raptor expert Peter Bloom considers the burrowing owl to be "at the very least, a winter visitor" on the Ranch Plan project site. While the Draft Program EIR acknowledges the "potential" for such use, there was no focused effort made to determine the species' true status on the site, or to determine which portions of the project site are actually occupied by this species. The Draft Program EIR's conclusions are inconsistent with CEQA's mandatory thresholds of significance with respect to the burrowing owl.

Response: Implementation of the land uses associated with the proposed project would result in impacts to 3,946 acres (52 percent) of winter grassland and agricultural foraging habitat for the burrowing owl (California Special Concern Species, U.S. Fish and Wildlife Service Bird of Conservation Concern). It is important to note that the burrowing owl is a winter visitor in the study area and is not known to nest in the area, as discussed in more detail below. This impact to foraging habitat was determined to be significant (Impact 4.9-90) prior to application of the draft Southern NCCP/HCP Planning Guidelines and Minimization/Avoidance Measures. Implementation of PDF 9-1 includes conservation of 3,651 acres (48 percent) of suitable foraging habitat in RMV Open Space. In addition, under PDF 9-1, implementation of the Adaptive Management Program would include management of grassland habitats in order to

roughly maintain the existing proportion and quality of grassland in the RMV Open Space through activities such as grazing management, prescribed burning, and artichoke thistle control. Additional protections of burrowing owl relating to potential construction impacts will be provided through MM 4.9-30, which states "The Project Applicant shall prepare and implement a Biological Resources Construction Plan (BRCP) that provides for the protection of the resource and established [sic] the monitoring requirements. Provisions for biological monitoring during construction activities to [sic] ensure compliance and success of each protective measure. The monitoring procedure will (1) identify specific locations of wildlife habitat and sensitive species to be monitored; (2) identify the frequency of monitoring, monitoring methodology (for each habitat and sensitive species to be monitored); (3) list required qualifications of biological monitor(s); and (4) identify reporting requirements." With regard to the burrowing owl, the primary concern would be potential construction impacts to nest sites, although the likelihood is very low because the species has not been documented to nest in the study area. Pre-construction focused surveys will be conducted and minimization/avoidance measures will be implemented, according to an established set of Wildlife Agency-approved or adopted guidelines at the appropriate time prior to construction.³⁰ Based on this evaluation of foraging habitat loss and protection, and implementation of PDF 9-1 and MM 4.9-30, it was concluded that impacts to winter foraging habitat for the burrowing owl will be reduced to a level less than significant.

During the compilation of data for the proposed Foothill Transportation Corridor-South project (now known as the South Orange County Transportation Infrastructure Improvement Project [SOCTIIP]), Peter Bloom served as the lead biologist for the data collection and documentation of resource information specific to amphibians, reptiles, and raptors. Peter Bloom is recognized as a local expert regarding wildlife resources in the southern California area, and has over 20 years of conducting biological surveys on the Ranch Plan project site. In the original biological technical report, in which Mr. Bloom was a contributing author, Mr. Bloom stated that only wintering owls have been observed on the Ranch property, and that no nest burrows have been found.

The suggestion that the project study area has not been adequately surveyed is inaccurate. It would be inappropriate to ignore decades of surveys by Mr. Bloom, biologists conducting surveys for SOCTIIP, the NCCP/SAMP programs, and the Ranch Plan, and rely solely on surveys conducted within the past few years. The Draft Program EIR appropriately acknowledged that this species is not believed to nest within the study area; however, it is known to occur in the region during the winter.

The burrowing owl should also have been discussed with other raptor species that potentially nest in the study area. The text shall be revised and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

Discussion of Other Raptors that Nest or Potentially Nest within the Study Area—Long-Eared Owl, Burrowing Owl, Red-Shouldered Hawk, Northern Harrier, and Barn Owl

Suitable foraging and potentially suitable nesting habitat for the long-eared owl, burrowing owl, red-shouldered hawk, northern harrier, and barn owl occurs in the study area. Suitable foraging habitat and wintering habitat for the burrowing owl occurs in the study area.

³⁰ As a very high profile sensitive species, substantial work currently is being done to develop appropriate burrowing owl survey protocols and avoidance and mitigation measures. It would be premature to outline specific minimization/avoidance measures at this time because they are likely to change before construction activities begin.

Project Impacts

Impact 4.9-90: The Proposed Project would result in significant impacts on the long-eared owl, burrowing owl, red-shouldered hawk, northern harrier, and barn owl.

The loss of 4,572 acres (45 percent) of foraging habitat for all five species, wintering habitat for the burrowing owl, and suitable nesting habitat and three historic nest locations (12 percent) of the red-shouldered hawk, 21 nest locations (25 percent) of the long-eared owl, and 12 historic nest locations (48 percent) of the barn owl would contribute to the ongoing regional and local loss of habitat for these species. Because of the substantial amount of habitat impacted, the loss of habitat for the long-eared owl, burrowing owl, red-shouldered hawk, northern harrier, and barn owl is considered significant.

Table 4.9-43 shall be revised and incorporated into the Final Program EIR as follows (changes are shown in underline):

TABLE 4.9-43

Impact 4.9-90: The Proposed Project would result in significant impacts on the long-eared owl, <u>burrowing owl</u> , red-shouldered hawk, northern harrier, and barn owl through habitat loss.	A total of 5,531 acres (55%) of <u>wintering</u> , nesting, and foraging habitat (grassland, agricultural, riparian, woodlands and forest), three historic nest locations (78%) of the long eared owl, 22 historic nest locations (88%) of the red-shouldered hawk, and 13 historic nest locations (52%) of the barn owl would be conserved <u>collectively for these species</u> through implementation of PDF 9-1. <u>To minimize indirect impacts to these species during construction of the proposed project, Mitigation Measure 4.9-30 shall be implemented which will include the preparation and implementation of a Biological Resources Construction Plan (BRCP) that provides for the protection of these resource and establishment of monitoring requirements.</u>	Refer to the prior summary discussion and Appendix G-7 for a detailed discussion of how the Conservation Strategy (PDFS 9-1 and 9-2) contributes to the mitigation of significant impacts and helps maintain and enhance net habitat value of resources protected through the creation and adaptive management of the RMV Open Space. In particular refer to Annual and Native Grasslands Vegetation Community—Goals, Objectives, Potential Stressors and Management, Enhancement and Restoration Actions.	Less than Significant
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As indicated, after mitigation, impacts to the burrowing owl will be less than significant.

3.1.9.8h Long-eared Owl

Theme of Comments: The Draft Program EIR provides no indication of how acreage calculations for loss of long-eared owl habitat were derived. The exact nature of the project's impacts to long-eared owl should be clarified. The Draft Program EIR's conclusions are inconsistent with CEQA's mandatory thresholds of significance with respect to the Long-eared Owl. Considering the long-eared owl's known status, distribution, habitat requirements and sensitivity to human developments, it is clear that implementation of the proposed project would entail significant impacts to the long-eared owl and its required nesting and foraging habitats.

Response: Implementation of the land uses associated with the proposed project would result in a direct impact to one mapped historic nest location of the long-eared owl (California Special

Concern Species) in lower Cristianitos Creek. Three historic nest sites, one of which is located in Talega Canyon in MCB Camp Pendleton, would be conserved. A fifth historic nest site located in Sulphur Canyon would be conserved, but likely is already abandoned because of its proximity to existing development in Coto de Caza to the east (see detailed discussion below). As discussed below, a landscape-level quantitative analysis of impacts and conservation of long-eared owl nesting and foraging habitat is not feasible because of this species' sensitivity to urban development. Therefore, the analysis is limited to historic nest sites. As noted above, the proposed project would directly impact one historic nest site located in Cristianitos Creek. However, this site likely is already abandoned because of its close proximity to the Talega development. Through implementation of PDF 9-1 and the Adaptive Management Program, three historic nest locations located in middle Gabino Canyon, lower La Paz Canyon and Talega Canyon are considered conserved because they would retain the potential to support the long-eared owl. The Adaptive Management Program would address environmental stressors to riparian woodlands and forest, including hydrology, altered geomorphic processes, exotic species and drought, as well as control of human access and vehicular traffic in proximity to nest sites. The rationale for concluding that these three sites are conserved is provided below. Conservation of these three nest locations along with implementation of the Adaptive Management Program will reduce impacts to the long-eared owl to a level less than significant.

The following is a clarification of impacts to long-eared owl, a California Special Concern Species. As discussed below, a habitat-based analysis is difficult because of the long-eared owl's apparent sensitivity to urban development. A simple calculation of loss and conservation of habitat would require erroneous assumptions. For this reason, the analysis presented in the Draft Program EIR and clarified below focuses on the status of documented historic nest sites in the study area.

Bloom's (1994) study of the biology and status of the long-eared owl in coastal southern California stated that he had never found an active long-eared owl nest within 1 kilometer (3,280 feet) of a residential street and thus any historic nest sites within this distance were considered abandoned in his analysis. It is important to understand that Bloom's observation just notes a correlation and does not identify the direct cause(s) of these abandonments. There are four historic long-eared owl nest sites on the Ranch Plan project site: one just south of Sulphur Canyon, one in middle Gabino Canyon, one in lower La Paz Canyon, and one in lower Cristianitos Canyon at the southern boundary of the project site. Perhaps because of the long history of Ortega Highway parallel to San Juan Creek, there are no long-eared owl nesting sites known from this area. A fifth nest site is located in Talega Canyon on MCB Camp Pendleton just south of the Ranch Plan project site boundary and southeast of Planning Area 8 and this nest site should be considered in the impact analysis of the proposed project. Impact 4.9-90 in the Draft Program EIR on page 4.9-147 states that 1 nest location (25 percent) of the long-eared owl would be directly impacted by the proposed project. This site is located in lower Cristianitos Creek and would be impacted by the construction of Cristianitos Road. However, using the 3,280-foot criterion following Bloom (1994), this site and one other of the four historic nest sites on the project site would already be considered abandoned; the Cristianitos site is adjacent to existing Talega residential development and the Sulphur Canyon site is about 2,000 feet south of existing residential development in Coto de Caza (see Exhibits 4.9-17a and b). Thus, the site reported as impacted in the Draft Program EIR likely is already extirpated because of its close proximity to existing development. The remaining two nest sites on the project site that would be considered "active" under Bloom's criterion are in middle Gabino Canyon and lower La Paz Canyon. The nest site in Talega Canyon on MCB Camp Pendleton also would be considered active. Under the proposed project, the lower La Paz Canyon site would be 3,280 feet, with an approximate 300 to 400 foot elevation difference, from the nearest development in Planning Area 8 and therefore would be considered protected using Bloom's

criterion. The middle Gabino site would be 2,518 feet south of the golf course and estate lots in Planning Area 9. Although this does not meet the 3,280-foot criterion, the proposed golf course and estate lots should not be considered as severe an impact as conventional residential development and this site may remain active. The Talega Canyon nest site is 2,411 feet from estate residential development in the eastern portion of Planning Area 8 and 6,000 feet from the conventional residential development in the western part of the Planning Area. Also, this site is separated from proposed development on the mesa in Planning Area 8 by approximately 400 feet in elevation, providing some additional physical separation between the nest site and proposed development. Although the nest site is within 2,400 feet, including 400 feet of elevation separation, from development, estate development should not be considered as severe as conventional residential and thus site may remain active.

As noted above, a habitat-based analysis of loss and conservation of long-eared owl habitat is difficult because of this species' apparent sensitivity to urban development and lack of understanding of the causal factors that may contribute to this sensitivity (e.g., human harassment of nest sites, loss of foraging habitat); as indicated above, the observed correlation between urban development and nest abandonment does not identify causal factors. A blanket criterion that assumes loss of all viable nest sites within 1 kilometer (3,280 feet) of any urban development may be too general to be meaningful because it does not take into consideration causal factors and does not include the potentially mitigating effects of steep terrains and elevation differences. Because of a lack of the necessary information, developing a valid habitat suitability index or population viability model for this species for the purpose of this environmental analysis is not feasible. Because the three "active" nest sites have a reasonably high probability of remaining viable and implementation of PDF's 9-1 and 9-2, impacts to long-eared owl are reduced to a level less than significant.

3.1.9.8i Loggerhead Shrike

Theme of Comments: Loss of several thousand acres of potentially suitable habitat for this sensitive species, and extensive fragmentation of the remaining landscape, are substantial impacts that are not meaningfully mitigated through adaptive management. This impact could only be addressed through additional set-asides of grasslands or other potentially suitable habitat. The Draft Program EIR's conclusions are inconsistent with CEQA's mandatory thresholds of significance with respect to the Loggerhead Shrike.

Response: The loggerhead shrike was grouped together with other avian species because it occurs within similar vegetation communities and because of its similar conservation status by the California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS). Impacts on these birds (including the shrike) were evaluated on a habitat basis, in terms of the potential or occupied habitat that would be lost by project implementation.

This species inhabits grasslands and other relatively open habitats such as coastal sage scrub. It is important to include coastal sage scrub as habitat for the loggerhead shrike. While this species primarily forages in open habitats such as grasslands and agriculture, it also depends on shrub habitats for nesting and uses the ecotones between shrub and open habitats for perching while foraging. According to Garret and Dunn (1981), shrikes use sparse trees, open woodland, and riparian habitat for nesting and may use a wide variety of habitats for foraging, including agriculture, grassland, and shrub and scrub habitats. The loggerhead shrike conservation analysis for the Western Riverside County MSCHP included several shrub types: coastal sage scrub, Riversidean alluvial fan sage scrub, and desert scrubs (see Table 1. page B-292, Volume II-B, November 2002).

Implementation of the land uses associated with the proposed project would result in a direct impact to 3,946 acres (52 percent) of grassland and agricultural foraging habitat for the loggerhead shrike (California Special Concern Species, U.S. Fish and Wildlife Service Bird of Conservation Concern, federal Species of Concern). In addition, 2,025 acres (26 percent) of coastal sage scrub and 96 acres (35 percent) of oak woodland that may be used by the loggerhead shrike for foraging and nesting would be impacted. Only two locations are in the database for loggerhead shrike, of which one would be impacted and one conserved. The impact on loggerhead shrike is considered less than significant because of the substantial conservation and management of habitat for this species in RMV Open Space, including 3,650 acres of grassland and agriculture primary foraging habitat and 5,837 acres of coastal sage scrub and oak woodland that would also be used by the shrike. The proposed project would not substantially reduce the loggerhead shrike population in southern California.

3.1.9.8j Tricolored Blackbird

Theme of Comments: The draft Southern NCCP/HCP Planning Guidelines conclude that because the study area supports 18,000+ acres of grassland and agriculture, which should be adequate to support nesting populations in the tens of thousands, that suitable nesting sites rather than foraging habitat likely is the limiting factor on the tricolored blackbird in the study area. Nothing in the discussion actually supports the notion that one can predict the size of a breeding population by calculating the area of grasslands and agriculture in that area. The commenter has noted that some aspects of range management on the Ranch Plan project site limit the abundance of grasshoppers, thereby restricting tricolored blackbird numbers relative to other parts of the species range.

Response: The conclusion in the draft Southern NCCP/HCP Planning Guidelines (Appendix G-3, page 4-84) that because the study area supports over 18,000 acres of grassland and agriculture (which should be adequate to support nesting populations in the tens of thousands), that suitable nesting sites rather than foraging habitat likely is the limiting factor on the tricolored blackbird (a California Special Concern Species) in the study area is based on the observation by Orions (1961) that foraging areas may be located up to 6.4 kilometers (4 miles) from nesting locations. A 4-mile radius around a nest site encompasses approximately 32,000 acres. Nesting colonies in the Central Valley have numbered up to 150,000 birds in the past (Humble and Churchill 2002). Therefore, it seems reasonable to assume, under the very conservative assumption that all 32,000 acres are suitable foraging habitat, that 32,000 acres is adequate to support a population of up to 150,000 birds in a colony, or more simplistically stated, about 4 to 5 birds per acre of potential foraging habitat. The Guidelines do not try to predict the population size of the tricolored blackbird on the Ranch Plan project site, but rather they just make the simple point that with 18,000 acres of grassland and agriculture habitat on the site, that available potential foraging acreage probably is not the main limiting factor on the relatively small populations of a few thousand birds that have been observed in the study area. In 1989, Bontrager (1990), for example, observed approximately 1,510 birds in the "upper Chiquita" colony (about 3,000 feet north of the Narrows and south of Oso Parkway) in about 1 acre of wetland, approximately 260 birds in the "Narrows" colony in a 0.7-acre wetland, approximately 420 birds in the CalMat settling basin in San Juan Creek, approximately 830 birds in the Trampas Canyon settling ponds, and approximately 380 birds in the Riverside Cement leaseholds in lower Gabino Canyon. Therefore, at least in 1989, about 3,400 tricolored blackbirds were documented nesting on the Ranch Plan project site in five separate areas. More recent information suggests that the tricolored blackbird population declined in the 1990s, with the most consistently observed nesting location supporting several thousand birds in lower Coto de Caza from 1993 to 1996 (Ortega, pers. comm., 1996). Elsewhere, breeding has been sporadic, with a small colony nesting in 1994 above the "Narrows" (but not in 1995), and recent

nesting in the stock pond south of a Ranch residence in the Radio Tower Road area. Recent breeding has not been observed in San Juan Creek or in lower Gabino Canyon. However, because of the itinerant behavior of this species, breeding sites and activity are difficult to predict.

With regard to grasshopper populations, generally range managers find that well managed and timed grazing actually controls grasshopper populations, which typically are considered pests for the purposes of range management and tend to occur when pasture quality is low. Continuous or over-grazing tends to increase grasshopper populations. What kinds of interactions between grazing management and grasshopper populations are occurring on the Ranch Plan project site is unknown, but the site has historically rotated cattle among the pastures which likely would have kept grasshopper populations in check, perhaps to the detriment of the tricolored blackbird. It is doubtful, however, that anyone would consider over-grazing as an appropriate management action to increase the number of grasshoppers considering the net adverse impact of over-grazing on grassland habitats. This is a possible example of a management action (timed, rotational grazing) to increase overall biological value and diversity acting against the management of a particular species that benefits from habitat disturbances (similar to the management conflicts between sage scrub and grassland species).

Theme of Comments: Biological studies performed for the Draft Program EIR have not attempted to determine in any systematic way the extent of grasslands that would be required to maintain a viable tricolored blackbird population on the Ranch Plan project site. Minimization/avoidance of impacts to Tricolored Blackbird Habitat is inadequate. Additional minimization/avoidance of suitable foraging habitat (grasslands) would be required in order to reduce the impacts to the tricolored blackbird to less than significant. Tricolored blackbirds require large expanses of grassland where they can forage for insects. The development on grasslands will, therefore, have a significant impact on this species. The Draft Program EIR's assertion that the critical factor for the species is suitable nesting sites rather than foraging habitat is unsupported. The Draft Program EIR's conclusions are inconsistent with CEQA's mandatory thresholds of significance with respect to the Tricolored Blackbird.

Response: Implementation of the land uses associated with the proposed project would result in a direct impact to 3,946 acres (52 percent) of grassland and agricultural foraging habitat for the tricolored blackbird (California Special Concern Species, U.S. Fish and Wildlife Service Bird of Conservation Concern, federal Species of Concern). At least one historic nesting area, the "Silica Products" colony in Trampas Canyon (Planning Area 5) would be directly impacted by the project. Other historic nest sites that may be indirectly impacted due to close proximity of development include "The Narrows" in Chiquita Canyon, the "Riverside Cement" colony in lower Cristianitos and lower Gabino canyons, and at the mouth of Verdugo Canyon. These impacts were identified as potentially significant (Impact 4.9-78) prior to application of the draft Southern NCCP/HCP Planning Guidelines and Minimization/Avoidance Measures. Under PDF 9-1, at least four of the historic sites would be conserved and managed for the tricolored blackbird. A recent colony south of a ranch residence south of Ortega Highway would be in RMV Open Space. In conjunction with avoidance of the thread-leaved brodiaea population in lower Cristianitos/Gabino, the Riverside Cement colony would be avoided. Setbacks of 300-feet from the 100-year floodplain of San Juan Creek between Planning Areas 3 and 4 would provide additional protection of the Verdugo site. The proposed golf course in middle Chiquita can be designed to be compatible with tricolored blackbird occupation (the only *important population* nesting area in the NCCP planning area is the ponds within the golf course in south Coto de Caza). In addition, as demonstrated in the analysis below, adequate grassland and agricultural foraging habitat would be available for the conserved nesting areas. Conservation of foraging habitat within a four-mile radius of nests sites would range from 4,457 acres for the Verdugo site

to 6,700 acres for the Riverside Cement site. The Adaptive Management Program would benefit the tricolored blackbird through management of potential breeding sites, including ponds with fresh emergent vegetation by (1) emulating natural flood regimes, runoff and infiltration patterns; (2) managing groundwater recharge areas that support wetlands; (3) managing water quality; (4) controlling invasive plant species such as giant reed, tamarisk, and pampas grass; (5) controlling human access and recreational activities in riparian/wetland habitat areas; and (6) controlling terrestrial mesopredators such as feral cats, dogs, skunks, raccoons and opossums). Grassland and agriculture foraging habitats will be managed to control the mesopredators listed above and by implementing Integrated Pest Management Pest Practices (e.g., minimizing the use of any pesticides on golf courses that could be toxic to tricolored blackbirds either directly or indirectly through prey). Through the implementation of PDF 9-1 and the Adaptive Management Program, impacts to tricolored blackbird nesting and foraging habitat would be reduced to a level less than significant.

In response to this comment, an analysis of how much suitable foraging habitat (grassland and agriculture) would be conserved and developed within a four-mile radius of the Coto de Caza *important population/key location* and other conserved historic nesting colony sites, Middle Chiquita, Coto de Caza, Radio Tower Road, San Juan Creek/Verdugo, and Riverside Cement, was conducted. The four-mile radius for foraging habitat is based on Orian's (1961) finding that tricolored blackbirds tend to forage within about four miles of nesting sites. Conserved habitat includes areas in already protected open space since the focus of the analysis is on how much protected habitat would be within four miles of nesting sites regardless of the ownership. The results of this analysis are provided in the table below.

Habitat Status ¹	Conserved Nesting Colony Locations				
	Middle Chiquita (acres)	Coto de Caza (acres)	Radio Tower Road (acres)	San Juan Creek/Verdugo (acres)	Riverside Cement ² (acres)
Conserved					
Grassland	2,951	3,257	5,315	3,676	6,696
Agriculture	1,988	1,944	1,250	871	4
Total Conserved	4,939	5,201	6,565	4,547	6,700
Percent Conserved	77%	71%	78%	62%	74%
Impacted					
Grassland	267	707	1,608	1,626	2,036
Agriculture	1,187	1,389	1,435	1,178	278
Total Impacted	1,454	2,096	3,043	2,804	2,314
Percent Impacted	23%	29%	22%	38%	26%
¹ The amount of grassland or agriculture conserved or impacted within a four-mile radius of the nesting colony. ² The total conserved includes 3,319 acres of grassland on MCB Camp Pendleton.					
Source: Dudek, 2004.					

The amount of potential foraging habitat remaining within four miles of nesting colonies ranges from 4,547 acres for the San Juan Creek/Verdugo historic site to 6,700 acres for the Riverside Cement site. Approximately 5,200 acres would be available for the *important population/key location* in Coto de Caza. The percentage of foraging habitat conserved ranges from 62 percent for the San Juan Creek site to the 78 percent for the Radio Tower Road site, with 71 percent conservation for the Coto de Caza *important population/key location*. The percentage of habitat

impacted for nesting colonies ranges from 22 percent for the Radio Tower Road colony to 38 percent for the San Juan Creek/Verdugo colony. There are no data on the total amount of foraging habitat needed to support a nesting colony of a particular size, and the best information that can be used to extrapolate any relationships between habitat areas and colony sizes is that the foraging habitat within four miles of large colonies (historically ranging up to 150,000 birds) would be a maximum of 32,000 acres (i.e., all habitat within four miles is grassland or agriculture). By extrapolation (but not confirmable by any existing information), it is reasonable to conclude that conservation acreages ranging from 4,500 to 6,700 acres and conservation percentages ranging from 62 percent to 78 percent for each conserved nesting site should be adequate to support the relatively small tricolored blackbird colonies nesting in the region (at most a few thousand at any site), and thus, persistence of the tricolored blackbird in the region will not be limited by a lack of suitable foraging habitat acreage. Based on this analysis, adequate foraging habitat would be conserved for recent and current nesting areas and thus impacts to tricolored blackbird foraging habitat would not be significant.

3.1.9.8k Cactus Wren

Theme of Comments: The proposed project would directly impact 220 (42 percent) of 523 known locations of the cactus wren and 2,025 acres of suitable habitat for this species. This constitutes a substantial adverse effect on both the cactus wren and its required habitat, meaning that the Draft Program EIR must identify significant impacts to this species and its cactus scrub habitat. The Draft Program EIR offers no explanation for its conclusion that project implementation will not result in a significant direct impact by identifying only “potentially significant” impacts to its required habitat.

Response: The Draft Program EIR identifies potentially significant impacts to suitable habitat for the cactus wren a California Special Concern Species (Impact 4.9-80) and summarizes in Table 4.9-43 on page 4.9-231 minimization/avoidance measures and contributions of the Adaptive Management Program that would reduce the potential impacts to a level less than significant. The Conservation Strategy presented on Draft Program EIR page 4.0-152 describes how project impacts will be mitigated to maintain net habitat value in the RMV Open Space. PDF 9-1 and PDF 9-2 on pages 4.9-152 through 163 describe the creation of the RMV Open Space and formulation and funding of the Adaptive Management Program, respectively. Table 4.9-43 also refers the reader to Appendix G-7 of the Draft Program for a more detailed discussion of how the Conservation Strategy contributes to mitigation of significant impacts and helps maintain and enhance net habitat value through creation and management of the RMV Open Space. Through the creation of RMV Open Space, the proposed project would conserve 303 cactus wren locations (57 percent) and 5,567 acres (74 percent) of suitable habitat (Table 4.9-43 on page 4.9-231). The RMV Open Space combined with already protected open space in the NCCP planning area would conserve 1,069 locations (80 percent) and 16,578 acres (84 percent) of coastal sage scrub in the planning area (these values include infrastructure impacts in the open space). The RMV Open Space, in conjunction with already protected open space in the planning area, would assure habitat connectivity within the existing and proposed open space system, including north-south connections along Chiquita and Chiquadora ridges; east-west connectivity between Arroyo Trabuco and Caspers Wilderness Park; along the San Juan Creek floodplain; north-south connections through the Trampas Canyon sub-basin and southern portion of the Chiquita sub-basin (south of Ortega Highway), leading to the Donna O'Neill Land Conservancy and the Cristianitos Canyon; and throughout the remainder of the San Mateo Watershed. Of particular importance for the cactus wren, adaptive management goals and objectives for coastal sage scrub habitat include maintaining the physiographic diversity of coastal sage scrub and associated focal species in RMV Open Space, restoring coastal sage scrub and enhancing the quality of existing sage scrub in RMV Open Space, managing fire

regimes to maintain a natural diversity of age-stands throughout RMV Open Space, and controlling exotic invasions of coastal sage scrub along the RMV Open Space-urban interface (Appendix G-7, pages 5-6). The minimization/avoidance measures and implementation of PDFs 9-1 and 9-2 reduce impacts to the cactus wren to a level less than significant.

Theme of Comments: The impact analysis makes no attempt to account for indirect impacts on the cactus wren and cactus scrub habitat, such as an increase in wildfire frequency.

Response: Although the Draft Program EIR did not identify indirect effects specific to the cactus wren, at pages 4.9-151-153 the Draft Program EIR identifies both short-term and long-term indirect effects that generally would result in potentially significant impacts on wildlife and their habitats and that would be applicable to the cactus wren. For short-term indirect effects that could affect the cactus wren and its habitat the Draft Program EIR identifies noise impacts (Impact 4.9.96) and construction impacts (Impact 4.9.97), and for long-term indirect effects the Draft Program EIR identifies invasive exotic species (Impact 4.9-98), night lighting (Impact 4.9-100) and human activity (Impact 4.9-101). The mitigation for these potentially significant indirect impacts is discussed on pages 4.9-250-253: MM 4.9-26 for Impact 4.9.96; MM 4.9-30 for Impact 4.9-97; MM 4.9-27 for Impact 4.9-98; MM 4.9-28 for Impact 4.9-100; and MM 4.9-29 for Impact 4.9-101.

Increased urbanization will increase the risk of both accidental and intentional human-caused fires in the study area. Cactus wrens and cactus scrub habitat are particularly vulnerable to intense fires because it takes several years for cactus stands to recover sufficiently to support nesting cactus wrens, although cactus patches with less intense burns that do not kill the cactus may be utilized soon after the burn (e.g., Harmsworth Associates 1997, 1998, 2001). The Adaptive Management Program, described in Draft Program EIR Appendix J, thus identifies frequent fire as an important stressor on coastal sage scrub habitat that could degrade the quality of sage scrub for the cactus wren and other species. Thus fire management is a key component of Adaptive Management Program for the cactus wren, other sage scrub species, and other vegetation communities and species in general. A Wildland Fire Management Plan, presented in Draft Program EIR Appendix J-5, was prepared to address the issue of wildfires in the study area. The Fire Management Plan describes both a Short-term Tactical Fire Suppression Plan and a Long-term Strategic Fire Protection Plan, which in tandem are designed to protect vegetation communities and species to the extent feasible and to maintain diverse age stands of the coastal sage scrub in the study area. By maintaining diverse age stands of sage scrub throughout the study area, suitable habitat for the cactus wren and other species will always be available even if some areas have burned and will take several years to fully recover. Cactus wren populations are widely distributed throughout the proposed RMV Open Space and larger planning area in already protected open space (e.g., Caspers Wilderness Park). Only a truly catastrophic fire that burned virtually all of the sage scrub in the planning area could feasibly cause local extirpation of the cactus wren. Even without the proposed project, the risk of such a fire exists today, as was seen in the San Diego Cedar fire in 2003. The Wildlands Fire Management Plan, as a component of the proposed project, should reduce the risk of such a catastrophic fire occurring in southern Orange County, but realistically there is no 100 percent guarantee that such a fire will not occur.

The Tactical Fire Suppression Plan component of the Fire Management Plan includes guidelines for fire suppression in biologically sensitive areas, including bulldozer policy, new fire roads policy, backfiring policy, ground tactical units policy, off-road policy, grading techniques and erosion control policy and fire prevention techniques policy. The Long-Term Strategic Plan identifies Fire Management Compartments (FMCs) and Fire Management Units (FMUs) within the FMCs. The FMCs generally are based on broad physiographic features such as ridgelines,

roads, key vegetation transitions, and water courses that define “natural” boundaries for fighting wildfires. Within the FMCs, the FMUs are defined by sub-basin watershed boundaries. The goal of the Strategic Plan is to confine all wildfires to a particular FMU if at all possible. While under severe wildland fire conditions, such as a Santa Ana wind condition, this may not always be possible, but it is a reasonable fire suppression guideline for all other average or above-average fire weather conditions.

Theme of Comments: The Draft Program EIR’s claim that 5,567 acres (74 percent) of suitable habitat for the cactus wren will be conserved is a gross overstatement because the calculation is based on the amount of coastal sage scrub expected to be conserved. Coastal sage scrub is a poor surrogate for habitat for the cactus wren because it requires tall, dense cactus patches, which represent a fraction of the total coastal sage scrub in the area.

Response: The commenter is correct that the cactus wren requires tall dense cactus patches and that coastal sage scrub itself is not necessarily suitable habitat for this species. However, in the study area and NCCP planning area, the distribution of the cactus wren is not strongly correlated with the mapped patches of southern cactus scrub in the NCCP vegetation database, which account for about 1,448 acres of the 21,000 acres of coastal sage scrub in the NCCP planning area. Of the total 1,431 cactus wren locations in the NCCP planning area, only 138 locations (9.6 percent) occur in mapped southern cactus scrub and 768 locations (53 percent) are in other coastal sage scrub associations. Coastal sage scrub, including southern cactus scrub, accounts for about 63 percent of the mapped locations, with the remaining 37 percent of locations mapped in other vegetation communities, such as small cactus patches in grasslands, chaparral and along the edges of riparian areas. The dispersion of cactus wren locations among non-southern cactus scrub vegetation likely is due to the difficulty of mapping small, discrete patches of cactus that are suitable for cactus wrens but are not large enough to be mapped as southern cactus scrub at a landscape level (i.e., they fall below the minimum mapping unit for southern cactus scrub as a distinct subassociation of coastal sage scrub). Magney (1992) described southern cactus scrub as a low, dense (50-85 percent cover) scrub dominated by succulent shrubs consisting primarily of prickly pear species.³¹ In many areas in the NCCP planning area, patches of cactus do not reach this cover percentage. For example, in the Upper Chiquita Canyon Conservancy, total cactus cover never exceeds 25 percent but it occurs in large enough patches (0.2 or 0.4 acre, etc.) with sufficient regularity that the cactus wrens are very common (Bomkamp, pers. comm. 2004). The southern Orange County landscape is different from San Diego County, for example, where *Opuntia*-dominated cactus patches and maritime succulent scrub supporting cactus wrens often occur in large, monospecific areas (e.g., in the San Pasqual Valley and on Otay Ranch, respectively). In the planning area, small cactus patches (e.g., less than one acre) often are interspersed throughout coastal sage scrub habitat, accounting for the lack of concordance between mapped southern cactus scrub and cactus wren occurrences. As such, the best available surrogate for cactus wren habitat in the NCCP vegetation database is, in fact, coastal sage scrub, contrary to the commenter’s assertion. Furthermore, it is not inappropriate to use coastal sage scrub to estimate “potential” future habitat for the cactus wren because new patches of cactus are most likely to grow in existing coastal sage scrub.

For the record, of the 1,448 acres of mapped southern cactus scrub in the NCCP planning area, 1,223 acres (84 percent) would be conserved in RMV Open Space and already protected open space. For the proposed project, of the 549 acres of mapped southern cactus scrub, 383 acres (70 percent) would be conserved in RMV Open Space and 163 acres (30 percent) would be

³¹ Magney, D. 1992. Descriptions of three new Southern California vegetation types: Southern Cactus Scrub, Southern Coastal Needlegrass Grassland, and Scalebroom Scrub. *Crossosoma* 18, No. 1, May 1992.

developed, which accords with the 74 percent protection of undifferentiated coastal sage scrub in the study area.

3.1.9.8I Grasshopper Sparrow

Theme of Comments: The proposed project would directly impact 253 (43 percent) of 584 known locations of the grasshopper sparrow and 2,413 acres of grassland (48 percent) on the Ranch Plan project site. The grasshopper sparrow distribution map (Figure 4-10 in Appendix G-2) indicates that most grasshopper sparrows in the Chiquita/Gobernadora *important population/key location* occupy lands mapped as "agriculture." As such, the Draft Program EIR's characterization and quantification of habitat impacts for the grasshopper sparrow appear to be incorrect and understated.

Response: The commenter is correct that most of the grasshopper sparrow locations in the Chiquita/Gobernadora *important population/key location* are mapped in agriculture. However, agriculture in the form of actively cultivated barley fields is not suitable nesting habitat for this grassland specialist, which typically nests in dense grasslands and especially those composed of a variety of grasses and tall forbs scattered with shrubs for singing purposes (Zeiner et al. 1990). The apparent discrepancy between the mapped land use of agriculture and occurrences of grasshopper sparrows probably is due the fact that land uses in Chiquita and Gobernadora Canyons vary from year to year in relation to rainfall. In years with adequate rainfall, Chiquita and Gobernadora canyons are cultivated with barley at a time when breeding sparrows would be establishing nest sites, thus precluding successful nesting. In drier years these areas may be left fallow, allowing for growth of non-native grasses and forbs that provide suitable nesting habitat for the grasshopper sparrow. The majority of the grasshopper sparrow occurrences are from studies conducted for the Foothill Transportation Corridor-South (FTC-S) project (MBA 1996). The vegetation maps prepared for the FTC-S project in Chiquita and Gobernadora canyons depict much of the canyons as grassland, in contrast to the NCCP vegetation database that characterizes the canyons as primarily agriculture. This likely reflects a difference in the land use at the time in Chiquita and Gobernadora canyons, and thus the suitability for grasshopper sparrow. In 2003, barley was cultivated in Chiquita and Gobernadora Canyons as depicted in Exhibit 4.1-2 of the Draft Program EIR. As stated on page 4.2-2 of the Draft Program EIR, "RMV plants between 800 and 1,000 acres of barley in several locations north of the Ortega Highway. In 2003, 886 acres of barley were planted. The fields are not irrigated and levels of production are inconsistent dependent on weather conditions (i.e., amount of rainfall)." Barley also was planted in 2004. Therefore, in 2003 and 2004, grasshopper sparrow nesting likely was limited to the adjacent grasslands along Chiquita and Chiquadora Ridges during these periods.

Rather than ignoring the fact that the grasshopper sparrow locations are mapped in what is currently non-habitat, the Draft Program EIR chose to present the worst-case scenario of impacts to grasshopper sparrow locations by including locations mapped in active agriculture that would be impacted, or 109 (44 percent) of 249 locations in agriculture in the Chiquita Canyon/Gobernadora *major population/key location*. If one were to assume that agriculture in Chiquita Canyon and Gobernadora is potential suitable habitat sometime in the future if the fields were left fallow, an additional 879 acres (48 percent) of 1,827 acres of potential habitat would be impacted by the proposed project and an additional 948 acres (52 percent) of potential habitat would be conserved in RMV Open Space (the calculation includes infrastructure impacts in RMV Open Space). Therefore, with regard to proportional impacts and conservation of suitable habitat, the impact on agriculture in the Chiquita/Gobernadora *important population/key location* is the same as the overall 48 percent impact on grasslands on the project site. That is, there is no skewing of impacts to agriculture and the conclusion regarding significance of the

impact and the level of significance after minimization/avoidance and mitigation reached in the Draft Program EIR regarding impacts to the grasshopper sparrow would not change because the overall conservation percentages are the same.

Theme of Comments: The Draft Program EIR offers no credible basis for its conclusion that significant impacts to 253 of 584 grasshopper sparrow locations would be mitigated to a level less than significant through habitat preservation and adaptive management.

Response: Implementation of the land uses associated with the proposed project would result in direct impacts to 253 (43 percent) of 584 known locations of the grasshopper sparrow (no state or federal special status) and 2,413 acres (48 percent) of grassland. In addition, as described in more detail below, the project would impact 879 acres (48 percent) of 1,827 acres of potential barley field agriculture that provides potential nesting habitat during fallow years in Chiquita and Gobernadora canyons (which support the *major population/key location*). This impact was considered significant (Impact 4.9-79) prior to application of the draft Southern NCCP/HCP Planning Guidelines and Minimization/Avoidance Measures. The proposed project would conserve 331 locations (57 percent) and 2,627 acres of grassland (52 percent) in RMV Open Space, as well as an additional 948 acres of agriculture in the Chiquita Canyon *major population/key location*. In combination with other already protected open space, a total of 426 locations (58 percent) and 9,404 acres (61 percent) of grassland would be conserved in the NCCP planning area. The Conservation Strategy presented on page 4.9-152 of the Draft Program EIR describes how project impacts will be mitigated to maintain net habitat value in the RMV Open Space. PDF 9-1 and PDF 9-2 on pages 4.9-152-163 describe the creation of the RMV Open Space and formulation and funding of the Adaptive Management Program, respectively. Table 4.9-43 also refers the reader to Appendix G-7 for a more detailed discussion of how the Conservation Strategy contributes to mitigation of significant impacts and helps maintain and enhance net habitat value through creation and management of the RMV Open Space.

For the grasshopper sparrow and grasslands, the Adaptive Management Program includes restoration of native grasslands and coastal sage scrub/valley needlegrass grassland mix (CSS/VGL) that will enhance habitat value for the grasshopper sparrow (which often uses grassland-shrub ecotones). The near-term restoration priorities for grassland and CSS/VGL are upper Cristianitos, portions of Blind Canyon, and upper Gabino Canyon. In addition, case-by-case restoration of native grasslands also may occur under the Adaptive Management Program, such as areas of degraded or low quality grassland that are not naturally recovering through passive management, areas that are degraded or disturbed future natural events, and it is determined that they are not likely to recover naturally (e.g., an area that has burned too frequently), and areas that have been temporarily disturbed by either authorized activities (e.g., infrastructure) or unauthorized activity (e.g., illegal trail). The Habitat Restoration Plan for native grassland and CSS/VGL is described in detail in Appendix J-2.

Grazing management will also be an important component of the Adaptive Management Program for maintaining and enhancing the habitat value of grasslands. The Grazing Management Plan is described in detail in Appendix J-4 of the Draft Program EIR. Appropriately timed grazing can increase the vigor of native grasslands and therefore its value as grasshopper sparrow habitat, by removal of thatch and litter, recycling of nutrients, stimulation of tillering (sprouting of new stalks), removal and control of alien species, and reduced transpiration (loss of water) by alien species, making more water available for native grasses.

Finally, periodic fire (e.g., every third or fourth year) can also have a beneficial effect on native grassland, especially in regard to reducing litter and thatch and alien species. In addition, periodic fire in coastal sage scrub and chaparral can help maintain openings in these shrublands to create a diverse mosaic of habitats, increasing habitat value for the grasshopper sparrow and overall biodiversity.

Minimization/Avoidance Measures 4.9-33 and 4.9-32 required the Project Applicant to restore an additional 60 acres of native habitats including native grasslands in the Cristianitos and Blind sub-basins as part of golf course landscaping which will further contribute to the restoration of grassland within the study area. Based on this evaluation of foraging habitat loss and protection and implementation of PDF 9-1, it was concluded the proposed project would not significantly affect the viability of grasshopper sparrow in the study area and that impact projects would be less than significant.

Through the conservation of 426 locations, 9,404 acres of grassland habitat, and 879 acres of potentially suitable agricultural areas in Chiquita Canyon and Gobernadora, and implementation of the Adaptive Management Program, the grasshopper sparrow is expected to persist in the study area and thus the significant impact to the grasshopper sparrow would be reduced to a level less than significant.

3.1.9.8m American Badger

Theme of Comments: The Draft Program EIR's conclusions are inconsistent with CEQA's mandatory thresholds of significance with respect to the American Badger. The badger is a regionally rare and declining species that requires huge expanses of unbroken habitat, especially grasslands. Development of the nearly 50 percent of the remaining grasslands in the project area, coupled with new road, human intrusion, and other edge and fragmentation effects will almost certainly extirpate this species from the area.

Response: American badgers occur from northern Alberta, Canada southward through the United States, to central Mexico. The range for this species is from the Pacific Coast eastward through Ohio. The California Department of Fish and Game (CDFG) has documented this species throughout California except for the humid forested region in the extreme northwestern corner of the state. They have been extirpated from many areas in southern California. In California, badgers occupy a diversity of habitats with friable soils and relatively open vegetative cover; however, cultivation is adverse to badgers and as a result, they do not survive on cultivated land (CDFG). Home ranges for badgers have been documented at approximately 640 to 2,091 acres per individual.

The American badger was identified as a potential umbrella species by the NCCP/HCP Science Advisors and is also a CDFG Special Animal, and was, therefore, appropriately included with Table 4.9-3 and discussed with other wildlife species with a similar status on page 4.9-148. The CDFG has recently (August 2004) updated their Special Animals List and have identified the American badger as a California Special Concern Species. This listing status revision was due to a previous administrative error by the CDFG, who inadvertently removed the badger from the Special Animals list after the 1986 posting (pers. comm. with CDFG Staff, Darlene McGriff, August 25, 2004).

Within the study area, the soil types and agricultural practices also play an important role in this species rare occurrence on the site. Although many areas on-site may support the appropriate vegetation for this species, these areas have been impacted by over 100 years of agricultural activities including discing and grazing. In addition, in many areas where the grassland

communities occur that could support this species, these areas also generally support concentration of clay soils, which is not the favored soil type for the badger, who requires friable soils. These combined factors, along with the fact that this species naturally occurs in very small numbers within large areas of suitable habitat required for home ranges (approximately 640 to 2,091 acres), this species is not expected to occur in high numbers within the study area.

There is one documented occurrence of badger for the study area from the FTC-S studies in San Juan Creek, which supports the sandy, friable soils. However, this species appears to be very uncommon on the Ranch site in general because there are no anecdotal observations by ranch personnel that are routinely in the field. Only three other occurrences in the NCCP planning area are known, two from Ladera Open Space just east of Arroyo Trabuco (i.e., between the Arroyo and the Ladera Ranch development) and one from the southern part of the FTC-S BX alignment. The apparent low population numbers of this species, along with the relative unsuitability of habitat in the study area, indicate that the Ranch Plan project site is not a significant habitat area for the badger in the context of the southern California region. Thus, the potential impacts to this species are considered less than significant due to (1) a relatively small population in the study area; (2) the small impact on this species in the context of its range in southern California (i.e., the loss of 35 percent of potential habitat on the Ranch Plan project site) would not cause this species to fall below self-sustaining levels in southern California; (3) substantial suitable habitat that will be protected and managed in RMV Open Space under PDF 4.9-1 and the Adaptive Management Program, a total of 2,627 acres of grassland would be conserved and managed in RMV Open Space; (4) suitable habitat areas that will be connected to provide for dispersal; and (5) the provision of bridges and culverts to provide for dispersal.

3.1.9.8n Mountain Lion

Theme of Comments: The proposed project will substantially reduce the regional mountain lion population and may cause it to drop below self-sustaining levels. Thus, the Draft Program EIR fails to disclose these mandatory findings of significant impact.

Response: The proposed project will result in the loss of approximately 5,779 acres (30 percent) of suitable habitat for the mountain lion in the study area (Draft Program EIR at page 4.9-145). This loss, combined with habitat fragmentation due to residential development and roads will reduce and restrict the use of the study area by the mountain lion compared to existing conditions. However, this comment only provides a partial explanation of the long-term risks to the Santa Ana Mountains lion population. Certainly, cumulative loss of habitat in the study area could contribute to a decline in the population, but is highly unlikely to be the cause of it dropping below unsustainable levels as implied by the comment and is less than significant within the context of the landscape-level conservation issues for the mountain lion. Based on population viability modeling by Beier (1993) the Santa Ana Mountains lion population inhabiting 1,114 km² (275,158 acres) currently in protected open space (including Cleveland National Forest, Camp Pendleton and Caspers Wilderness Park) is "demographically unstable" and at a high risk of extinction.³² Beier states that "A movement corridor allowing immigration from the adjacent population and intra-range corridors would greatly enhance the prognosis." for this population. Beier concludes that, "If a wildlife movement corridor is available to allow immigration of up to three males and one female per decade an area as small as 600-1,600 km²...can support a cougar population without significant extinction risk in 100 years." The movement corridor Beier refers to is at the eastern extent of the Santa Ana Mountains range and connects to the Palomar Range. Thus, even without including the Ranch Plan project site

³² Beier, P. 1993. Determining minimum habitat areas and habitat corridors for cougars. Conservation Biology 7:94-108.

as part of protected land uses for the viability analysis, Beier concludes that with a functional connection to the Palomar Range the extinction risk for the Santa Ana Mountain lion population would not be significant. By the same token, given the critical importance of the eastern movement corridor for conserving this population, conservation of the entire project site property (22,815 acres) would only increase the protected suitable habitat by 8 percent and would not be enough to significantly reduce the risk of extirpation of this population. Therefore, the key to sustaining the Santa Ana Mountains lion population is not conserving the Ranch Plan project site, but functionally connecting the Santa Ana Mountains to the Palomar Mountains. Nonetheless, the proposed 13,800+ acres of suitable habitat in large blocks in proposed RMV Open Space would provide additional protected "live-in" habitat mountain lion habitat and important habitat linkages and movement corridors along Verdugo, La Paz, Gabino, and Talega canyons linking to Caspers Wilderness Park, the Cleveland National Forest, and Camp Pendleton. Although the risk of vehicle collisions may increase with additional traffic and roads, these impacts will be minimized to the extent possible by the siting and design of roads to protect linkages and movement corridors, as outlined in General Policy 4 described in Section 3 of the draft NCCP Planning Guidelines. Minimization/Avoidance Measures 4.9-22 in Table 4.9-35 on page 4.9-173 provides guidelines for the design of bridges for Cristianitos Road and New Ortega Highway to accommodate wildlife movement, including mountain lion. MM 4.9-22 specifies that bridges shall have a minimum height of 20 feet, chain link fencing of 10 feet in height shall be installed within 100 feet of either side of the bridges to deter wildlife from crossing roadways, and any required lighting for public health and safety shall be shielded to prevent indirect spill-over effects. Minimization/Avoidance Measure 4.9-23 in Table 4.9-35 provides design guidelines for road culverts over upper Cristianitos Creek and Blind Canyon to accommodate wildlife movement. Mitigation Measure 4.9-23 specifies that culverts shall have minimum dimensions of 15 x 15 feet, the bottom of the culvert shall be a natural substrate, light shall be visible from one end of the culvert to the other, vegetation installed at either end of the culvert shall be native low-growing species to prevent predator-prey stalking, chain link fencing 10 feet in height shall be installed within 100 feet of either side of the culverts to deter wildlife from crossing roadways, and any required lighting for public health and safety shall be shielded to prevent indirect spill-over effects. Although box culverts may not be as desirable as bridge overpasses for wildlife movement because they are more constricted, there is ample evidence that mountain lions (Beier 1995; Beier and Barrett 1993) as well as mule deer, bobcats and smaller species (Haas and Crooks 1999; Dudek 1995) will use culverts with dimensions of at least the minimum specified 15 x 15 feet.^{33,34,35,36}

All road crossings of major identified movement corridors for the mountain lion, as identified by Beier and Barrett (1993) and Michael Brandman Associates (MBA) during SR-241 South studies (MBA 1996),³⁷ would be bridge structures that exceed the design standards stated above. It is notable that the Florida panthers use underpasses of a divided highway as low as 2.1 meters (under 7 feet) (Foster and Humphrey 1995)³⁸ so the design standards for height for this project far exceed those known to be used. As described at Draft Program EIR page 4.9-

³³ Beier, P. 1995. Dispersal of juvenile cougars in fragmented habitat. *Journal of Wildlife Management* 59:228-237.

³⁴ Beier, P. and R.H. Barrett. 1993. The Cougar in the Santa Ana Mountain Range, California. Final Report, Orange County Cooperative Mountain Lion Study. 104 pp + Appendices.

³⁵ Haas, C. and K. Crooks. 1999. Carnivore abundance and distribution throughout the Puente/Chino Hills. Prepared for The Mountains Recreation and Conservation Authority and State of California Department of Transportation. 64 pp. + Appendices

³⁶ Dudek. 1995. Southern Subregion NCCP Wildlife Corridor Survey. Prepared for the Santa Margarita Company.

³⁷ Michael Brandman Associates (MBA) 1996. Draft Natural Environmental Study for Foothill Transportation Corridor-South. Prepared for the Orange County Foothill Transportation Corridor Agency.

³⁸ Foster, M.L. and S.R. Humphrey. 1995. Use of highway underpasses by Florida panthers and other wildlife. *Wildlife Society Bulletin* 23:95-100.

119-121, the extension of Cristianitos Road to north of San Juan Creek would bridge the creek. Preliminary design concepts estimate that San Juan Creek Bridge I would be approximately 80 feet wide, 547 feet long and 83 feet high, thus providing for wildlife movement along San Juan Creek. The construction of New Ortega Highway north of San Juan Creek would necessitate a second bridge crossing over San Juan Creek to the east of the Cristianitos Road Bridge. Based on preliminary design concepts, San Juan Creek Bridge II is estimated to be approximately 100 feet in width, 509 feet in length and 56 feet high, also providing for wildlife movement along San Juan Creek. The proposed change in the classification of existing Ortega Highway on RMV from a state highway to a local/recreational access road also would reduce volume of traffic and decrease the risk of vehicle collisions with mountain lions moving along and adjacent to San Juan Creek. Further to the south, Cristianitos Road would be realigned and would cross over Gabino Creek, a mountain lion movement corridor connecting to the Donna O'Neill Conservancy. The preliminary design concept for Gabino Bridge is a structure 55 feet wide, 818 feet long and 120 feet high, thus providing for wildlife movement along Gabino Creek. The construction of Cristianitos Road also would require construction of a bridge over Cristianitos Creek. The preliminary design concept for Cristianitos Bridge is a structure 80 feet wide, 499 feet long and 65 feet high, thus providing for wildlife movement along Gabino Creek. Two other road improvements are anticipated within the southeastern portion of the study area supporting mountain lions. The existing gravel Ranch road that would serve the golf course and estate lots in Planning Area 9 (Gabino Canyon) would be upgraded to a rural collector road, but other than increased traffic volume, would not be an additional impediment to mountain lion movement through the area. An all-weather wildfire evacuation road also might be required for the development proposed in Planning Area 9. The existing Ranch road access from upper Gabino to existing Cristianitos Road could serve as an evacuation route. Minor improvements to the surface of the existing road and creation of periodic turnouts to allow two-way traffic, and the expected very low volume of traffic along this road would not impede continued use of the area by mountain lions.

In regard to the willingness of mountain lions to use identified movement corridors, dispersing mountain lions apparently are quite flexible in finding travel routes, although it is preferable to maintain movement corridors in known travel routes (Foster and Humphrey 1995). Beier and Barrett (1993) state, in regard to lion movement between the Santa Ana Mountains and Chino Hills, "Dispersing cougars are so proficient at finding travel routes that a rare disperser probably would use B Canyon to enter the Chino Hills even if Coal Canyon is destroyed." (page 32) In addition, Beier (1995) concluded that dispersing animals will utilize areas with housing as long as the density is less than 1 du/16 ha (1 du/39.5 acres). Not including the golf course in upper Gabino, the residential density in Planning Area 9 is approximately 1 du/77 acres. Finally, Beier (1995) recommends that corridor widths designed for mountain lions should be more than 100 meters (328 ft) wide if the total distance to be spanned is less than 800 meters (2,600 ft) and greater than 400 meters (1,300 ft) wide for distances of 1-7 km (3,280-22,966 ft). All important movement corridors for mountain lion identified in the study area (i.e., linkages C, D, G, H, I, J, L, M, O, P, and Q) as shown in Exhibit 4.9-8 would exceed these minimum standards under the proposed RMV Open Space.

With creation of the proposed RMV Open Space that would conserve 15,000 acres of open space directly connected to adjacent open space in Caspers Wilderness Park, Cleveland National Forest and MCB Camp Pendleton, and implementation of the Minimization/Avoidance Measures regarding bridge and culvert design standards at key wildlife movement areas, the mountain lion population in the region will not be substantially adversely affected by the proposed project and potential impacts are reduced to a level less than significant.

3.1.9.8o Southern Grasshopper Mouse

Theme of Comments: The Draft Program EIR inappropriately lumps the grasshopper mouse, a very rare habitat specialist, together with several other species of widely varying habitat requirements, natural history and conservation status. The Draft Program EIR's conclusion that impacts to known locations and suitable habitat are considered less than significant due to the amount of habitat loss relative to the availability of habitat for the species in the region and amount of potential habitat conserved and managed as part of the RMV Open Space and AMP is clearly flawed. Suitable habitat for this species is grossly overestimated. If any southern grasshopper mice persist on the project site, any impacts would have to be considered significant under CEQA.

Response: The grasshopper mouse (California Special Concern Species) is most likely to occur in open grasslands and sparse scrub habitats underlain by friable (sandy and loamy soils) and is often found in microhabitats dominated by gopher mounds and burrows that the mouse can utilize (Stapp 1997). Existing burrows also may also provide greater prey availability; i.e., arthropods using burrows for refuge. Specific habitat requirements are unknown. However, based on its known habitat preference, it would not be expected to occur in areas with dense vegetation and clayey soils that inhibit or preclude burrowing by small rodents. An examination of the Draft Program EIR maps depicting terrains and soils groups in the study area (Exhibits 4.5-5, 4.5-7 and 4.5-10) gives some indication that the study area has relatively little suitable habitat for the grasshopper mouse. As shown in Exhibit 4.5-5, the vast majority of the study area is comprised of erodible clays and erodible silts on high slopes, with alluvial sandy soils typically confined to canyon bottoms and major drainages such as San Juan Creek, Chiquita Creek, Gobernadora Creek, Verdugo Creek, Gabino Creek, La Paz Creek, and Talega Creek. Similarly, Exhibits 4.5-7 and 4.5-10 show that the large majority of the study area supports soils with very slow infiltration (Type D) and slow infiltration (Type C), indicating a large component of clays in the soils. As an example, grasslands in the Cristianitos and upper Gabino areas, based on the vegetation map, would appear to be potential habitat areas for the grasshopper mouse. However, both areas are dominated by clay soils, as shown in Exhibit 4.5-5. In addition, a habitat evaluation based on a focused walkover survey was conducted in both areas for suitable habitat of federally listed Endangered and state-listed Threatened Stephens' kangaroo rat, which has similar habitat requirements to the grasshopper mouse. Although there are small pockets of sandy, loamy soils around drainages, the surfaces generally are too clayey and cobbly for the kangaroo rat and likely the grasshopper mouse (Dudek 1998).

Another line of evidence that the southern grasshopper mouse has low potential to occur in the study area is the extensive trapping that was conducted for the proposed SR-241 South project (SOCTIIP) along the BX and CP alignments for the federally-listed Endangered Pacific pocket mouse, which included areas south of the Ranch Plan project site along the CP alignment parallel to San Mateo Creek. As with the Stephens' kangaroo rat, this pocket mouse has at least generally similar habitat associations as the southern grasshopper mouse (i.e., sparse vegetation underlain by sandy soils) so it is reasonable to assume that the Pacific pocket mouse trapping study sampled potential habitat for the grasshopper mouse as well. In 1995 and 1996 approximately 59,000 trap nights were conducted (a trap night is one trap set for one night) for the Pacific pocket mouse resulting in no captures of the grasshopper mouse. Although a focused trapping program for the grasshopper mouse would use different bait (i.e., something pungent such as dog food or natural prey items) because the mouse is a carnivore rather than a granivore (seed eater), if the grasshopper mouse was present in the survey areas it likely would have been captured in the course of 59,000 trap nights (it should be noted that this trapping effort is much greater than most presence/absence surveys which may rely on several hundred to a 1,000 or so trap nights over a single five-night period). (Grasshopper mice will enter traps

baited with seeds or rolled oats [Behrends, personal observation], and may actually be attracted to the trap by the scent of the other small rodents which are also prey of the grasshopper mouse.) With regard to the southern grasshopper mouse, the Final Natural Environmental Study for the SOCTIIP (2003) states, "Small mammal trapping surveys did not detect the presence of this species in 1996 and this species was not detected in 2001. The historical range of this subspecies does not include coastal habitats (Jameson and Peeters, 1998). Therefore the SOCTIIP survey area may be outside the range of this species."

3.1.9.8p Least Bell's Vireo

Theme of Comments: Project impacts to the least Bell's vireo and the associated mitigation for this species are not adequately discussed in the Draft Program EIR.

Response: Implementation of the land uses associated with the proposed project would result in impacts to two of the 30 known breeding locations of the least Bell's vireo (federally- and state-listed Endangered) in the study area; one location in Planning Area 4 at the edge of San Juan Creek and one location associated with bridge construction across lower Cristianitos Creek. These impacts were determined to be significant (Impact 4.9-72) prior to application of the draft Southern NCCP/HCP Planning Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures would result in conservation of 28 of 30 (97 percent) breeding locations and 443 acres (84 percent) of southern willow scrub/arroyo willow riparian forest and 100 percent of the vireo *important population* located in the Gobernadora Ecological Restoration Area (GERA). The Adaptive Management Program (Appendix J) would include habitat restoration/enhancement activities that would benefit the vireo in the study area, including control of invasive exotic plant species such as giant reed, tamarisk, and pampas grass along San Juan Creek and in lower Cristianitos and control of invasive animal species such as brown-headed cowbirds and Argentine ants. In addition, restoration in Gobernadora Creek above GERA to restore the historic natural meandering of the creek will have downstream benefits to the vireo *important population*. Implementation of the Minimization/Avoidance Measures and the Adaptive Management Program will reduce significant direct impacts to the least Bell's vireo to a level less than significant by restoring and enhancing habitat in GERA, San Juan Creek and lower Cristianitos and increasing the carrying capacity for the species in the study area.

3.1.9.8q Southwestern Willow Flycatcher

Theme of Comments: Some commenters have asserted that implementation of the Ranch Plan project would significantly impact the southwestern willow flycatcher.

Response: Implementation of the land uses associated with the proposed project would not result in significant direct or indirect impacts to the southwestern willow flycatcher (federally- and state-listed Endangered). The proposed project study area contains one willow flycatcher *important population* GERA that overlaps with the least Bell's vireo *important population*. Although no significant impacts were identified for the willow flycatcher, and thus no specific Minimization/Avoidance Measures were identified in the Draft Program EIR, implementation of the Adaptive Management Program would include habitat restoration/enhancement activities that would benefit the willow flycatcher in the study area in the same manner as the least Bell's vireo, including control of invasive exotic plant species such as giant reed, tamarisk, and pampas grass along San Juan Creek and in lower Cristianitos and control of invasive animal species such as brown-headed cowbirds and Argentine ants. In addition, restoration in Gobernadora Creek above GERA to restore the historic natural meandering of the creek will have downstream benefits to the willow flycatcher *important population*. Implementation of the

Minimization/Avoidance Measures and the Adaptive Management Program (Appendix J) will reduce significant direct impacts to the willow flycatcher to a level less than significant by restoring and enhancing habitat in GERA, San Juan Creek, and lower Cristianitos and increasing the carrying capacity for the species in the study area.

3.1.9.8r Riverside Fairy Shrimp

Theme of Comments: Minimization/avoidance and mitigation of impacts to listed fairy shrimp species are inadequate. Proposed mitigation simply consists of avoiding some occupied pools. The project proponent should be required to avoid all impacts to these species, or to undertake a vernal pool creation and fairy shrimp relocation program.

Response: Implementation of the land uses associated with the proposed project would result in a direct impact on one vernal pool occupied by the Riverside fairy shrimp (federally-listed Endangered) in Planning Area 5 (Trampas Canyon). This impact was determined to be significant (Impact 4.9-68) prior to application of the draft Southern NCCP/HCP Planning Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures will result in avoidance of impacts to the vernal pool supporting the Riverside fairy shrimp and its contributing hydrological sources (i.e., local watershed). Mitigation Measure 4.9-35 states "Prior to issuance of a grading permit for Planning Area 5, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all vernal pools in the Trampas Sub-basin have been avoided." Implementation of the Adaptive Management Program (Appendix J) will include monitoring of vernal pools and fairy shrimp populations, management of hydrological regimes by maintaining the existing local contributing hydrological sources, grazing management to avoid impacts when pools hold water, development of management tools to control proliferation of non-native species (including grazing management, prescribed burns, mowing, and selective weeding), water quality management to emulate baseline conditions, and control of public access. The combination of avoidance of the pools and adaptive management will reduce impacts to the Riverside fairy shrimp to a level less than significant.

3.1.9.8s San Diego Fairy Shrimp

Theme of Comments: Minimization/avoidance and mitigation of impacts to listed fairy shrimp species are inadequate. Proposed mitigation simply consists of avoiding some occupied pools. The project proponent should be required to avoid all impacts to these species, or to undertake a vernal pool creation and fairy shrimp relocation program.

Response: Implementation of the land uses associated with the proposed project would result in a direct impact on one vernal pool occupied by the San Diego fairy shrimp (federally-listed Endangered) in Planning Area 5 (Trampas Canyon). This impact was determined to be significant (Impact 4.9-67) prior to application of the draft Southern NCCP/HCP Planning Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures will result in avoidance of impacts to the vernal pool supporting the San Diego fairy shrimp and its contributing hydrological sources (i.e., local watershed). Mitigation Measure 4.9-35 states "Prior to issuance of a grading permit for Planning Area 5, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all vernal pools in the Trampas Sub-basin have been avoided." Implementation of the Adaptive Management Program (Appendix J) will include monitoring of vernal pools and fairy shrimp populations, management of hydrological regimes by maintaining the existing local contributing hydrological

sources, grazing management to avoid impacts when pools hold water, development of management tools to control proliferation of non-native species (including grazing management, prescribed burns, mowing and selective weeding), water quality management to emulate baseline conditions, and control of public access. The combination of avoidance of the pools and adaptive management will reduce impacts to the San Diego fairy shrimp to a level less than significant.

3.1.9.8t Bats

Theme of Comments: The Draft Program EIR appears to have overlooked or omitted important biological studies recently conducted in the region of the proposed project. An important example of this problem is the treatment of the sensitive species of bats potentially occurring on the Ranch.

Response: There are no state or federally listed bats. The bat roosting and bat foraging habitat impacts to the special-status bats either known to occur or potentially occur throughout the study area are addressed below:

The following discussion focuses on the potential impacts to roosting habitat for special status bat species known or potentially present from the study area.

Foraging patterns for bats are dictated by the location and abundance of insects upon which they forage. Insect emergence in turn is subject local and seasonal factors including rainfall, temperature, changes in the aquatic environment (for species with aquatic larvae such as mayflies, mosquitoes, and midges) and other conditions. As such, bat foraging areas can change dramatically from week to week and in some cases, from day to day. Therefore, assessment of potential impacts to bat foraging is difficult and is generally best addressed at the level of habitat rather than on site-specific observations.

Suitable habitat conserved through implementation of PDF 9-1 (RMV Open Space) and managed through implementation of PDF 9-2 (Adaptive Management Program) include 2,627 acres of grassland, 5,657 acres of coastal sage scrub, 1,507 acres of riparian, 3,081 acres of chaparral, 180 acres of woodland, and 184 acres of forest. Any potential impacts to potential foraging habitat for these, and other bat species, are considered less than significant due to the amount of habitat loss relative to the availability of habitat for these species in the region and the amount of potential habitat that will be conserved and managed as part of the RMV Open Space and AMP.

Pallid Bat. Pallid bats (California Special Concern Species) are primarily insectivores, feeding on a wide variety of large arthropod prey that they typically capture on or near the ground. They are generalists in their roosting requirements—using of a variety of structures including rock crevices, tree hollows, mines, caves, and human structures. However, they are intolerant of human disturbance and threatened by roost damage and destruction.

Brown (1996) indicates that this species has a high probability of occurring in the study area in suitable rock crevice habitat, caves, or tree hollows. Through implementation of PDF 9-1 and PDF 9-2, 2.1 acres of cliff and rock habitat, 180 acres of woodland and 184 acres of forest habitat would be conserved and managed, impacts to this species are not significant.

The pallid bat and the spotted bat (discussed below) are known to forage in the variety of habitat types from grasslands through forests. Suitable foraging habitat for these species within the study area including 2,627 acres of grassland, 5,657 acres of coastal sage scrub, 1,507

acres of riparian, 3,081 acres of chaparral, 180 acres of woodland, and 184 acres of forests, for a total of approximately 13,236 acres would be conserved and managed through implementation of PDF 9-1 and PDF 9-2. Any potential impacts to foraging habitat for these two species are considered less than significant due to the amount of habitat loss relative to the availability of habitat for these species in the region and the amount that will be conserved and managed as part of the RMV Open Space and AMP.

Townsend's Western Big-Eared Bat. Townsend's western big-eared bat is a California Species of Special Concern. This subspecies roosts in mine tunnels, limestone caves, lava tubes, buildings, and other man-made structures. Although the study area provides suitable roosting habitat for this species by ranch structures within the study area, the study area does not support the other types of roosting features used by this species and it has low probability of occurring (MBA 1996). Therefore, the limited loss of roosting opportunities would not significantly impact this species in the region.

The Townsend's western big-eared bat primarily forages within mesic habitats, including scrub and forest communities. Primary suitable foraging habitat for this species including 1,507 acres of riparian, 180 acres of woodland, and 184 acres of forests, for a total of 1,871 acres (75 percent) would be conserved through implementation of PDF 9-1 (RMV Open Space) and managed through implementation of PDF 9-2 (Adaptive Management Program [AMP]). Any potential impacts to foraging habitat for this species are considered less than significant due to the amount of habitat loss relative to the availability of habitat for this species in the region and the amount that will be conserved and managed (75 percent) as part of the RMV Open Space and AMP.

Spotted Bat. The spotted bat is a California Species of Special Concern. This species roosts in rock crevices, which naturally limits their distribution. Although the study area provides limited suitable roosting habitat for the spotted bat, it has a low probability of occurring (Brown 1996). The limited loss of roosting opportunities relative to the available roosting opportunities in the region would not significantly impact this species in the area.

California Mastiff Bat. The California mastiff bat is a California Species of Special Concern. It is a colonial, cliff-roosting species whose distribution is constrained to areas where there are significant rock features offering suitable roosting habitat. Limited suitable habitat occurs for this species within the study area and there would be no impacts to roosting habitat for this species.

The California mastiff bat primarily forages within arid to semi-arid habitat types including grasslands, scrub, chaparral, and woodland areas. Within the study area, suitable foraging habitat for this species including 2,627 acres of grassland, 5,657 acres of coastal sage scrub, 3,081 acres of chaparral, and 180 acres of woodland, for a total of approximately 11,545 acres (69 percent) would be conserved and managed through implementation of PDF 9-1 and PDF 9-2. Any potential impacts to foraging habitat for this species are considered less than significant due to the amount of habitat loss relative to the availability of habitat for this species in the region and the amount that will be conserved and managed (69 percent) as part of the RMV Open Space and AMP.

California Leaf-nosed Bat. The California leaf-nosed bat is a California Species of Special Concern. This bat can be found to roost in caves and abandoned mines. Suitable roosting habitat for this species does not occur within the study area and, therefore, there would be no impacts to roosting habitat for this species.

The California leaf-nosed bat is known to forage in desert habitat types. Desert habitat types suitable for this species are not present within the study area; therefore, the proposed project is not expected to significantly impact foraging habitat for this species.

Small-Footed Myotis. The small-footed myotis is a crevice-dwelling species that forage early in the evening on a variety of small insects. In the southern California region, it is known to occur in the riparian and wooded habitats of the inland valleys, foothills, and mountains. This species is expected to occur within the study area, primarily associated with oak woodlands and riparian areas (Brown 1996). Large-scale preservation of oak and sycamore habitat in the study area will ensure that impacts to this species are not significant.

The small-footed myotis and long-legged myotis have similar foraging habitat preferences of scrub, chaparral, woodland, and forest communities, often in proximity to water sources. A total of approximately 10,609 acres (76 percent) of suitable foraging habitat for these species, including 5,657 acres of coastal sage scrub, 1,507 acres of riparian, 3,081 acres of chaparral, 180 acres of woodland, and 184 acres of forests would be conserved and managed through implementation of PDF 9-1 and PDF 9-2. Any potential impacts to foraging habitat for these two species are considered less than significant due to the amount of habitat loss relative to the availability of habitat for these species in the region and the amount that will be conserved and managed (76 percent) as part of the RMV Open Space and AMP.

Long-legged Myotis. The long-legged myotis preferred habitat includes wooded habitats from pinon-juniper to coniferous forests, usually at elevations of 4,000 to 9,000 feet. The study area is well below 4,000 feet. This species may only rarely occur within the study area because it typically occurs at elevations of 4,000 to 9,000 feet.

Yuma Myotis. The Yuma myotis is a cave-dwelling species that will also roost in old buildings. This species has been observed on-site and may roost in the study area, or in off-site areas. Although the study area provides limited (MBA, 1996 and Newkind, 1996) suitable roosting habitat (old buildings) for the spotted bat, the limited loss of roosting opportunities relative to the available roosting opportunities in the region would not significantly impact this species in the area.

The Yuma myotis and pocketed free-tailed bat (discussed below) forage over open water resources. Approximately 1,600 acres (77 percent) of riparian, pond/reservoir, freshwater marsh, and watercourse communities that provide open water resources would be conserved and managed through implementation of PDF 9-1 and PDF 9-2. Any potential impacts to foraging habitat for these two species are considered less than significant due to the amount of habitat loss relative to the availability of habitat for these species in the region and the amount that will be conserved and managed (77 percent) as part of the RMV Open Space and AMP.

Pocketed Tree-tailed Bat. The pocketed free-tailed bat is a colonial, crevice-dwelling species found in a variety of habitats, but usually associated with high cliffs and rugged rock outcrops where they roost during the day. Colony sizes usually number under 100 individuals and they typically do not leave the roost until well after dark. Brown (1996) indicated that suitable roosting and foraging habitat may occur within the study area, but the species has a low probability of occurrence.

The following are summaries of the impacts, minimization and mitigation for CNPS List 1B and 2 plant species.

3.1.9.8u Southern Tarplant

Theme of Comments: The Draft Program EIR does not adequately address the size of the southern tarplant populations, or their relationship to the open space areas, and potential for recovery.

Response: Implementation of the land uses associated with the proposed project would result in a direct impact on 29 locations of southern tarplant (CNPS List 1B) totaling 41,055 individuals. In addition, construction of maintenance and infrastructure facilities within the RMV Open Space would temporarily impact 18 locations and 3,068 individuals. This impact was determined to be significant (Impact 4.9-85) prior to application of the draft Southern NCCP/HCP Planning Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures will result in substantial avoidance with conservation of 105,000 (72 percent) individuals and 9 locations including the *major populations/key locations* in Lower Chiquita canyon that would be conserved. Mitigation Measure 4.9-2 states "Prior to issuance of a grading permit for Planning Area 2, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the key location and major population of southern tarplant in the Chiquita sub-basin have been substantially avoided. Implementation of the Adaptive Management Program (Appendix J) will include monitoring southern tarplant populations, development of management tools to control proliferation of non-native species (including grazing management, prescribed burns, mowing and selective weeding), control of public access and translocation of impacted populations or creation of new populations using seed as set forth in the Plant Species Translocation, Propagation and Management plan (Appendix J-1). The combination of avoidance of the southern tarplant, adaptive management, and translocation of impacted individuals will reduce impacts to the southern tarplant to a level less than significant.

3.1.9.8v Coulter's Saltbush

Theme of Comment: The Draft Program EIR should acknowledge the importance of the population of Coulter's saltbush within the study area.

Response: Implementation of the land uses associated with the proposed project would result in a direct impact on 25 locations of Coulter's saltbush (CNPS List 1B) totaling 478 individuals. In addition, construction of maintenance and infrastructure facilities within the RMV Open Space would temporarily impact nine locations and 51 individuals. This impact was determined to be potentially significant (Impact 4.9-84) prior to application of the draft Southern NCCP/HCP Planning Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures will result in substantial avoidance with conservation of 2,611 (85 percent) individuals and 16 locations including the major population/key location in Chiquita Canyon through avoidance and minimization of impacts of the proposed golf course west of Chiquita Creek. The *important population/key location* north of the treatment plant in Chiquita Canyon would be conserved and the important populations in upper Cristianitos and upper Gabino canyons could be conserved through incorporation of golf course avoidance and minimization features. Mitigation Measure 4.9-3 states "Prior to issuance of a grading permit for Planning Area 2, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the key location and major population of Coulter's saltbush in the Chiquita sub-basin have been substantially avoided." Mitigation Measure 4.9-11 states "Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that important population of Coulter's

saltbush in the Cristianitos sub-basin is protected.” Mitigation Measure 4.9-14 states “Prior to issuance of a grading permit for Planning Area 9, the Project Applicant shall demonstrate to the satisfaction of the County’s Director of Planning Services Department or his/her designee that important population of Coulter’s saltbush in the upper Gabino sub-unit is protected. Implementation of the Adaptive Management Program (Appendix J) will include monitoring of Coulter’s saltbush populations, development of management tools to control proliferation of non-native species (including grazing management, prescribed burns, mowing and selective weeding), control of public access and translocation of impacted populations or creation of new populations using seed as set forth in the Plant Species Translocation, Propagation and Management plan (Appendix J-1). The combination of avoidance of the Coulter’s, adaptive management, and translocation of impacted individuals will reduce impacts to the Coulter’s saltbush to a level less than significant.

3.1.9.8w Many-stemmed Dudleya

Theme of Comments: The Draft EIR should discuss the importance of the potential project impacts on the many-stemmed dudleya.

Response: Implementation of the land uses associated with the proposed project would result in a direct impact on 195 locations of Many-stemmed dudleya (CNPS List 1B) totaling 26,799 individuals. This impact was determined to be significant (Impact 4.9-86) prior to application of the draft Southern NCCP/HCP Planning Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures will result in substantial avoidance with conservation of 33,000 (70 percent) individuals and 175 locations. Of the *major populations/key locations*, 96 percent of the individuals, and 92 percent of location of the Chiquadora Ridge population, 97 percent of individuals and 69 percent of locations of the Upper Gabino/La Paz Canyon population, and 4 percent of the individuals and 8 percent of the Gobernadora population would be conserved. Approximately 69 percent of the locations of the Cristianitos canyon *major population/key location* could be conserved through golf course design features. Of the *important populations/key locations*, 100 percent of the Chiquita Ridge population/locations, 89 percent of the individuals and 85 percent of the locations in the Upper Gobernadora population and 16 percent of individuals and 30 percent of locations of the lower Chiquita Canyon population would be conserved. In the East Talega *important population*, 89 percent of the individuals and 93 percent of the locations would be conserved. Mitigation Measure 4.9-10 states “Prior to issuance of a grading permit for Planning Area 2, the Project Applicant shall demonstrate to the satisfaction of the County’s Director of Planning Services Department or his/her designee that impacts to the key location and major population of Many-stemmed dudleya in the Cristianitos sub-basin is protected.” Mitigation Measure 4.9-13 states “Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County’s Director of Planning Services Department or his/her designee that six known discrete locations of many-stemmed dudleya that are part of the major population in a key location in the Upper Gabino sub-unit are protected.” Implementation of the Adaptive Management Program (Appendix J) will include monitoring many-stemmed populations, development of management tools to control proliferation of non-native species (including grazing management, prescribed burns, mowing and selective weeding), control of public access and translocation of impacted populations or creation of new populations using seed as set forth in the Plant Species Translocation, Propagation and Management Plan (Appendix J-1). The combination of avoidance of the many-stemmed dudleya adaptive management, and translocation of impacted individuals will reduce impacts to the many-stemmed dudleya to a level less than significant.

3.1.9.8x Mud Nama

Theme of Comment: The Draft EIR should include more specific information regarding the size, and relative importance of populations of mud nama within the study area.

Response: Implementation of the land uses associated with the proposed project would result in a direct impact on 2 locations of mud nama (CNPS List 2) totaling 9,500 individuals. This impact was determined to be significant (Impact 4.9-87). Mitigation Measure 4.9-40 addresses translocation of mud nama to other suitable sites on RMV or other open space (i.e., vernal pool on Chiquita Ridge in Ladera Open Space) as set forth in the Plant Species Translocation, Propagation, and Management plan (Appendix J-1). Due to the degraded character of the two artificial ponds proposed for impact that support the mud nama, it is expected that with implementation of the restoration plan there would be a net long-term benefit to the mud nama.

Based on its colonization and persistence in a variety of artificial aquatic features, it is fully expected that translocation of this species to higher quality aquatic features such as the vernal pools on Chiquita Ridge, Radio Tower Road and Tijeras would be highly successful. Restoration/expansion of vernal pool habitat at Fairview Park in Costa Mesa resulted in colonization of the restored area by this species. Glenn Lukos Associates (GLA) botanists have implemented a number of vernal pool restoration programs, including federally listed plants as well as special-status plants and have found that translocation of vernal pool/seasonal pond plants is highly successful given appropriate hydrological conditions. All of the potential translocation sites on the Ranch Plan project site have been subject to sufficient monitoring to establish the presence of suitable hydrology (e.g., many of the receptor pools support the Riverside and/or San Diego fairy shrimp). As noted, with implementation of such a translocation program there would be an increase in sites supporting mud nama as well as an overall increase in individuals and impacts to mud nama would be reduced to a level less than significant.

3.1.9.9 Cumulative Methodology for Biological Resources

Theme of Comments: The Draft Program EIR fails to adequately consider cumulative impacts on biological resources and specifically fails to consider the effect of projects located within the Foothill Trabuco Specific Plan area.

Response: As noted in certain comments, the study area for cumulative impacts to biological resources is the Southern Subregion NCCP planning area. All projects within the study area were evaluated to determine whether or not they might contribute to cumulative impacts on biological resources. The projects evaluated include the projects named by the commenters, i.e., the Saddle Creek/Saddle Crest, Saddleback Meadows, and other projects in the Foothill/Trabuco Specific Plan area. A summary of these projects, including their respective impacts on biological resources, is presented at pages 7-17 through 7-20 of the Draft Program EIR. As noted in the Draft Program EIR, some of these projects have already been the subject of extensive environmental review by the County as part of their project approval process. The U.S. Fish and Wildlife Service, one of the commenters, has also issued a Biological Opinion for the Saddleback Meadows project. The BO concludes that implementation of the identified conservation measures will help this area to continue its function of providing linkage for coastal California gnatcatcher movement and dispersal between core populations within the Southern and Central/Coastal NCCP Subregions of Orange County. As discussed in the Draft Program EIR, the potential impacts of the projects include habitat fragmentation and impacts to coastal sage scrub and wildlife corridors. However, in the case of Saddleback Meadows, those impacts would be reduced to a less than significant level through the proposed mitigation measures.

Measures for Saddleback Meadows include on- and off-site coastal sage scrub mitigation and the incorporation of a wildlife movement corridor into the project's tract map. This corridor would help link the Southern Subregion NCCP study area to the Central/Coastal NCCP area. Furthermore, with regard to the Saddle Creek/Saddle Crest project, a recently announced grant from the federal government in the amount of \$3,000,000 will support the acquisitions of the Saddle Creek property. The acquisitions of Saddle Creek will reduce habitat fragmentations and provide critical habitat and a movement corridor for the gnatcatcher and other wildlife in the Foothill/Trabuco Specific Plan area and in the region.

Other development in the Foothill/Trabuco Specific Plan area (i.e., the Robinson Ridge project), is also described in the Draft Program EIR at page 7-24 to 7-26. Although the environmental review for this project has not yet been completed, a description of potential impacts based on the Notice of Preparation for the project EIR is discussed in the Draft Program EIR for the Ranch Plan. It should be noted that, while some coastal sage scrub could be impacted by project development, the majority of the Robinson Ridge project site is an existing commercial nursery. According to the NOP, it is anticipated that mitigation measures would reduce potential project related impacts to below a level of significance.

Impacts due to the agricultural/nursery operations near Upper Oso Reservoir, which are an existing use, have already been accounted for in the baseline conditions, i.e., impacts have been documented through the NCCP database.

It should also be noted that gnatcatcher connectivity and wildlife movement beyond the boundaries of the Southern Subregion NCCP study area are enhanced by proximity to the Cleveland National Forest and are further benefited by other regional planning programs including the adopted Central/Coastal NCCP, and similar programs that have been adopted in neighboring San Diego and Riverside counties.

As stated in the Draft Program EIR (pages 7-59 and 7-60), only those projects that could affect the overall RMV Conservation Strategy have been evaluated as part of the cumulative biological resources impact analysis. The projects included are those that could conflict with the SRP Reserve Design Tenets, general policies contained in the Draft Planning Guidelines, SAMP/MSAA Tenets, and Draft Watershed Planning Principles, thus contributing to cumulative impacts. Under CEQA, the cumulative impact analysis is to focus on those projects that could affect the same resources as the proposed project or act in combination with project impacts to increase the severity of impacts. The RMV Conservation Strategy has been designed to reduce impacts on biological resources within the project study area to below a level of significance (and has done so, except for a few significant unavoidable impacts) and to present a complementary program to the NCCP program which is anticipated for the larger NCCP study area. Because the Ranch Plan area is the largest remaining private landholding in the NCCP study area, the RMV Conservation Strategy would be the linchpin for the overall conservation strategy for the anticipated NCCP program. It is appropriate that the cumulative impact study focus on those other projects that potentially could act to lessen the effectiveness of the RMV Conservation Strategy.

As also noted in the Draft Program EIR, and as further noted above, past projects within the NCCP study area have been addressed through the baseline condition (i.e., impacts have been documented through the NCCP database) and mitigation is documented through the already protected open space described in Section 4.9 of the Draft Program EIR. With regard to several other projects that are included in the list of probable future projects in Section 7.3 of the Draft Program EIR, it has been determined that their incremental contributions to the cumulative effect on biological resources would not be cumulatively considerable because they would

comply with the requirements of certain mitigation programs designed to avoid or substantially lessen the cumulative problem. These programs include those enacted under the provisions of Section 4(d) of the Federal Endangered Species Act. Pursuant to CEQA Guidelines §15064(h)(3), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located. Projects permitted under the 4(d) permit program and other approved programs would not contribute to the cumulative effect on biological resources in the NCCP study area. See above for discussion of particular projects such as those in the Foothill/Trabuco Specific Plan area.

The projects evaluated in the cumulative biological impact analysis have the potential to contribute to cumulative biological impacts. For example, they either have not yet been permitted or, in the case of Ladera Ranch, they would have a remaining significant unavoidable impact that needs further evaluation in relation to the Ranch Plan conservation strategy. The Prima Deshecha landfill and the Santa Margarita Water District (SMWD) seasonal storage facilities would, along with the proposed project, eventually seek "take" authorization under the anticipated NCCP program. La Pata Avenue could also require take authorization under the anticipated NCCP depending upon the alignment selected and resulting impacts. The SOCTIIP would seek separate approvals from the resource agencies for any take of listed species. The Cleveland National Forest Revised Draft Management Plan (including any of its proposed actions) is technically outside the NCCP planning area but, because of its adjacency to the proposed project, has been included in the cumulative impact discussion.

3.1.10 RECREATION

3.1.10.1 Impacts Associated with Provision of Proposed Parks

Theme of Comments: The Draft Program EIR does not address impacts associated with establishing proposed parks.

Response: The project would provide for the Ranch Mission Viejo Regional Park, a sports park(s), and local parks. Both types of parks, which combined would be a minimum of 82 acres, would be located within the development areas of the Planning Areas. As discussed in Topical Response 3.1.2, the analysis in the Draft Program EIR assumed that the entire area with the development boundaries of each planning area would be disturbed by development for Planning Areas 1 through 8, unless otherwise noted (page 3-23 of the Draft Program EIR). As identified, all construction staging, grading, and fuel modification for development would also occur within the limits of development for each planning area. Since the local parks, including sports parks, would be constructed within the development areas, the impacts associated with mass grading and impact to resources are assumed as part of the impacts of the project. When specific development plans are proposed if any additional impacts beyond those addressed in the Program EIR are identified, additional environmental documentation would be required to address those impacts (see Topical Response 3.1.1.2 regarding the use of a Program EIR to evaluate all foreseeable impacts and subsequent approvals required as part of the project processing.)

The Rancho Mission Viejo Regional Park would be located within Planning Areas 1 and 9. The park would predominately be a passive park; however, a riding and hiking trail and a regional bike path would be provided along San Juan Creek. The impact of these two active components of the park has been addressed in the pertinent sections of the Draft Program EIR.

3.1.10.2 Compliance of Local Park Ordinance

Theme of Comments: The project does not comply with the Local Park Ordinance.

Response: Project Design Feature 4.12-8 clearly states: "Local park sites will be provided in accordance with the provisions of the Orange County Local Park Code as contained in the Park Implementation Plan for the Ranch Plan PC Area. Park sites will also be identified at the Master Area Plan level per Section II.B.3.a.6." The Draft Program EIR identifies that the project would be required to comply with the Local Park Ordinance and identifies the project, at the requested density, would have to provide an estimated 82 acres of local parkland (page 4.12-11). It further identifies the Rancho Mission Viejo Regional Park would not be applied to the local parkland requirements. Dedication of parkland is tied to the approval of tentative tract maps, which the applicant is not requesting at this time. However, Standard Conditions of Approval for subsequent levels of approval were included in the Draft Program EIR to allow the reader to understand the requirements the project would routinely have to comply with. Standard Condition 4.12-1 applies to Local Park Code compliance. As is evident with a review of the standard condition, the subdivider would be required to make an irrevocable offer of fee dedication for local park, grade the public park site(s), to provide a minimum acres of creditable local park land and secure the park site against erosion, and stub out sewer, water, gas, electricity, telephone, storm drain, etc., connections to the property lines. The provision of a sports park(s) was identified as an amenity because of the demand for this type of facility. It was not intended, nor identified in the Program EIR as the only means of fulfilling the Local Park Code requirements.

3.1.10.3 Impact to Existing Parks

Theme of Comments: The Draft Program EIR does not address impacts to existing parks.

Response: The potential impact to existing parks was addressed in Section 4.12, Recreation, as well as Section 4.10, Aesthetics and Visual Resources. On page 4.12-12, under the heading "Effect on Recreational Use of Existing Parks," the potential impact on each of the recreational facilities in the area is discussed. Though indicated in one of the comments, the Draft Program EIR does not purport to find that none of the project's future residents would use existing recreational resources in the region. It is acknowledged that it is likely that a resident from the Ranch Plan project will visit an existing park. Similarly, it is likely that residents from other areas will visit parks established for the Ranch Plan area. However, in both cases the level of attendance would not be expected to result in a physical deterioration of the parks. The Local Parks Code, which has been drafted in compliance with the Quimby Act, is intended to provide for comprehensive local park planning and programming (i.e., acquisition, development, operation, maintenance, and financing) (see Draft Program EIR page 4.12-5). By meeting the requirements of the Local Park Code, the proposed project would be providing sufficient park facilities to meet the demand generated by the project. As indicated in the Draft Program EIR, the project would provide a minimum of 82 acres of local parks. A sports park(s) is proposed as part of the project, which would provide for facilities, such as ball fields, which are often in great demand.

For regional parks, the project would increase usage of nearby facilities because it would introduce more people into the region. However, it would not result in the physical deterioration of the recreational facilities (threshold of significance). As part of General Plan, the Master Plan of Regional Parks has been designed to meet the needs associated with the projected growth in the County. The countywide regional park system has been designed to serve the existing and future needs for the residents of Orange County. The Ranch Plan would introduce fewer people to the region than assumed in the adopted growth projections, which have been incorporated into the assumptions of the General Plan.

An evaluation of the attendance numbers at the regional parks in the vicinity of the project and the population for the County, as a whole, and in the south Orange County area. The OCP-2004, year 2000 the population for Orange County, which is based on the 2000 census, was 2,846,289. In 2003, the annual attendance at Ronald W. Caspers Regional Park, General Thomas F. Riley Regional Park, and O'Neill Regional Park was 72,000, 28,000, and 104,000, respectively. This equates to an annual average of 71.6 guests at these parks per 1,000 persons on a countywide basis. The Ranch Plan is projected to support a population of 32,823 at buildout. Assuming a similar rate of attendance, the proposed Ranch Plan project would be expected to 2,350 visits to these three regional parks annually or a 1.15 percent increase. Based on discussions with Bruce Buckman at the County of Orange Harbors, Beaches and Parks, there is not a maximum number of people allowed into these regional parks at any one time because the parks are large enough to accommodate the demand. Though a capacity figure has not been established for Ronald W. Caspers Regional Park, General Thomas F. Riley Regional Park, and O'Neill Regional Park, the County has not had to turn away visitors from these facilities due to lack of capacity. Given the size of the parks, overuse, which would result in the deterioration of the park facilities or resources, has not been an issue.

3.1.10.4 Cumulative Recreation Impacts

Theme of Comments: The Draft Program EIR did not address the cumulative recreation impacts should the Far Eastern Corridor ("FEC") Alternative be selected for the SR-241

extension. This alignment would pass through both the Donna O'Neill Conservancy and Subunit #1 of the San Onofre State Beach. Should California Department of Parks and Recreation abandon management of the inland subunit of San Onofre State Beach there would be pressure on the remaining recreational resources in the region.

Response: The Draft Program EIR does address cumulative recreation impacts associated with the project. Specifically, the Draft Program EIR states:

"Direct or indirect impacts to specific recreational facilities must also be considered. This would be site-specific and only consider cumulative impacts that have the potential to impact the same recreational facilities as the Ranch Plan. To this end, all the toll road alternatives of SOCTIIP have the potential for cumulative impacts. Both the Ranch Plan and the toll road alternatives would have an effect on the inland portion of San Onofre State Beach as well as the Donna O'Neill Land Conservancy and the proposed San Juan Creek Regional Park. Development of Planning Area 8 would be visible from the inland portion of San Onofre State Beach, though it would have no direct impacts related to physical deterioration of the park. The Ranch Plan would extend the urban development that is adjacent to the park. This was determined to be an insignificant impact because of the distance of Ranch Plan development from the park facilities and because of other urban components in the area (development in the City of San Clemente and I-5) further reducing the likelihood of the Ranch Plan's population's use of the park. The nature of the impacts associated with the toll road alternatives would be very different because they would have a direct impact on San Onofre State Beach, the Donna O'Neill Land Conservancy and the proposed San Juan Creek Regional Park. Considering the nature of the two projects, the Ranch Plan would not contribute to a significant cumulative impact on the inland portion of San Onofre State Beach, the Donna O'Neill Land Conservancy, or the proposed San Juan Creek Regional Park because it would not contribute to, or accelerate, a substantial physical deterioration of the facilities" (page 7-104).

Should the California Department of Parks and Recreation decide not to manage the inland portion of San Onofre Beach for the remainder of the lease there would potentially be an incremental increase for demand for the trails and camping facilities that are currently met by that portion of the park. However, there is no component of the Ranch Plan project that would result in similar type impacts (i.e., contribution of loss of State Beach or loss of trails and camping facilities). Therefore, the Ranch Plan would not contribute on a cumulative basis to the loss of these resources. The project would provide for trails, which could help offset the loss to that recreational resource at San Onofre Beach.

Theme of Comments: Another commenter expressed concern over the effects of cumulative development on San Clemente's recreational resources, which it said the Draft Program EIR did not analyze.

Response: The Draft Program EIR concluded that it is unlikely that substantial numbers of residents from the Ranch Plan area would frequent these community parks because similar facilities are planned for the Ranch Plan area, and Ranch Plan residents would be more inclined to use the parks within their own development. The Draft Program EIR also examined the issue of cumulative impacts in Section 7.4.12, and concluded that cumulative projects and growth would result in an increased demand for recreational facilities, but such impacts would not be significant because all of the projects that propose development of new residential units are required to either provide parkland or pay in-lieu fees so that parkland can be acquired, consistent with state law and General Plan and local ordinance requirements.

With regards to the potential impact on the local beaches, the beaches in California are intended to serve the entire population of the state, as well as visitors. The Public Resources Code 30001.5(c) identifies one of the goals of the state for the coastal zone is to "Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners." In 1995 there were approximately 566 million visits to California's coast, with state residents accounting for 85 percent of those trips. The California Department of Parks and Recreation administers approximately 260 miles or 23 percent of coastline for public recreational activities. State parks in the area include San Onofre State Beach, Doheny State Beach and San Clemente State Beach. The increased usage of the beaches is a function of an increase in population of the state and specifically of southern California. The project is within the growth projections for the area.

3.1.11 HAZARDS AND HAZARDOUS MATERIALS

3.1.11.1 Mitigation of Impacts from Hazardous Materials within Planning Area 8

Theme of Comments: The Draft Program EIR fails to adequately mitigate impacts from hazardous materials. The Draft Program EIR fails to consider the potential for soil, groundwater, and surface water contamination from known and potential sources of hazardous waste in Planning Area 8.

Response: The Draft Program EIR does in fact consider the potential for soil, groundwater, and surface water contamination from known and potential sources of hazardous waste in Planning Area 8. Numerous studies and investigations have documented these issues, and have indicated that TRW-Northrop Grumman Corporation (TRW-NGC) have historically taken a proactive, environmentally responsible approach to regulatory compliance and, where needed, corrective action. Correspondence from TRW-NGC is provided as Appendix D to the Responses to Comments. Prior to lease termination in 2018, a comprehensive facility closure plan will be prepared to document, investigate, and, if required, remediate, any significant impacts to the property resulting from operations at the Capistrano Test Site (CTS). This process will include testing for known or potential chemical compounds of concern including N-nitrosodimethylamine (NDMA, EPA Method 1425C or equivalent). This will occur before grading activities or the planned development of Planning Area 8; see Mitigation Measure 4.14-12.

Background

Northrop Grumman Space Technology (NGST) has operated the Capistrano Test Site since 1963. The facility consists of a 2,770-acre research and development facility that currently employs approximately 60 people. Less than 10 percent of the total acreage is developed and the remainder is untouched open land. During the 1960s and 1970s, the facility was used for development and testing of the Lunar Module Descent Engine and the Thor Delta rocket. Other past research activities included chemical laser development in the 1970s; development of advanced techniques for burning coal in the 1990s; and testing of components for advanced space communications systems. The facility currently performs rocket engine, high-energy laser, and space communication systems testing.

Previous Investigations Regarding Potential Contamination

In November 1999, the U.S. Air Force produced a report, entitled "Environmental Baseline Survey for Three Sites at Capistrano Test Site, CA" regarding a Phase I Baseline Survey conducted at the Capistrano Test Site. The Baseline Survey involved an assessment of approximately 75 percent of all developed areas at the Capistrano Test Site. These areas were operated on behalf of the Air Force for a project known as the Space Based Laser. The Baseline Survey involved a records search, interviews, and a visual inspection of the property. The records reviewed included environmental restoration and compliance reports, audits, surveys, inspection reports, real estate records, and aerial photographs. The conclusion reached by the Air Force was that the Capistrano Test Site areas surveyed should be listed as "Category 1," which is defined in the Baseline Survey as meaning "Areas where no release or disposal of hazardous substances or petroleum substances have occurred (including no migration of these substances from adjacent areas)."

Chemical inventories from the TRW-NGC site have documented the storage of hydrazine and monomethylhydrazine (MMH) on the property. In addition, the 1999 Air Force Environmental

Baseline Study lists the storage of Aerozine-50 on-site at the Hazardous Fuel Storage Facility. Aerozine-50 is a mixture of hydrazine and 1,1-dimethylhydrazine (UDMH), which is cited by Commenter 57 as a potential source for NDMA. There have been no documented releases or spills of Aerozine-50 at the Capistrano Test Site.

While no sampling was performed during the 1999 Air Force Environmental Baseline Survey, the Air Force subsequently performed soil sampling of Space Based Laser test areas at the Capistrano Test Site in June 2002. A contractor, Equipose, working on behalf of the Air Force, obtained 53 soil samples from 14 locations within the area of the Capistrano Test Site used for the Space Based Laser project. Borings were conducted down to 20 feet below grade surface. Groundwater was not detected in any of the borings and was not sampled.

The samples collected by the Air Force were analyzed for the following substances: volatile organic compounds (VOCs); semi-volatile organic compounds (SVOCs); polynuclear aromatic hydrocarbons (PAHs); polychlorinated biphenyls (PCBs); priority pollutant metals; hydrocarbons; volatile fuel hydrocarbons, including benzene, toluene, ethylbenzene, xylenes, and methyl-tert-butyl ether; and hydrazines, including hydrazine, methylhydrazine, and 1,1-methylhydrazine. The report concluded that most of the VOCs and SVOCs, and all of the PAHs, PCBs, hydrazines, volatile fuel hydrocarbons, BTEX, MTBE, selenium, and silver tested for were not detected above their respective analytical method detection limits in any of the analyzed samples. Certain VOCs, SVOCs, and metals were detected above analytical method detection limits. However, the report concluded that none of the constituents of concern were detected above the Preliminary Remediation Guidelines established by the U.S. EPA. While the report indicated that "chemical-like" odors were detected in PID samples, the report concluded that the odor was the result of the presence of water vapor or some interference other than the presence of chemicals. The report further concluded that the Space Based Laser operations had not adversely impacted soil at the CTS facility.

While specific testing for either 1,1-dimethylhydrazine (UDMH) or nitrosodimethylamine (NDMA), was apparently not conducted in the above-referenced soil sampling activity, it is NGST's position that the presence of such chemicals is highly unlikely based upon the test results from the 2002 Air Force investigation. Further, based upon review of historical information, there has been only very limited storage and use of Aerozine 50 at the Capistrano Test Site. Current chemical records indicate that a partially full 55-gallon drum of Aerozine 50 is in the inventory at the Capistrano Test Site.

Background on NDMA

According to the California Department of Health Services (CDOHS), and National Toxicity Program (NTP), NDMA is used primarily as a research chemical. Prior to April 1976, the compound was used as an intermediate in the electrolytic production of 1,1-dimethylhydrazine, a storable liquid rocket fuel containing approximately 0.1 percent NDMA as an impurity. Other uses of NDMA include the control of nematodes, inhibition of nitrification in soil, plasticizer for rubber and acrylonitrile polymers, in active metal anode-electrolyte systems (high-energy batteries), in the preparation of thiocarbonyl fluoride polymers, and as a solvent in the fiber and plastics industry, an antioxidant, a softener of copolymers, and an additive to lubricants. It has been reported in foods, beverages, drugs, and tobacco smoke and to be an air and water contaminant. According to DOHS, NDMA has also been found to be a byproduct of drinking water treatment (i.e., chlorination).

NDMA has caused cancer in laboratory animals, and is classified by U.S. EPA as a probable human carcinogen. In 1987, NDMA was added to the list of chemicals known to the state to

cause cancer [Title 22, California Code of Regulations, Section 12000], pursuant to California's Safe Drinking Water and Toxic Enforcement Act of 1986.

The potential for soil contamination is generally limited to the source area, which may be a storage or testing facility, thus greatly reducing the possibility for direct human contact. These areas are usually mitigated through source removal (typically excavation and off-site treatment/disposal). The U.S. EPA has published a Preliminary Remedial Goal (PRG) for residential soils of 9.5 micrograms per kilogram (ug/kg) for NDMA. However, due to the mobility of the compound in the subsurface environment, NDMA has been considered a greater threat to groundwater, where the compound may migrate over larger geographic areas, potentially impacting downstream drinking water supply wells, if present. According to DOHS, NDMA historically has not been considered a common drinking water contaminant, and it has no state or federal drinking water standards (maximum contaminant levels, MCLs). In the absence of an MCL, DHS uses a drinking water "action level" for the protection of public health in drinking water supplies. This action level is 0.010 micrograms per liter (ug/l), or 10 parts per trillion for NDMA.

To safeguard the drinking water supply, DOHS provides the following guidance if the NDMA action level is exceeded:

Requirement for Local Governing Body Notification. If NDMA in a drinking water well exceeds the action level, notification of local governing bodies is required. Section 116455 of the California Health and Safety Code requires a public water system, whenever a well that is used as a drinking water source for a public water system is discovered to contain (or is closed because it contains) a contaminant in excess of a MCL or an action level, to notify the governing body of the local agency in which users of the drinking water reside (e.g., the city council or county board of supervisors) within 30 days of the discovery or closure.

Recommendation for Source Removal

If NDMA in a drinking water source exceeds 0.2 µg/L, DHS recommends that the source be removed from service. This concentration corresponds to a 10^{-4} cancer risk, the upper bound of the risk range considered "acceptable" by regulatory agencies.

Recommendation for Consumer Notice

DHS recommends that the utility inform its customers and consumers as soon as is feasible about NDMA's presence and its potential for adverse health effects. DHS recommends that whenever such a public "right-to-know" notice occurs as a result of exceeding a drinking water action level, it should be provided to customers and to the water-consuming population in the affected area that would not directly receive such information, including renters, workers, and students.

Where NDMA has been encountered in drinking water, effective treatment options have been developed to address the reduction of NDMA to acceptable levels. The Expert Panel Final Report (2001) on the Aerojet Facility in Rancho Cordova, California, indicates that advanced oxidation processes have been successful in reducing NDMA concentrations several orders of magnitude to a treatment goal of 20 nanograms per liter (20 parts per trillion). The oxidation process was part of a treatment train, which included air stripping, ultraviolet light (UV)/hydrogen peroxide treatment, and polishing with granular activated. UV light appears to be particularly effective in the breakdown of NDMA.

Wastewater Discharge

Commenter 57 specifically compares the Capistrano Test Site with the Boeing and NASA facilities in regard to the need for a NPDES permit. The Capistrano Test Site does operate several different systems for the control of process or cooling water; sanitary sewage; and stormwater. However, as described below, none of these activities require an NPDES permit.

The Capistrano Test Site operates multiple process and/or cooling water systems at the facility. These systems replaced seven surface impoundments closed under Regional Water Quality Control Board oversight in 1988. The process and cooling water systems at the Capistrano Test Site are semi-closed loop systems in which cooling water is recycled by placement into holding tanks until it is required for further use related to testing. When water levels exceed holding capacity, the excess water is transported to a local Publicly Owned Treatment Works for disposal. Any sludge produced in the system is properly disposed off-site at permitted Treatment, Storage, and Disposal facilities. The Capistrano Test Site does not discharge process-cooling water through the septic system to the leach fields.

Domestic or sanitary wastewater is handled through a variety of methods. The RWQCB has issued Waste Discharge Requirements for the Disposal of Treated Domestic Sewage (surface irrigation) for one secondary treatment pond operated at the facility. This pond collects overflow from a septic tank serving several buildings at the Capistrano Test Site and is limited to discharging no more than 3,000 gallons per day. Monitoring and reporting activities are performed regarding the pond pursuant to requirements imposed by the RWQCB. Discharges from the pond occur primarily during the rainy season. The system has had an average discharge of less than 100 gallons per day over the last three years and is regularly inspected by the RWQCB. Other domestic or sanitary wastewater systems in operation at the Capistrano Test Site include nine septic systems, seven leach fields, and one collection tank. The septic tanks and the collection tank are periodically pumped out, and solids/sludge are transported to a publicly owned treatment work (POTW).

Stormwater at the Capistrano Test Site is managed pursuant to a Stormwater Best Management Practices Plan developed in June 1992 under the oversight of the County of Orange Health Care Agency, Environmental Health Division and the Water Quality Management Plan developed as a condition to the Conditional Use Permit issued by the Orange County Planning Commission in 1993.

With the exception of the limited sanitary water discharge discussed above, there are no surface water discharges from operations at the Capistrano Test Site. The Capistrano Test Site, therefore, comes within the SIC Code 8734 (Research and Development Laboratories) exclusion from the NPDES permit requirement under 40 Code of Federal Regulations Section 122.3(c). Contrary to the statements made in Commenter 57, the Capistrano Test Site is not required to obtain an NPDES permit.

U.S. EPA Inspection

Commenter 57 discusses the findings by the U.S. EPA resulting from its inspection of the Capistrano Test Site in October 2002. While this inspection was the first conducted by the U.S. EPA at the Capistrano Test Site, the facility is subject to regular inspection by State of California agencies such as the Department of Health Services, the Department of Toxic Substances Control, the Regional Water Quality Control Board, and the South Coast Air Quality Management District. Further, the facility is subject to regular inspections by local agencies

such as Orange County Fire Authority, Hazardous Materials Disclosure Office, and the County Of Orange Health Care Agency, Environmental Health Division.

NGST acted immediately to address the concerns raised by the U.S. EPA and was able to demonstrate compliance measures to the agency for all of the issues raised in the inspection. It is NGST'S position that none of the issues identified presented a risk to the public or the environment.

3.1.11.2 Mitigation of Impacts from Hazardous Materials Associated with Ford Aerospace

Theme of Comments: The Draft Program EIR does not mention hazardous and radioactive waste associated with operations at the former Ford Aerospace Site.

Response: Weapons testing at the Ford Aerospace Site involved the use of solid propellants, explosives, and depleted uranium ammunition. This testing was performed during development of weapons systems including the M1 Abrahms Tank and the Bradley Fighting Vehicle. Engine testing for the sidewinder missile also reportedly occurred at the facility. The use of chemicals/materials related to testing was confined to specific areas of the site, comprising a small percentage of the total site area. These areas were the subject of numerous investigations and remedial actions, resulting in regulatory closure³⁹ from the California Department of Toxic Substances Control (DTSC). This included testing and evaluation of petroleum hydrocarbons, volatiles, semivolatiles, metals, explosives (including RDX and HMX), and radioactive debris. However, the potential presence of perchlorate residue was not addressed during these investigations. The storage of potassium perchlorate has been documented at the site, although no documentary evidence of ammonium perchlorate storage has been encountered. Perchlorate is both a naturally occurring and man-made anion commonly associated with the solid salts of ammonium, potassium, and sodium perchlorate. These salts are highly soluble in water, and because perchlorate sorbs poorly to mineral surfaces and organic material, it can be very mobile in surface and subsurface aqueous systems. Perchlorate and its salts (e.g., ammonium perchlorate) are used in solid propellant for rockets, missiles, and fireworks. Perchlorate has a number of industrial uses, and it's used in matches, flares, pyrotechnics, ordnance, and explosives. A propellant storage facility and an "open burn area" (used for ordnance disposal) were documented at the site.

Wastes from the manufacture and improper disposal of perchlorate-containing chemicals are increasingly being discovered in soil and water throughout California. As with NDMA, the risk of perchlorate contamination on soil is generally limited to the source areas (storage, testing, or burn areas). The U.S. EPA has established a Preliminary Remedial Goal (PRG) for residential soils of 7.8 milligrams per kilogram (mg/kg) for perchlorate. Source removal is the most effective means of mitigation.

According to DOHS, results of well monitoring show perchlorate detected in more than 300 drinking water sources, primarily wells and mostly in the counties of Los Angeles, San Bernardino, and Riverside, but also in the Colorado River and Santa Clara County areas. Like NDMA, there is no Maximum Contaminant Level (MCL) published for perchlorate. Until the

³⁹ Regulatory closure means that "no further action" is required to be taken at the Explosive Ordnance Disposal (EOD) facility. The Department of Toxic Substance Control (DTSC) had determined that existing levels of chemical residue, where present, were below current standards established by background (i.e., naturally occurring) concentrations mean plus two, or the health based levels established in the DTSC-approved site specific risk assessment prepared in March 1995, which was prepared for unrestricted land use.

perchlorate MCL is in place, DOHS will use an action level to protect consumers. The action level is currently 6 micrograms per liter (µg/L)

Treatability studies at the Aerojet Facility in Rancho Cordova, California, have demonstrated the effectiveness of enhanced biologic processes in breaking down perchlorate to chloride ions. The biologic process, which consisted of a fluidized bed of granular activated carbon, operated as a fixed-film reactor, with ethanol as a carbon source, was able to reduce perchlorate several orders of magnitude to below laboratory detection limits. This process was enhanced in the treatment train by polishing with granular activated carbon.

As this planning area is not scheduled for redevelopment for several years, a specific plot plan indicating proposed land uses relative to the former operations areas has not been developed. Therefore, it is somewhat premature to prepare a site-sampling plan at this time. Once the layout of the specific development areas have been determined, a sampling plan can be prepared that considers not only property use but also the historic operations in a given area and the various potential exposure risks to future residents. This sampling plan will be prepared and submitted to the Orange County Health Care Agency and San Diego Regional Water Quality Board for review and comment. This plan shall include random soil sampling of suspected source areas, as well as testing of existing groundwater supply wells for residual perchlorate (EPA Method 314.0) and radionuclides (i.e., gross-alpha and gross beta, EPA Method 900.0). The results of this testing will be evaluated for potential health hazards and forwarded to the regulatory agencies for review and comment. Sample results exceeding applicable risk-based concentrations will be mitigated through implementation of a remedial action plan, approved by the regulatory agencies.

3.1.11.3 Wildland Fires and Consistency between Wildland Hazards and Public Services and Facilities Evaluations

Theme of Comments: The Draft Program EIR does not adequately address wildland fire impacts. The analysis did not include evaluation of topography and the interplay with the Santa Ana winds. Secondary access, as an alternative emergency access route in the event of a wildland fire, is required for Planning Area 9.

Response: The Draft Program EIR did take into consideration the vegetative types and topographic conditions of the project site in evaluating potential impacts associated with wildland fires. As indicated on page 4.14-25 of the Draft Program EIR, fuel modeling was done as part of the analysis of the risks associated with the project site. Detailed information on the modeling and factors considered are included in the *Wildland Fire Management Plan* (Appendix J-5 of the Draft Program EIR), which is a component of the larger Adaptive Management Plan. The National Fire-Danger Rating System (NFDRS) fuel models, which are used in the BEHAVE fire behavior modeling computer program done for the project, provides fire behavior outputs such as intensity, rate of spread, flame length, fire size, and perimeter estimates under varying weather conditions such as dead fine fuel moisture, live fuel moisture, mid-flame wind speed, percent slope and direction of fire spread based on a single, specific ignition. Specifically requested by the commenter was topographic information, which is visually depicted on Figure 1-3A of the *Wildland Fire Management Plan*.

The *Wildland Fire Management Plan* as a component of the project. This is an important consideration because it aims to meet fire objectives while maintaining and increasing net habitat values. Implementation of the Plan would provide measures intended to reduce the incidence and severity of wildfires (e.g., the use of prescribed burns to reduce fuel loads) and includes a "Strategic Fire Suppression Plan" intended to guide fire suppression actions that

protect sensitive habitat areas from repeated wildfires (e.g., by identifying high priority "aggressive" fire suppression areas) and that minimize physical impacts from fire protection activities (e.g., the use of heavy fire suppression equipment) (page 4.14-25 of the Draft Program EIR).

Several commenters identified that it appeared the Draft Program EIR made conflicting conclusions between in Section 4.14, Hazards, and Section 4.15, Public Services and Facilities. Though related, these topics are somewhat different. The discussion in Section 4.14, Hazards, is focused on the projects potential impact associated with exposure of people or structures to wildland fires or interfering with an emergency response plan. Section 4.15, Public Services and Facilities, evaluated the projects ability to provide fire protection services. With regard to the wildland fires, while the project would increase the number of people in the area, the project has a proactive program for managing the wildland fires through the implementation of the *Wildland Fire Management Plan*. With implementation of the Plan, the wildland fire impacts would be reduced to less than significant. Section 4.15, Public Services and Facilities, evaluates whether the project provides sufficient facilities to serve the community and meet adopted performance standards. Though a Secured Fire Protection Agreement is required, without the plan being fully negotiated, uncertainty remained if performance standards would be met; therefore, the Draft Program EIR found there would still be a significant impact with respect to fire access to those areas described in the Draft Program EIR (page 4.15-9 of the Draft Program EIR). Additionally, a commenter identified apparent inconsistencies in how roadway widths were considered in wildland fire hazard and fire protection service discussions. The comment cites "the Draft Program EIR states that '[t]he width and grade for all roadways would be constructed to County and OCFA requirements.' Draft Program EIR at 4.14-24. However, the fire protection services analysis states that 'access to estates and casitas within Planning Area 9 would be insufficient for OCFA purposes.' Draft Program EIR at 4.15-8." The commenter is directed to the page 4.15-9 of the Draft Program EIR, which states, "Mitigation Measure 4.15-2 would reduce Impact 4.15-4 by coordinating with OCFA on roadway design. Though Verdugo Road would not comply with County Standard Plans, the 28-foot roadway width may be sufficient for OCFA dependent on the number of units taking access, alternative access points and other design factors. Regardless, through the Secured Fire Protection Agreement the OCFA requirements would need to be met. It is possible that the impacts associated with necessary roadway improvements in Planning Area 9 would exceed the level of impact assumed in this Program EIR. Should that occur, supplemental CEQA documentation would be required. With implementation of the mitigation program, impacts pertaining to adequate fire access would be reduced to a level of less than significant."

3.1.12 PUBLIC SERVICES AND FACILITIES

3.1.12.1 Water Supply Assessment

Theme of Comments: The Draft Program EIR and the June 2003 Water Supply Assessment prepared by SMWD indicate that the majority (i.e., approximately 70 percent) of the domestic water supplies available to serve SMWD's customers—including the Ranch Plan—will be provided by the Metropolitan Water District of Southern California (MWD). In light of ever-increasing demands upon MWD water supplies, potential water restrictions resulting from long-term drought conditions, and continuing litigation/disputes concerning the availability of imported water supplies from the Colorado River Aqueduct and the State Water Project, commenters have questioned whether long-term reliance upon MWD water supplies is reasonable/appropriate.

Response: Section 4.15.4 of the Draft Program EIR identifies the estimated water demands for the Ranch Plan and analyzes said demands in the context of (i) existing and ultimate projected water demands within the service area of the Santa Margarita Water District (SMWD) and (ii) total projected water supplies available to meet the proposed Ranch Plan project's water demands plus the water demands associated with existing and planned futures uses in SMWD's service area. As discussed in Section 4.15.4 (and as more particularly described in the Water Supply Assessment [WSA] attached to the Draft Program EIR as Appendix K), total projected water supplies available to SMWD over the next 20 years (based on normal, single dry, and multiple dry year conditions) will be sufficient to meet/exceed the domestic and non-domestic water demands of both the Ranch Plan and all existing and anticipated/approved new development within SMWD's service area.

Section 4.15.4 identifies SMWD's relationship with the MWD and describes SMWD's reliance upon MWD to supply sufficient amounts of water to meet SMWD's resale obligations. Certain commenters have questioned the reliability of MWD's long-term supply projections and, ultimately, the ability of SMWD to meet the needs of its existing and future customers (including the Ranch Plan), because of (i) MWD's reliance upon water derived from the State Water Project (SWP) and the Colorado River Aqueduct (CRA) to meet the demands of its member agencies and (ii) the perceived vulnerability of these water resources due to drought, infrastructure limitations, and legal challenges.

On September 13, 2004, MWD prepared/submitted a letter to the County of Orange concerning the Draft Program EIR and the WSA (see Appendix E of the Responses to Comments document). In relevant part, the letter directly responds to the water supply reliability challenges posited by certain of the commenters, and signifies MWD's concurrence with the conclusions reached in the Draft Program EIR and the WSA (i.e., based on substantial evidence in the record, sufficient water supplies will be available to satisfy the demands of the Ranch Plan). As reflected in MWD's letter, the individual comments questioning the reliability/availability of long-term water supplies to support the proposed project reflect a fundamental misunderstanding concerning MWD's water resources and its long-term integrated planning process. The following paragraphs are intended to clarify these misconceptions and to resolve all outstanding concerns relative to water supply sufficiency/availability.

Although the State Water Project and Colorado River Aqueduct represent important elements of MWD's water supply system, these resources do not represent the exclusive components of MWD's water program. As a result of the 1987 to 1992 drought, MWD recognized the need for water supply diversification and began to objectively and programmatically reduce its dependence upon State Water Project and Colorado River Aqueduct deliveries. Beginning in

1993, MWD and its member agencies set about to establish an integrated water supply plan for southern California. The result of the process was the adoption and publication of the 1996 Integrated Resources Plan (IRP), a program that established specific targets, funding, and implementation goals for the development and preservation of water resources available to MWD. More specifically, the Integrated Resources Plan provided a 20-year resource plan that sought to achieve a balance between locally developed resources and imported supplies by calling for investments in water conservation, recycling, groundwater treatment storage, and water transfers.

By virtue of the implementation of the 1996 Integrated Resources Plan, MWD has markedly reduced its dependence on imported water supplies and has increased both the amount and reliability of water supplies available to MWD's member agencies. See *MWD Integrated Water Resources Plan – 2003 Update* at 6-7, 16, 34-40, 55-56 and 62-63; *MWD Annual Progress Report to the California State Legislature (February 2004)* at 6-10, 17-29 and 33. For example, Integrated Resources Plan water recycling programs generated 204,000 acre-feet of usable water in fiscal year 2003, with groundwater recovery programs producing another 56,000 acre-feet. Joint water conservation activities conducted with the Imperial Irrigation District in 2003 resulted in the recovery of another 105,130 acre-feet of water. Additionally, MWD has, to date, entered into several agreements and expended millions of dollars for the purpose of developing and expanding conjunctive use and water storage programs in order to reduce the burdens and impacts associated with future supply shortfalls. One of MWD's primary Integrated Resources Plan goals and achievements has been the expansion of regional surface and groundwater storage capacity to provide a storage volume of nearly three million acre-feet that may be called upon in times of shortage and drought.

In November 2001, the MWD board of directors adopted a work plan to update the 1996 Integrated Resources Plan to (i) focus on changed conditions and (ii) extend the planning horizon through 2025 in order to comply with new water planning legislation (i.e., SB 221 and SB 610). Consistent with the work plan, MWD identified and analyzed a series of changed conditions that had the potential to affect (both positively and negatively) MWD's resource mix targets and long-term supply reliability. Notable among the identified changes were (a) higher conservation savings by member agencies, (b) revised goals for the State Water Project and Colorado River Aqueduct, (c) more stringent water quality regulations, and (d) evolving resource implementation risk. Using the results of this analysis, MWD staff prepared a revised Integrated Resources Plan that modified, as appropriate, the individual elements of the 1996 Integrated Resources Plan to demonstrate that the program would provide 100 percent supply reliability through 2025.

In 2003, the MWD board of directors adopted the Integrated Resources Plan update. In addition to maintaining the balance between imported and local supplies, the update increased the regional goal for seawater desalination to 150,000 acre-feet per year and added a water supply planning buffer to offset concerns related to water quality and the chance that planned projects may not be realized. The planning buffer calls for MWD to develop 500,000 acre-feet of supplies in addition to the resource targets by 2025. Development of the buffer will be split equally between local sources (i.e., recycling, groundwater recovery and desalination) and imported sources (i.e., Central Valley/State Water Project storage and transfer). The supply buffer is consistent with MWD's practice of developing supplies that are available at least 10 years in advance of need.

In preparing the 2003 Integrated Resources Plan update, MWD established new goals for State Water Project and Colorado River Aqueduct supplies:

State Water Project: The original State Water Contract for the State Water Project called for an ultimate delivery capacity of 4,230,000 acre-feet, with MWD holding a contract for 2,011,500 acre-feet. For several reasons (including infrastructure issues and environmental limitations), State Water Project deliveries to MWD have never approached the MWD contract amount. With the adoption of the CALFED Policy Principles in August 1999, MWD developed new strategies and goals for increasing overall yield on the State Water Project. In addition to committing MWD to pursue water quality objectives, the Principles call for the development of a 650,000 acre-foot minimum dry-year supply from the State Water Project by 2020. MWD's policy objectives also include an average 1,500,000 acre-feet of supply to MWD, exclusive of transfers and storage programs along the State Water Project.

Colorado River Aqueduct: MWD holds a contract with the federal government that provides a basic apportionment of 550,000 acre-feet per year of Colorado River water. Historically, MWD has also possessed a priority for an additional 662,000 acre-feet per year depending upon the availability of surplus supplies. Based on historical yield data and anticipated demand projections, the 1996 Integrated Resources Plan set a target resource goal for the Colorado River Aqueduct of 1,200,000 acre-feet per year. Subsequent thereto, the MWD Board revised its Colorado River policy and increased the annual target by 50,000 acre-feet. The 2003 Integrated Resources Plan update incorporates this revised long-term target of 1,250,000 acre-feet per year to meet regional demands when needed. MWD also needs these supplies to manage regional storage conditions and water quality. MWD recognizes that, in the short-term, programs are not yet in place to provide the full target, even with the adoption of the 2003 Quantification Settlement Agreement (QSA) (see pages 4.15-24 to 4.5-25 of the Draft Program EIR). Notwithstanding, the QSA provides a solid foundation towards developing the programs that will help accomplish the long-term Colorado River Aqueduct target. Notable elements of the long-term program include the IID/San Diego County Water Authority Transfer, the Coachella and All-American Canal Lining programs, the IID/MWD Conservation Program, the Palo Verde Land Management and Crop Rotation Program, and the Hayfield Groundwater Storage Program. Collectively, these programs are projected to provide up to 540,000 acre-feet of dry year deliveries. Other programs that could be developed by 2025 include groundwater storage programs in the Chuckwalla and Lower Coachella Valleys and a program with the state of Arizona to store surplus along the Central Arizona Project. Together, these supplemental programs provide a potential for an additional 450,000 acre-feet in dry years.

The foregoing goals and programs reflect MWD's concurrent recognition of the importance and limitations of Colorado River Aqueduct and State Water Project water deliveries vis-à-vis MWD's overall water storage and delivery success. Although the Colorado River Aqueduct and State Water Project continue to represent significant elements of MWD's comprehensive water supply program, MWD is cognizant of the risks associated with over-dependence on these resources. Variable weather conditions, political and legal issues, environmental and water quality regulations, and breakthroughs in the development of new resources have reshaped MWD's attitudes and strategies relative to long-term planning for the Colorado River Aqueduct and State Water Project. As reflected in MWD's 2003 *Report on Metropolitan's Water Supplies (Report)*, MWD specifically assessed the reliability of its regional supplies in the context of reduced Colorado River Aqueduct water delivery due to (i) California's failure to execute the QSA prior to the December 2002 deadline and (ii) the unprecedented drought in the Colorado River basin. Although recognizing these events as very serious matters, MWD did not perceive them to be emergencies due to earlier contingency planning by MWD and its member agencies. In 2001, MWD and its member agencies began aggressively preparing for the possibility that Colorado River supplies could be curtailed by either drought conditions or the failure of the QSA. The *Report* states that reductions in Colorado River deliveries could be offset with "the

use of more than 2.2 million acre-feet of water stored in reservoirs and existing banking programs in the Central Valley and southern California; options to purchase up to 250,000 acre-feet of additional transfer water from sellers in Sacramento, San Joaquin, and San Bernardino valleys; enhanced conservation programs; and the development of additional local resources, including recycling, brackish desalination, and seawater desalination." *Report* at 14-15.

Issues relative to QSA supply impacts were resolved when, as previously indicated, the agreement was executed and delivered in October 2003. However, as identified on page 4.15-25 of the Draft Program EIR, a series of lawsuits were filed beginning in November 2003 that directly and indirectly challenge the QSA. Prior to execution of the agreement, MWD analyzed the impacts associated with potential curtailment of its surplus Colorado River Aqueduct supplies due to possible QSA failure. As discussed in the *Report*, MWD concluded that failure of the parties to execute the QSA would not adversely affect the agency's ability to meet its long-term water demands. Specifically, MWD's prior and ongoing efforts to improve overall supply reliability (e.g., improvements in regional storage, conservation, water recycling, and conjunctive use programs) were deemed sufficient to compensate for any losses associated with failure of the QSA. Thus, were any of the current lawsuits to result in the termination or revocation of the QSA (with a concomitant reduction in MWD's receipt of surplus water from the Colorado River Aqueduct), MWD's prior "no-QSA" analysis should remain valid and the impacts of any such adverse judicial ruling should not affect MWD's ability to meet its long-term obligations.

In order to further prepare for and mitigate the effects of surplus and drought conditions, MWD has prepared a 10-year plan that uses the resource development targets specified in the Integrated Resources Plan. Although separate from the Integrated Resources Plan, the *Water Surplus and Drought Management Plan* (or *WSDM Plan*) provides the framework for the shorter-term operations of MWD's water resources. Specifically, the *WSDM Plan* provides the planning that ensures that the long-term resources plan described by the Integrated Resources Plan works under shorter-term conditions and operations. As identified by MWD, "[t]he *WSDM Plan* recognizes the interdependence of surplus and shortage actions and is a coordinated plan that utilizes all available resources to maximize supply reliability. The overall objective of the *WSDM Plan* is to ensure that shortage allocation of [MWD's] imported water supplies is not required." 1999 *WSDM Plan* at 1.

Since adoption of the first Integrated Resources Plan in 1996, MWD has continued to aggressively pursue supply diversification in accordance with the goals set forth in the Integrated Resources Plan. Notably, and as previously indicated, MWD has continued to expand its regional storage capacity (now approaching three million acre-feet), option and water transfer agreements (projected at 300,000 acre-feet) and local and regional conservation efforts. As implementation and expansion of these programs continues, issues concerning State Water Project/Colorado River Aqueduct supply and reliability should continue to abate.

Furthermore, on a local level, SMWD and the project applicant have taken affirmative steps toward insulating the Ranch Plan from the adverse effects of water shortages in the event of potential reductions in MWD deliveries. As described on Draft Program EIR on pages 4.15-26 and -27, SMWD has entered into two supplemental supply agreements with the Cucamonga Valley Water District (CVWD) (formerly, the Cucamonga County Water District) and the Southern California Water Company (SCWC) to augment MWD deliveries in times of shortage. Specifically, the CVWD agreement (when converted from option to contract) will authorize SMWD to call upon CVWD for delivery of up to 4,250 acre-feet per annum for a period of not less than 25 years. The SCWC agreement authorizes SMWD to acquire up to 2,000 acre-feet from SCWC in times of need. Each of these agreements has been executed for the specific

benefit of the Ranch Plan and, collectively, will satisfy approximately 67 percent of the Ranch Plan's domestic water needs during a single dry year and approximately 51 percent of the Ranch Plan's domestic water needs during multiple dry years. Accordingly, a reduction in MWD supply deliveries in times of shortage or drought should not adversely impact the Ranch Plan and its future residents.

Furthermore, in order to ensure delivery of the CVWD/SCWC (ala Chino Basin) water supplies to the Ranch Plan area in times of shortage, the Metropolitan Water District of Orange County (MWDOC) and the Inland Empire Utilities Agency (IEUA) entered into a Memorandum of Understanding (MOU) in November, 2003 that expressly recognizes the CVWD/SMWD water storage/exchange agreement. Specifically, the MOU addresses the possibility of MWD de-allocating water to SMWD in the amount of the CVWD/SMWD exchange, if the exchange were implemented. A copy of the MOU is included in Appendix E of the Responses to Comments document.

MWD's *WSDM Plan* warns of the possibility of de-allocation in times of water supply shortage. However, in such event, the MOU would require MWDOC and IEUA to recognize the exchange from whatever amount of water may be accorded to those agencies by MWD. Thus, the exchange could not be offset by reducing the amount of SMWD's imported water allocation under any water shortage regimen.

MWD has reviewed the MOU and has indicated that it is acceptable given that (i) the MOU operates at the local level as between MWDOC/IEUA and (ii) does not require MWD to pre-determine water shortage allocations in deference to the CVWD/SMWD agreement prior to such time as a shortage allocation may be invoked by MWD. MWD officials have lauded the MOU and have used it as an example of the approach, which should be taken by agencies securing water supply reliability to augment MWD's supplies.

3.1.12.2 Fiscal Implications on Provision of Services and Utilities

Themes of Comments: The project would result in increased taxes and fees for existing residents because of increased demand for public services and utilities.

Response: The Ranch Plan would not affect the cost of services or utilities to already established areas. Current residents would not be responsible for provision of infrastructure to development in the Ranch Plan. The project would be required to cover the costs of extending infrastructure and providing facilities for new services (i.e., fire stations, police substation, and utilities). Though the utility or service provider may implement the improvements, these improvements are routinely paid for through the payment of fees. The mitigation measures outlined in the Draft Program EIR require the project to enter into agreements with service providers regarding the provision of services and facilities. The ongoing cost for provision of services is paid for through the increase tax base provided by the project. The fiscal implications of the project have been addressed in a Fiscal Impact Report, which the County of Orange is reviewing through an independent process. The FIR has indicates that project provides sufficient revenues to offset the cost of services. An EIR is not required to address economic implications of a project. CEQA Guidelines §15131 states that economic or social effects of a project shall not be treated as significant effects on the environment. However, the decision maker can take this into consideration when taking action on the project.

3.1.12.3 Electrical and Gas Supply and Facilities

Theme of Comments: A few commenters suggested that there are insufficient electrical and gas supplies and facilities to serve the proposed Ranch Plan project.

Response: The following information is provided to respond to the commenter's concerns. Supplemental data is provided in Appendix F of the Responses to Comments document.

San Diego Gas & Electric Company

San Diego Gas & Electric ("SDG&E") is a regulated public utility providing electric service to 3 million consumers through 1.3 million electric meters and 800,000 natural gas meters in San Diego and southern Orange counties. SDG&E's service area encompasses 4,100 square miles, covering two counties and 25 cities.⁴⁰

SDG&E's service area has two major electric generation plants—the Encina plant and the South Bay plant—with a total capacity of approximately 1,635 megawatts (MW). Additionally, SDG&E's service area is home to approximately 525 MW of combustion turbine facilities, 30 MW of renewable power plants and 170 MW of cogeneration facilities. Notwithstanding, only 350 MW of this generation capacity is under contract to SDG&E; accordingly, SDG&E has historically relied on significant quantities of imported power to meet its remaining service area needs.⁴¹

In April 2003, SDG&E filed its 20-year, long-term resource plan ("Resource Plan") with the California Public Utilities Commission (CPUC). The Resource Plan identifies SDG&E's strategy for meeting the growing energy needs of its current/future customers through a balance of new generation facilities, improved transmission systems, renewable supply resources and other programs. Of particular note, the Resource Plan acknowledges the CPUC's interim planning reserve mandate (see D.02-10-062) and contemplates the creation of a 15 percent supply reserve in each year of the Resource Plan.⁴² Furthermore, in June 2004, the CPUC approved SDG&E's regional energy reliability plan ("Reliability Plan") concerning long-term planning and procurement of energy resources on behalf of its customers. In approving the Reliability Plan, the CPUC supported/endorsed several local resource projects designed to provide near-term enhancement of SDG&E's supplies. Notably, the CPUC authorized SDG&E's turn-key purchase of the combined-cycle Palomar Energy plant in the City of Escondido that will produce approximately 550 MW and will be available by summer 2006. Additionally, the CPUC approved SDG&E's execution of a contract with Calpine Corp., whereby SDG&E would purchase up to 570 MW over a 10-year period (beginning in 2008) following Calpine's completion of the Otay Mesa power plant. The Otay Mesa power plant has been approved by the California Energy Commission; all necessary permits have been issued.⁴³

With implementation of the individual elements of the Resource Plan and the Reliability Plan, SDG&E will have sufficient supplies of electricity available to meet the demands of current and future customers within its service area, including the proposed project.

⁴⁰ <http://www.sdge.com/community/>

⁴¹ Direct Testimony of Robert B. Anderson, SDG&E, before the California Public Utilities Commission (April 15, 2003) (<http://www.sdge.com/news/anderson.pdf>)

⁴² Id.

⁴³ SDG&E Press Release, June 9, 2004 (<http://public/sempra.com/newsreleases>).

Southern California Gas Company (SoCalGas)

SoCalGas is the nation's largest natural gas distribution utility, serving 19 million people through 5.4 million gas meters in more than 530 communities. Specifically, SoCalGas delivers approximately 1 trillion cubic feet of gas annually, representing approximately 5 percent of all the natural gas delivered within the United States. SoCalGas' service area encompasses approximately 23,000 square miles throughout most of Central and Southern California, from Visalia to the Mexican border.⁴⁴

As a distributor of natural gas, SoCalGas purchases natural gas on the open market and thereafter sells same to its residential, commercial and industrial customers. The supplies of natural gas purchased by SoCalGas originate in one of several major gas producing areas in North America, including New Mexico, Texas, Wyoming, and Canada. SoCalGas maintains a network of 48,000-miles of pipeline facilities to distribute these gas supplies to its customers.⁴⁵ Therefore, SoCalGas has a firm backbone transmission capacity of 3,875 million cubic feet per day (MMcf/day).⁴⁶

To balance gas supplies with customer demands, some of the gas purchased by SoCalGas is diverted into four underground natural gas storage fields maintained by the company. Presently, SoCalGas has a total underground storage capacity of 122.1 billion cubic feet (Bcf). Of this amount (i) 70 Bcf is used by SoCalGas' core residential, small industrial and commercial customers, (ii) approximately 5 Bcf is used for system balancing, and (iii) the remainder is made available for use by SoCalGas' large industrial customers to help balance and meet their gas supply requirements. Notably, the storage capacity maintained by SoCalGas is enough to meet the needs of its core residential and business customers for approximately 20 weeks during the non-winter months, or 13 weeks during the winter, before being depleted.⁴⁷

The 2004 California Gas Report for Southern California ("2004 Report") reflects that SoCalGas will have adequate supplies and distribution capacity to meet the natural gas demands of its current/future customers during the 22-year forecast period addressed in the 2004 Report. Mainly as a result of growing number of residents, SoCalGas expects its active meters to increase an average of approximately 1.3 percent per annum from 2003 to 2025, nearly the same as the current growth rate in 2004. Similarly, SoCalGas expects overall demand to increase for its core non-residential and wholesale customers during the forecast period, while decreases are expected for core non-residential, non-core commercial and industrial, enhanced oil recovery (steaming) and electric generation demands. In 2003, aggregate demand for SoCalGas service was 958 Bcf. Anticipated demand for natural gas within SoCalGas' service area in 2025 is projected to be 946 Bcf, representing a net change of -1 percent.⁴⁸

As previously indicated, SoCalGas receives gas supplies from several sedimentary basins in the western United States and Canada. Notably, the San Juan Basin and other traditional, southwestern U.S. sources of natural gas have provided the majority of southern California's natural gas supplies. Additionally, gas supplies from California sources (state onshore plus state/federal offshore supplies) totaled about 400 MMcf/day in 2003. Per the 2004 Report, these sources are expected to provide consistent, reliable supplies of natural gas to meet the current and future demands of SoCalGas customers through at least 2025. See 2004 Report at 58-59. Furthermore, Rocky Mountain gas, Canadian gas, Permian basin gas, and liquefied

⁴⁴ <http://www.socalgas.com/about/profile/>

⁴⁵ [Id.](#)

⁴⁶ 2004 California Gas Report for Southern California at 45.

⁴⁷ <http://www.socalgas.com/about/profile/>

⁴⁸ 2004 California Gas Report for Southern California at 43, 44 and 47-54.

natural gas (LNG) represent additional/supplemental sources of natural gas to meet demands within SoCalGas' service area. Id. Accordingly, SoCalGas should have sufficient supplies of natural gas to meet the demands of the proposed Ranch Plan project.

3.1.13 ALTERNATIVES

3.1.13.1 Identification of the Environmentally Superior Alternative

Theme of Comments: Some commenters have suggested that the Draft Program EIR does not address the CEQA-required environmentally superior alternative.

Response: CEQA Guideline §15126.6(e) provides that an EIR must evaluate the alternative of “no project.” The Guidelines also provide that if the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. As is indicated in the Draft Program EIR, the analysis of potential impacts associated with the project and the alternatives indicates that no one alternative is clearly superior in comparison with the other alternatives in all respects. Instead, the impacts associated with the alternatives vary; particular alternatives are superior environmentally to the others in some respects, and inferior environmentally in other respects. For example, Alternative A-2, with the smallest amount of development, would have the lowest impacts associated with population, while Alternative B-8 has the smallest development area, and would leave the greatest amount of land undeveloped. On the other hand, both of these alternatives would provide far fewer housing units than the other alternatives presented, and would accordingly be inconsistent with relevant policies of regional planning agencies. For a comparison of the pros and cons of each of the alternatives, see Draft Program EIR pages 5.4-8 through 5.4-90. Alternative A-2 is the environmentally superior alternative with regard to impacts associated with amount of population, such as traffic and air quality. Alternative B-8 is the environmentally superior alternative with regards to impact associated with development footprint, such as impact to biological resources. Alternatives B-4, B-10, and B-11 are environmentally superior with regards to the production of housing.

One comment contends that provision of housing is irrelevant to an impact analysis under CEQA. However, established regional planning programs referred to in the Draft Program EIR are designed to help the region meet environmental standards and goals, particularly with respect to traffic and air quality. The provision of housing in accordance with regional plans is accordingly fundamental to long-term planning efforts relating to traffic and air pollution. As a result, alternatives that reduce housing units on site in order to reduce impacts on open space and habitat would do so at the expense of regional planning policies and related environmental objectives. It also bears noting that achievement of these regional planning policies is of critical importance because a failure to provide sufficient housing in the County over time will lead to increased pressure for housing development beyond the County borders, seriously exacerbating the environmental problems that occur when growth is displaced to outlying areas.

As the Draft Program EIR explains, the alternatives with a greater amount of development are better able to meet County and regional housing goals, whereas alternatives with smaller development areas impact less natural habitat. As one comment notes, Alternative B-8 is superior to the other alternatives in terms of the amount of open space and habitat that would not be disturbed by development. When considering the proposed project and the alternatives, County decision makers will be responsible for weighing this factor together with the other aspects of the project and the alternatives in determining whether to approve the project as proposed or one of the alternatives to the project.

3.1.13.2 Feasibility of Reduced Development Alternatives

Theme of Comments: Commenters have suggested that some of the reduced development alternatives are not feasible and therefore do not represent true CEQA alternatives to the proposed project. Therefore, additional alternatives need to be addressed in the Program EIR.

Response: The Draft Program EIR explains that dedication of a given amount of open space and funding of an Adaptive Management Plan can occur only if the economic return from the proposed development is sufficient to support such measures. This economic feasibility question in turn depends upon a multiplicity of factors, including the amount and type of development that is approved, infrastructure and other development costs, cost of implementing mitigation measures, phasing of construction, financing and market conditions. Contrary to the suggestions in one of the comments, the Draft Program EIR does not find that any of the alternatives examined in the EIR are infeasible. (Instead the EIR explains the financial factors necessary to support the Adaptive Management Plan, as well as the rationale for the scale of the proposed project.) The Draft Program EIR notes that for some of the alternatives, outside sources of funding to support acquisition of dedication rights and the adaptive management program might be necessary if the economic return from development under the alternative proved to be insufficient to support those programs. It further explains that the project applicant has expressed concerns regarding the economic feasibility of several of the alternatives. The Draft Program EIR identifies but does not attempt to resolve the question of economic feasibility. That question involves issues to be addressed by the decision makers after weighing the environmental issues evaluated in the Draft Program EIR, together with social, economic and policy considerations that are not within the purview of the EIR's environmental analysis.

Alternative B-1 was eliminated from further discussion in the Draft Program EIR because it would provide too few housing units to address the fundamental project objective of providing an economically viable level of development that would address goals in County and regional plans relating to balanced community development. Alternative B-1 is significantly different from the alternatives that were carried forward for evaluation in the EIR in that it would not be capable of actually satisfying key project objectives in any meaningful way.

3.1.13.3 Scope of Project Objectives

Theme of Comments: Several commenters addressed project objectives. The comments ranged from noting that the project objectives were too specific to others that noted that some of the alternatives to the proposed project better met the objectives.

Response: One comment criticizes the project objectives, complaining that they are "too specific" because they identify the project proponent's objective of building a master planned community that would accommodate up to 14,000 dwelling units and approximately five million square feet of nonresidential uses. It is fundamental to an adequate analysis under CEQA that the project objectives define the level of development that the project proponent is proposing. Absent this basic information, it would not be possible to undertake a meaningful assessment of the project or to formulate alternatives to it. For this reason, EIRs typically identify the overall goals of the project in terms of levels of development as a component of the project objectives.

Identification of the project proponent's objectives regarding the amount of residential and non-residential development does not undermine a comparison of alternatives to the project. CEQA provides for an EIR to evaluate the project that is proposed, and to consider alternatives to the project as it has been proposed. It is up to the project proponent, in the first instance to identify reasonable objectives for the project it proposes. The range of alternatives reviewed in the EIR

must be capable of reducing or avoiding significant impacts while being capable of feasibly attaining most of the basic objectives of the project. This standard provides flexibility in the analysis by allowing the lead agency to select for consideration in the EIR alternatives to the project that will implement some project objectives, but will not fully attain others. It also reserves to the lead agency the discretion to determine what weight to give each project objective when determining whether to approve the project as proposed or an alternative to it.

Therefore, as shown in the Draft Program EIR's alternative analysis, these standards for alternatives provide the flexibility to consider lower levels of development than specified in the project objectives. The identification of proposed development levels as project objectives has not unduly constrained the range of alternatives considered in the EIR, as is asserted in the comment. To the contrary, the EIR examines three alternatives that would entail major reductions in residential units, and three alternatives that would entail major reductions in non-residential development.

One commenter suggests that a more appropriate project objective would be "to create a balanced mixed-use community consist[ent] with target jobs/housing ratios that protects the natural environment of Orange County." However, key project objectives include protection of the natural environment, including comprehensive planning for protection of habitats, aquatic resources and watersheds, and achievement of water quality protection goals. Although the project objective of providing 14,000 housing units falls short of the 20,000 housing units anticipated for the site in County and regional projections (i.e., OCP-2000M), it does identify a housing production objective that would substantially advance housing goals. See Draft Program EIR at page 4.1-60 for further discussion.

The same commenter suggested that Alternatives B-8, B-11, and B-4 reflect the better balance in implementing appropriate project objectives. Alternative B-8 would significantly reduce the development footprint, and associated open space and habitat impacts, by allowing only 8400 housing units and making a proportionate reduction in non-residential development. Alternative B-11 would increase the number of housing units to 19,200, and comes closest to satisfying identified housing needs, while reducing nonresidential development, and expanding the development footprint in comparison with the other alternatives. Alternative B-4 is the Ranch Plan alternative. As noted by the commenter, each of these alternatives is consistent with overall project goals. This illustrates the point that no development plan can completely satisfy every project objective in all respects, and that the various alternatives considered in the Draft Program EIR strike a balance between meeting housing and environmental goals in various ways and demonstrate a range of approaches for implementing these objectives in varying degrees in comparison with the proposed project.

3.1.13.4 Alternatives Suggested in Comments

Theme of Comments: Several commenters suggested additional alternatives to the proposed project and noted that these alternatives should be addressed in the Program EIR.

Response: Each of the suggested alternatives is addressed below.

"Infill" Alternative. One comment suggests that the EIR should consider an "in-fill alternative with a purchase of development rights component." As suggested by the commenter, CEQA Section 15126.6(f)(2) does discuss "alternative locations" as a potential type of alternative. However, under the "Alternative Locations" section, CEQA recognizes that it is up to the lead agency to determine whether an alternative location might be a reasonable and feasible alternative to a project that is proposed. According to the commenter, the County should

accommodate demand for housing and employment growth within existing “infill” developments or existing planned developments, and postpone consideration of developing the project area. As indicated in CEQA Section 15126.6(f)(1), a central factor related to feasibility is “whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.” Clearly, this applicant does not have access to alternative sites nor can they reasonably acquire sufficient sites to implement their proposal. As a practical matter, this suggested alternative is essentially equivalent to the “no action” alternative since it would entail no development of the project site, at least in the near term, with the result that the demand for new housing and employment uses that would otherwise be met by the project would have to be met by developing other sites within the County. If viewed as an alternative different from the “no action” alternative, such a proposal would not meet the threshold test for alternatives under CEQA—that the alternative be capable of satisfying most project objectives—because such an alternative would not satisfy any of the project proponent’s objectives relating to development of the site. Furthermore, the concept of infill as an alternative would involve distributing the housing and other uses envisioned by the project among hundreds of unspecified sites, which would be developed or redeveloped at unknown times, depending on a variety of actions taken by landowners and relevant public agencies that cannot be predicted or foreseen. The provisions of CEQA relating to alternatives call for the consideration of a range of realistic, potentially feasible alternatives that are capable of achieving most of the basic project objectives, and that discourage consideration of an alternative whose effects cannot be reasonably ascertained, and whose implementation is remote and speculative. As a practical matter, the County focuses its planning activities on unincorporated Orange County because its land use authority is limited to those areas. Within the unincorporated portions of the County, there are no other sites of sufficient size, which the applicant could conceivably acquire to develop the proposed project. Therefore, to have analyzed an “Infill Alternative” would have been an unreasonable planning exercise relating to a hypothetical alternative that could not realistically be implemented.

“Constraints” Based Alternative. A comment suggests that the alternatives should be based upon a “comprehensive constraints analysis.” The commenter requests that this analysis identify areas of high resource values, hazard areas, and areas of high visibility, as well as areas that should be avoided based on policies, ordinances and regulations of the agencies, such as those protecting wetlands and riparian corridors. It is not clear from the comment how such an approach might differ from the analysis in the EIR. The alternatives were designed to reduce or avoid various environmental impacts and evaluate a wide range of options for addressing those environmental impacts. An extremely broad and diverse set of alternative development footprints were examined during the extensive process of screening alternatives for evaluation in the EIR. The alternatives selected for further study in the EIR were specifically designed to reduce or avoid environmental impacts by taking account of relevant environmental constraints in designing the development area and the level of development proposed. The comment hypothesizes that other development alternatives that would avoid high value resources and hazard areas might merit consideration, but does not provide any specifics about impacts that are not adequately addressed by the alternatives that have been examined. Nor does the comment explain how such an alternative might differ from the alternatives that have been examined in terms of specific impacts or ability to meet project objectives.

“Village” Alternative. The same commenter suggests that the EIR should examine a “village alternative” that would decrease footprint size and cluster mixed use development adjacent to already developed areas. The comment does not provide any specifics or explain how such an alternative might differ from decreased footprint alternatives already considered, including Alternative B-8. As a result, the suggested alternative is too undefined to be meaningfully addressed. The comment does not provide any specifics about environmental impacts that are

not adequately considered by the alternatives that have been examined, or how the suggested alternative might differ from the alternatives that have already been examined in terms of specific environmental impacts. In the absence of more specific information about such a concept and its ability to meet basic project objectives, the feasibility, practicality, and suitability of such a concept cannot be meaningfully evaluated. It should also be noted that the Ranch Plan does provide development areas or villages rather than disperse the development through the study area as currently allowed under the existing zoning. For example, the Urban Activity Center (UAC) designation provides for an integration of mixed-uses, which would facilitate the development of a town center or focal point for the planning areas. Alternative sizing and locations of the development areas or villages are addressed in the Draft Program EIR in Section 5, Alternatives.

3.1.13.5 Proposed Modifications to Particular Aspects of the Project

Theme of Comments: Several commenters suggested that modifications to various components of the project be evaluated in the EIR, describing these proposed modifications as "alternatives."

Response: Under CEQA, an EIR's discussion and analysis of alternatives involves consideration of a range of potentially feasible alternatives to the project as a whole that can reduce or avoid one or more of the project's significant environmental impacts while still achieving most project objectives. Modifications to particular aspects of the project that are proposed to mitigate or avoid specific impacts are not treated as alternatives to the project as that concept is used in CEQA. They instead are more properly characterized as mitigation proposals. Such proposals are discussed below.

Several commenters suggested that the EIR should evaluate eliminating residences in Planning Area 8 in response to land use conflicts with Marine Corps Base (MCB) Camp Pendleton. With respect to the potential for noise from activities at MCB Camp Pendleton to adversely affect future residents in Planning Area 8, there is a potential that the updated RCUZ program for MCB Camp Pendleton would identify an area within Planning Area 8 that would potentially be subjected to impacts from MCB Camp Pendleton training activities. However, under the phasing plan for the project, it is not expected that Planning Area 8 would be proposed for development until after 2020. Mitigation Measure 4.1-2 addresses the issue of potential land use conflicts and the suggestion that residences not be developed where significant conflicts would occur. It requires that the most current version of the RCUZ be reviewed at the time Area 8 is proposed for Area Plan approval to ensure that noise-sensitive land uses, such as residences, are not constructed in areas that would exceed state and applicable local noise standards. It should also be noted that Alternatives B-5 and B-8 both assume no development in Planning Area 8. The reader is also referred to Topical Response 3.1.3, Land Use regarding compatibility with MCB Camp Pendleton, as well as the comments provided by MCB Camp Pendleton (Commenter 2). In their Comment 15, MCB Camp Pendleton acknowledges that their concerns regarding the land use compatibility have been adequately addressed.

Another comment suggested that Planning Area 8 be reconfigured to avoid residential use of any portions of the site that contain hazardous levels of soil contamination. With respect to the potential for hazardous levels of soil contamination within Planning Area 8, the Draft Program EIR recognizes that there is a possibility of soil contamination in locations within this planning area. See Impacts 4.14-2, 4.14-3, 4.14-9 and discussion on page 4.14-14, -15, and 4.14-17 of the Draft Program EIR. Implementation of standard methods and procedures for remediating any soil contamination that is identified, as reflected in the mitigation measures (see Draft Program EIR pages 4.14-18 through -22), will be sufficient to prevent any potential health and

safety hazards. See Topical Response 3.1.11, Hazards and Hazardous Materials. Typically, where hazards are found, the area is avoided or remediated.

Because these mitigation measures adequately address the potential impact, a further mitigation measure requiring reconfiguration of the development area within Planning Area 8 is not warranted. However, as indicated in Topical Response 3.1.11, if hazardous materials are discovered that cannot be adequately remediated, the area would be avoided.

Two comments suggested that the EIR should consider various "annexation alternatives" under which the project site, or parts of the project site, would be annexed to one or more of the cities in the project area. Other comments suggest that the impacts of annexation be addressed in this Draft Program EIR.

The possibility of annexation of some or the entire site to a city would not constitute an alternative to the proposed project which, under CEQA, is the development of the project site as described in Section 3.4 of the Draft Program EIR. Given the nature of the project, the alternatives appropriately address alternative ways to implement the development objectives of the project that might be capable of reducing potentially significant impacts. By contrast, annexation of some or the entire project site is not an alternative to the proposed development but is instead a potential future consideration relating to governance (See Topical Response 3.1.2).

The site is not now within the sphere of influence of any city and no proposals or plans for annexation of the site, or for incorporation, have been formulated. Unless and until that occurs, the County of Orange will be the governing body for the Ranch Plan area and will provide municipal services through special districts administered by the County. Furthermore, the timing and nature of potential proposals for incorporation or annexation of all or part of the site to one or more cities are unknown and no such action is currently proposed for consideration by the County or by the LAFCO. Analysis of the effects of hypothetical scenarios relating to incorporation or annexation of all or part of the site to one or more cities would not be appropriate.

3.1.14 GROWTH-INDUCING IMPACTS

Theme of Comments: The Draft Program EIR did not adequately address the growth inducing potential of the project.

Response: The Draft Program EIR discusses at length the question whether development of the Ranch Plan might cause additional growth elsewhere. See Draft Program EIR pages 6-1 – 6-8. The Draft Program EIR concludes that no growth-inducing impact would occur. See Draft Program EIR page 6-8.

One comment asserts that the Draft Program EIR's analysis of growth-inducing impacts improperly focuses on "unplanned" rather than "planned" growth. The Draft Program EIR in fact addresses both types of growth. See Draft Program EIR page 6-1 (discussion of inducing "planned growth" and "growth which is not assumed as planned growth"). The Draft Program EIR describes planned growth in all three jurisdictions that surround the Ranch Plan site. See Draft Program EIR pages 6-2 through 6-6. The comment's quote from page 6-8 of the Draft Program EIR omits the beginning of the quoted sentence; the sentence as a whole addresses both planned and unplanned growth.

Another comment asserts that the financial success and need for the proposed SR-241 extension are intimately tied to the Ranch Plan. The SR-241 extension is a component of the South Orange County Transportation Infrastructure Improvement Program (SOCTIIP), which is the subject of its own EIS/EIR. The purpose and need for the SOCTIIP was established through the NEPA/Section 404 Integration Process conducted by Federal Highway Administration, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and the U.S. Environmental Protection Agency. At the time the purpose and need was established the Ranch Plan was not under consideration. In fact, the growth assumptions for the Ranch Plan area were substantially less (approximately 2,500 dwelling units) than what is assumed in the OCP-2000 projections or in the Ranch Plan. Both that EIS/EIR and Caltrans confirm that the SR-241 extension has long been proposed to alleviate existing, congestion on I-5 and does not depend on approval of the Ranch Plan. The extension of the SR-241 has been on the Master Plan of Arterial Highways since 1981. With regards to the fiscal ramifications, the Ranch Plan is within the Zone A of the benefited area for the Foothill/Eastern Transportation Corridor and development is subject to the payment of fees imposed by the County of Orange through the adoption of Major Thoroughfare and Bridge Fee Program for the Eastern/Foothill Transportation Corridor. When the fee program was enacted by the County and affected jurisdictions, it was anticipated that the FTC/Eastern Corridors would be completed, in phases, to their ultimate extents. Notwithstanding, all of the fees collected to-date and projected to be collected from within the benefited area are assigned to debt service on the FTC-North and Eastern Corridors and there is no commitment and/or expectation that said fees will be used to construct the FTC-South. The identification of funding strategies for said extension, if approved, is the responsibility of the Transportation Corridor Agency (TCA) for the FTC/Eastern Corridors. Because the SR-241 extension is an independent project that may or may not be approved, the Ranch Plan Draft Program EIR properly analyzes traffic with and without the SR-241 extension and discusses the potential extension as a cumulative project.

Another comment asserts that the Ranch Plan would induce growth by contributing to the expansion of the Chiquita Water Reclamation Plant. Expansion of the CWRP to 18.0 MGD secondary treatment capacity has, however, long been the subject of its own planning and CEQA process. In accordance with that process, the CWRP now stands at 9.0 MGD capacity; the CWRP has been and will be expanded in 3-million MGD increments to meet demand. The Ranch Plan would be expected to contribute to the need for either one or two 3-million MGD

expansions, but would not provide for expansion beyond its own needs. Therefore, the Ranch Plan would not induce growth by adding capacity that would serve other unplanned projects.

A comment suggests that implementation of the Ranch Plan would “presumably create” many low-income employment positions but would not include housing affordable to low-income families, so that affordable housing would have to be provided elsewhere. These presumptions are speculative and not justified. No particular type of commercial development, much less any particular employer, has yet been identified for the commercial portion of the Ranch Plan. It would not be appropriate to assume that the jobs created would be “low income” or to make assumptions regarding specific types of housing needs of future employees. This is particularly true because, unlike in the *Napa Citizens* case cited in the comment, which involved development of an industrial park that would create jobs, but no new housing, the Ranch Plan includes 14,000 housing units, resulting in a significant net increase in the housing stock in this area of the County. Furthermore, these housing units will encompass a range of housing types, including apartments. In addition, as the Draft Program EIR states, the Ranch Plan would be responsible for contributing to the County's Regional Housing Needs Assessment allocations. See Draft Program EIR page 4.3-11. The comments provided no substantiation as to why the employment uses proposed for the Ranch Plan would be substantially different from the other employment uses in Orange County and in particular the surrounding areas. For a further discussion of the range of housing to be provided, please see Topical Response 3.1.5.

Finally, while acknowledging that the Ranch Plan would not expand existing ranch roads or easements providing access to off-site private properties, a comment asserts that the Ranch Plan would “encourage owners of these private land-holdings to develop their properties to their maximum potential.” No facts that would support this supposition are provided. The comment requests analysis of the existing roadways and their capacity for expansion. As noted above, however, the Ranch Plan does not include expansion of such ranch roads. It would not be appropriate for the EIR to speculate on the growth-inducing potential of hypothetical activities that are not proposed as part of the project.

3.2 **RESPONSES TO FEDERAL AGENCIES COMMENTS**

COMMENTER 1 DEPARTMENT OF HOMELAND SECURITY, FEMA

Dated: July 23, 2004

Response 1

Your comments are noted. The project is currently requesting a General Plan Amendment and Zone Change. The County of Orange will evaluate compliance with Flood Insurance Rate Maps and applicable ordinances and regulations at the time tentative tract maps and grading permits are requested for any development within the Ranch Plan area. However, to assure your concerns are fully addressed, Standard Condition 4.5-12 has been added to ensure that the no new development results in an increase in flood elevation levels, through compliance with County of Orange Standard Drainage Condition of Approval D-08a:

Development Within Floodplain. Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only) or the issuance of any grading or building permits, whichever occurs first, within the FP-2 Zoning District, the applicant shall submit all of the necessary documents to the Federal Emergency Management Agency (FEMA) to receive a Conditional Letter of Map Revision (CLOMR) of the Flood Insurance Rate Map (FIRM). Concurrently, the applicant shall submit to the Manager, Subdivision and Grading, three (3) sets of the calculations and plans showing the method of satisfying FEMA and FP-2 Zoning District Regulations, all in a manner meeting the approval of the Manager, Subdivision and Grading.

COMMENTER 2 UNITED STATES MARINE CORPS, CAMP PENDLETON

Dated: July 25, 2004

Response 1

The Conceptual Water Quality Management Plan (WQMP) presented in the Draft Program EIR Appendix C-2 was specifically developed to meet the project objectives, including the SAMP Tenets, the Watershed Planning Principles, and the Sub-basin Planning Recommendations. The anticipated effectiveness of the proposed Conceptual WQMPs ability to protect groundwater quality is discussed in Topical Response 3.1.6, Water Resources.

Response 2

Marine Corps Base (MCB) Camp Pendleton is located both south and east of the project site. The last paragraph of page 4.1-1 has been modified to clarify the location of the base in relationship to the project site. This change is incorporated into the Final Program EIR as follows:

Surrounding Land Uses

The Ranch Plan project site is located within the unincorporated portion of southeastern Orange County. In general, located to the north are the City of Rancho Santa Margarita and the unincorporated planned communities of Las Flores and Coto de Caza, Thomas F. Riley Wilderness Park, and permanent open space located within unincorporated Orange County. MCB Camp Pendleton in the County of San Diego bounds portions of the site on the east and south...

Response 3a

Your comment is noted. Please see Topical Response 3.1.3, which includes additional text for the Final Program EIR.

Response 3b

Effects of the proposed project on water supply and quality in San Mateo Creek are addressed in Section 8.2 of the WQMP (Appendix C-2 to the Draft Program EIR). Comparisons with USGS stream gauging data collected on Cristianitos Creek Below Talega (USGS Gauge No. 11046350) and on Cristianitos Creek Above San Mateo (USGS Gauge No. 11046360) indicate that the runoff downstream of the project area in the San Mateo watershed will actually be larger than under current conditions. Mean annual volumes are projected to increase in lower Cristianitos Creek by as much as 25 percent for the Proposed Project (Table 8-60). Under the Proposed Project loads for solids would be comparable to existing conditions, nutrient loads would increase by about 10 percent, and dissolved copper and lead loads would increase by 30 percent and about 80 percent respectively, but remain below both Cal DHS or USEPA Drinking Water Standards after treatment. Concentrations would generally decline or remain unchanged. Also see Topical Response on Cumulative Water Resources Impacts (Section 3.1.6.4) and Groundwater Impacts (Section 3.1.6.5).

Response 4

Significant literature exists regarding the efficacy of infiltration on treating water (irrespective of whether it is of dry or wet weather origin) and protecting groundwater quality. See Topical Response on Best Management Practices Effectiveness and Monitoring (Section 3.1.6.5).

Response 5

As discussed in the Cumulative Impacts Section of the WQMP (Section 8) under the Proposed Project dissolved copper loads in Lower Cristianitos Creek are projected to increase by about 30 percent; however, concentrations would remain essentially unchanged with the project (Table 8-7) and would remain below both Cal DHS or USEPA Drinking Water Standards after treatment. Please see Topical Response 3.1.6.5 for further discussion of trace metals, including copper.

Response 6

The proposed combined control system presented in the Conceptual WQMP will protect the receiving water quality in both surface and ground waters for all of the contaminants mentioned in this comment. The Conceptual WQMP also provides projections of water quality in surface runoff, which given the interaction of surface and groundwater in this area, provides a good means of evaluating potential effects on groundwater quality within Marine Corps Base (MCB) Camp Pendleton. The selection of the elements for the combined control system was guided by the concern for pollutants that are brought up in this comment. There is a body of knowledge that indicates that the proposed facilities should be quite effective if properly designed and maintained to minimize effects on surface and groundwater quality. For more details, including an evaluation of discharges on drinking water quality, see the general discussion on impacts to groundwater set forth in Topical Response 3.1.6.5.

Diversion of surface flows and recycling for irrigation are proposed measures for protection of the current hydrologic regime and habitat for sensitive species in the creeks that will receive

surface runoff from developed areas. Water balance results indicate that imported water used for irrigation will effectively increase the total volume of water within the system, and increase, rather than diminish groundwater resources.

To reiterate, the proposed control system is specifically designed to address trash and debris, pesticides, and pathogens, identified pollutants of concern. Chlorine is not a constituent of concern as it is not commonly found in dry weather or wet weather flows. The primary source of chlorine in urban areas is swimming pools and discharge of swimming pool water will only be allowed to the Chiquita Reclamation Plant.

Response 7a

The entire project area, including the area within the San Juan Creek watershed, is located within the San Diego Regional Water Quality Control Board jurisdiction. The Conceptual WQMP was prepared in full compliance with the Regional Board's requirements, which have been implemented by the County of Orange in the DAMP, the County Local Implementation Plan, and the County Local WQMP. The Water Quality Objectives and the California Toxics Rule criteria are referenced extensively in the Conceptual WQMP.

Response 7b

The proposed Conceptual WQMP is based on the scientific literature as described in Section 3 "Water Quality and Flow Control and Analysis Approach" (Appendix B.2 of EIR). Please also refer to the reference section for literature citations used. Additional literature references supporting the control concepts being proposed can be found in Topical Response 3.1.6, Water Quality–Best Management Practices (BMPs) Effectiveness and Monitoring.

Response 8

Your comment is noted. The additional information pertaining to Restricted Airspace area R-2503B has been incorporated into the Final Program EIR as part of Section 4.1, Land Use and Related Planning Programs (see Response 3) and will also be referenced in Section 4.8, Noise.

Response 9a

Your comment is noted. Provisions for exotics control is part of the Adaptive Management Plan, which is provided for in Project Design Feature 9-2 and is contained in Appendix J and would be addressed in the Phase II Open Space Agreement. Edge treatment issues are discussed in Topical Response 3.1.9.

Response 9b

The requested breakdown of acreage in the DSA open space area is provided in Topical Response 3.1.9.

Response 10

The thresholds of significance for the mineral resources discussion pertain to the loss of a mineral resource that would be of value to the region and the residents of the state. The gypsum-like deposits would not be a mineral resource of value such that the development of the land would preclude the extraction of the resource. The concern identified pertains to potential

water quality issues. The Alo-Bosanko Association is well drained clays found in portions of the Cristianitos and in the San Juan Watersheds. The Alo soils contain soft lime masses at shallow depths below the ground surface, which are a source of soluble calcium salts that can be leached to the underlying groundwater by percolating rainwater. High TDS levels have been found in wells in the San Juan Basin (See Hecht, 2001, and groundwater monitoring data in Appendix C of the Conceptual WQMP).

Because leaching of salts from the lime soils occurs by natural processes, it is not expected that construction activities would result in a significant increase the amount of salts leached to the groundwater. A Pollution Prevention Plan (PPP), which is required for all construction work, would include necessary BMPs to prevent erosion and off-site migration of exposed soils during construction. Once construction is completed, it is expected that there will be a decrease in the amount of exposed soils as a result of the impervious cover and associated landscaping. This could possibly result in a long-term decrease in the amount of salts leached to the underlying groundwater.

Response 11a

The undated information is hereby incorporated into the Final Program EIR. The penultimate sentence on page 6-3 is revised to read as follows:

MCB Camp Pendleton covers 125,000 acres and includes 17.5 miles of shoreline.

Response 11b

Your comment is noted. Though the overall number of jobs and housing may be greater than provided in the Draft Program EIR, it does not change the findings of the analysis. The additional housing that would be added would not provide additional housing opportunities for the civilian population. The second sentence in the third paragraph on page 6-4 is hereby revised and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

However, MCB Camp Pendleton encompasses all of SRA 43, so development opportunities are exceptionally limited. Camp Pendleton is projected to add anywhere from 300 to 2,500 housing units between 2000 and 2030. A total of 276 additional housing units have been added to the Base's inventory since 2000. The number of future jobs will likely be a function of the next Base Realignment and Closure Commission findings in 2005.

Response 12

The impact to cultural resource sites within the Ranch Plan would not affect the eligibility of sites on the Base. The eligibility of a site for the National Register is evaluated on the merits of the resources at the site.

Response 13

Detention ponds are only one of several types of control facilities envisioned for the project. The combined controls system actually incorporates various elements depending on local conditions, including detention and low flow wetlands, infiltration basins, bioswales, reuse of stormwater, and export out of basin. When used in combination along with site design and source control, this system becomes quite robust. Further justification for the anticipated

performance of the BMP system can be found in Topical Response 3.1.6, Water Quality–Best Management Practices (BMPs) Effectiveness and Monitoring.

The maintenance of the combined control facilities including detention ponds is described in Chapter 6 of the Conceptual Water Quality Management Plan (Appendix C-2 of the Draft Program EIR). Chapter 6, the Long-Term Adaptive Management Plan sets forth:

- a. BMP Inspection and Performance Monitoring, including wet and dry weather monitoring
- b. Hydrologic Monitoring, including groundwater, base flows and peak discharges
- c. WQMP Review and Evaluation
- d. Corrective Measures
- e. Documentation and Reporting

Response 14

Please refer to Topical Response 3.1.6, Water Resources–Impacts on Sensitive Species.

Response 15

Your comment is noted.

Response 16

Your comment is noted. Mitigation Measure 4.14-11, which pertains to soil sampling and testing at the known pistol ranges in Planning Area 8 shall be amended to read as follows (modification is underlined):

In conjunction with the Master Area Plan for Planning Area 8 the applicant shall contact the Army Corps of Engineers Formerly Used Defense Sites coordinator to determine if areas within the development area were used by the military as firing ranges. For any sites identified, plus the two areas within Planning Area 8 previously used for pistol ranges, the applicant or leaseholder shall provide verification of soil sampling and testing prior to issuance of a grading permit for those locations. If significant contamination is encountered, the results of the testing/investigation, etc. will be provided to OCHCA, or other appropriate agency, for direction and oversight (this may be the water board) that spent ammunition have been removed and soils tested to assess residual lead and copper concentrations. Soil with residual lead or copper concentrations exceeding US EPA's PRGs shall be removed from the property and disposed of at an appropriate facility.

**COMMENTER 3 UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
Dated: August 9, 2004**

Response 1

Southern steelhead within the San Juan and San Mateo watershed are discussed in detail in Appendix G-9 titled *Geomorphic and Hydrologic Needs of Aquatic and Riparian Endangered Species, San Juan and Western San Mateo Watersheds*, of the Draft Program EIR. For a

discussion of the potential direct and indirect impacts on the steelhead potentially within or downstream from the proposed project, please also refer to Topical Response 3.1.9, Biological Resources–Impacts to Species.

**COMMENTER 4 UNITED STATES FISH AND WILDLIFE SERVICE/CALIFORNIA
DEPARTMENT OF FISH AND GAME
Dated: August 9, 2004**

Response 1

Please refer to Topical Response 3.1.1, Project Processing and Topical Response 3.1.9.5, Biological Resources–Reserve Design/NCCP Amendments.

Response 2

The County of Orange recognized that there was a large amount of information available for review due to the size and complexity of the project. For this reason the public review period was extended from 45 to 60 days. However, it should be noted that much of this information has been available to the agencies for a substantial period of time, especially to the resource and regulatory agencies, because the baseline data is the same database being used for the NCCP/HCP and SAMP/MSAA. The Ranch Plan is the B-4 Alternative for these two planning programs. The error in the listing of tables in the Table of Contents is hereby noted and corrected for the Final Program EIR.

Response 3

It is not clear from the comment what value a planning area/sub-basin comparative analysis of impacts on habitats and species would contribute to the overall understanding of the proposed project's impacts. The Sub-basin and Planning Species Consistency Analyses provide the context for the discussion of impacts to habitats and species among the planning areas and sub-basins. For example, Draft Program EIR Table 4.9-28 on page 4.9-115 provides the Consistency Analysis for the California gnatcatcher, with a breakout by *major* and *important populations* and *key locations* that is tied to sub-basins. A simple analysis of impacts of gnatcatcher locations or coastal sage scrub by planning area/sub-basin would not significantly contribute to an understanding of the proposed project's impacts on the gnatcatcher and sage scrub habitat and could actually obscure the analysis because the simple analysis does not provide the appropriate context for analyzing the impact in relation to the Planning Guidelines.

Response 4

Please refer to Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts regarding the NCCP/HCP Planning Guidelines and Topical Response 3.1.9.5–Reserve Design/NCCP standards regarding NCCP Standards. Please also refer to Topical Response 3.1.2.2, Project Description–Definition and Preservation of Open Space, with respect to the preservation of open space regarding special linkage and existing use designations.

Response 5

Please refer to Topical Response 3.1.9.9, Biological Resources–Cumulative Impacts for a discussion regarding cumulative impacts to biological resources.

Response 6

Table 4.9-28 on page 4.9-115 of the Draft Program EIR presents the consistency analysis for Planning Species (i.e., conservation analysis within RMV Open Space only). Species protected in existing protected open space outside of the study area is not part of the analysis presented in this table. However, consistent with the discussion in the beginning of the Draft Program EIR Biological Resources section regarding how the proposed project “should build upon the significant open space planning, protection, and management efforts on the part of local government, state, and federal agencies, and private and quasi-public landowners that have already taken place within the Southern Subregion” (page 4.9-1) and consistent with the discussion regarding how the proposed project 1) provides for a plan for development and a framework for conservation that will help achieve the major benefits originally envisioned by the NCCP/HCP and SAMP/MSAA for the Ranch Plan area; and 2) provides a conservation strategy that would be complimentary to any such programs that are completed in the future Table 4.9-36 sets forth both the conservation of species with RMV Open Space and the conservation of species within the overall Southern Subregion planning area. Conservation of species within the overall planning area includes conservation within already protected open space and RMV Open Space thus giving the reader a complete picture of species conservation within the Southern Subregion planning area.

The County acknowledges that the NCCP process is working towards resolution of management and monitoring issues for lands outside the Ranch Plan project site study area.

Response 7

Please refer to Topical Response 3.1.2.2, Project Description–Definition and Preservation of Open Space. The Adaptive Management Plan will further address the details of future uses of the open space areas for the purpose of minimizing impacts to species.

Response 8

The ability of appropriately placed golf course features (e.g., open water, riparian habitat, native upland vegetation, and native trees) to provide habitat and/or an urban interface buffer has been documented in both literature and in several documents prepared by the U.S. Fish and Wildlife Service (USFWS). In June 2002, the USFWS issued a Biological Opinion for the Arroyo Trabuco Golf Course project in the Arroyo Trabuco area of south Orange County, located in the near vicinity of the project site. The Arroyo Trabuco Golf Course includes both typical golf course features, but also included natural habitat features that would buffer the natural resource on the site from human activities associated with the golf course facility and the adjacent developments within the City of Mission Viejo. In the Biological Opinion, the USFWS stated that the Arroyo Trabuco Golf Course “is anticipated to play a habitat conservation and connectivity role in the future Subregion reserve.” The USFWS further stated that “the combination of buffer vegetation and elevation difference between the fairways and riparian habitat will substantially reduce thy potential for long-term impacts from inadvertent disturbance by humans (golfers and groundskeepers).”

These findings that the USFWS made regarding the ability of golf course features to serve as buffers to native habitat areas has been similarly documented in several other Biological Opinions for projects that include golf courses that will provide for native habitat and serve as buffers including the Walnut Hills Development in the City of Walnut, the Black Gold Golf Course in the City of Yorba Linda, the Pelican Hills Golf Course in the City of Newport Beach, Talega Golf Course in the City of San Clemente, and many others in the Orange County area.

Responses to concern regarding the ability of golf courses to provide wildfire protection and the potential indirect impacts from pesticides, herbicides, and irrigation are addressed in Topical Response 3.1.6, Water Resources and Topical Response 3.1.9.3, Biological Resources—Comments Regarding the Proposed Mitigation. Water quality issues are discussed in Topical Response 3.1.6 and wildland fire issues are discussed in Topical Response 3.1.11.3.

Response 9

Please refer to Topical Response 3.1.9.5, Biological Resources—Reserve Design/NCCP Standards regarding design issues and NCCP Standards for San Juan Creek and the treatment of specific planning areas. Please also refer to Topical Response 3.1.9, Biological Resources—Impacts to Species (specifically California gnatcatcher) and Topical Response 3.1.9.4, Biological Resources—Wildlife Linkages/Corridors.

Response 10(a)

As discussed in Topical Response 3.1.9.8c regarding the arroyo toad, the County may not be interested in establishing the Rancho Mission Viejo Regional Park in which case the proposed park acreage would be part of the RMV Open Space. Nonetheless, the following responds to the comment raised. The biological resources impact exhibits (Exhibits 4.9-11 through 4.9-21) depict the infrastructure improvements proposed for Rancho Mission Viejo Regional Park. The acreage of these impacts has been included for the overall impact of the proposed project, including those impacts to special status species. The proposed infrastructure will generally include road crossings, trails/bikeways, sewer and water facilities, drainage facilities (outfalls), and passive park features such as nature interpretation and picnic areas. Underground facilities, such as water and sewer lines, would not result in long-term impacts to wildlife movement. Construction impacts would be temporary. Aboveground facilities, such as trails were assumed in the impact analysis of the Draft Program EIR. The two major arterials that occur adjacent to the proposed Rancho Mission Viejo Regional Park include the proposed New Ortega Highway and the existing Ortega Highway. The proposed New Ortega Highway would be located on the north side of San Juan Creek, outside of the floodplain, primarily within the development boundaries of Planning Areas 2 and 3. Wildlife movement along San Juan Creek is anticipated to function in a capacity similar to current conditions upon completion of the proposed project because of the limited direct impacts to resources within this planning area. Please also refer also to Topical Response 3.1.9.8c for further discussion on this topic.

Impacts to least Bell's vireo are discussed in Topical Response 3.1.9.8p as being 2 of 30 known breeding locations in the study area. The important population located in GERA would be unaffected by either the development or infrastructure associated with the proposed project. Implementation of the trails/bikeway associated with either a "with" San Juan Creek Regional Park scenario or a "without" San Juan Creek Regional Park scenario would not impact known breeding locations. As noted in the referenced topical response, implementation of the Adaptive Management Plan (Appendix J) in San Juan Creek, particularly the Invasives Species Control Plan (Appendix J-3) is anticipated to benefit the least Bell's vireo in the study area.

Response 10(b)

Please refer to Topical Response 3.1.9.5, Biological Resources—Reserve Design/NCCP Standards regarding design issues and NCCP Standards for San Juan Creek. Please also refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species (specifically California gnatcatcher) and 3.1.9.4, Wildlife Linkages/Corridors.

Response 10(c)

Please refer to Topical Response 3.1.9.5, Biological Resources–Reserve Design/NCCP Standards regarding design issues and NCCP Standards for San Juan Creek. Please also refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species (specifically California gnatcatcher) and Topical Response 3.1.9.5, Biological Resources–Wildlife Linkages/Corridors.

Response 11

Please refer to Topical Response 3.1.9.5, Biological Resources–Reserve Design/NCCP Standards regarding design issues and NCCP Standards for San Juan Creek. Please also refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species (specifically California gnatcatcher) and Wildlife Linkages/Corridors.

Response 12

Please refer to Topical Response 3.1.9.5, Biological Resources–Reserve Design/NCCP Standards regarding design issues and NCCP Standards for San Juan Creek. Please also refer to Topical Response 3.1.9, Biological Resources–Impacts to Species (specifically California gnatcatcher) and Topical Response 3.1.9.5, Biological Resources–Wildlife Linkages/Corridors.

Response 13

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species (specifically Thread-Leaved Brodiaea).

Response 14

Refer to Topical Response, 3.1.9.5, Biological Resources–Reserve Design/NCCP Standards regarding design issues and NCCP Standards for San Juan Creek, as well as for a discussion of impacts to species (specifically arroyo toad).

Response 15

Your comments are noted. Please refer to Topical Response 3.1.9.8, Biological Resources–Impact to Species for a discussion on steelhead.

Response 16

Your comments are noted. Please refer to Topical Response 3.1.9.5, Biological Resources–Reserve Design/NCCP standards regarding reserve design issues and NCCP Standards. Wildlife movement is addressed in Topical Response 3.1.9.4–Wildlife Linkages/Corridors. For responses regarding impacts to specific species, please also refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 17

No response is necessary. This is a restatement of fact from text.

Response 18

Although the commenters note that pond turtles can travel a considerable distance (400 meters or more; Jennings and Hays, 1994), a radio telemetry study by Goodman of pond turtle

populations in southern California suggests that turtles usually nest much closer to watercourses.⁴⁹ Also refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species. Goodman found that nest sites were an average of 16.2 meters (53.1 feet) from the watercourse (range: 1.5 to 58.2 meters [4.9 to 158.1 feet]) at Aliso Creek in Chino Hills State Park and an average of 28.7 meters (94.1 feet) from the watercourse (range: 18.3 to 47.3 meters [60.0 to 155.2 feet]) along the West Fork of the San Gabriel River. Based on Goodman's studies, it is reasonable to assume that the majority of nest sites along San Juan Creek will be within 100 meters (328 feet) of the active stream channel, as would nest sites adjacent to the stock pond in upper Cristianitos and Jerome's lake in upper Gabino. The 328-foot minimum setback buffer provided for by the proposed project would provide adequate upland nesting/overwintering sites for the pond turtle and impacts to upland habitat adjacent to occupied areas would be less than significant.

The County disagrees that important populations are not being adequately protected, given the preservation and enhancement of aquatic habitats and associated uplands. However, the County also assumes that the commenting agencies will take these considerations into account in their respective permitting processes.

Response 19

Please refer to Topical Response 3.1.9.5, Biological Resources—Reserve Design/NCCP standards regarding reserve design issues and NCCP Standards. Wildlife movement is addressed in Topical Response 3.1.9.4—Wildlife Linkages/Corridors. For responses regarding impacts to specific species, please also refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species.

Response 20

Please refer to the response to Comment 18.

Response 21

Please refer to Topical Response 3.1.9.5, Biological Resources—Reserve Design/NCCP standards regarding reserve design issues and NCCP Standards. Wildlife movement is addressed in Topical Response 3.1.9.4—Wildlife Linkages/Corridors. For responses regarding impacts to specific species, please also refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species. Planning Area 2 issues are addressed on page 3-118 of the Draft Program EIR.

Response 22

Please refer to Topical Response 3.1.9.5, Biological Resources—Reserve Design/NCCP standards regarding reserve design issues and NCCP Standards. Wildlife movement is addressed in Topical Response 3.1.9.4—Wildlife Linkages/Corridors. For responses regarding impacts to specific species, please also refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species. Planning Area issues are addressed on page 3-118 of the Draft Program EIR.

⁴⁹ Goodman, R.H. Jr., 1997. The Biology of the Southwestern Pond Turtle (*Clemmys marmorata pallida*) in the Chino Hills State Park and the West Fork of the San Gabriel River. Masters Thesis. California State Polytechnic University, Pomona.

Response 23

Please refer to Topical Response 3.1.1.1, Project Processing, regarding separation of the Ranch Plan from processing of the NCCP/HCP and SAMP/MSAA.

COMMENTS 5 DEPARTMENT OF THE ARMY
LOS Angeles DISTRICT, CORPS OF ENGINEERS
Dated: August 9, 2004

Response 1

Your comment is noted. The processing of the Ranch Plan and the NCCP/HCP and SAMP/MSAA is discussed in Topical Response 3.1.1.1.

Response 2

Your comment is noted. The following expanded explanation of the consistency of the Proposed Project with the SAMP Tenets is hereby incorporated into the Final Program EIR. The modifications to the Draft Program EIR are indicated by the underlined text:

SAMP Tenet 1: No net loss of acreage and functions of waters of the U.S./State

The Proposed Project has been designed to protect the major terrains/hydrology functions of each sub-basin, as well as the major riparian/wetlands systems. Specifically, land uses associated with the Proposed Project (i.e., residential, commercial) avoid Chiquita, Gobernadora, San Juan, La Paz, and Talega Creeks. Impacts would occur to alkali wetlands associated with Cristianitos Creek as a result of development uses. Implementation of a golf course in the Gabino sub-basin would impact Gabino Creek. On a limited basis infrastructure such as bridge piers would result in impacts to mainstem creeks. Project Design Features 9-1, 9-2, and mitigation measure 4.9-6 are proposed to reduce these impacts to a level of less than significance. As set forth in Table 4.9-91 through implementation of PDF 9-1 - RMV Open Space the Proposed Project would conserve 1,507.4 acres of riparian communities, 63.1 acres of open water, 16.3 acres of freshwater marsh, and 19.9 acres of vernal pools. Implementation of PDF 9-2, the Adaptive Management Program would provide no net loss of function of these protected communities through management actions such as invasive species control. With regard to net acreage of waters of the U.S./State, the Proposed Project would need to provide mitigation in the form of new restoration/creation of wetlands acreage equal to the loss of wetlands and non-wetlands waters due to development, and permanent and temporary impacts associated with infrastructure. Impacts to USACE and CDFG jurisdiction are identified previously as 89.51 acres of USACE jurisdiction and 195.55 acres of CDFG jurisdiction (riparian habitat). Mitigation for these impacts is discussed conceptually in the Habitat Restoration Plan, an appendix to the AMP (Appendix J). The Habitat Restoration Plan (Appendix J-2) identifies several potential habitat creation/restoration areas including GERA, Gobernadora Canyon, Gobernadora Canyon/Fertile Crescent, Sulphur Canyon, Chiquita Creek between the "Narrows" and the SMWD Treatment Facility, Chiquita Canyon between SMWD Treatment Facility and New Ortega Highway in addition to stream restoration opportunities within Gobernadora at the knick point, Chiquita Creek between the "narrows" and the SMWD Treatment Facility and upper Gabino Creek and invasive species control in San Juan Creek for giant reed (*Arundo donax*).

Implementation of invasive species control in San Juan Creek is expected to increase functions of San Juan Creek.

SAMP Tenet 2: Maintain/restore riparian ecosystem integrity

Given its focus on protecting (as noted above) and, where feasible and beneficial, restoring each of the major canyon systems as well as mainstem creeks, the proposed project addresses this tenet. For example, as noted above, implementation of invasive species control including giant reed (*Arundo donax*) removal and bullfrog control (see Appendix J-3 of the Draft Program EIR) in San Juan Creek is expected to increase riparian ecosystem integrity by removing/controlling two invasive species of particular concern in San Juan Creek. *Arundo donax* removal is anticipated to have the following benefits: 1) a decrease in non-native biomass; 2) an increase in native species biomass through natural recovery; 3) increase in available water (e.g., *Arundo donax*) (source: http://wric.ucdavis.edu/exotic/techtran/impacts_aquatic_weeds.pdf); 4) an increase in species numbers and diversity as a result of the increase in native species biomass.

SAMP Tenet 3: Protect headwaters

Each of the headwaters areas not already urbanized is protected and/or restored. The headwaters of Chiquita Canyon are located in the Upper Chiquita Conservation area; the headwaters of San Juan Creek are located in the Cleveland National Forest, as are Verdugo, Talega and portions of La Paz Creeks. Significant enhancement/restoration is proposed for Upper Cristianitos Creek and Upper Gabino Canyon. The headwaters area of Trampas Creek is proposed for development but this area is currently significantly altered due to existing mining operations.

SAMP Tenet 4: Maintain/protect/restore riparian corridors

All major riparian corridors are protected as discussed above for tenet 1. The Proposed Project provides for riparian restoration discussed in the Habitat Restoration Plan, an appendix to the AMP (Appendix J). The Habitat Restoration Plan (Appendix J-2) identifies several potential habitat creation/restoration areas including GERA, Gobernadora Canyon, Gobernadora Canyon/Fertile Crescent, Sulphur Canyon, Chiquita Creek between the "Narrows" and the SMWD Treatment Facility, Chiquita Canyon between SMWD Treatment Facility and New Ortega Highway in addition to stream restoration opportunities within Gobernadora at the knick point, Chiquita Creek between the "narrows" and the SMWD Treatment Facility and upper Gabino Creek and invasive species control in San Juan Creek for giant reed (*Arundo donax*). In addition to identifying locations of potential restoration, the Habitat Restoration Plan also sets forth target functions, annual performance standards for 1) emergent marsh, wet meadow, and/or riparian scrub/forest creation; 2) southern coast live oak riparian forest; and 3) *Arundo donax* control in San Juan and/or Trabuco Creeks. An implementation plan is included in the Habitat Restoration Plan that identifies the necessary steps of habitat restoration including an assessment of site hydrology, assessment of restoration approach, planting techniques and conceptual plant palettes, irrigation schedule, weed control, and maintenance and monitoring.

SAMP Tenet 5: Maintain/and or/restore floodplain connection

The Proposed Project maintains all existing areas of floodplain connection. The Proposed Project is consistent with the concepts in the Habitat Restoration Plan in the

AMP to restore the meander in Gobernadora Creek, thereby helping restore historic floodplain connection. Where longer-term terrains/hydrology processes are responsible for areas with existing loss of floodplain connection (e.g., Chiquita Canyon at the "narrows" and lower Gobernadora Creek below the knick point), the Proposed Project does not propose any actions that would be contrary to such processes.

SAMP Tenet 6: Maintain and/or restore sediment sources and transport equilibrium

Consistent with the Watershed Planning Principles, the Proposed Project protects all of the significant sources of coarse sediment in order assure the continued generation of such sediments important for riparian/wetlands habitat systems and focuses development on areas generating fine sediments in order to reduce the runoff of fine sediments that can cause deleterious impacts on riparian/wetlands habitats and associated species. The Proposed Project is consistent with all or most of the vegetation restoration proposals for areas with clay soils, including Sulphur Canyon, Upper Cristianitos Canyon, and Upper Gabino Canyon. In some areas of Cristianitos Canyon and Upper Gabino Canyon, the Proposed Project would conflict with restoration recommendation contained in the Draft NCCP/HCP Planning Guidelines (e.g., the golf course in Planning Area 6 Cristianitos Meadows and the golf course/estate lots in Upper Gabino Planning Area 9); however, proposed development in these areas would result in the stabilization and/or elimination of existing sources of fine sediments. In addition, it is likely that native species can be introduced to the landscape plant palette for the proposed Planning Area 6 and Planning Area 9 golf courses, thus potentially decreasing the conflict.

SAMP Tenet 7: Maintain adequate buffer for the protection of riparian corridors

Under the Proposed Project all major riparian corridors are adequately buffered from development bubbles. Major riparian corridors within the study area can be defined as Chiquita Creek, Gobernadora Creek, San Juan Creek, Verdugo Creek, Cristianitos Creek, Gabino Creek, La Paz Creek and Talega Creek. Development in Planning Area (PA) 2 is setback a range of 50 feet minimum to over 500 feet from Chiquita Creek and above the treatment plant is focused on ridge tops away from the creek. The golf course proposed for PA 2 has a setback range of 50 feet minimum to over 200 feet from the Creek.

Development in PA 3 has a setback range of 125 to 1,000 feet from Gobernadora Creek which is confined to the western edge of the sub-basin. The Gobernadora Ecological Restoration Area (GERA) will act as a buffer between future development in PA 3 and Gobernadora Creek. A 300-foot setback from the 100-year floodplain of San Juan Creek will buffer PA 3 on the South and PA 4 on the North/west from San Juan Creek.

Verdugo Canyon, itself, would not be directly impacted by the proposed estate lots thereby protecting the Verdugo Creek riparian corridor and its associated coarse sediments.

Cristianitos Creek will be buffered through the implementation of minimization measures which call for a minimum setback of 200 feet from the creek and an average setback of 500 feet.

Middle Gabino Creek is protected. Development in Southern PA-7 has a setback range from Lower Gabino Creek of 450 to 1,000 feet, the elevation difference is 35 to 170 feet. The golf course starts in middle Gabino sub-basin, but is predominantly located in Upper Gabino

sub-basin adjacent to Gabino Creek which has a less developed riparian corridor in this location.

Four estate lots are proposed for the La Paz sub-basin and at the minimum are 40 feet in elevation above the creek and have a 850-foot setback from the creek; these lot setbacks would protect the La Paz Creek riparian corridor.

Development in the Talega sub-basin is centered on the current Northrop Grumman test site above the Talega Creek riparian corridor. On the southwestern edge of PA-8 to the southern middle of PA-8, the setback range for development is 750 to 1,150 feet to the creek and up to 220 feet above the creek. From the southern middle of PA-8 to the southeastern edge of PA-8, the setback range for development is 750 to 3,150 feet from the creek with an elevation range of 220 to 500 feet above the creek.

SAMP Tenet 8: Protect riparian areas and associated habitats of listed and sensitive species

As reviewed above for Reserve Design Tenet 1, riparian areas associated with listed species and Planning Species would be protected. Specifically, the Proposed Project would conserve 1,507.4 acres of riparian communities, 63.1 acres of open water, 16.3 acres of freshwater marsh and 19.9 acres of vernal pools (Table 4.9-91, Draft Program EIR 589). Regarding listed species and Planning Species associated with aquatic/riparian habitats, namely, arroyo toad, least Bell's vireo, southwestern willow flycatcher, Cooper's hawk, tricolored blackbird, white-tailed kite, yellow warbler, yellow-breasted chat, western spadefoot toad and southwestern pond turtle, the Proposed Project would protect these species (as set forth in the following table) within the RMV Open Space (Table 4.9-36, Draft Program EIR 589).

Arroyo Toad	100 percent of breeding locations comprising <i>major and important populations</i> in <i>key locations</i> in San Juan Creek, Bell Canyon, lower Gabino Creek, lower Cristianitos Creek and Talega Creek would be conserved, as well as the majority of adjacent upland habitats. In the San Mateo Creek Watershed the minimum elevation differential between development and breeding locations would be 80 feet. Along San Juan Creek, development would be offset by at least 300 feet south of the floodplain and an average of about 300 feet north of the floodplain.
Least Bell's Vireo	Twenty-nine of 30 breeding locations (97 percent) and approximately 466 acres (88 percent) of southern willow scrub/arroyo willow riparian forest would be conserved on RMV. The single <i>important population</i> on RMV in GERA would be conserved.
Southwestern Willow Flycatcher	Six of six breeding locations and approximately 466 acres (88 percent) of southern willow scrub/arroyo willow riparian forest would be conserved on RMV. The single identified <i>important population</i> on RMV in GERA would be conserved.
Cooper's Hawk	Nineteen historic nest locations (83 percent) and 1,958 acres (78 percent) of suitable habitat (riparian, woodlands, and forest) would be conserved on RMV. No major/important populations identified, but breeding and foraging habitat within the major drainages on RMV would be conserved, including Talega, Cristianitos, Gabino, La Paz, San Juan, Chiquita, Gobernadora, and Verdugo.
Tricolored Blackbird	Approximately 50 percent of the historic nesting colony areas would be conserved. In particular, grassland habitat in the valley bottom of Lower Gobernadora on RMV property would be conserved to support a breeding population. In combination with the existing breeding ponds in south Coto de Caza, this area supports an <i>important population/key location</i> . Potential breeding/ foraging areas also would be conserved south of a ranch residence south of Ortega Highway. Potential breeding/foraging areas that would be affected by development include the Narrows area of Chiquita Canyon, the "Riverside Cement" colony in Lower Cristianitos and Lower Gabino canyons, and at the mouth of Verdugo Canyon.
White-tailed Kite	Thirteen historic nest locations (93 percent) and 1,958 acres (78 percent) of riparian and woodland habitats would be conserved on RMV. In particular, nesting and foraging habitat would be conserved in GERA, Central San Juan Creek, Lower Cristianitos Creek, middle and lower Gabino Canyon, La Paz Canyon, and Talega Canyon.
Yellow Warbler	Seventeen locations (100 percent) and 1,581 acres (84 percent) of riparian habitat would be conserved on RMV. All three of the <i>important populations</i> on RMV would be conserved. Scattered locations in Lower Gobernadora and Chiquita canyons also would be conserved.
Yellow-breasted Chat	Sixty-six locations (88 percent) and 1,581 acres (84 percent) of riparian habitat would be conserved on RMV. All four of the <i>important populations</i> on RMV would be conserved. Scattered locations in Middle Chiquita, Verdugo, Lower Gabino, and La Paz canyons also would be conserved.
Western Spadefoot Toad	Thirteen locations (87 percent) and all of three <i>important populations</i> on RMV (Radio Tower Road, Upper Cristianitos, and Lower Gabino Creek) would be conserved, assuming that golf course design in Upper Cristianitos would avoid the stock pond and adjacent upland habitat. A portion of the fourth <i>important population</i> along San Juan Creek would be conserved. All conserved breeding locations would have at least a 650-ft upland buffer zone from proposed development to support all life stages.
Southwestern Pond Turtle	Six of eight locations would be conserved, including <i>important populations/key locations</i> in riparian and aquatic habitats along San Juan Creek, the stock pond and other wetlands in Upper Cristianitos, and Jerome's Lake in Upper Gabino in Upper Cristianitos and potentially in Upper Gabino at Jerome's Lake. Proposed golf courses in these two areas would preserve or create water features that would provide suitable habitat. Locations in San Juan Creek and the adjacent floodplain providing nesting/estivation habitat would also be conserved. Setbacks of at least 328 feet from breeding ponds containing suitable upland habitat with southern exposures would provide for nesting and overwintering sites. Habitat connectivity between the San Juan Creek and San Mateo Creek watersheds would be maintained to allow dispersal.

Source: Dudek, 2004.

Response 3

The "analysis of conventional impacts to waters of the U.S." refers specifically to the amount of such waters (in acres) to be filled as a result of the proposed project. It is acknowledged that a detailed breakdown of such impacts was not included in the main text of the Draft Program EIR. However, a detailed breakdown by drainage or other aquatic feature (e.g., slope wetlands,

vernal pools) for each planning area is provided in Technical Appendices G-1a and G-1b (of the Draft Program EIR) for CDFG and U.S. Army Corps of Engineers (USACE) jurisdiction, respectively. These appendices also included a detailed breakdown of impacts associated with roads outside of the planning areas as suggested by the commenter.

Provision of the conventional impact analysis in the technical appendices allowed for the main text Draft Program EIR and Appendix M of the Draft Program EIR to address each sub-basin (which in many cases were further separated into subunits) relative to consistency with both the NCCP/HCP Sub-Basin Planning Guidelines (see Table M-4 in Appendix M) and the SAMP/MSAA Sub-Basin Planning Principles (see Table M-5 in Appendix M). Tables M-4 and M-5 include very specific analysis, including avoidance recommendations relative to specific aquatic resources (e.g., see NCCP/HCP Sub-Basin Planning Guidelines 3, 5, 6, and 7 for Chiquita Canyon Sub-Basin and SAMP/MSAA Planning Principles 24 through 28). As such, the analysis provided in the Draft Program EIR and technical appendices ensures a level of analysis that both include a "conventional" analysis plus the overall consistency for each planning area with the NCCP/HCP Sub-Basin Planning Guidelines and the SAMP/MSAA Sub-Basin Planning Principles at the level of sub-basin.

Response 4

As set forth in Section 1.5, Project Alternatives, to the Draft Program EIR, a full range of alternatives was developed during scoping sessions and by the NCCP/SAMP Working Group, that included representatives from the USACE, CDFG, USFWS, the County of Orange, and local landowners. The USACE was an active participant in the Working Group meetings and as such, participated in the selection of alternatives that are subject to review in the Draft Program EIR. In accordance with the CEQA Guidelines §15126.6(a), the alternatives selected represent a reasonable range of alternatives. The opportunity to "mix and match" has been an ongoing process within the NCCP/SAMP Working Group during the last two plus years, which is the process responsible for bring the alternatives in this document forward for review.

Detailed information regarding the extent of jurisdictional waters, including jurisdictional wetlands for each planning area, along with a detailed breakdown of impacts for each planning area, including wetlands is provided in Technical Appendices G-1a and G-1b of the Draft Program EIR for CDFG and USACE jurisdiction, respectively and repeated here. These appendices also included a detailed breakdown of impacts associated with roads outside of the planning areas as suggested by the commenter.

Impacts to wetlands subject to the jurisdiction of the USACE is provided in Table 12 by habitat type.

TABLE 12
WETLAND HABITAT TOTALS WITHIN THE RANCH PLAN

Habitat Type	PA 1	PA 2	PA 3	PA 4	PA 5	PA 6	PA 7	PA 8	PA 9	Totals
Alkali Meadow (5.2)	0.04		0.19			1.20		0.12	0.88	2.43
Seasonal Pond (5.3)					0.12	0.17	0.03			0.32
Coastal Freshwater Marsh (6.4)			0.55		0.65	0.73	3.05		0.77	5.75
Riparian Herb (7.1)					0.01		0.22			0.23
Southern Willow Scrub (7.2)			0.65			0.19	0.08	0.10	1.57	2.59
Mulefat Scrub (7.3)						2.90	1.36		0.19	4.45
Sycamore Riparian Woodland (7.4)			0.01							0.01
Oak Riparian Woodland (7.5)										0.00
Arroyo Willow Forest (7.6)			5.47			0.08				5.55
Total	0.04	0.00	6.87	0.00	0.78	5.27	4.74	0.22	3.41	21.33

Impacts to riparian habitats subject to the jurisdiction of the CDFG is provided in Table 13 by habitat type.

TABLE 13
RIPARIAN HABITAT TOTALS WITHIN THE RANCH PLAN

Habitat Type	PA 1	PA 2	PA 3	PA 4	PA 5	PA 6	PA 7	PA 8	PA 9	Totals
Alkali Meadow (5.2)	0.04	0.29	0.22		0.42	1.63		0.12	0.91	3.62
Coastal Freshwater Marsh (6.4)			0.54		0.65	1.00	3.05		0.78	6.02
Riparian Herb (7.1)	0.09				1.37	1.03	0.37			2.86
Southern Willow Scrub (7.2)	1.50	0.46	5.13		0.48	0.61	1.23	2.19	1.94	13.54
Mulefat Scrub (7.3)	0.66	1.51	2.33	3.82	4.53	3.91	3.45	0.27	2.45	22.92
Sycamore Riparian Woodland (7.4)		0.69	5.91	0.05		0.67		2.62	9.36	19.29
Oak Riparian Woodland (7.5)		3.62	4.72	0.63	11.34	0.41	0.37	5.72	4.29	31.09
Arroyo Willow Forest (7.6)	0.75	0.02	15.49	0.47	3.87	0.20				20.81
Total	3.04	6.59	34.33	4.98	22.66	9.45	8.47	10.91	19.72	120.16

Response 5

Alternative B-4 Reduced Intensity was developed to address traffic impacts and potential minimization of traffic impacts. Impacts to jurisdictional wetlands subject to USACE jurisdiction are not measurably different between the proposed Ranch Plan project and this alternative following application of the avoidance and minimization measures. For example, the only important wetlands in Planning Area 6 are associated with the alkali drainage along the east side of the planning area that will be avoided in accordance with Minimization/Avoidance Measures 4.9-7 and 4.9-8. Similarly, the casitas and golf course in Gabino will substantially avoid wetlands and other jurisdictional waters. No important wetlands (only a highly degraded stock pond) occur within the eastern portion of Planning Area 8. As such, impacts to jurisdictional resources are not substantially different between these alternatives and the alternatives as presented in the Draft Program EIR address a representative range of impacts relative to USACE jurisdiction.

Response 6

The comment is noted. The information provided in Table 4.9-29 of the Draft Program EIR for the proposed project cannot be directly compared with Tables M-1, M-2, M-2, M-3, M6, M7, M-8, and M-9 because the numbers in Table 4.9-29 reflect all impacts associated with the proposed project including those resulting from development, permanent infrastructure and temporary infrastructure. The impacts depicted in the Appendix M tables only show impacts resulting from development. Conceptual infrastructure was not designed for each of the other alternatives analyzed in Appendix M. As noted on page M-2 infrastructure impacts would be proportional to the impacts of the development area for each alternative. The tables in Appendix M do provide an order of magnitude comparison of impacts and conservation of vegetation and species for each alternative that can be compared to the first column in Table 4.9-29.

Response 7

As described in the Draft Program EIR and in Topical Response 3.1.9.1, the NCCP/HCP Planning Guidelines and Watershed Planning Principles were developed in coordination with the NCCP/SAMP Working Group including the USACE to provide guidance to decision makers that are keyed to local biologic, hydrologic and geomorphic conditions and while a "work in progress" present the most current thinking regarding protection, restoration and management priorities for resources within the study area (page 4.9-5). The Planning Guidelines and planning principles are initially sub-basin specific and build to the broader SRP Tenets of Reserve Design and SAMP Tenets, and as such do not lend themselves to differential weighting. The County agrees that avoidance of impacts is the best method to reduce impacts and for this reason developed the B-10 Alternative which improves upon the performance of the proposed project with respect to the protection of resources while still addressing the Project Objectives regarding the provision of much needed housing opportunities.

Response 8

Refer to Topical Response 3.1.9.4, Biological Resources–Wildlife Linkages/Corridors. Pond turtle movement is addressed on page 3-113 of the Draft Program EIR,

Response 9

Monthly water balance results are presented in Appendix C-2, Conceptual WQMP. As is shown in these tables, surface runoff from the proposed projects would occur primarily during the winter months of December, January, and February and would generally closely match pre-development runoff. Groundwater outflows that contribute to base flows do increase modestly in some sub-basins; however, such increases are generally in the range of 10 to 20 percent and much of this water would likely infiltrate into the stream channel and therefore would not lead to perennialization of flows in San Juan Creek or San Mateo Creek.

The flow duration/water quality basins proposed in the Conceptual WQMP are to be designed to drain within 48 hours and therefore will not contain standing water. Low flow wetlands within the basins will remain moist due to dry weather flows, but also will not retain standing water.

If persistent standing water is noted during operation and maintenance of the combined control facilities, actions will be taken to remediate the situation.

Potential actions and corrective measures are set forth in Chapter 6 of the Conceptual WQMP and include such actions as adjusting water levels in the event that water levels are too high or persist longer than the 48-hour design time. A 48-hour design drain time will not provide breeding habitat for bull frogs. Bull frogs are one of the invasive species addressed in the Adaptive Management Program, Invasive Species Control Plan (Appendix J-3). Therefore, mechanisms are in place to prevent occupation of combined control facilities by bull frogs through 1) proper drain time and 2) control of source populations.

Response 10

Subarea Plans are not available at this time. As indicated on page 3-13 of the Draft Program EIR, a Master Area Plan that covers an entire Planning Area would be prepared prior to approval of any development plans for any portion of a Planning Area. The Subarea Plan shall be prepared prior to approval of any subdivision. Topical Response 3.1.1.2, Project Processing, provides more detail on the subsequent project processing requirements. Area Plan approvals are a discretionary action and would require the approval of the Planning Commission.

Response 11

The uses permitted in the DSA, as well as discussion of natural open space and other open space, are further discussed in Topical Response 3.1.2.

Response 12

Planning Area 2 on Exhibit 3-20 of the Draft Program EIR contains an area marked as DSA and shown in a cross-hatch pattern in the south-western corner of the Planning Area. The water quality basin/flood detention facility would be located within this cross-hatched area. The water quality basin/flood detention facility anticipated for this location is also identified on Exhibit 4.5-13 (Preliminary Detention Basin Locations) and is assumed in the biological impact analysis as an infrastructure facility. Exhibits 4.9-11 through 4.9-21 of Section 4.9 note this facility in a brown color titled "Drainage Facilities" in the legend. For further discussion on the definition of open space and the permitted uses therein, refer to Topical Response 3.1.2.

Response 13

This comment was addressed by the Errata issued on June 23, 2004 which notes "References to open space not in DSA should be 10,950 acres. Referenced to DSA open space should be 4,171 acres.

Response 14

The location of anticipated flood detention/water quality facilities is identified on Exhibit 4.5-13 (Preliminary Detention Basin Locations). Two locations are outside of the development footprint and are located in DSAs, one in Planning Area 2 (Chiquita sub-basin) and one in Planning Area 3 (Gobernadora Sub-basin). These locations are assumed in the biological impact analysis as infrastructure facilities and are shown on Exhibits 4.9-11 through 4.9-21 of Section 4.9 in a brown color titled "Drainage Facilities" in the legend. Flood detention facilities are anticipated to be of sufficient size to handle flows greater than the ten-year event and are intended to function primarily in a flood control capacity. Flow Duration/Water Quality basins, infiltration basins and extended detention basins are part of the combined control system (described in the Draft Program EIR Water Quality Appendix C-2) and will handle all low flow urban discharges and up to the ten-year storm event and as such will be smaller in scale than

the flood control facilities. The precise location of these facilities is not identified at this time pending further community planning at the Master Area Plan and Subarea Plan levels. Approximately 20 acres will be necessary for the combined control systems in the San Juan Watershed and approximately 30 acres in the San Mateo Watershed. Generally, these facilities will be located within the developed portion of a planning area. Under limited circumstances, these facilities may be located with DSA as noted previously and explained in Topical Response 3.1.2.2, Project Description-Definition and Preservation of Open Space.

Response 15

The 1,920.3 acres of riparian habitat in Table 4.9-2 is based on the generalized NCCP database as specifically noted in footnote 1 in the table. As set forth in the Draft Program EIR:

“...the WES/CRREL and NCCP databases are intended to characterize the study area at a landscape level. Beginning in 2002, wetland specialists from Glenn Lukos Associates (GLA) conducted a project-level jurisdictional delineation for the proposed development and project alternatives, to identify with a higher level of precision, the limits of the USACE jurisdiction pursuant to Section 404 of the Clean Water Act (GLA, 2003a) and the California Department of Fish and Game (CDFG) pursuant to Section 1600 of the Fish and Game Code, including areas of riparian habitat (GLA, 2003b). The jurisdictional delineation for CDFG focused on a functional definition of “riparian habitat” and thus defined riparian resources which would be subject to evaluation under CEQA. During the performance of the project-level USACE and CDFG jurisdictional delineations, it became apparent that many features identified by WES/CRREL as Waters of the United States (WoUS) did not meet the criteria set forth in 33 CFR 328.3 due to a lack of characteristics consistent with the presence of an Ordinary High Water Mark (OHWM) or jurisdictional wetlands in accordance with the 1987 Wetland Manual. It was also noted that areas identified as riparian habitat by WES/CRREL and/or the NCCP databases sometimes overestimated the extent of riparian habitat, and in some instances mapped upland areas as riparian habitat because of the inherent generalization based on aerial photo interpretation compared to the specific characterization of habitat at the project-level delineation. Overall the WES/CRREL and NCCP databases were generally accurate for mainstem creeks and associated riparian habitat and were less accurate on smaller tributaries extending into upland habitats. The general description of the existing setting in the study area provided in this section will be based on the WES/CRREL and NCCP databases to provide a broad landscape overview. However, because CEQA requires an analysis of potential impacts on existing “on the ground” conditions, the impact analyses within development planning areas and adjacent open space potentially impacted by infrastructure facilities will be based on the GLA (2003a, b) USACE/CDFG delineations.” (Draft Program EIR, page 4.9-2)

Therefore, the 1,920 acres represents a general characterization of the riparian habitat within the study area at a landscape level.

In keeping with statement above regarding CEQA analysis, a detailed delineation of both USACE and CDFG jurisdiction was performed by Glenn Lukos Associates (GLA) for the Ranch Plan Program EIR. This delineation is contained in Appendices G-1a and G-1b of the Draft Program EIR. As noted in these appendices, the delineation was not performed for the entire study area (i.e., 22,815 acres), rather a “delineation study area” was created by overlaying all the alternatives subject to review in the Draft Program EIR and creating a maximum likely extent of development. Both USACE and CDFG jurisdiction were then delineated within this refined

study area. Pages 4.9-8 and 4.9-9 of the Draft Program EIR provide a detailed description of the methods used for determining the limits of riparian habitat subject to CDFG jurisdiction. The 398.14 acres of CDFG jurisdiction (of which only 368.4 acres are riparian habitat) are the amounts of CDFG jurisdiction, including riparian habitat, within this refined study area as verified by CDFG personnel during verification visits noted on page 4.9-8 of the Draft Program EIR. The amount of riparian habitat within the 7,694-acre development area and, therefore, subject to impacts resulting from the proposed project is set forth in Table 4.9-30 and for riparian totals 152.77 of permanent impacts resulting from both development and infrastructure impacts. Additionally, 18.49 acres of temporary impacts (resulting from infrastructure) would also result from the proposed project.

Response 16

Table 1 in Appendix G-1b has the correct numbers: 192.44 acres of waters of which 81.98 acres consist of wetlands. Page 4.9-131 will be revised to reflect these acreages and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

“Discussion of Riparian and Wetland (Jurisdictional Areas)

State and federal jurisdictional delineations of the study area have been conducted by Glenn Lukos and Associates (GLA, 2004) (Appendix G-1). It should be noted that the delineation did not include the entire study area, but was focused on the development planning areas and their potential impacts associated with major arterials that connect the development areas. The delineation determined that the development planning areas contain 192.44 acres that are within the jurisdiction of the USACE, of which 81.98 acres are considered jurisdictional wetland...”

Response 17

There is not a discrepancy between Tables 4.9-28 and 36 with Exhibit 4.9-14b. Exhibit 4.9-14b shows potential impacts to the easternmost Radio Tower Road vernal pool in Planning Area 6 (Trampas Canyon) prior to the implementation of Minimization/Avoidance Measures. This potential impact is identified as Impact 4.9-67 for the San Diego fairy shrimp and 4.9-68 for the San Diego fairy shrimp at Draft Program EIR page 4.9-136. Tables 4.9-28 and 36 in regard to the Riverside and San Diego fairy shrimp state that “The easternmost pools would be avoided through project design.” This avoidance is based on implementation of the protection recommendation for this pool in the draft Southern NCCP/HCP Planning Guidelines. The specific Minimization/Avoidance Measures to address this vernal pool are presented in Table 4.9-42 at Draft Program EIR page 4.9-226 in reference to the Riverside and San Diego fairy shrimp.

Response 18

Please refer to Topical Response 3.1.9.5, Biological Resources—Reserve Design/NCCP Standards regarding design issues and NCCP Standards for San Juan Creek. Also refer to Topical Response 3.1.9.8 for a discussion of impacts to species, specifically arroyo toad. Planning Areas 3 and 4 “choke points” are addressed on page 3-118 and on pages 3-145 through -149 of the Draft Program EIR.

Response 19

This is not a discrepancy. The identification of two impacts to the least Bell's vireo at Draft Program EIR page 4.9-138 and in Table 4.9-42 (i.e., Impact 4.9-71) is based on both impacts from proposed development in Planning Areas and anticipated infrastructure impacts in RMV Open Space. It was determined that one vireo location would be impacted in Planning Area 4 and one would be impacted by new road construction through RMV Open Space. The single vireo impact identified in Tables 4.9-28 and 36 is based on the Consistency Analysis that was used to compare alternatives and did not include infrastructure impacts.

Response 20

This is not a discrepancy. Please refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species (specifically spadefoot toad).

Response 21

This is not a discrepancy. The identification of 14 impacts to the yellow-breasted chat at Draft Program EIR page 4.9-143 and in Table 4.9-43 (i.e., Impact 4.9-83) is based on both impacts from proposed development in Planning Areas and anticipated infrastructure impacts. It was determined that nine chat locations would be impacted in Planning Areas and five would be impacted by infrastructure construction in RMV Open Space. The nine chat impacts (i.e., 66 conserved locations) identified in Tables 4.9-28 and 36 are based on the Consistency Analysis that was used to compare Alternatives and did not include infrastructure impacts.

Response 22

This is not a discrepancy. The identification of impacts to 29 locations of southern tarplant at Draft Program EIR page 4.9-143-144 (i.e., Impact 4.9-85) is based on both impacts from proposed development in Planning Area 2 and anticipated infrastructure impacts in RMV Open Space in Chiquita Canyon. The 33 conserved locations identified in Tables 4.9-28 and 36 are based on the Consistency Analysis that was used to compare Alternatives and did not include infrastructure impacts. It should be noted that although a substantial proportion of the locations identified as conserved in the Consistency Analysis (i.e., Table 4.9-28) will be impacted by infrastructure, resulting in approximately 76 percent of the southern tarplant locations being impacted, the estimated number of individual tarplants impacted increases only from about 33,000 without infrastructure impacts factored in to about 40,000 with infrastructure, an increase in impacts of about five percent. This relatively small increase in impacts to individuals compared to locations resulting from infrastructure is due to the linear nature of the infrastructure; i.e., roads and water and sewer pipelines impact limited areas of the plant polygons.

Response 23

Exhibit 4.9-18b is correct relative to the location of southwestern pond turtle in Planning Area 6. Measure 4.9-4 in Table 4.9-32, page 4.9-165 will be modified to correctly refer to Planning Area 6 and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

Impact 4.9-5: Implementation of the Proposed Project may result in impacts to a stock pond supporting southwestern pond turtle in the Cristianitos sub-basin (Planning Guideline 82).	Measure 4.9-4: Prior to issuance of a grading permit for Planning Area 7 <u>6</u> the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the southwestern pond turtle breeding and estivation habitat associated with the stock pond in the Cristianitos sub-basin have been substantially avoided.	Less than Significant
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Response 24

Exhibit 4.9-18b is correct relative to the location of western spadefoot toads in Planning Area 6. Measure 4.9-5 in Table 4.9-32, page 4.9-166 will be modified to correctly refer to Planning Area 6 and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline).

Impact 4.9-6: Implementation of the Proposed Project may result in impacts to a stock pond supporting western spadefoot toad in the Cristianitos sub-basin (Planning Guideline 83).	Measure 4.9-5: Prior to issuance of a grading permit for Planning Area 7 <u>6</u> , the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the western spadefoot toad breeding and estivation habitat associated with the stock pond in the Cristianitos sub-basin have been substantially avoided.	Less than Significant
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Response 25

The subject alkali drainage is located along the eastern boundary of Planning Area 6. Measure 4.9-6 in Table 4.9-32, page 4.9-166 will be modified to correctly refer to Planning Area 6. The same revision will be incorporated into Table 4.9-33 on page 9-170 of the Final Program EIR as follows (changes are shown in cross-out and underline):

Impact 4.9-7: Implementation of the Proposed Project may result in impacts to alkali wetlands in the Cristianitos sub-basin (Planning Guideline 84).	Measure 4.9-6: Prior to issuance of a grading permit for Planning Area 7 <u>6</u> , the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the alkali wetlands in the Cristianitos sub-basin have been substantially avoided.	Less than Significant
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Response 26

Mitigation Measure 4.9-30 addresses development of a Biological Resources Construction Plan (BRCP) to minimize construction-related impacts to sensitive wildlife. While noise is not explicitly mentioned in the mitigation measure, the fourth bullet point refers to "(s)pecific construction monitoring programs for sensitive species required by resource agencies..." It is the County's experience that such programs also include protection for special-status species potentially affected by noise impacts. The BRCP will include measures to protect potentially affected offsite species from noise impacts.

3.3 RESPONSES TO STATE AGENCIES COMMENTS

COMMENTER 6 DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

Dated: June 28, 2004

Response 1

The discussion of California Highway Patrol (CHP) services is discussed on page 4.15-11 of the Draft Program EIR. On page 4.15-12, the EIR states that the CHP would continue in their support role to the Orange County Sheriff's Department (OCSD) with regards to law enforcement unless the area was to incorporate or be annexed to an existing city. OCSD would continue to be the primary law enforcement agency for the study area. As noted in the comment, the project would provide a substation for the Sheriff's Department within the project limits. The substation would provide sufficient facilities to support law enforcement activities within the Ranch Plan boundary. Should the CHP require space to support the OCSD efforts, this should be coordinated with the Sheriff's Department.

Response 2

New Ortega Highway, including the intersection with the existing Ortega Highway, would be constructed consistent with the County's standard plans for arterial highways. This would ensure that there would be sufficient sight distance at the intersection. Additionally, as shown in Tables 4.6-12 and 4.6-16 of the Draft Program EIR the level of service at the New Ortega Highway/Ortega Highway intersection is projected to operate at level of service (LOS) A under the existing conditions plus project scenario and LOS A in the A.M. peak hour and LOS B in the P.M. peak hour under the Year 2025 plus project build out scenario. A relatively limited number of trips generated by the project would travel on Ortega Highway east of the project study area. The project should not result in any conditions that would result in an inordinate level of congestion or generate collisions at the New Ortega Highway/Ortega Highway intersection.

Response 3

The intersection of New Ortega Highway and Antonio Parkway will operate at an acceptable level of service with the extension of SR-241. Without the extension of SR-241 a grade separated intersection would be required. The project is committed to make this improvement if necessary (PDF 4.6-1). Additionally, it should be noted the County is not pursuing the proposal to add this facility to the state highway system at this time and is only proposing that the "New Ortega Highway" be added to the County Master Plan of Arterial Highways (MPAH) as an arterial highway. If the existing Ortega Highway is retained as a State Highway it is likely that some of the trips assumed to use New Ortega Highway would remain on the existing State Route. Overall, the addition of a parallel roadway facility north of San Juan Creek will provide additional capacity and therefore increase safety through reducing the volumes on the existing parallel section of Ortega Highway. Please also refer to Topical Response 3.1.7, Transportation and Circulation-New Ortega Highway, and to the response to Comment 2, above.

COMMENTER 7 NATIVE AMERICAN HERITAGE COMMISSION

Dated: July 12, 2004

Response 1

The archaeological consultant for the Ranch Plan Program EIR had already contacted local Native Americans in regard to cultural resources that are known to be present within the

boundaries of The Ranch Plan project site. Consultation with representatives of the Juaneño Band of Mission Indians was initiated by the project archaeologist, ARMC, by mail and followed up by telephone. Letters were mailed to David Belardes on February 16, 2000, Sonia and Darrell Johnson on February 16, 2000, and Jean Fietze on March 7, 2000. David Belardes and Joyce Perry responded by telephone and through Nancy Evans, the project ethnohistorian. They asked for and received permission to visit the project site on March 16, 2000, accompanied by ARMC personnel. The purpose of the field trip was to explore the possible identification of several named historic Juaneño villages with recorded archaeological sites in the study area. At the conclusion of the visit, Mr. Belardes and Ms. Perry asked to be included in the ongoing review process to which ARMC personnel agreed. Ms. Fietze responded by telephone regarding several issues. She expressed a desire to obtain a copy of the survey report and asked that any collected artifacts be turned over to the Juaneño Band. Ms. Fietze was referred to the project applicant, RMV, to make her requests directly. Sonia and Darrell Johnston did not respond to the letter or to a follow-up telephone call. The list provided by Rob Wood of the Native American Heritage Commission will be used for future consultation as the review process continues.

COMMENTS 8 DEPARTMENT OF PARKS AND RECREATION

Dated: July 22, 2004

Response 1

The SAMP watershed planning principles were specifically followed in developing the elements of the Conceptual WQMP for each sub-basin. For each sub-basin, a table listing the planning recommendations and how the Conceptual WQMP complied with those recommendations is provided. For example for the Chiquita sub-basin, see Table 4-6, page 85 of Conceptual WQMP. Please also refer to the Biological Resources section of Draft Program EIR, which contains an extensive discussion of the proposed project's consistency with the SAMP Tenets, the Watershed Planning Principles, and the Sub-basin Planning Principles.

Response 2

Please refer to Topical Response 3.1.6, Water Resources–Impacts to Sensitive Species and to Topical Response 3.1.9.6, Biological Resources–Indirect Impacts. Water quality impacts to sensitive species such as those mentioned in the comment are addressed in Topical Response 3.1.6 Water Resources. Sedimentation would be considered a hydrologic condition of concern and is also discussed in the same topical response. Relative to the tidewater goby it should be noted that the Draft Program EIR discusses that the clay soils in the Cristianitos sub-basin currently contribute fine silts to Cristianitos Creek. In a post-project scenario these fine silts would decrease as the areas shedding these silts would be either developed as part of Planning Area 7 or restored with coastal sage scrub/valley needlegrass grassland through implementation of the Adaptive Management Program, Habitat Restoration Plan.

Response 3

The issue of separation of the NCCP/HCP and SAMP/MSAA is addressed in Topical Responses 3.1.1.1, Project Processing. The County wishes to clarify, as stated in the Topical Response, the County did not “promise” to concurrently develop the three programs.

Regarding consistency with the NCCP sub-basin planning principles and alternative configurations, the Draft Program EIR examines several different alternative open space/

configurations including two alternatives developed by the County. These are identified as Alternatives B-10 and B-11.

Response 4

Refer to Topical Response 3.1.9.4, Biological Resources–Wildlife Linkage/Corridors.

Response 5

The trail staging site within the San Onofre State Beach is not proposed as part of the Ranch Plan. The staging site is identified on the County of Orange Master Plan of Regional Riding and Hiking Trails. The Draft Program EIR, including Exhibit 4.12-2, identifies the staging area within the State Beach as it reflects the adopted County General Plan.

COMMENTER 9 DEPARTMENT OF HEALTH SERVICES
Dated: July 23, 2004

Response 1

The Department of Health Services correctly reflects that neither Santa Margarita Water District (SMWD) nor Metropolitan Water District of Orange County (MWDOC) hold guaranteed water rights relative to Metropolitan Water District (MWD) water supplies. Notwithstanding, by virtue of the fact that both SMWD and MWDOC are within MWD's service area, these two member agencies are statutorily or contractually entitled to purchase available water supplies from MWD. As reflected in the Draft Program EIR, the Water Supply Assessment (WSA), the individual reports, studies, and analyses prepared/reproduced in support thereof, and the supplemental analysis provided in Topical Response Number 3.1.12, sufficient, reliable water supplies will be available from MWD and other supplemental resources to satisfy the Ranch Plan's anticipated potable and non-potable water demands. Accordingly, the provision of additional/requested information concerning program "guarantees" is neither warranted nor possible under the current circumstances.

Furthermore, the comprehensive water supply and demand analysis performed in connection with the Ranch Plan comports with the requirements of CEQA and Water Code Section 10910 (i.e., the WSA statute). Indeed, Water Code Section 10910(c) specifically prescribes the information that must be contained within a WSA. As mandated by Water Code Section 10910(c), a WSA must discuss whether the identified public water system's (in this case, SMWD's) total water supplies available during normal, single dry and multiple dry water years during a 20-year projection period will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses. The WSA clearly provides this information, and ultimately demonstrates that SMWD's total water supplies will exceed anticipated Ranch Plan water demands beyond the 20-year planning horizon—even under multiple dry-year conditions (and assuming full deliveries to existing and planned uses within SMWD's service area).

Pursuant to Water Code Section 10910(c), a WSA is sufficient if:

- The projected water demand associated with the proposed project was accounted for in the public water system's most recently adopted urban water management plan (UWMP), and the public water system incorporates information from the UWMP into the WSA; or

- In the absence of a current UWMP, the WSA identifies existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project (with a description of the quantities of water received in prior years by the public water system).

The WSA prepared by SMWD for the proposed project conservatively satisfies the elements of each mandate. As discussed on pages 5 and 6 of the WSA, projected water demand for the Ranch Plan was substantially accounted for in SMWD's Year 2000 UWMP. Furthermore, the WSA provides detailed information concerning the individual water supply entitlements, water rights and contracts held by SMWD which can/will be called upon to satisfy the anticipated water demands of the Ranch Plan project. Additionally, and as required by SB 610 (ala Water Code Section 10910(e)), the WSA includes updated information concerning groundwater supplies not specifically addressed in the Year 2000 UWMP.

In summary, the WSA prepared in connection with the Ranch Plan contains all information and analysis required by the statute; accordingly, the WSA is sufficient and the provision of additional evidence/documentation is not warranted. Notwithstanding, and as indicated above, Topical Response Number 3.1.12 has been prepared in order to provide supplemental information concerning the reliability of MWD's regional water supplies and to clarify certain misunderstandings relative to the nature, scope and content of the WSA.

COMMENTS 10 DEPARTMENT OF JUSTICE

Dated: August 6, 2004

Response 1

Please refer to Topical Response 3.1.1, Project Processing.

Response 2

Adoption of the Development Agreement will not interfere with the adoption and implementation of the NCCP/HCP or SAMP/MSAA, or the implementation of mitigation provided in the Program EIR. Please refer to Topical Response 3.1.2, Project Description.

COMMENTS 11 DEPARTMENT OF TOXIC SUBSTANCE CONTROL, Teresa Hom

Dated: August 6, 2004

Response 1

The public review period will not be extended; however, the County of Orange will respond to late comments provided they are received prior to the completion of the response to comments document. All late comments will be transmitted to the decision makers for consideration as part of the Final Program EIR.

**COMMENTS 12 UNITED STATES FISH AND WILDLIFE SERVICES/CALIFORNIA
DEPARTMENT OF FISH AND GAME**

Dated: August 9, 2004

The United States Fish and Wildlife Service and the California Department of Fish and Game submitted a joint letter. Please see the response to the United States Fish and Wildlife Service in Section 3.2, Federal Agencies.

COMMENTS 13 DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

Dated: August 9, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 2

Your comment is noted. Densities within the Planning Areas would be decided as part of the Master Area Plan and Subarea Plan process. However, the overall development levels would not exceed 14,000 dwelling units.

COMMENTS 14 GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

Dated: June 30, 2004

Response 1

The comment is noted.

COMMENTS 15 GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

Dated: August 10, 2004

Response 1

The comment is noted.

3.4 RESPONSES TO SPECIAL DISTRICTS/REGIONAL AGENCIES COMMENTS

**COMMENTS 16 THE HYDRO COMPANY, INC.
ELSINORE VALLEY MUNICIPAL WATER DISTRICT**
Dated: June 29, 2004

Response 1

The Ranch Plan Draft Program EIR analyzed the proposed Ranch Plan's impacts on the existing environment and properly concluded that the Ranch Plan would not create or expose people or structures to significant flooding risks in the San Mateo and San Juan Creek watersheds. The EIR did not conclude that implementation of the Ranch Plan would expose people to any potential risks associated with a hydroelectric reservoir and dam near the headwaters of San Juan Creek because such a facility is not in existence at this time. The proposal that the commenters describe in their letter (called "LEAPS"), and which they desire to have analyzed in the Program EIR, has not been approved, has not undergone environmental review, and has no funding in place (see Sections 4.1 and 8.0 of Exhibit D, LEAPS License Application, February 2004).

Although the Elsinore Valley Municipal Water District (EVMWD) and the commenter submitted a joint application for the LEAPS project to the Federal Energy Regulatory Commission (FERC), it was found to be deficient and in need of clarification by the FERC in August 2004 (source: FERC letter to Rexford Wait dated August 13, 2004). Among other things, the FERC noted that the license application "shows some ambiguities in regard to the project description...it is not clear from that description and from information provided in [the application] which facilities and measures comprise your proposed action, as several options are often presented." If the LEAPS proposal moves forward, an Environmental Impact Statement under the National Environmental Policy Act will be required, this would include an analysis of project-specific and cumulative impacts, as well as reasonable project alternatives. Environmental review under the California Environmental Quality Act (CEQA) also would be required. As part of those processes, the LEAPS sponsors will be required to define the specifics of the proposal, evaluate its potential impacts, and to identify engineering proposals and mitigation measures designed to minimize the risk of dam failure and any potential risks of flooding and inundation to structures and people downstream. In light of the foregoing, the Ranch Plan project is in no position to identify the range of design features and mitigation measures that may be available to the LEAPS project proponents to avoid or mitigate the potential future impacts of their project. Such measures should be developed based on detailed engineering and hydrologic studies and an alternatives analysis prepared by the commenter as part of the permitting and environmental review process for the LEAPS project.

The commenter's request that the Ranch Plan prohibits residences, intensive recreational uses, visitor facilities, emergency facilities and critical infrastructure in areas that might be inundated by the failure of a future LEAPS dam can be considered by agencies considering whether to approve the Ranch Plan. However, CEQA does not dictate such a requirement. The LEAPS dam is not part of the existing environment, and it is speculative whether it will be part of the future environment. Further, such a suggestion appears to amount to a request that the owner of the Rancho Mission Viejo property grant to LEAPS an easement for inundation in the event of failure of a dam that is the subject of a proposal that may or may not ripen into an actual project. CEQA does not require that a property owner do so.

It should also be noted that the dam inundation hazard zones associated with potential reservoir failures represent an extremely low probability risk and such hazard zones generally do not

restrict land planning. Thus, if the LEAPS proposal moves forward, it should be designed to minimize the possibility of failure. The federal guidelines for dam safety have improved the operation and inspection of dams, which have greatly reduced the failure potential.

By contrast, the mapping of dam inundation zones is based on conservative procedures outlined by the California Department of Emergency Services (Sequence of Step in Inundation Map Preparation, 1991) in which the actual breach of the dam applies an assumed failure mode. Those general procedures may be very conservative for the LEAPS dam, depending upon its design and other attributes.

Furthermore, little or no development is anticipated to occur within the natural floodplain of the creek in order to maintain the natural hydraulic characteristics and preserve the environmental stream corridor. The natural flood plain of the creek represents the majority of the conveyance area for any potential dam failure except for fringe areas. Although the flow rate that would be associated with failure of a hypothetical future dam would be much larger than the 100-year flows within the creek, a comparison of the flood hazard mapping reveals that the majority of the conveyance would be within the 100-year floodplain. The portions of development adjacent to the floodplain, but within the fringe of the inundation mapping, would have limited effect of the hydrologic characteristics of a dam flood wave since the riverine storage areas will essentially remain the same and the hydraulic characteristics are more dominated by the slope of the creek which will remain unchanged. Grading adjacent to the floodplain could result in encroachments by the fringe areas of the dam inundation zones, but this represents a relatively small portion of the active hydraulic conveyance area which is less influenced by the side effects.

The Ranch Plan has adopted a strategy of limiting development within the 100-year floodplain, and this would clearly avoid the majority of the critical portions of the potential inundation zone even if a dam such as the LEAPS dam were approved and constructed some time in the future.

COMMENTER 17 ORANGE COUNTY FIRE AUTHORITY
Dated: July 29, 2004

Response 1

The commenter's concurrence with the conclusions set forth in the Draft Program EIR is noted.

Response 2

A copy of the Mitigation Monitoring and Report Plan, which includes all the project design features, standard conditions, and mitigation measures, will be forwarded to Orange County Fire Authority (OCFA) when the Final Program EIR is certified.

The recommended revision (to Mitigation Measure 4.15-1, not 4.15-3) is hereby incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline)

MM 4.15-1 The Ranch Plan Fire Protection Program shall be approved prior to the approval of the first Area Plan. The Ranch Plan project shall confirm to the Orange County Fire Authority (OCFA) Special Fire Protection Area (SFPA) Guidelines and exclusions shall be applied to the project by application on a subarea basis in conformance with the Ranch Plan Fire Protection Program. The project applicant shall participate in, and maintain an approved OCFA Wildland Management Plan for all wildland interface areas

and designed open spaces. Prior to approval of the first subdivision Subarea Plan, except for Planning Area 1, the developer shall enter into a Secured Fire Protection Agreement with OCFA for the provision of necessary facilities, apparatus, and fire and rescue supplies and equipment for the Ranch Plan. This comprehensive plan will address fire and emergency medical service delivery within the project site, and will specify the timeframes and trigger points for initiation of services within the project by geographic area. The Secured Fire Protection Agreement shall ensure that OCFA fire protection and emergency medical performance objectives can be achieved for the Ranch Plan area. The applicant will ensure that development is phased in a manner that allows the maximum use of existing fire protection resources before new resources are required to be established.

Response 3

OCFA's opposition to the deletion of the Crown Valley Parkway extension is noted. The fire service impact of deleting Crown Valley Parkway from the Orange County Master Plan of Arterial Highways (MPAH) was addressed in the Draft Program EIR. Impact 4.15-2 identifies that the removal of Crown Valley Parkway from the MPAH would reduce the effectiveness of Fire Station 58 and result in service levels below adopted performance objectives. The fiscal implications of adding additional fire stations are beyond the scope of the Program EIR and are not required pursuant to CEQA. Recognizing that mitigation was not being proposed that would reduce this impact, the Draft Program EIR identified the impact as an unavoidable impact that would not be reduced to a level of less than significant. Please also refer to Topical Response 3.1.9, Transportation and Circulation, which addresses that the County is withdrawing its request for deletion of Crown Valley Parkway extension from the MPAH.

Response 4

As requested, the Planned Community Program Text, page 14, has been modified to require that arterial highway locations (including secondary and collector arterials, if appropriate and known) be shown on each Master Area Plan.

Response 5

Your comment is noted. Page 3-14, item 12, has been modified and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

"At a minimum, the Master Area Plan shall consist of text, a map, and statistical table identifying and/or providing the following:...

- 12) The Ranch Plan Fire Protection Program shall be approved prior to the approval of the first planning area Master Area Plan."

In addition, a new Ranch Plan Planned Community Program Text condition of approval has been added ensuring by ordinance that the Ranch Plan Fire Protection Program, and its components, shall be approved prior to the approval of the first planning area Master Area Plan. Additionally, the following word shall be incorporated into the Final Program EIR as a replacement for MM 4.15-3.

8. Prior to approval of the first Master Area Plan, applicant shall gain Orange County Fire Authority (OCFA) approval of a Ranch Plan Fire Protection Program, per the requirements of Section II.D, including a Planned Community-wide Fuel Modification Plan. If adaptive management tools (grazing, prescribed fires, etc.) for controlling the growth of vegetation surrounding Ranch Plan development are not successful and vegetation transitions from Fuel Model 2 (FM2) to Fuel Model 4 (FM4), as classified by the BEHAVE Fire Behavior Fuel Modeling System, the OCFA may choose a total Fuel Modification zone width based on the BEHAVE model anticipated flame lengths plus 20-feet for defensible space.

Response 6

Your comment is noted. It is unclear where in the document that OCFA is requesting the additional wording. The Project Description does not discuss any special or exceptional requirements for the processing of tentative tract maps. Applicants for tentative tract maps have the option of preparing a Fire Master Plan to facilitate the review of OCFA requirements, but it is not presently an OCFA requirement. Revised Mitigation Measure 4.15-1 above requires approval of a Ranch Plan Fire Protection Program prior to approval of the first Master Area Plan. The Ranch Plan Fire Protection Program will include a Planned Community-wide conceptual fuel modification plan. OCFA's standard conditions require a fuel modification plan for each "A" tentative tract. In addition, within the Ranch Plan Planned Community, all subsequent fuel modification plans must conform to the unique Ranch Plan Fire Protection Program.

Response 7

The comment is noted. It is agreed that fire station locations cannot be determined with any real accuracy at this point. The number of, and location of, future fire stations will be further addressed through the implementation of the Secured Fire Protection Agreement.

Response 8

The comment is noted. Adequate fire access would need to be demonstrated as part of the Master Area Plan and subsequent levels of planning for Planning Area 9. As indicated on page 4.15-10 of Draft Program EIR, "through the Secured Fire Protection Agreement the OCFA requirements would need to be met. It is possible that the impacts associated with necessary roadway improvements in Planning Area 9 would exceed the level of impact assumed in this Program EIR. Should that occur, supplemental CEQA documentation would be required."

Response 9

The comment is noted. At the time of formation of a County Service Area, Community Services District or County Facilities District, this level of detail would be addressed.

Response 10

The comment is noted. The Cooperative Study Process involves discussions between cities and the County of Orange regarding arterial highway issues. Because the OCFA is the fire department for all unincorporated and incorporated areas in south Orange County, it would be advisable that these jurisdictions consult with OCFA regarding the impact of revisions on service levels. This interaction is outside of the purview of this Draft Program EIR.

Response 11

The typographical error on page 4.1-65 of Section 4.1 has been corrected and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

PDF 4.1-2 A component of the *Ranch Plan Planned Community Program Text* is the provision for the processing of Master Area Plans, which would cover an entire Planning Area, as well as Subarea Plans for smaller areas within each Planning Area. These plans would address the project's compliance with the zoning regulations, as well as other applicable codes and requirements. The Master Area Plan shall cover the entire Planning Area and address the provisions for a Master Area Plan as defined in Section II.B.3a of the *Ranch Plan Planned Community Program Text*. In addition to a Master Area Plan, ~~Seba~~ Subarea Plans addressing the provisions outlined in Section II.B.3b of the *Ranch Plan Planned Community Program Text* shall be required for all development areas. Multiple ~~Seba~~ Subarea Plans addressing portions of a Planning Area may be prepared, provided a Master area Plan for all development areas has been prepared. (The requirements for the Master Area Plan and the Subarea Plan are provided in Section 3.4.5.)

Response 12

OCFA information for the Phase I reports was obtained by written request through the Clerk of the Fire Authority, and typically consisted of Hazardous Materials Disclosure Office (HDMO) Community Right To Know information. This included information regarding chemical inventories, underground storage tanks, and/or annual inspections.

While not all business addresses with generator or tank operator status within the project area are mentioned in the body of the text within the Draft Program EIR, several are in fact identified in the attached Appendix I (i.e., Phase I Environmental Site Assessments). These include Casper's Wilderness Park (33401 Ortega Highway), Santa Margarita Water District (28793 Ortega Highway), and Nichols Institute (33608 Ortega Highway). The remaining sites were inspected during preparation of the Phase I Environmental Site Assessment process, but were not identified on the regulatory database search. The presence of chemical inventories at Genesis Growers (29001 Ortega Highway), OC Sheriff cell site (29862 Ortega Highway) and Santa Margarita Water District Lift Station (31563 Ortega Highway) is duly noted.

Prima Deshecha Landfill is managed by Orange County's Department of Integrated Waste Management (IWMD). Operations at the landfill are scheduled to continue for several decades. IWD will continue operate the facility in accordance with all applicable laws and regulations, including methane monitoring, as required.

Response 13

The County acknowledges proper attention to the wildland/urban interface is critical. The project design features, such as incorporation of fuel modification and other provisions outlined in the *Wildland Fire Management Plan*, would reduce the risk of occurrence to a level of less than significant. The Ranch Plan project will comply with Uniform Building Code (UBC) requirements and Orange County Fire Authority (OCFA) guidelines, which will reduce the potential impacts of wildfire on the development area.

Response 14

Paragraph three under Impacts on page 4.14-24 has been revised and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

"Natural vegetation would be reduced in the planning areas where development is proposed. Development areas with natural brush that could fuel a wildland fire would be removed as part of the grading for the project. Additionally, a fuel modification zone will be provided on wildland interface areas. This would reduce the impact of wildland fires on developed areas and provide a defensible space for urban interface areas.

Response 15

It is acknowledged that the OCFA has not approved a 110-foot-wide fuel modification zone for the proposed Ranch Plan project. However, the applicant's proposal to the County for the Ranch Plan project requests a 110-foot-wide fuel modification zone rather than a 170-foot-wide buffer. The County concurs that OCFA would have the authority to modify the width of the fuel modification zone. Any increase in the width of the fuel modification zone (from 110 feet up to 170 feet) would occur within the boundaries of the proposed development areas and, therefore, not result in any new environmental impacts.

Response 16

Your comment is noted. It is acknowledged that many of the existing fire stations surrounding the project site will not be the optimum service provider. The number of, and location of, future fire stations will be further addressed through the implementation of the Secured Fire Protection Agreement.

Response 17

Your comment is noted. The number of, and location of, future fire stations will be further addressed through the implementation of the Secured Fire Protection Agreement.

Response 18

The last paragraph on page 4.15-5 of Section 4.15 has been revised and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

"In accordance with the NFPA Fire Protection Handbook, the OCFA requires that residences 5,500 square feet and larger be constructed with residential fire sprinkler systems. This requirement is based upon the demonstrated historical effectiveness of fire sprinkler systems within residences. Because low-density and estate development within Planning Areas 7 and 9, respectively, would be anticipated to be at least 5,500 square feet, such development will be built to Special Fire Protection Area standards."

Response 19

Your comment is noted. It is agreed that the issue of medical emergency service be addressed as part of the Secured Fire Protection agreement, as stated in Mitigation Measure 4.15-1.

Response 20

OCFA's comments regarding applicable standards are noted. Project Design Feature 4.15-2 shall be modified to add the statement:

PDF 4.15-2 Roadways, with the exception of Verdugo Road and other local access roads in Planning Area 9, will be designed in conformance with the Orange County Standard Plans. This is supplemented with Mitigation Measure 4.15-2. Applicants may request alternative roadway designs as an Alternate Means and Methods, including roadways within Planning Area 9.

Response 21

Please refer to the response to Comment 2.

Response 22

Page 4.15-9 of Section 4.15 has been modified and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

Through the implementation of the Secured Fire Protection Agreement or Ranch Plan Fire Protection Program and the Special Fire Protection Area standards, ~~and use of residential fire sprinklers the impacts associated with compliance with adopted performance standards (Impacts 4.15-1 through 4.15-3) would~~ may be reduced. The Secured Fire Protection Agreement requires that provisions for meeting OCFA performance objectives be met; however, until the Agreement is fully negotiated, it is uncertain if the impacts can be reduced to a level of less than significant. Therefore, as a measure of caution, impacts associated with provision of service to low density development in the northern portion of Planning Area 2, the eastern portion of Planning Area 7 and the estates in Planning Area 9, performance objectives may not be achievable. This would be considered a significant, unavoidable impact.

Response 23

The comment is noted. Additional detail would be provided to the OCFA as a project-specific development is proposed on the Ranch Plan project site; the requested detail is not needed a programmatic-level of analysis.

Response 24

OCFA's comments regarding applicable standards are noted.

Response 25

OCFA's comment is noted. The number of, and location of, and access to fire stations are to be addressed as part of the Secured Fire Protection agreement, as stated in Mitigation Measure 4.15-1. However, the Secured Fire Protection Agreement, not the Ranch Plan Fire Protection Program, would be the appropriate document to address "phasing, fiscal impacts, circulation and staffing needs for the proposed development."

Comments received during the Cooperative Process and subsequent comments received during the public comment period for the Ranch Plan Program EIR indicate that substantial

opposition remains to the proposed deletion of Crown Valley Parkway. In consideration thereof, and with the recognition that the County's Circulation Element must conform to the MPAH, the County is withdrawing its proposed amendment to delete the extension of Crown Valley Parkway. See Topical Response 3.1.7, Transportation and Circulation-Crown Valley Parkway for more information on this topic.

COMMENTS 18 SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
Dated: August 3, 2004

Response 1

Your comment is noted. No reply is necessary.

COMMENTS 19 TRANSPORTATION CORRIDOR AGENCIES
Dated: August 4, 2004

Response 1

The Ranch Plan Draft Program EIR did take into consideration the SOCTIIP study. Section 7, Cumulative Impacts, identified the various alignment alternatives being evaluated for the SR-241 extension. The traffic analysis was prepared to evaluate potential impacts both with and without the SR-241 extension. Additionally, within the project description for the Ranch Plan (page 3-5 of the Draft Program EIR), it is acknowledged that, "Should the TCA and FHWA select a SOCTIIP alternative that includes an alignment for the SR-241 extension that is different from what is depicted in the local General Plans, regional planning documents, and this Program EIR, the Ranch Plan project would be modified, as needed, to reflect the adopted alignment." Action on the Ranch Plan is expected in late 2004, whereas action on SOCTIIP is not anticipated until mid-2005. Therefore, at this time it is not possible for the General Plan Amendment/zone change to reflect the selected alignment and would require the Program EIR to reach a speculative conclusion.

Response 2

The comment is noted. The County understands that the project applicant has granted the TCA an option for the MPAH-adopted alignment. The Draft Program EIR acknowledges that the TCA is currently considering alternative alignments, and that the proposed land use plan for the Ranch Plan project may need to be modified to reflect the approved alignment. With regard to the referenced JPA, the County intends to fulfill its obligations there under.

Response 3

The comment is noted.

Response 4

Please refer to the specific subsequent responses.

Response 5

Section 4.9 of the Draft Program EIR is the Biological Resources section in which impacts to biological resources are examined in accordance with the threshold of significance criteria established by the County for the proposed project. As reviewed on page 4.9-96, these criteria are a combination of the six CEQA Guidelines Appendix G criteria and the two sets of detailed

guidelines and principles from the NCCP/HCP and SAMP/MSAA processes. Due to the length of the consistency analysis for the proposed project with the two later criteria, the County included this information in two appendices, Appendix G-5 and G-6. However, a complete summary of the consistency analysis is contained in Section 4.9, as are the complete results of the impacts analysis according to the Appendix G criteria.

Response 6

Please refer to Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts.

Response 7

The land use designation exhibits included in the Draft Program EIR are depicted as per the Orange County's amended General Plan graphics. The SOCTIIP Corridor alignments are not on the County's General Plan graphic.

It is recognized that the South Orange County Transportation Infrastructure Improvement Project (SOCTIIP) has a number of alternative alignments. It is also recognized that the old Far East Alignment is no longer being considered in the SOCTIIP. The purpose of showing the old Far East Alignment is to provide a generic depiction of the SR-241 extension that generally corresponds to the Orange County Master Plan of Arterial Highways (MPAH). In this manner, the Draft Program EIR does not give the appearance of choosing any specific alignment from the SOCTIIP document, but merely indicates the potential extension of the SR-241.

Response 8

The circulation system in Exhibit 3-24 (see Section 4) depicts the proposed Local Collector Roads system that does not assume the extension of the toll road. In this scenario, Cristianitos Road would be extended north along the alignment shown on the MPAH for SR-241 to connect at an intersection with Chiquita Canyon Road. The circulation system in Exhibit 3-22 reflects a generic depiction of the proposed Local Collector Roads with the SR-241 Far-East alignment. In these two exhibits, major, arterial, and local collector roads are shown. Much of the local circulation network would be defined at the time area plans and tentative tract maps are processed.

Exhibit 3-23 depicts the bridge locations for the proposed circulation system without the SR-241 alignment. This exhibit reflects only the proposed major and arterial roads, and does not include the proposed local roads for the Ranch Plan project (as shown on Exhibit 3-24).

Response 9

Comment noted.

Response 10

The extension of the toll road and the various SOCTIIP alternatives are not evaluated in this Draft Program EIR. The proposed Ranch Plan circulation system depicts a circulation system designed to provide accessibility for the Ranch Plan development areas and is not dependent on the construction of the SR-241 toll road.

It is recognized that SOCTIIP has a number of alternative corridor alignments still under study. In the event that one of the alternatives is selected, the Ranch Plan may modify the circulation network to address changes needed in the transportation system.

Response 11

The changes in coarse sediment yield displayed in Table 4.5-29 of the Draft Program EIR are total volumes of sediment, not percentage increases. Talega is one of the larger watersheds (5,363 acres; approximately 13 percent of which would be developed under the proposed project), resulting in greater volumes of sediment production. Although Talega shows a large volumetric decrease of coarse sediments produced post-project, the actual percentage decrease for the sub-basin is on the low side. During the 2-year event, the volume of coarse sediments decreases from 314 tons (existing conditions) to 274 tons (post-construction) resulting in a 13 percent decrease in coarse sediment production. During the 100-year event, the volume of coarse sediments decreases from 4,678 tons (existing conditions) to 3,848 tons (post-construction), an 18 percent reduction. The actual percent decrease is likely even smaller when considering long-term, episodic coarse sediment inputs. The last line of Table 4.5-29 states that nearly all of the episodic coarse sediment yield is retained in the Talega watershed, as the primary episodic sources are outside of the Talega planning area (see Figure 2 in Balance Hydrologics May 2004 sediment report). This episodic source is approximately 30 percent of the total (long-term average) coarse sediment contribution, and is not included in the MUSLE model (which is event-specific).

Response 12

Sediment yield for Talega Canyon are discussed in Technical Appendix C-1; Alternatives Analysis Hydrologic Comparison of Baseline and Alternative Land Use Conditions for San Juan and San Mateo Watersheds. The commenter is directed to Section 5.5, Subsection 5.5.9 of this appendix.

Response 13

As the comment notes, there are a number of differences between the traffic forecasts in the two documents. The commenter correctly notes that there are reasons for these, such as updates to the South (Orange) County Sub-Area Model (SCSAM) and different land uses in the Ranch Plan area. Also, point "C" in the comment regarding the opening of the Avenida Vista Hermosa/I-5 Interchange, is correct and recent counts have been applied in the traffic forecasts used in the Draft Program EIR. Therefore, this response confirms the noted differences in the respective traffic studies as outlined in the comment.

Response 14

The short-range analysis included in the Draft Program EIR is intended to show mitigation measures that will be needed for the first phase of the project under a committed network only. In the event that one of the SOCTIIP alternatives is implemented in this time frame, then the background conditions would improve. However, the EIR evaluates a worst-case scenario in which only the committed network improvements are in place in this time frame.

Response 15

The commenter notes that three intersections are indicated to be deficient without SR-241. Those intersections are not deficient with the construction of the SR-241 in the 2025 time frame.

Response 16

The analysis does not identify levels of service at the ramps for SR-241 within the study area. This is because such ramps will be designed as part of the new facility and adequate capacity will be provided within those ramps. The commenter is referred to the SOCTIIP EIS/SEIR for such information. With respect to the SR-73, the information is included in Appendix B, Traffic Resource Material–SR-73 Ramp and Mainline Data.

Response 17

The entry in Table 4.6-8 that is labeled "Ortega Highway (north of I-5)" is incorrect and should actually be "SR-73 (north of I-5)", which is in the jurisdiction of TCA and Caltrans. The deferment from year 2010 to year 2016 of the improvements that are planned on SR-241 would not change the findings of the year 2010 project impact analysis because the 2010 with project traffic forecasts shown in Exhibit 4.6-21 for SR-241 north of Oso Parkway and north of Antonio Parkway are well within the existing capacity of SR-241.

Response 18

A special analysis has been made of the degree to which this project could conflict with the Caltrans TCA/non-compete agreement. Please refer to Topical Response 3.1.7, Transportation and Circulation.

Response 19

Please refer to the response to Comment 18.

Response 20

The comment is noted.

Response 21

The noted intersection between Santa Margarita Parkway and SR-241 was not included in the study area because it does not have any significant impacts in relation to the proposed project.

Response 22

The project roadway system in Exhibit 4.6-6 is a generalized depiction of the Far-East toll road alignment. The extension of the toll road and the various SOCTIIP alternatives is not evaluated in this Program EIR. If an alternative corridor alignment is selected, the Ranch Plan may revise the circulation network to provide better accessibility to the development areas.

As noted in the response to Comment 7, above, the SR-241 extension that has been depicted in the analysis is a generic alignment, generally conforming to the alignment shown on the County MPAH. The actual alignments in the SOCTIIP would not change the traffic forecast data in the Draft Program EIR.

Response 23

The proposed project is intended to be built over an extended time period (for the purposes of the traffic study, it is assumed that the project will be completed by 2025).

Exhibit 4.6-18 depicts the proposed project roadways to be constructed by 2010. Remaining road connections will be constructed concurrent with adjacent development.

In this short range (2010) time frame, the local roadway system is not proposed to connect to Oso Parkway or Ortega Highway.

Response 24

The source for the data is the NCCP database.

Response 25

Within the United States, the California leaf-nosed bat is known to occur from San Diego, Riverside, Imperial, and San Bernardino counties. This species has previously been known also to occur from the coastal basins of Los Angeles to San Diego counties. The California leaf-nosed bat occurs within desert riparian, desert wash, desert scrub, desert succulent shrub, alkali desert scrub, and palm oasis habitats. Due to the lack of these vegetation types within the study area, this species is not expected to occur in high numbers in the study area, although it may occur infrequently as a rare visitor. Potential impacts to this species were found to be less than significant within the Draft Program EIR.

Response 26

As stated in Paragraph 4.9-105, Appendix G-5 presents a NCCP Planning Guidelines consistency matrix for all sub-basin protection, management and restoration recommendations. For ease of reference, all recommendations are identified by a number. When identifying a "could be" consistent finding, the recommendation which the proposed project could be consistent with is identified by number; please refer to page 4.9-106 of the Draft Program EIR. To give the reader an overall impression of the performance of the proposed project and each alternative a total score and the corresponding percentage is presented; please refer to page 4.9-106 for the proposed project and Appendix M for the alternatives.

Response 27

Pages 4.9-106 and -107 of the Draft Program EIR were intended as a summary statement of the proposed project's consistency analysis. Tables 4.9-32, 4.9-33, and Table 4.9-35 review all "could be" consistent findings, minimization/avoidance measures, contributions of the Adaptive Management Program/mitigation measures, and levels of significance after the minimization, avoidance, and mitigation measures. Table 4.9-43 sets forth the same information for the "not consistent" findings.

Response 28

The information presented on page 4.9-129 is intended as a guide to the reader of the information to be presented in the following pages, specifically pages 4.9-129 to 4.9-153. Please refer to Topical Response 3.1.9.6, Biological Resources-Indirect Impacts for further discussion on edge effects. All identified impacts include a statement of significance/no significance. See for example, Impact 4.9.62 on page 4.9-131.

Response 29

As indicated by the footnote to Table 4.9-29 impacts on riparian, freshwater marsh and watercourses are addressed by the impact to USACE and CDFG jurisdictional areas that are set forth Table 4.9-30 and stated in Impact 4.6-93.

Response 30

Pages 4.9-139 through 4.9-145 of the Draft Program EIR discuss impacts to unlisted NCCP/HCP Planning Species including western spadefoot toad, southwestern pond turtle, orange throated whiptail, San Diego horned lizard, Cooper's hawk, tricolored blackbird, grasshopper sparrow, cactus wren, white-tailed kite, merlin, yellow breasted chat, Coulter's saltbush, southern tarplant, many-stemmed dudleya, mud nama, chaparral beargrass, salt-spring checkerbloom, mule deer, mountain lion and golden eagle. None of these species are listed.

Response 31

Page 4.9-135 of the Draft Program EIR discusses major populations, key locations, and important populations for Thread-leaved brodiaea. Impacts are discussed below Impact 4.9-66 as follows: the proposed project would impact three locations totaling 82 flowering stalks of the Chiquadora Ridge major population. Five populations of the Cristianitos/Gabino major population in a key location would be impacted. Nine of 13 locations in the Cristianitos important population would be impacted and 2 of 4 locations in the Talega important population would be impacted.

Response 32

Mitigation Measure 4.9-1 requires the applicant to demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that two of the four small thread-leaved brodiaea locations are protected. In this context, "protected" would mean first that two out of the four locations are avoided (i.e., not impacted by grading) and secondly, that these two locations are protected (i.e., lie within RMV Open Space).

Mitigation Measures 4.9-2, 4.9-3, and 4.9-4 use the term "substantially" when referring to the applicants' obligation to avoid certain specific resources. Table 4.9-32 of the Draft Program EIR defines the applicant's obligation relative to avoidance and minimization of impacts to Coulter's saltbush and southern tarplant major population/key locations, important populations/key locations and important populations. Mitigation for remaining impacts would be as specified in Appendix J-1: Plant Species, Translocation, Propagation and Management Plan, which sets forth methods by which both species would be restored through the creation of new populations from seed and translocation of existing populations. As it applies to the southwestern pond turtle, please also refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species.

Response 33

The County does not agree that visual simulations contained in Section 4.10 need to include the SOCTIIP. The SOCTIIP is a cumulative project and cumulative visual impacts are discussed in Section 7; see page 7.9-102.

Response 34

Your comment is noted. The response times would improve with the implementation of a SOCTIIP Corridor Alternative; however, given the timing of the improvements are uncertain, the Draft Program EIR did not factor the construction of the SR-241 into the evaluation of response times.

Response 35

Your comment is noted. As previously indicated, the Ranch Plan would be required to accommodate the alignment ultimately approved for the SR-241 extension. With the need to preserve the right-of-way for the corridor, the Ranch Plan would ensure that the project would not relocate any portion of the Santa Fe Pipeline within the right-of-way for the corridor. To ensure proper coordination mitigation measure 4.15-6 is hereby modified as follows (modification is underlined):

MM 4.15-6 Prior to recordation of final tract maps where the relocation of the Santa Fe Pipeline is required, except for financing purposes, the project applicant shall coordinate with the pipeline owner, Kinder-Morgan, to ensure that no notable disruptions to the fuel pipeline that extends through the project site would occur as a result of project implementation. Should an alignment for the SR-241 alignment be selected at the time of recordation of the final tract maps, the relocation will not place the pipeline within the right-of-way for the SR-241 extension, nor preclude the relocation of any portion of the pipeline currently within the right-of-way for the SR-241 alignment.

Response 36

The reference to payment of fees for impacts to coastal sage scrub is to the mitigation program for the original construction project (SR-241). To clarify, the following changes are made and incorporated into the Final Program EIR as follows (changes are shown in underline):

"This initial phase of development required a Nationwide Section 404 permit and Section 1600 Agreement for improvements at stream crossings. Pursuant to the permits issued for the initial phase, the impacts associated with the project were mitigated through the restoration and development of wetland habitat and payment of fees for impacts to coastal sage scrub habitat. Mitigation for the current widening phase includes restoration and preservation only."

Response 37

To clarify, the following changes are made and incorporated into the Final Program EIR as follows (changes are underlined):

"...(SOCTIIP). The purpose of the SOCTIIP is to relieve congestion on I-5."

Response 38

To clarify, the following changes are made and incorporated into the Final Program EIR as follows (changes are underlined):

"...property along I-5. This project would not be funded or constructed by the TCA as TCA does not have jurisdiction over I-5 or responsibility to build such an alternative should it be selected."

Response 39

To clarify, the following changes are made and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

The following summarizes potential impacts of the various SOCTIIP alternatives. A brief summary of the types of mitigation for each impact is also discussed. Specific mitigation is dependant upon the alternative selected. For a full discussion of the mitigation proposed for each SOCTIIP alternative refer to the SOCTIIP Draft EIS/EIR.

- Air Quality: Each of the build alternatives would result in significant hydrocarbon (HC), carbon monoxide (CO), nitrogen oxide (NO_x), and fine particulate matter (PM₁₀) air quality impacts during construction. Similarly, each of the build alternatives would result in significant CO and NO_x impacts during operations. The no build alternatives would not result in significant air quality impacts. Mitigation measures related to air quality include emission and dust control per SCAQMD Rule 403, street sweeping, vehicle washing, and control of construction emissions.
- Biological Resources: Each of the build alternatives would result in significant unavoidable impacts to wildlife and vegetation as well as threatened and endangered species. Biological impacts are fully addressed in Section 7.4 of this EIR. The SOCTIIP Draft EIS/EIR includes 11 mitigation measures relating to wetlands and waters of the U.S. including such measures as acquiring the services of a project biologist to oversee biological monitoring, regulatory compliance, and restoration activities and implementation of a Biological Resources Management A further 40 mitigation measures related to Wildlife, Fisheries and Vegetation are described in the Draft EIS/EIR including ratios for preservation or restoration of native plant communities, avoidance and translocation of sensitive plant species, installation of fencing, low-light features adjacent to native habitats, pre-construction surveys for specified species and procedures for establishment of Environmentally Sensitive Areas. Twenty-nine mitigation measures are proposed for threatened and endangered species including species-specific management plans, focused plant survey and avoidance, and minimization measures for construction activities.
- Farmland: By converting farmland to non-agricultural use and conflicting with the Williamson Act, each of the six toll road alternatives would result in significant impacts to farmland as would the arterial improvements only (AIO) alternative. Neither the I-5 alternative nor either of the two no build alternatives would significantly impact farmland. Mitigation for farmland impacts includes the realignment of ranch access roads on the Ranch Plan project site, relocation of any corrals and/or windmills, all weather access for Marine Corps Base (MCB) Camp Pendleton agriculture operations, and pre-construction notification.
- Aesthetics: All the SOCTIIP alternatives, except the No Build Alternative, would result in significant aesthetic impacts by altering the visual quality of the area. The I-5 alternative, arterial improvements only, and those SR-241 alternatives that connect with I-5 in the vicinity of Avenida Pico would result in impacts to the existing urban environment by removing buildings and landscaping. The level of impact and nature

of the impact would be different than the impacts associated with the construction of SR-241 through undeveloped areas. The toll road alternatives would result in substantial amounts of grading, removal of vegetation, and construction of an urban component in areas that are currently undeveloped. This would change the visual character and setting of the area. Mitigation for visual impacts includes preparation of design guidelines for aesthetics and landscaping, lighting per Caltrans, County, or Orange or location jurisdiction standards and restrictions on the illumination outside of right-of-way.

- **Cultural Resources:** Each of the build alternatives would have potentially significant adverse impacts on cultural resources. Because of the extensive amount of earth-moving activities that would be required for the construction, all of the build alternatives, including the AIO alternative, could result in potentially significant adverse impacts to archeological resources. Similarly, disturbance of historic resources is possible with the I-5 and SR-241 alternatives. Mitigation in the form of pre-construction surveys, salvage of paleontological and historical resources, data recovery of archeological resources, monitoring during construction of all cultural resources, and recordation of historic resources is proposed in the SOCTIIP EIS/EIR.
- **Hydrology and Drainage:** The CC and A7C-ALPV alternatives would result in significant adverse impacts due to encroachment of roadway elements on the Cañada Chiquita floodplain. With incorporation of project design features, none of the other alternatives would have significant hydrology and drainage impacts. No mitigation is proposed for hydrology and drainage due to the incorporation of the PDFs that address the identified impacts.
- **Noise:** Implementation of the mitigation measures identified in the SOCTIIP EIS/SEIR would reduce construction-related impacts for each of the build alternatives except I-5 to a level considered less than significant. The I-5 alternative would include nighttime demolition along I-5 and, therefore, result in significant noise impacts. All the long-term significant adverse noise impacts associated with the SOCTIIP build alternatives could be reduced to below a level of significance with implementation of the mitigation measures discussed in the SOCTIIP EIS/SEIR. However, if mitigation is not implemented at any location, there would be a significant adverse noise impact at that location. Mitigation measures related to noise impacts include such measures as compliance with local noise ordinances, maintenance and muffling of construction equipment, designation of approved haul routes, detailed noise and sound barrier analysis, and subsequent implementation of same.
- **Land Use:** By requiring the temporary use of land to accommodate construction-related activities, conflicting with adopted land use plans, and dividing existing communities, each of the SOCTIIP build alternatives would result in significant unavoidable adverse impacts with respect to land use. Mitigation for land use include design refinements to avoid or minimize impacts to existing land uses and relocating the Capistrano Test Site gate and access road.
- **Socioeconomic Impact:** None of the SOCTIIP alternatives would result in adverse impacts related to Environmental Justice. However, the CC, A7C-ALPV, and I-5 alternatives would result in unavoidable adverse impacts related to socioeconomics by displacing residential and/or commercial uses and inducing growth. Mitigation related to socioeconomics include avoidance or minimization of temporary

occupancy or permanent acquisition of property, compensation, and replacement of affordable housing units in San Clemente.

- **Recreation:** Each of the SOCTIIP would result in adverse impacts on one or more existing and/or planned recreation resources which cannot be mitigated to below a level of significance due to the fact that they would result visual, air quality, transportation, or noise impacts that could reduce individuals' enjoyment of recreation facilities. In addition, the FEC-M, FEC-W, CC, A7C-FEC-M, and I-5 alternatives would result in the acquisition of recreation lands. Mitigation measures related to recreation include such measures as refining the road design to avoid or minimize impacts related to construction and permanent acquisition of land used for recreation, consultation with affected property owners, and provide for existing and planned bikeways and riding/hiking trails.
- **Military Impacts:** Three SOCTIIP alternatives (FEC-W, FEC-M and A7C-FEC-M) would result in significant unavoidable impacts on military operations on MCB Camp Pendleton. This alignment traverses San Onofre State Beach, which is leased from the Department of the Navy. The roadway would sever this acreage from the remainder of the base, which could result in limitations on the future effectiveness of those acres for military training operations. Mitigation measures related to military uses include such as measure as FAA approved aircraft construction lights, identification and use of approved access routes, implementation of security measures, and design of two underpasses for military use.
- **Water Quality:** The SOCTIIP Alternatives, with the exception of the No Build Alternative, would have the potential of having water quality impacts associated with pollutants in runoff from the roadway. However, current regulations require that the water be treated prior to release into downstream waters. Therefore, potentially significant short-term adverse impacts to water quality would be mitigated to below a level of significance. Six mitigation measures related to water quality are described in the Draft EIS/EIR including such measures as preserving vegetation on site as feasible, implementation, operation and maintenance of construction Best Management Practices, and implementation of a Storm Water Pollution Prevention Plan.

Response 40

The comment is noted.

Response 41

To clarify, the following changes are made and incorporated into the Final Program EIR as follows (changes are underlined):

"...Ranch Plan boundaries. The proposed reservoir is located within the Upper Chiquita Canyon Conservation Area over which the TCA owns a conservation easement."

Response 42

As noted on page 7-58, "It is anticipated that all future projects within the watersheds will implement treatment and mitigation programs that will reduce pollutants of concern to levels of insignificance prior to downstream discharge." The description provided of the Transportation

Corridor Agency's (TCA's) Runoff Management Plan appears to be consistent with this statement.

Response 43

To clarify, the following changes are made and incorporated into the Final Program EIR as follows (changes are underlined):

"...NEPA/CEQA review. The SOCTIIP EIS/EIR evaluates six build alternatives and two no build alternatives."

"As described previously, the TCA, Caltrans, FHWA, EPA, USFWS, and ACOE are evaluating the SOCTIIP."

The comment is noted regarding the availability of information regarding the proposed project and the B-8 alternative.

The examples cited were added to illustrate the point that impacts may or may not be additive with those of the proposed project.

Response 44

The source of Table 7.4-1 is the SOCTIIP EIS/EIR. The ultimate project was selected for the purposes of the cumulative impact analysis as the possible worst-case project scenario.

Response 45

The comment is noted. The consistency analysis in Table 7.4-5 notes the mitigation measures proposed by TCA to facilitate wildlife movement.

The comment regarding "Greater impacts to key locations of Planning Species" is noted. The County understands that the TCA did not analyze impacts to key locations of Planning Species in the SOCTIIP EIS/EIR.

The comment regarding restoration of coastal sage scrub/grassland restoration is noted.

Response 46

To clarify, the following changes have been made to Table 7.4-6 and incorporated into the Final Program EIR as follows (changes are underlined):

"A7C-FEC-M

Riverside Fairy Shrimp: No direct impacts to Riverside Fairy Shrimp will occur from this alignment; however, grading possibility would affect vernal pool hydrology on Radio Tower Road mesa.

San Diego Fairy Shrimp: No direct impacts to San Diego Fairy Shrimp will occur from this alignment; however, grading possibility would affect vernal pool hydrology on Radio Tower Road mesa."

Response 47

To clarify, the following changes are made to Table 7.4-7 and are incorporated into the Final Program EIR as follows (changes are underlined):

"FEC-M Alternative

The FEC-M alternative would result in impacts to 49.0 acres of USACE jurisdiction based on the landscape level analysis U.S. Army Corps Engineer Research and Development Center (2003) and CDFG jurisdiction.

FEC-W Alternative

The FEC-W alternative would result in impacts to 38.7 acres of USACE jurisdiction based on the landscape level analysis U.S. Army Corps Engineer Research and Development Center (2003) and CDFG jurisdiction.

A7C-FEC-M

The A7C-FEC-M alternative would result in impacts to 42.9 acres of USACE jurisdiction based on the landscape level analysis U.S. Army Corps Engineer Research and Development Center (2003) and CDFG jurisdiction."

Response 48

The comment is noted regarding that the SOCTIIP Alternatives have been designed so the post-construction conditions match the pre-construction conditions to the maximum extent practicable. The Planning Principle cited is one of several generated by the NCCP/SAMP Working Group relative to Planning Area 2 and is contained in the Draft Watershed Planning Principles. The conclusion offered in the referenced table is based on a review of the Draft SOCTIIP EIS/EIR.

Response 49

As noted in the response to Comment 41 above, this clarification is added to the description of the reservoir location earlier—it is not necessary to repeat it here. The source of biological data for the analysis is the NCCP database.

Response 50

As noted above, the source of the biological data for the analysis is the NCCP database. Your request for the data has been passed on to the project applicant.

Response 51

To clarify, the following changes are made to Table 7.4-10 and incorporated into the Final Program EIR as follows (changes are underlined):

"Upper Chiquita Site

...However, provisions for this facility in this location were made at the time the USFWS issued the Section 7 Biological Opinion for the FTCN-Oso Section which provided for a 24-acre reservoir."

Response 52

The Draft Program EIR uses a consistent approach for addressing cumulative biological impacts; therefore, it is not appropriate to use a different assessment standard as suggested by the TCA.

Response 53

The County does not agree with the comment regarding the use of the SAMP/MSAA tenets. Please refer to the response to Comment 52. The TCA's position regarding the reservoir is noted.

COMMENTS 20 SANTA MARGARITA WATER DISTRICT
Dated: August 9, 2004

Response 1

Your comment is noted. At this time, the project is only requesting a General Plan amendment and zoning. More detailed information would be provided at subsequent levels of planning. The Master Area Plan will be required to address phasing of infrastructure improvements for the entire Planning Area (Draft Program EIR, page 3-14) and the Subarea Plan would be required to identify conceptual water and wastewater system locations (Draft Program EIR, page 3-16). Additionally, the standard conditions that apply to the project (Standard Condition 4.15-5 through 4.15-8) requires the project applicant to coordinate with SMWD on specific sizing and placement of water and wastewater facilities.

Response 2

The anticipated monitoring of combined control facilities which are part of the Conceptual Water Quality Management Plan (WQMP) are set forth in Chapter 6 of the WQMP, including wet weather monitoring, dry weather monitoring, and hydrologic/stream stability monitoring. As part of the hydrologic monitoring, groundwater levels will be sampled on a quarterly basis. Such monitoring could occur in conjunction with the SJBA. However, further discussions between the County, project applicant, and the SBJA would be necessary to explore this possibility.

Response 3

Your comment is noted.

Response 4

Your comment is noted. As indicated in the Draft Program EIR (page 4.5-51) the project would be required to comply with the Orange County DAMP and the Orange County NPDES Permit (Order No. R9-2002-0001). Recycling for irrigation and diversion of runoff to less sensitive areas are strategies that may be used depending on conditions. SMWD's support of this project is acknowledged.

Response 5

Your comment is noted. The project has identified the Gobernadora Multipurpose Basin on the development plan. The applicant will coordinate with SMWD on the design of flood detention and water quality basins.

Response 6

Your comment is noted.

Response 7

Your comment is noted. The requested modification has been made and incorporated into the Final Program EIR on page 4.5-83 as follows (changes are underlined):

SC 4.5-5 **Subordination of Easements.** Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only), the subdivider shall not grant any easements over any property subject to a requirement of dedication or irrevocable offer to the County of Orange or the Orange County Flood Control District, unless such easements are expressly made subordinate to the easements to be offered for dedication to the County. Prior to granting any of said easements, the subdivider shall furnish a copy of the proposed easement to the Manager, Subdivision and Grading, for review and approval. The Santa Margarita Water District will restore other improvements or facilities located within the easement, if it has consented to the location of such improvements or facilities to the extent that the exercise of its rights in connecting with the easement impacts other improvements or facilities located within the easement; however, in no event shall Santa Margarita Water District be responsible for the cost of relocating its facilities in event of conflicts with such improvements or facilities.

With regards to the request to eliminate the sentence that reads: "Diversion of outflows from the FD/WQ basin to non-domestic water supply reservoirs will be conducted if feasible and cost effective." from the paragraph titled Storage Facility for Recycling Water for Non-Domestic Supply in Mitigation Measure 4.5-6, it would appear reasonable to maintain this as an option. The measure clearly identifies that the diversion would need to be feasible and cost effective. Coordination with SMWD would be necessary if the non-domestic water supply reservoir is owned and operated by SMWD. This would provide the District complete latitude whether or not to implement this provision. To address your concern, the following provision has been incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

4. Storage Facility for Recycling Water for Non-Domestic Supply

The fourth possible element of the combined control system shall be storage of surface water flows for recycling where there is opportunity for reuse of water for irrigation, such as a golf course, residential common area, or local park. Diversion of outflows from the FD/WQ basin to non-domestic water supply reservoirs will be conducted if feasible and cost effective. All elements of the combined flow and water quality control system shall be reviewed with the SMWD for determination of feasibility of reuse and connection to non-domestic irrigation facilities. Diversion of outflows from the FD/WQ basin to non-domestic water supply reservoirs will be conducted if feasible and cost effective.

Response 8

The County and the project applicant are aware of the identified facilities and their service functions. When the land for the Chiquita Water Reclamation Plant (CWRP) was acquired in 1984, Santa Margarita Water District (SMWD) acquired more land than was required for the physical construction of plant (the facilities occupy approximately 34 acres of an 82-acre parcel) in order to 1) screen the operation and 2) to provide a buffer from existing and future land uses contiguous to the property. Similarly, the County and the project applicant are aware of the two identified sewage lift stations; the applicant is working with SMWD to retrofit those facilities with odor control equipment in order to minimize the dispersal of fugitive odors.

The project applicant has successfully worked with SMWD in Ladera Ranch to ensure adequate buffers from the Arroyo Trabuco and Horno Basin lift stations to the residences and is continuing to work in cooperation on provisions for additional odor control efforts. As part of the future development including provisions for "will-serve" letters from the SMWD, the extent and types of odor control mitigation measures will be implemented for those areas potentially impacted by these facilities (and/or additional facilities required to serve the development).

Response 9

SMWD's comments regarding the adequacy of water supplies for each of the alternatives are noted.

Page 4.15-20 has been revised and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

SMWD Service Area, Operations and Responsibilities. SMWD provides potable and non-potable (i.e., recycled) water and sewer service to approximately 132,500 residents in 97 square miles of southeastern Orange County, including the project site. Established in 1964 as a California special district (California Water Code Sections 34000 et seq.), SMWD is responsible for inter-agency coordination and long-range planning to meet future water supply and wastewater treatment needs for its service area. SMWD operates 1,330 miles of water and sewer mains, 15 connections to other water districts, 30 domestic reservoirs, four non-domestic reservoirs, 21 water pump stations, 30 pressure-reducing stations, six non-domestic water pump stations, two wells with chlorine injection, 21 sewer lift stations, and ~~four~~ three sewage treatment plants (Oso Creek Water Reclamation Plan, Chiquita Water Reclamation Plan, and Nichols Water Reclamation Plan). Additionally, SMWD owns capacity in the MWD 3A Water Reclamation Plan and the South Orange County Wastewater Authority Jay B. Latham Plant.

The second paragraph of page 4.15-22 has been revised and incorporated into the Final Program EIR as follows;

An additional easement containing two ~~non-domestic water mains~~ sewer forcemains and one non-domestic recycled water pipeline runs parallel to the South County Pipeline easement, entering at the south in Planning Area 8 and exiting the site at the northern boundary of Planning Area 2. Similar to the South County Pipeline, these non-domestic water conveyance facilities are owned and operated by SMWD.

Page 4.15-28 has been revised and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

Non-domestic recycled water storage facilities would also provide for seasonal storage based on the fluctuating demand related to summer and winter demands. Non-domestic storage facilities would be required to provide the planning areas with the following storage components:

With respect to PDF 14.5-6, the comment is noted.

Response 10

The comment is noted.

Response 11

The potential SMWD reservoirs are addressed in the cumulative impacts section of the Draft Program EIR. Page 4.15-28 of the Draft Program EIR notes that "While the precise location and size of the storage and conveyance facilities would be determined at the time tentative tract maps are processed, the general location, type, and capacity of water facilities is indicated in: (a) Table 4.15-10 and Exhibit 4.15-1 for domestic water facilities and (b) Exhibit 4.15-2 for non-domestic water facilities. The reservoir tank sizes shown for the reservoirs are a worst-case scenario to provide sufficient back-up capacity. When the seasonal storage facilities are implemented, the size of the reservoir tanks would be reevaluated and likely reduced. Coordination with SMWD would be required. Because most facilities would be within development areas, the grading is assumed as part of the cut and fill for the development and no new impacts are anticipated. For those facilities located outside of development areas, an approximate location and pad size has been assumed to ensure that the potential impacts of these facilities are included in the impact assessment for the project." It is acknowledged that final siting of reservoirs and project alternative will need to be coordinated with the SMWD.

Response 12

Your comments are noted. The seasonal storage reservoirs are discussed in the Draft Program EIR as a cumulative project.

COMMENTS 21 ORANGE COUNTY TRANSPORTATION AUTHORITY
Dated: August 9, 2004

Response 1

As noted, the OCTA has been administering the required cooperative process with the requested MPAH Amendments. At this time, no resolution has been reached with respect to the proposed changes. The comments and suggestions made by the OCTA in this comment will be considered as part of the ongoing cooperative process.

As noted in the comments, the OCTA has been administering the required cooperative process with the requested Master Plan of Arterial Highways (MPAH) Amendments. At this time, no resolution has been reached with respect to the proposed changes. The comments and suggestions made by the OCTA in this comment will be considered as part of the ongoing Cooperative Process.

As addressed in Topical Response 3.1.7, Transportation and Circulation, the County is withdrawing the request to delete the Crown Valley Parkway extension from the MPAH.

Response 2

Please refer to Topical Response 3.1.7, with respect to New Ortega Highway.

Response 3

The traffic forecasting used in the Draft Program EIR is discussed in the traffic report and documented in the traffic model description for the South County Sub-Area Model (SCSAM). Where lower volumes than existing occur at a specific location, it is typically because a new facility has diverted traffic from the existing location.

Response 4

The No Project scenario (2025 cumulative) is contained in the appendices to the traffic report and is contained in Appendix B, Traffic Reference Material-2025 No Project ADT Volume Diagram, of the Responses to Comments document.

COMMENTS 22 CAPISTRANO UNIFIED SCHOOL DISTRICT
Dated: August 9, 2004

Response 1

Your comments are noted; and the revised Table 4.15-15, as shown below, is hereby incorporated into the Final Program EIR. However, even with the revised student generation factors the project still does not support the need for six elementary schools. Of the proposed 14,000 dwelling units, approximately 6,000 units will be age-restricted, reducing the anticipated number of students generated by the project. Table 4.15-15 reflects the estimated number of students generated by the proposed non-senior dwelling units and the estimated number of facilities needed. The number and type of schools required will ultimately depend on actual student generation, the capacity of the existing and future schools, the rate of development and the actual number of residential units. The Ranch Plan project anticipates the need for a minimum of four elementary schools, one middle school (or an undetermined number of K-8th grade schools), and one high school. The Draft Program EIR identified five elementary schools, as well as a middle school and high school. Mitigation Measure 4.15-5 requires the applicant to coordinate with the school district and enter into an agreement with CUSD regarding the development of future facilities and payment of costs prior to 500th non-senior residential building permit. The precise facility sites would be determined at subsequent phases of development, in coordination with CUSD.

The Final Program EIR Table 1.7-1 on page 1-32 does not need to be revised. The project design feature listed identifies up to five elementary schools. As indicated above, using four elementary schools may be adequate. Should through the negotiation of the agreement with the school district the need for an additional elementary school be identified, there would be no new environmental impacts. The schools would be built within the development area. The Draft Program EIR assumes full removal of all resources within the development areas.

**TABLE 4.15-15
ESTIMATED STUDENT GENERATION**

Type of School	Number of Proposed Non-Senior Dwelling Units	Student Generation Factor	Potential Number of Students Generated
Elementary School	8,000	0.328 <u>0.358</u>	2,624 <u>2,864</u>
Middle School	8,000	0.110 <u>0.134</u>	880 <u>1,072</u>
High School	8,000	0.098 <u>0.127</u>	784 <u>1,012</u>
Total			4,288 <u>4,948</u>

Source: Capistrano Unified School District, 2004.

Response 2

Your comment is noted. Page 3-30 is hereby corrected and incorporated into the Final Program EIR to read as follows (changes are shown in cross-out and underline):

The additional students generated by the project, combined with existing area demand, may necessitate the construction of a high school within the project limits. The high school, if required, would be built on approximately 55 acres and serve approximately ~~900~~ 2,200 students. If needed, a high school site would be made available for acquisition by the school district in Planning Area 3.

Response 3

Your comment is noted. The text in the Final Program EIR on page 3-30 is hereby revised to read as follows (changes are shown in cross-out and underline):

Elementary school sites are anticipated to be located in Planning Areas 2, 3, ~~7~~, and 8. Planning Area 3 would likely require two elementary schools. Each elementary school would be built on approximately 12 acres and would provide for approximately ~~600 to 800~~ 750 children. These schools would serve the proposed development and would be phased with construction. The middle school would likely be located in Planning Area 3. The middle school would be built on approximately 25 acres and would serve approximately 1,500 students. The school district may elect to construct joint elementary and middle (K-8) schools, which would require 20 acres for school use and serve 1,050 students. The precise location and combination of elementary and joint elementary and middle of the school would be determined in consultation with the Capistrano Unified School District (CUSD). The conceptual locations for these facilities are shown on Exhibit 3-20, though the precise site of the facilities would be determined at subsequent phases of development in conjunction with CUSD.

Page 4.15-40 is hereby revised and incorporated into the Final Program EIR to read as follows:

Elementary school sites are anticipated to be located in Planning Areas 2, 3, ~~7~~, and 8. Planning Area 3 would likely require two elementary schools. Each elementary school would be built on approximately 12 acres and would accommodate approximately 750 ~~700~~ children.

Response 4

Your comment is noted. The text in the Final Program EIR on page 4.1-46 is hereby revised and incorporated into the Final Program EIR to read as follows:

“Capistrano Unified School District.”

Response 5

Please refer to the response to Comment 1.

Response 6

Please refer to the response to Comment 3, above.

Response 7

Your comment is noted. The Draft Program EIR does not state, “the district receives property tax revenue from property within the Ranch Plan area.” These revenues are linked to the assessed value of land located within the Ranch Plan project area. Increases in revenue will come from increases in assessed value, primarily from new development, and reassessments. Therefore, the proposed project would generate an increase of tax revenue for CUSD. In the instance that tax revenues would not sufficiently cover the financial needs of the district in relation to the Ranch Plan area schools, an opportunity exists for CUSD to seek supplemental fees from residential developers (see the following section)” (page 4.15-41). The Draft Program EIR acknowledges the need for additional revenue and provides a discussion of school fees pursuant to SB 50 (California Government Code Section 65995). Additionally, Mitigation Measure 4.15-5 requires the applicant shall enter into an agreement with CUSD regarding the development of future facilities and payment of costs.

Response 8

Project Design Feature 4.15-8 is hereby revised in the Final Program EIR to read as follows (changes are underlined):

The project description provides for the incorporation of school sites into the land use plan. The project design assumes up to five elementary school sites, one middle school site, and a potential high school site, if deemed necessary by CUSD. The precise number, location and combination of elementary and joint elementary and middle school would be determined in consultation with CUSD.

Response 9

Your comment is noted. The County acknowledges that the applicant would be responsible for the payment of school fees for all proposed development uses. However, the implementation of an agreement with the school district prior to issuance of building permits for non-residential or senior housing should not be necessary because these uses would not generate students. The mitigation measure is hereby amended to require the applicant to enter into a facilities agreement with the school district prior to issuance of any residential building permits, excluding the seniors. The mitigation measure is modified as follows (changes shown in underline/strikeout):

Prior to issuance of any 500th residential building permit, excluding senior housing, the applicant shall enter into an agreement with CUSD regarding the development of future facilities and payment of costs. The agreement shall, at a minimum, provide for the payment of fees pursuant to California Government Code Section 65995. If fees are paid, the amount of fees to be paid will be determined based on the established State formula for determining construction costs. Applicable fees shall be paid prior to the issuance of each building permit.

Response 10

Joint use facilities that provide both recreational and educational opportunities would be encouraged, as appropriate, and would be determined in consultation with CUSD and other government entities. Specific characteristics and design of each joint facility would be determined at subsequent phases of development. The Subarea Plans require the location of land uses be identified. The Planned Community Program Text will be modified to specifically require the identification of school sites.

Response 11

The comment is noted. Mitigation Measure 4.15-5 requires the applicant to enter into an agreement with the school district for the provision of school facilities. Additionally, please refer to page 4.15-42 regarding the mitigation of impacts to schools. In accordance with California Government Code §65995(h) and (i), the payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities.

**COMMENTS 23 SAN DIEGO GAS AND ELECTRIC/
SOUTHERN CALIFORNIA GAS COMPANY**
Dated: August 9, 2004

Response 1

Your comment is noted. The discussion on page 4.1-12 of the Draft Program EIR provides a brief overview of each General Plan Element. As indicated on page 4.1-10, to avoid redundancy the evaluation of the project's consistency with the General Plan goals, objectives and policies is discussed in Section 4.1.3, Impacts. The Draft Program EIR reflects the organization of the Orange County General Plan. Energy Resources is a component of the *Resources Element*. Additionally, there is a *Public Services and Facilities Element*. Both elements of the General Plan were discussed in the Draft Program EIR.

Response 2

Your comment is noted. The policy to construct bikeways in existing and abandoned public rights-of-way along flood control channels, parks, roads, and utility and railroad rights-of-way where feasible is a policy of the Orange County General Plan, not of the Ranch Plan. At this time no SDG&E easements have been identified for use for a bikeway or trail.

Your comment is noted regarding potential confusion if public gas and electric services should fall under the *Energy Resources Element* or the *Public Services and Facilities Element*. As indicated in Response 1, the discussion of General Plan consistency in the Draft Program EIR reflects the organization of the Orange County General Plan.

Response 3

Your comment is noted. The information provided is on page 4.15-14 of the Draft Program EIR.

Response 4

Your comment is noted. The Draft Program EIR acknowledges that SDG&E has identified Planning Area 1, rather than Planning Area 5 as the preferred location for the second substation. The Draft Program EIR states that the precise location would be coordinated with SDG&E. Regardless of the final location, the substations would be located within the development area and would not result in new grading and associated impacts.

Your comment is noted about the inability to place all utilities underground. Potential impacts associated with aboveground utility lines are discussed in Topical Response 3.1.9.

Response 5

Please refer to Topical Response 3.1.1–Programmatic versus Project EIR. At the time development is proposed, whether it is for land development within Planning Area 1 or a regulator station, the impacts would need to be evaluated. If the impacts were to be greater than those addressed in the Program EIR supplemental CEQA documentation would be required.

SDG&E did not identify a potential alternative route for the pipeline extension along San Juan Creek Road during the preparation of the Draft Program EIR. Should SDG&E choose to construct the pipeline extension along San Juan Creek Road the nature of impacts would be similar to those associated with construction of facilities within the Ortega Highway right-of-way. There is the potential for impact to cultural resources, biological resources, and short-term construction related impacts associated with noise, air quality, and traffic. The precise nature of these impacts will be dependent upon the alignment when an actual project is proposed. Evaluation of the impacts pursuant to CEQA would be required at that time.

Your comment is noted. The final sentence of first paragraph under the heading “Impacts to Natural Gas Service” is modified to read as follows (modification is underlined):

“The project site is within the service area of an existing provider.”

Response 6

Your comment is noted. The identification of future facilities was based on input from SDG&E. While it is possible that load growth demands may necessitate additional facilities this would be speculative and there is nothing to indicate that this should be anticipated. If this were to occur the impacts associated with additional facilities would be evaluated at the time the improvements are proposed.

Your comment is noted. The last sentence in the second to the last paragraph on page 4.15-15 is hereby modified to read as follows (modification is underlined):

This typical coordination ensures that the nature, design, and timing of electrical system improvements are adequate to serve the project and remain in compliance with among other regulations. California energy conservation requirements as specified in California Administrative Code Title 24/25.

Your comment regarding required facilities is noted. The standard conditions of approval require the applicant to coordinate with SDG&E regarding provision of facilities. Your comment regarding an additional 230kV transmission line is noted. However, at this time no precise location has been identified and the project is not proposed in the reasonably foreseeable future. The Ranch will coordinate with SDG&E at the time the construction of the line is being proposed.

Response 7

Your comment is noted. The page 4.15-14 of the Final Program EIR is hereby modified to read as follows (modification is underlined):

Because the Ranch Plan project site is mostly undeveloped, there is only one on-site SDG&E electrical transmission facility: a single-circuit 138 kilovolt (kV) transmission line that runs generally north-northwest to south-southeast across the project site.

Response 8

Your comment is noted. Please refer to the response to Comment 4, above. The applicant is required to coordinate with SDG&E regarding location of facilities.

Response 9

Your comment is noted. Please refer to the response to Comment 4, above. The applicant is required to coordinate with SDG&E regarding location of facilities.

Response 10

Your comment is noted. The page 3-2 of the Final Program EIR is hereby modified to read as follows (modification is shown in strikeout and underline):

In addition, there are several large overhead electric ~~distribution~~ transmission lines owned by San Diego Gas and Electric (SDG&E) and Southern California Edison (SCE) that extend from the San Onofre Nuclear Generating Station (SONGS) located south of the site.

Response 11

Your comment is noted. Please refer to Response 4, above. The applicant is required to coordinate with SDG&E regarding location of facilities.

Response 12

Your comment is noted. Please refer to Response 4, above. The applicant is required to coordinate with SDG&E regarding location of facilities.

Response 13

The purpose of Table 1.7-1 is to provide a summary of significant impacts and the mitigation program. A statement about the distribution lines is hereby included in the Final Program EIR, Section 3, Project Description, as follows (modification is underlined)

San Diego Gas and Electric (SDG&E) provides electrical service to the project site. Development of the Ranch Plan would require at least one, and potentially two new electrical substations. These facilities would each be located on a two- to three-acre site. These substations would be 138/12 kV and have associated 138 kV transmission lines. The transmission lines would be double circuit 138 kV lines. An electrical substation would be located within Planning Area 3. The facility would be within the development area; therefore, the grading and associated impacts would be provided for in the evaluation of the development plan. A second facility may be located in the development area of Planning Area 5.⁵⁰ The timing for construction of these facilities, as well as the precise locations, would be coordinated with SDG&E. In addition, distribution lines would be required to provide service to the proposed development.

Southern California Gas Company would provide natural gas service to the site. To serve the project, the Southern California Gas Company would be required to extend a 12-inch, high-pressure gas line from the vicinity of the Atchison Topeka and the Santa Fe Railroad line, west of I-5, to Antonio Parkway. The line would be placed within the Ortega Highway right-of-way and connect to a new regulating station at the northwest corner of the Antonio Parkway/Ortega Highway intersection. The regulating station would be on a parcel approximately 30 feet by 10 feet.

Response 14

Your comment is noted. The Standard Conditions are requirements the County of Orange places on the developer. The conditions pertaining to gas and electrical service pertain to coordination requirements prior to recordation of tract maps.

Response 15

Your comment is noted. PDF 4.15-5 is hereby modified in the Final Program EIR to read as follows (modification underlined):

PDF 4.15-5 Unless otherwise waived by the Director, PDS, or determined not to be feasible by SDG&E, all permanent electric transmission lines less than 66 kV shall be subsurface within those portions of the Ranch Plan approved for development.

Response 16

Your comment is noted. Section 8, List of Preparers, of the Final Program EIR is hereby revised to read as follows (modifications are underlined):

⁵⁰ SDG&E, in a letter dated January 19, 2004, has identified two potential substations for the project. One would be in Planning Area 3, as proposed by the Ranch Plan. However, SDG&E has identified Planning Area 1 as the potential site for the second substation. Given the proximity of the Planning Area 1 site to the substation in Ladera Ranch, RMV is proposing to locate the second substation in Planning Area 5 to ensure appropriate overlap of service for the Ranch Plan. The precise location would be coordinated with SDG&E. Regardless of the final location, the substations would be located within the development area and would not result in new grading and associated impacts.

San Diego Gas and Electric/Southern California Edison

Land Planning

Environmental Specialist..... Christopher P. Terzich

3.5 RESPONSES TO LOCAL AGENCIES COMMENTS

COMMENTER 24 CITY OF FULLERTON

Dated: July 23, 2004

Response 1

Your comment is noted. No further response is necessary.

COMMENTER 25 CITY OF LAKE FOREST

Dated: July 28, 2004

Response 1

Your comment is noted and hereby incorporated into the Final Program EIR. The description in Section 7.3.9 is hereby read as follows:

The Opportunities Study includes a General Plan Amendment and Re-Zone of approximately 900 acres of vacant lands in the City of Lake Forest in the vicinity of the former Marine Corps Air Station El Toro. The General Plan Amendment would change the allowed land uses from industrial and commercial land uses to residential and mixed-uses. The vacant lands currently have approximately seven million square feet of approved industrial and commercial development rights. The number of residences considered in the General Plan Amendment and Re-Zone range between 5,394 and 6,617. Approximately 40 to 70 acres of neighborhood parks, 45 acres of sports parks, community/civic center and 500,000 to 650,000 square feet of commercial development could also be permitted as a result of the project.

COMMENTER 26 CITY OF MISSION VIEJO

Dated: August 3, 2004

Response 1

The County of Orange believes that the Ranch Plan Program EIR is adequate in accordance with CEQA and the CEQA Guidelines. In addition, through the Cooperative Process, there have been technical forums and individual meetings between the City of Mission Viejo and the County to address specific questions and provide technical assistance/data in response to all City staff requests. The commenter's opinions are noted and will be taken into consideration by the County's decision makers.

Response 2

Topical Response 3.1.7, Transportation and Circulation–Crown Valley Parkway, addresses the Crown Valley Parkway extension. As noted in the topical response, the County is submitting a request to OCTA to withdraw its request for the deletion of Crown Valley Parkway from the Orange County MPAH. The Draft Program EIR traffic study addresses the proposed project with and without the Crown Valley Parkway extension.

It should be noted that the Draft Program EIR does not conclude that there is a *"benefit to deleting this planned extension..."* The results of the comparison show generally similar average daily traffic (ADT) volumes on the east/west arterials (slightly lower on Crown Valley parkway and slightly higher on Oso Parkway as noted in the comment). A summary table is

given in Appendix B, Traffic Resource Material–Crown Valley Parkway, of the Responses to Comment document, which shows that the same 2025 cumulative intersection deficiencies occur under both scenarios.

The County disagrees that there should be a separate analysis of each MPAH Amendment because that analysis is part of the cooperative process. Also as noted, the County is withdrawing its application to delete the Crown Valley Parkway extension; therefore, the only changes to the MPAH are potential additions of some of the on-street circulation elements.

Response 3

As noted in the comment, the proposed project includes an east/west roadway north of San Juan Creek. It has a Tee-intersection with Antonio Parkway and then connects to existing Ortega Highway in the eastern part of the project site. The purpose of this new roadway, referred to as “New Ortega Highway,” is to serve project development north of the creek and also provide a connection to the proposed southward extension of the SR-241 (in lieu of a crossing of the creek at this location as would be required to connect existing Ortega Highway to the SR-241 Far East Alignment). It would be inappropriate to include the preliminary conceptual design prepared by Caltrans because it was part of discussions with Caltrans with respect to changing the State Highway designation. Because the County is no longer requesting such a change, Caltrans would not be involved in the intersection of Antonio Parkway at New Ortega Highway.

Topical Response 3.1.6, Transportation and Circulation–New Ortega Highway, discusses New Ortega Highway. While it is suggested that New Ortega Highway could become State Route (SR) 74 (replacing the existing parallel section of Ortega Highway), such a change is not relevant to the findings of the traffic study. The study evaluates New Ortega Highway as an arterial serving both through traffic and local traffic. Should the state decide to continue to operate existing Ortega Highway as a State highway and not to change the State Highway designation, some or most of the through trips that currently use existing Ortega Highway would likely remain on this facility and not make the jog from New Ortega Highway to existing Ortega Highway along Antonio Parkway. In deference to the City and Caltrans concerns and due to time constraints to achieve a mutual resolution, the County is not pursuing the proposal to add this facility to the State highway system at this time and is only proposing that the ‘New Ortega Highway’ be added to the MPAH as an arterial highway.

Appendix B, Traffic Resource Material–New Ortega Highway Diversion, of this Responses to Comments document, shows comparison data for the two intersections. As noted in the traffic report and Draft Program EIR, the intersections of Antonio Parkway at New Ortega Highway and Antonio Parkway at Ortega Highway would be designed to provide a high level of efficiency for through traffic making this movement, thereby addressing a worst-case with respect to traffic volumes at the two intersections. Please also see Project Design Feature (PDF) 4.6-1 on page 4.6-59 of the Draft Program EIR regarding design of the Antonio Parkway at New Ortega intersection. As referenced in CHP’s letter, Comment 3, the Tee-intersection would operate at an acceptable level of service.

Response 4

As noted in the Draft Program EIR, the traffic analysis follows CEQA requirements whereby it first examines existing versus existing plus project conditions and then analyzes existing plus project plus related projects (cumulative setting). Recognizing that the Ranch Plan Program EIR traffic study methodology is a departure from the methodology used by some jurisdictions, a

special section is contained in the traffic report that compares long-range cumulative conditions with and without the proposed Ranch Plan project. This is not intended to be a second level of impact analysis, but is provided as informational data to show future conditions with and without the project in this long-range cumulative context.

As described in Topical Response 3.1.7, Transportation and Circulation–Traffic Forecasts, the long-range cumulative comparison with and without the project involves trip redistribution effects for year 2025 as derived by the Orange County Traffic Analysis Model (OCTAM) and imported into the South County Sub-Area Model (SCSAM). As such, it is not possible to simply estimate the trips from the project and add them to the surrounding roadway network. The difference in volumes on that roadway network can be seen by comparing the average daily traffic (ADT) volumes with and without project in that year 2025 setting, and a detailed discussion on the redistribution effects involved can be found in Topical Response 3.1.7. It is for this reason that a project trip exhibit is not included in the Draft Program EIR and traffic report because such exhibit would imply that the project trips are simply added to the no project network volumes. The redistribution effort is an important consideration in evaluating projects like this in a long-term setting (see Topical Response 3.1.7, Transportation and Circulation–Traffic Forecasts). One of the obvious examples of this effect is trips generated within the City of Mission Viejo either by residential or non-residential development which will have interaction with the project (e.g., future city residents working in the project business park or project residents working or shopping in Mission Viejo). Such trips will be on the roadway system regardless of whether or not the project develops. It is simply their origins or destinations that would change.

The information provided does show how the proposed Ranch Plan project would affect city streets and intersections and shows such information under a number of future scenarios (committed highway network, committed network plus Avenida La Pata, and committed network plus SR-241 extension). It also shows how the proposed mitigation program will mitigate long-range cumulative deficiencies caused by growth in the area in combination with the proposed project.

With respect to the internal capture of the project, a detailed discussion of this can be found in Topical Response 3.1.7, Transportation and Circulation–Traffic Forecasts. As noted in this topical response, the internal capture is derived from regional modeling relationships, derived from the OCTA/OCTAM model and information provided both in the traffic report and summarized in that comment show that it is a realistic internal capture given the size of the project, the mix of uses, and the project location. As addressed in Topical Response 3.1.1.3, Project Processing, modifications to a project would be subject to CEQA review, and additional traffic studies are required as a part of each Master Area Plan (see Section 4.6, Mitigation Measure 4.6-2, of the Draft Program EIR).

Response 5

Please refer to Topical Response 3.1.3, Land Use, and well as Section 4.1, Land Use and Related Planning Programs, of the Draft Program EIR.

Response 6

Please refer to Topical Response 3.1.12, Public Services and Facilities–Water Supply Assessment, as well as Section 4.15, Public Services and Facilities of the Draft Program EIR.

Response 7

The internal roadway street labeled as "A" Street is intended to serve only local development within that part of the Ranch Plan project site. It is not intended as a through street, and is not intended to carry through traffic. There would be no impact from "A" Street to Crown Valley Parkway or Oso Parkway since "A" Street is simply a means of distributing project traffic to the nearest roadway on the arterial street system.

Response 8

The proposed mitigation program has level of service performance criteria that corresponds to those of the various jurisdictions. The goal of SCRIP is to provide a set of transportation improvements that will meet the level of service (LOS) performance criteria of the communities in the study area, thereby providing adequate accessibility to key services such as provided by the hospital. It should be noted that the UAC designation permits medical facilities. It is reasonable to assume that such facilities would be constructed within the Ranch Plan project site.

Response 9

Please refer to the response to Comment 3.1.10, Recreation—Impacts to Existing Parks, as well as Section 4.12, Recreation, of the Draft Program EIR. The Draft Program EIR does not purport to find that none of the project's future residents would use existing recreational resources in the region, including existing facilities in the City of Mission Viejo. It is acknowledged that it is likely that a resident from the Ranch Plan project will visit local off-site recreational facilities (including, by association, those located in Mission Viejo). Notwithstanding this potential increase in use, the impacts associated with such additional access and use are anticipated to be insignificant. Specifically, the proposed Project contemplates the provision of sufficient local recreational facilities to meet the needs and demands of Project area residents (e.g., a minimum of 82 acres of local parks, sports park facilities, and provision of new trails and bikeways). In providing these new facilities, the applicant is, in relevant part, reducing/eliminating the need for Project area residents to utilize local recreational facilities in Mission Viejo and other surrounding communities. Accordingly, potential intermittent or low-intensity use of Mission Viejo recreational facilities by Project area residents should not unduly burden said facilities or otherwise cause accelerated deterioration of said facilities. Furthermore, any such impacts are likely to be offset by potential use of Project area recreational facilities by Mission Viejo residents.

The Local Parks Code, which has been drafted in compliance with the Quimby Act, is intended to provide for comprehensive local park planning and programming (i.e., acquisition, development, operation, maintenance, and financing) (see Draft Program EIR page 4.12-5). By meeting the requirements of the Local Park Code, the proposed project would be providing sufficient park facilities to meet the demand generated by the project.

Response 10

Impacts on affected school districts are addressed in Section 4.15, Public Services and Facilities, of the Draft Program EIR. Mitigation Measure 4.15-5 requires the applicant to enter into an agreement with the school district for the provision of school facilities. Additionally, please refer to page 4.15-42 regarding the mitigation of impacts to schools. In accordance with California Government Code §65995(h) and (i), the payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the

amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities.

Response 11

The Draft Program EIR sets out a long-range mitigation program for the identified cumulative deficiencies. New east/west roadways are not included in that program (except for New Ortega Highway) and would be considered a regional transportation feature to be considered by appropriate entities such as the Orange County Transportation Authority (OCTA) or Caltrans.

Response 12

Economic issues are beyond the scope of CEQA. The Ranch Plan traffic analysis does take into consideration traffic distribution/redistribution associated with existing and proposed on-site and off-site land uses. At the General Plan Amendment/zone change it is not possible to identify the precise types of commercial/retail development that would occur within the Ranch Plan limits. The traffic analysis used adopted generation rates for these types of uses (see Topical Response 3.1.7.2 regarding trip generation).

Response 13

Please refer to Topical Response 3.1.12, Public Services and Facilities–Fire Protection, as well as Section 4.15, Public Services and Facilities, of the Draft Program EIR.

Response 14

At the time of development the need for alternative fueling facilities would be evaluated. There would need to be sufficient demand to support alternative fueling facilities. Given the timeframe for development (20 to 25 years), the technology being employed would need to be considered. This is an area in great flux at the present time. For example, charging stations would not likely be appropriate because electric vehicles are not likely to be in widespread use at any time in the future. Most automobile manufacturers are concentrating on hybrid vehicles that run on both gasoline and electricity, but generate electricity while in use rather than through recharging. The County will determine at the Master Area Plan stage whether new developments in this project need support facilities recommended by the SCAQMD or CARB. The County will work with the developer to determine the feasibility of specific measures at that time. However, it should be noted that there is nothing in the Ranch Plan Planned Community Text that would preclude the establishment of these uses should there be sufficient demand to make them cost effective. To address this request, the following mitigation measure has been incorporated into the Final Program EIR as follows:

MM 4.7-2 With the submittal of each Master Area Plan, the project applicant shall identify locations where alternative fueling facilities could be sited.

Response 15

Please refer to the subsequent responses to comments.

Response 16

The Draft Program EIR does discuss the potential environmental impacts of the proposed project, including traffic impacts on city streets and intersections in the study area, and required mitigation measures. Refer to corresponding responses to the City's specific comments elsewhere in the Response to Comments document. Also please refer to Topical Response 3.1.1.5 regarding the recirculation issue.

Response 17

As noted in the comment, the Draft Program EIR is a Program EIR and will serve as the primary CEQA environmental documentation for future entitlements obtained to implement the program. However, as noted elsewhere in the Response to Comments document (refer to Topical Response 3.1.2.2), the RMV Open Space, including lands to be managed for habitat protection, have been identified in the Draft Program EIR. Additionally, the ramifications of selecting a preferred route for SR-241 South in a different location than assumed in the Draft Program EIR are addressed in Topical Response 3.1.7.3. In deference to Caltrans' concerns and due to time constraints to achieve a mutual resolution, the County is not pursuing the proposal to add this facility to the state highway system at this time and is only proposing that the "New Ortega Highway" be added to the County Master Plan of Arterial Highways (MPAH) as an arterial highway. Please also refer to Topical Response 3.1.7, Transportation and Circulation-New Ortega Highway. The issue of whether New Ortega Highway would be approved as the new state route does not affect the conclusions of the Draft Program EIR regarding traffic impacts. In any event, at each stage of the subsequent entitlement process, the County will determine whether additional environmental review is required pursuant to CEQA Section 21161 and CEQA Guidelines Sections 15162 and 15168.

Response 18

The Draft Program EIR acknowledges the multiple alignments for the SR-241 extension being evaluated as part of the SOCTIIP. The alignment alternatives are depicted in Section 7, Cumulative Impacts on Exhibit 7.3-3. It would not be appropriate to model all six corridor alignments and as discussed in various responses, the differences can be seen in the SOCTIIP Draft EIS/SEIR. The Draft Program EIR also acknowledges (page 3-5) should the TCA and FHWA select a SOCTIIP alternative that includes an alignment different than the alignment depicted on the MPAH and General Plan, the Ranch Plan would need to be modified. For additional discussion of the toll roads, please refer to Topical Response 3.1.7.

The County of Orange believes that the Ranch Plan Program EIR is adequate in accordance with CEQA and the CEQA Guidelines. The commenter's opinions are noted and will be taken into consideration by the County's decision makers.

Response 19

The County of Orange acknowledges that the TCA would be involved in the selection of the preferred alternative to SR-241 South. However, as addressed on page 3-5 of the Draft Program EIR, the construction of the toll road is not part of the Ranch Plan project and the Ranch Plan project is not dependent on the completion of the toll road. For this reason, the related TCA actions do not include the selection of a preferred alternative for SR-241 South.

Response 20

The Ranch Plan Draft Program EIR traffic study, in accordance with CEQA requirements, analyzes existing plus project impacts, as well as existing plus project plus cumulative projects. In each case, the South (Orange) County Sub-Area Model (SCSAM) is used to include the project within the overall countywide traffic modeling forecasts. As discussed in Topical Response 3.1.7, Transportation and Circulation–Traffic Forecasts, and in the response to Comment 4, the with and without project trips are derived from separate trip distributions whereby the trips in the surrounding area are redistributed with the inclusion of the project (i.e., the project does not simply add trips to local roadway system but interacts with the surrounding residential areas, retail areas, and places of employment). This interaction is determined by the traffic model as described in detail in Topical Response 3.1.7, and the result is a comparison between conditions with the project versus without the project. The impacts of the project cannot be estimated by simply adding project trips to the roadway system surrounding the project but need to be estimated by considering the effects of this interaction. The resulting comparison between with and without conditions reflects these major differences in traffic patterns that will occur with or without the project, and provides the basis for identifying project impacts.

For this reason, the Ranch Plan Draft Program EIR traffic report does not give a diagram that shows the project trips on the surrounding street system. This would imply that those trips simply added to the existing traffic rather than interacting with the various land uses in the surrounding area. The real comparison between with and without project conditions is to compare the ADT diagrams given in the traffic report for with and without the project (either the existing versus existing plus project trips or the cumulative with and without project trips).

In this regard, the analysis is significantly different than the traffic analysis conducted for the Mission Hospital Expansion EIR. That EIR addressed a relatively small single use project with a confined study area (primarily Crown Valley Parkway). In that case, it was appropriate to estimate the hospital trips and add them to the study area traffic because the majority of the trips were estimated to be entering or leaving the study area with little interaction with land uses within the study area. This approach is neither applicable nor possible for the Ranch Plan. The proposed Ranch Plan project has a mix of uses, is considerably larger, and has a very large study area within which most of the Ranch Plan trips will occur (in direct contrast to the study area for the Mission Hospital expansion). For example, project trips will travel to Mission Viejo Mall and other employment opportunities in Mission Viejo while some Mission Viejo residents will have jobs in the Ranch Plan business park. Without the project, such trips generated in Mission Viejo will still be on the roadway system but will have different origins and destinations. This is an example of the redistribution effect noted in the response to Comment 4 and described in detail in Topical Response 3.1.7, Transportation and Circulation.

The Ranch Plan traffic study did not provide diagrams for peak hour volumes throughout the study area. The study has over 2,000 sets of individual intersection turn movement volumes and the detailed peak hour turn movement data can be found in the appendices to the Draft Program EIR in which peak hour turn movement volumes at every intersection for every scenario are summarized.

Response 21

A detailed discussion on project trip generation and internal capture is given in Topical Responses 3.1.7. As noted there, the internal capture for the project depends on a number of factors, the most important being size of the project and the mix of uses. The internal capture is

derived from regional traffic modeling and Topical Response 3.1.7 shows a listing of various uses in the project and the internal capture for each. No references are made in the Ranch Plan Draft Program EIR traffic study to “pass-by” trips. Based on that summary, it is concluded that the internal capture is reasonable for the type of project being addressed here.

Response 22

The trip generation used for senior housing is comparable to trip generation data for senior housing from sources such as Institute of Transportation Engineers and other studies of retirement communities (see Appendix B, Traffic Resource Material–Senior Housing Trip Rates, to the Responses to Comments document). The actual trip generation is derived as part of the socioeconomic data conversion process in which senior housing is depicted in terms of number of employed residents and household size. (Please refer to Topical Response 3.1.7, Transportation and Circulation–Trip Generation for Age Restricted Housing). Trip generation studies show senior housing to have substantially lower trip generation than single family housing, and the trip generation derived from the application of trip rates to the socioeconomic data is considered an appropriate procedure for establishing trip generation estimates for that use. It is recognized that in a senior housing project, there will be a range of ages and activity levels, resulting in the averages which have been recorded in various studies and which are comparable to the rates derived here.

Response 23

The concern expressed by the City is noted; however, sufficient safeguards have been incorporated into the project that would regulate a shift of the 6,000 senior units to conventional housing. The Ranch Plan Planned Community text notes that each Master Area Plan must provide a statistical table estimating the proposed senior citizen housing dwelling units by Planning Subarea. At the Master Area Plan, among other things, the project needs to prepare supplemental traffic analysis that evaluates how any proposed refinements to the circulation system and/or milestones remain in substantial compliance with appropriate Development Agreement obligations and Program EIR mitigation measures. Supplemental CEQA documentation would be required to address the potential impacts associated with converting the 6,000 senior units to conventional units. The total number of units, including the number of senior units, would be monitored in the Annual Monitoring Report.

Response 24

The traffic study shows the trip generation associated with non-residential uses in the proposed project, and as noted in the comment, the trip generation from the retail and business park uses are a substantial proportion of the total trips. The trip generation rates used for all proposed uses in the traffic study are included in Table 3-1 of the Ranch Plan traffic study. This part of the project trip generation represents retail opportunities (primarily for residents) and employment opportunities (for residents in the project area and the surrounding area), plus minor non-residential amenity types of uses for residents (e.g., schools).

The traffic model forecasts for the project reflect these various non-residential uses and the trips that will be attracted into the project as workers travel to jobs in the business park locations (as can be seen in Topical Response 3.1.7, Transportation and Circulation–Traffic Forecasts, it is estimated that 84 percent of the business park workers will come from outside the project site). It is for this reason that the interaction with the surrounding area is part of the traffic forecasting process noted earlier (i.e., the business park will attract workers into the area and those workers

would otherwise be on the surrounding street system but going to different destinations using at least some part of the study area roadway system).

With respect to the non-residential uses, the separation into retail and non-retail land use is considered adequate to estimate an average trip generation for the non-residential portions of the project. Non-residential developments in south Orange County are typically classified into these two generic categories, with retail uses serving shopping needs and non-retail uses being the typical business park developments. The County does not intend to have a trip budget type of performance standard imposed on the proposed project.

Response 25

Allowable land uses in the UAC category include, but are not limited to, residential, commercial, and office. For traffic purposes, the analysis assumes a maximum of 560,000 sq. ft. of office uses within the proposed UAC category. The mix of office uses versus business park uses is intended to reflect the expected activity center uses at buildout. The mix of land uses used in the traffic study is a representative interpretation of the future land uses within the project site. The categories are somewhat generic in nature, which is appropriate at a programmatic, General Plan level of definition. As each Area Plan is completed, more detailed land use will be defined, particularly for the non-residential categories, and their relationship to these generic uses will be described in terms of traffic and other characteristics.

Please also refer to the response to Comment 24.

Page 3-24 has been clarified and included in the Final Program EIR as follows (changes are underlined):

Urban activity center uses would be located north and south of San Juan Creek. One area would be in the general vicinity of the intersection of Antonio Parkway with both the existing Ortega Highway and proposed New Ortega Highway. A second urban activity center location would be south of San Juan Creek in the vicinity of the intersection of Antonio Parkway. Together these uses would consist of approximately 1,190,000 square feet of Urban Activity Center development, consisting of potential residential, office space, and 180,000 square feet of retail development.

Page 3-26 has been clarified and included in the Final Program EIR as follows (changes are underlined):

Of the 2,353-acre planning area, approximately 132 acres would represent a core urban activity area to the Ranch Plan where a number of services and amenities would be provided. Within the non-residential development area, a variety of urban activity uses are proposed. The proposed project would allow for approximately 1,680,000 square feet of urban activity center uses, consisting of potential residential uses, office space, 100,000 square feet of neighborhood commercial, and a Town Center. These uses would be clustered around New Ortega Highway, Gobernadora Road (an internal roadway),⁵¹ and SR-241 (if constructed). An additional 100,000 sq. ft. of neighborhood retail is proposed in Planning Area 3.

⁵¹ Key components of the internal road network are discussed later in the Project Description.

Response 26

The proposed Ranch Plan project includes an east/west roadway north of San Juan Creek that will serve local development. As noted in the comment, it is proposed as a Tee-intersection with Antonio Parkway. The Ranch Plan Program EIR traffic analysis notes that the intersection with Antonio Parkway at New Ortega Highway and the intersection between Antonio Parkway and Ortega Highway will be designed to accommodate the traffic flow at those two locations. The actual traffic volume differs depending on whether or not SR-241 is extended, and this is clearly described in the Ranch Plan Draft Program EIR traffic report.

The lack of a direct route between New Ortega Highway and existing Ortega Highway is recognized. The Ranch Plan Draft Program EIR traffic analysis examines a worst-case scenario in which through traffic would use the New Ortega Highway north of San Juan Creek and then jog down to existing Ortega Highway (see Appendix B, Traffic Resource Material–New Ortega Highway Diversion, to this Responses to Comments document). In deference to Caltrans' concerns and due to time constraints to achieve a mutual resolution, the County is not pursuing the proposal to add this facility to the state highway system at this time and is only proposing that the "New Ortega Highway" be added to the County Master Plan of Arterial Highways (MPAH) as an arterial highway. Various alternatives are discussed in the Special Issues section of the traffic study (i.e., a westward extension of New Ortega Highway to connect with Avery Parkway and the potential deletion of Crown Valley Parkway extension). Please also refer to Topical Response 3.1.7, Transportation and Circulation–New Ortega Highway.

Response 27

The Draft Program EIR identifies an interchange between New Ortega Highway and the SR-241 southerly extension. The Far East Alignment of the SR-241 extension includes an interchange with Ortega Highway north of San Juan Creek, and requires a connection across the creek from existing Ortega Highway to this interchange. New Ortega Highway would eliminate the need for such a cross-creek connector.

The proposed New Ortega Highway simply recognizes that there is a need for a roadway north of San Juan Creek to serve development in that area. It is therefore logical that this roadway will connect with the interchange and will extend westerly to Antonio Parkway. With New Ortega Highway extending eastward to the existing alignment of Ortega Highway this new east/west roadway provides a logical connection to SR-241 serving both local and regional traffic.

The recommendation to include an alternative that retains existing Ortega Highway and an interchange with the SR-241 extension south of San Juan Creek has been found infeasible by the TCA through SOCTIIP due to topography and other related issues. Since the interchange has to be located north of San Juan Creek, the new Ortega Highway alignment provides the most efficient way to serve this interchange.

Response 28

The volume of traffic on new Ortega highway depends on whether SR-241 is extended as currently proposed. The traffic forecasts show that while a four lane primary arterial would provide adequate capacity, it would be prudent to reserve right-of-way for a six lane major arterial between Antonio Parkway and the SR-241 extension. The traffic analysis has been carried out using the six lane assumption to ensure that the full demand is fully accounted for in the traffic analysis.

With respect to the question in the last paragraph regarding the 2010 analysis, only part of New Ortega Highway is assumed to be completed in that time. (Note that the 2010 analysis is based on the committed network which assumes that the SR-241 extension is not built in 2010.)

The following responses pertain to the itemized recommendations in this comment:

1. As noted above, New Ortega Highway is modeled as a six-lane arterial to show the future demand on this facility.
2. With respect to the designation of New Ortega Highway as a state route, please refer to Topical Response 3.1.7, Transportation and Circulation.
3. Only part of New Ortega Highway is planned for year 2010. The exhibit referred to pertains to a special analysis for 2010 to show the effect of extending New Ortega Highway further to the east and connecting with an arterial highway extending south from the current termination point of the SR-241 toll road. Neither extension is part of the proposed roadway plan or mitigation program for year 2010.
4. The New Ortega Highway interchange with SR-241 is part of the current plans for the SR-241 extension and would be the responsibility of the TCA. The "C" Street connection would be a joint County/TCA project.
5. The year 2010 analysis shows conditions for that year in the absence of a SR-241 extension, thereby showing needed mitigation measures for a worst case scenario. Should the extension occur in that time frame, then traffic conditions would be improved over those depicted in that 2010 analysis.
6. The Draft EIR does not identify a trigger that would determine when New Ortega Highway would be extended to connect to the existing Ortega Highway, or when the SR-241 extension would be assumed to be operational. As mentioned above, the technical traffic analysis has assumed that the New Ortega Highway connection to existing Ortega Highway would occur sometime after year 2010. Because of the uncertainty of the SR-241 extension, the technical traffic analysis has analyzed long-range (2025) traffic conditions and project impacts for settings both with and without the SR-241 extension in operation.

Response 29

In deference to Caltrans' concerns and due to time constraints to achieve a mutual resolution, the County is not pursuing the proposal to add this facility to the state highway system at this time and is only proposing that the "New Ortega Highway" be added to the County Master Plan of Arterial Highways (MPAH) as an arterial highway. Please also refer to Topical Response 3.1.7, Transportation and Circulation–New Ortega Highway. Please also refer to the response to Comment 3.

Response 30

Please refer to Topical Response 3.1.7, Transportation and Circulation–Crown Valley Parkway. As noted there, the traffic study includes a section in which the project land uses together with a network that does not include the Crown Valley Parkway extension are compared to the same land uses with the current MPAH superimposed on that land use plan. The results show generally similar ADT volumes on the east/west arterials (slightly lower on Crown Valley

parkway and slightly higher on Oso Parkway as noted in the comment). Comparative data in Appendix B, Traffic Resource Material–Crown Valley Parkway Extension Deletion, of these Responses to Comments document shows that the same intersections are deficient for year 2025 cumulative conditions under both scenarios. While the Crown Valley Parkway extension deletion is no longer being requested from the MPAH, the data does show the effects of this extension not being built in the year 2025.

Response 31

With respect to the City's concerns regarding fire protection, please refer to the comment letter from and responses to the Orange County Fire Authority (Commenter 17). It should be noted that paramedic services would be provided as a part of new fire station facilities within the project site. With respect to hospitals, please refer to the Response to Comment 8.

Response 32

Please refer to the response to Comment 7.

Response 33

As discussed in Topical Response 3.1.7, Transportation and Circulation–Traffic Forecasts, the traffic forecasts used in the analysis assume that the project will interact with the surrounding area. Residents of the project will shop in Mission Viejo, residents of Mission Viejo will work in the project business parks, etc. The trip generation summary for the proposed project (see Section 4.6 of the Draft Program EIR) shows how much traffic is allocated to commercial and retail sites on the project site. A separate economic study is not required to assess the potential traffic impacts associated with these types of trips. This is accounted for in the traffic analysis and is discussed in detail in the topical response. Please also refer to the response to Comment 12.

Response 34

The traffic analysis shows the improvements needed for cumulative conditions (including the proposed project) for year 2010 and year 2025. The South County Roadway Improvement Program (SCRIP) that will be accompanying the adoption of the proposed project integrates requirements for phasing of the transportation improvements as set forth in the Development Agreement for the proposed project. It will include specific milestones tied to levels of development with the goal of maintaining adequate levels of service on the study area roadway system as development occurs over time and will address all of the requests of the City of Mission Viejo.

Response 35

The Draft Program EIR shows traffic shares for the proposed project in accordance with CEQA requirements for cumulative development. As discussed in Topical Response 3.1.7, Transportation and Circulation, that share table uses the increment of new development in the study area to show the project share of all future development. The discussion in the Draft Program EIR and the EIR traffic report notes that this table is primarily for CEQA purposes and does not necessarily imply the project responsibility with respect to individual locations in the overall roadway program. The SCRIP will establish traffic shares for the proposed project taking into consideration various factors such as local programs implemented by study area jurisdictions, and the degree in which other future development (i.e., non-Ranch Plan) will

participate in a funding program (i.e., projects with development agreements, conditions of approval, etc. will in most cases not be candidates for such participation). The SCRIP has traffic improvement phasing milestones which are intended to ensure that traffic improvements are implemented as development occurs. Please also refer to the response to Comment 34.

Response 36

Please refer to Topical Response 3.1.7, Transportation and Circulation. It should be noted that the draft SCRIP has been reviewed by all of the proposed participating jurisdictions, including the City of Mission Viejo. Part 2 would also include review by the participating jurisdictions.

Response 37

In most cases, the mitigation measures required for 2010 conditions are included in the overall long-range improvements program and would therefore be the subject of early implementation. Those under footnote "b" of Table 4.6-27, which are shown as being required in 2010 but not in the long range would be addressed as part of the SCRIP. Assuming that the conditions noted in 2010 occur, such improvements will need to be made as part of the milestones for project development phasing. Such improvements would remain in place, providing excess capacity for a future time when other improvements reduce traffic at the featured locations. A discussion on these can be found in Appendix B, Traffic Resource Material–Mitigation Needed in 2010 but not in 2025, of this Responses to Comments document.

Response 38

No modification of the proposed mitigation would be necessary because the traffic analysis submitted in conjunction with the approval of each Master Area Plan will involve discretionary approval before the Orange County Planning Commission through a public hearing process. Such public review process will afford adjacent jurisdictions, other agencies, and the general public an opportunity for early review and comment through the Master Area Plan entitlement process and consideration at a public hearing before the Planning Commission.

The SCRIP identifies the type of documentation to be produced in subsequent traffic studies. That program includes provisions for participation by jurisdictions in the study area so that the improvement program proceeds in a cooperative manner.

It is the County's practice that for a development that will have impacts to the circulation system into another jurisdiction, then any relevant technical analysis is provided to that jurisdiction for review and comment. The County will follow this practice with regard to the proposed Ranch Plan project.

Response 39

Both the issues of impacts to recreational facilities and water supply are addressed in Section 4.15, Public Services and Facilities, of the Draft Program EIR. Please also refer to Topical Response 3.1.12, Public Services and Facilities.

Response 40

Potential land use conflicts are addressed in the Draft Program EIR. Please refer to Section 4.1, Land Use and Related Planning Programs and Section 4.8, Noise. Please also refer to Topical Response 3.1.3, Land Use.

Response 41

Please also refer to Response 14, above.

Response 42

Please refer to Topical Response 3.1.2, Project Description–Governance.

Response 43

Jobs/housing balance is discussed in the Draft Program EIR in Section 4.3, Population and Housing. The southern California region, as a whole, is presumed by SCAG to be balanced. SCAG also considers a subregion to be balanced if its ratio of jobs to housing matches the ratio for the region. The jobs/housing ratio for the southern California region was 1.27 (total number of jobs divided by total number of housing units) in 2001 and is projected to be 1.33 in 2025. Northern Orange County had high jobs/housing ratios and eastern and southern Orange County had low jobs/housing ratios. SCAG determined in the 1994 Growth Management Plan that the Orange County Subregion had a job/housing ratio of 1.52 in 1997 and a projected ratio of 1.91 in the year 2025. The source for this information is *The New Economy and Jobs/Housing Balance in Southern California* (SCAG, 2001). Further discussion is provided on pages 4.3-8 through 4.3-10 and 4.3-12 of Draft Program EIR 589.

Response 44

Exhibits 3-20 and 3-21 include a symbol for the two interchange locations proposed to connect to the Ranch Plan circulation system. Interchanges are proposed in Planning Area 3 and near the south/western project boundary by Planning Area 8. Both exhibits depict the old Far-East alignment and serve to provide a generic depiction of the SR-241 extension that generally corresponds to the County MPAH.

Response 45

Exhibit 3-24 has been revised to reflect the correct proposed circulation network for the proposed project. The following clarifies the conceptual road names: “A” Street” is also named “Chiquita Canyon Road.” “C Street” is also named “Cristianitos Road.” “F Street” is named “Gobernadora Road” within Planning Area 3, and is named “Cristianitos Road” outside and north of Planning Area 3. The revised exhibit is provided in Section 4.

Response 46

The comment is noted. Please refer to the response to Comment 45.

Response 47

The comment says that “*Felipe Road, north of Oso Parkway should be referenced as Olympiad Road.*” According to the City’s street signing, Felipe Road changes to Olympiad Road at La Paz Road. With respect to Olympiad Road as a four lane facility, the comment is so noted.

Response 48

The comment is noted. Exhibit 4.6-2 has been corrected and is provided in Section 4 of the Responses to Comments document.

Response 49

The traffic volumes for this intersection are included in Appendix B, Traffic Resource Material, of these Responses to Comments document.

Response 50

The westbound right-turn default movement assumption is corrected and is not identified as a committed improvement and is therefore included in the project mitigation program. The comment states that this needs to be corrected, but reference to Appendix C of the traffic report (see Draft Program EIR) shows that it is in fact shown correctly as a "0" movement for the Committed Circulation System.

Currently, the westbound bikeway, together with the through lane provides adequate space for a de-facto right-turn lane (based on field observations and field measurements) of the de-facto right-turn lane operations.

Response 51

It is recognized that the Mission Hospital expansion is to construct the referenced second northbound left-turn lane. The second northbound left-turn lane was inadvertently left out of one of the 2025 analysis scenarios and attached is a corrected worksheet for this intersection (see Appendix B, Traffic Resource Material, Corrected ICU Calculation for Los Altos/Crown Valley Parkway intersection, of this Responses to Comments document).

Response 52

The comment is noted with respect to the street name change. It is understood that the intersection geometrics are correct (i.e., they had been corrected as originally requested by the City).

Response 53

The committed improvement at this location is based on adopted mitigation measures for the Laguna Niguel Gateway Project. It is recognized that it is not part of the City of Mission Viejo's current Crown Valley Parkway improvement program, as noted in the comment. The year 2010 and the year 2025 ICUs are correlated and improvements are identified. The improvement noted here is also included in SCRIP.

COMMENTER 27 CITY OF RANCHO SANTA MARGARITA

Dated: August 5, 2004

Response 1

Topical Response 3.1.7, Transportation and Circulation–Crown Valley Parkway, addresses the Crown Valley Parkway extension. The Draft Program EIR traffic study includes a section in which the project land uses together with a network that does not include the Crown Valley Parkway extension are compared to the current Master Plan of Arterial Highways (MPAH) superimposed on that same land use plan.

It should be noted that the Draft Program EIR does not conclude that there is a "*benefit to deleting this planned extension...*" The results of the comparison show generally similar average daily traffic (ADT) volumes on the east/west arterials (slightly lower on Crown Valley

parkway and slightly higher on Oso Parkway as noted in the comment). A summary table is given in Appendix B, Traffic Resource Material - Crown Valley Parkway, of this Responses to Comments document, which shows that the same 2025 cumulative intersection deficiencies occur under both scenarios.

County policy does not require a developer to construct a roadway if the project is not accessing such a facility. As noted in Topical Response 3.1.7, the project is not proposing to access the roadway. However, both County and OCTA (Measure M) policy requires that an agency not preclude implementation of an MPAH facility. The County will comply with this provision by requiring the Ranch Plan to provide a "right-of-way reserve" designation along the current alignment of the Crown Valley Parkway extension to ensure that this facility is not precluded as a potential future roadway.

Response 2

Mitigation Measure 4.15-5 of the Draft Program EIR, as modified by the response to the Capistrano Unified School District comments (Response 9) requires that prior to the issuance of any residential building permit, excluding senior housing, the applicant enter into an agreement with Capistrano Unified School District regarding the development of future facilities. A component of that agreement would be the phasing of the facilities.

COMMENTS 28 CITY OF SAN CLEMENTE
Dated: August 5, 2004

Response 1

As indicated in Draft Program EIR 589, on page 9, given the length of the mitigation measure, all measures are only briefly summarized in the summary table. The reader was directed to the full mitigation text in the applicable section of the EIR. Additionally, the document indicated the mitigation monitoring program will be developed using the full text of the mitigation program. The Executive Summary table groups the impacts and mitigation measures by topical area. Many of the measures help to offset more than one of the impacts identified. Therefore, there would be redundancy to have to repeat each measure by associated with each of the impacts.

Response 2

Your comment is noted. The SCORE process was part of a public outreach process conducted by the County of Orange to allow greater participation of interested parties in the planning process. However, the SCORE process was not tied to the CEQA process. The SCORE summary reports are the best source of tracking the issues raised. The purpose of the EIR is to document the inform agency decision makers and the general public of the direct and indirect environmental effects of a proposed action, provide mitigation measures to reduce or eliminate potential significant adverse impacts, and identify and evaluate reasonable alternatives to the proposed project.

Response 3

Provisions for specific Senior Housing Units are defined in the Ranch Plan Planned Community Program Text under Section III.A.5. These regulations provide for a variety of Senior Housing dwelling types including conventional single-family, estate, multiple-family, and planned concept detached dwellings. Specific dwelling types will be defined in subsequent levels of approval. Restrictions for age 55 and older will be implemented in specified Senior Housing dwelling units

under CC&R type controls applied to Senior Housing projects as defined by the Planned Community Program Zoning.

Response 4

The Draft Program EIR acknowledges the multiple alignments for the SR-241 extension being evaluated as part of the SOCTIIP. The alignment alternatives are depicted on Exhibit 7.3-3 of Section 7, Cumulative Impacts. The Draft Program EIR also acknowledges (page 3-5) should the TCA and FHWA select a SOCTIIP alternative that includes an alignment different than the alignment depicted on the MPAH and General Plan, the Ranch Plan would need to be modified. For additional discussion of the toll roads, please refer to Topical Response 3.1.7. As discussed in the Topical Response, if a substantially different alignment is selected CEQA documentation evaluating the change in the environmental impacts as a result of the new alignment would be required.

Response 5

As described in the Draft Program EIR, the use regulations for each of the proposed Ranch Plan uses (including senior housing) are set forth in more detail in the PC Text. Sufficient detail is provided in the Draft Program EIR for environmental review.

The rationale and support for reduced trip generation rates for senior housing is discussed in Topical Response 3.1.7.8. Air quality and noise impacts are a function of the trip generation rates.

Once the number of senior housing units have been established for the Subarea plans, the numbers would be assured through provisions in the project CC&Rs.

Response 6

Please refer to Topical Response 3.1.2. The draft Development Agreement is on file at the County of Orange.

Response 7

Please refer to Topical Response 3.1.2.

Response 8

Section 4.10, Aesthetics, of the Draft Program EIR acknowledges that implementation of the proposed Ranch Plan project would result in significant, unavoidable aesthetic impacts associated with changes in the character of the site, including landform modifications. The grading assumptions for the proposed project represent a worst-case assumption appropriate for a programmatic level of analysis for a General Plan amendment. As subsequent project-specific developments are proposed, additional grading studies would be performed. The purpose of the Draft Program EIR is to evaluate the potential impacts of the General Plan and zone change. Alternative grading concepts were not addressed at this time because approvals of a concept grading plan is not being requested. Provisions for contour grading and other measures that would potentially reduce the grading quantities and visual impacts would be more appropriately considered when approval of grading plans is being requested.

Response 9

As addressed in the Draft Program EIR, annexation of the project site in part or in whole is not proposed by the project applicant. Please refer to Topical Response 3.1.2.

Response 10

While the jurisdictional boundaries of the City of San Clemente are not included on every exhibit in Section 3, Project Description, they are shown on some of the exhibits.

Response 11

As noted in the response to Comment 9 and in Section 3, Project Description, of the Draft Program EIR, annexation of the Ranch Plan project site in part or in whole to the City of San Clemente is not proposed by the project applicant. The project site, in its entirety, is within unincorporated Orange County. No part of the site is within the existing jurisdictional boundaries or the sphere of influence of any city. As such, the City of San Clemente General Plan policies are not applicable to the proposed Ranch Plan project. However, it should be noted that the Ranch Plan Draft Program EIR does address project-specific and cumulative impacts, including those related to traffic, noise, aesthetics, air quality, open space, and public safety services.

Response 12

Consistency with Orange County General Plan policies and goals are addressed in the Draft Program EIR. Please also refer to the Southern California Association of Governments (SCAG's) comment letter on the Draft Program EIR, which notes that the EIR adequately addresses SCAG policies. Please also refer to the response to Comment 11.

Response 13

The threshold of significance for the Population and Housing impacts, which was developed based on the CEQA checklist, is that there would be a significant impact if the project exceeds adopted regional or local population projections. Therefore, even though the Ranch Plan would not provide the number of units assumed in OCP-2000M there would not be a significant impact for Population and Housing because the projections would not be exceeded. However, in Section 4.1, Land Use, the Draft EIR did identify a significant impact associated with local and regional planning documents (Impact 4.1-2) because the project would provide only 68 percent of the development assumed for the area in the local and regional planning documents..

Response 14

The typographical error is noted and has been modified on page 4.3-4 of the Final Program EIR as follows (changes are shown in cross-out and underline):

"...CAA 70."

Response 15

Please see response 13, above. The growth inducing impacts of the project were addressed in Section 6 of the Draft Program EIR. The Draft Program EIR concluded the development of the Ranch Plan would provide a sufficient tie-in to existing utility systems to accommodate the demands of this project at full buildout. However, the project does not propose the construction

of surplus capacity that would encourage urban development beyond what is proposed in the Ranch Plan. Most of the surrounding areas are either already developed or are within public ownership, such as MCB Camp Pendleton, Caspers Wilderness Park and the Cleveland National Forest. The surrounding developed areas are not of the age or nature where redevelopment would be likely in response to the proposed project. The public ownership would eliminate the potential of future urban development. As a result, the Ranch Plan is not expected to induce housing or economic growth within southern Orange County.

Response 16

Page 4.3-8 has been corrected and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

Existing and projected employment data for the project area and Orange County are listed in Table 4.3-5. As identified in Table 4.3-5, the CDR states that there were ~~87,892~~ 88,223 employed persons within the project study area in 2000; this accounts for almost 16 percent of Orange County's entire work force. The majority of those employed persons were engaged in jobs not related to retail or service positions.

Response 17

The typographical error is noted and has been modified on page 4.3-11 of the Final Program EIR as follows (changes are shown in cross-out and underline):

"Population Projections"

Response 18

The Draft Program EIR identifies the shortfall of the development compared to OCP-2000M as a significant impact. It is not anticipated that the reduced growth on the Ranch Plan would result in impacts on the surrounding Community Analysis Areas. As discussed in the Draft Program EIR, Section 6, Growth Inducing Impacts, with the exception of the Ranch Plan project site, the majority of the land within the adjacent CAAs is presently developed or the development levels have been set. Most of the remaining undeveloped areas (other than the Ranch Plan area) are designated for recreation or open space. Other remaining land is generally not developable land because it is in public ownership or due to physical, public policy, or environmental reasons.

Response 19

Page 4.4-14 incorrectly states that there are four landslides mapped within Planning Area 8. There are three landslides mapped within Planning Area 8, as stated correctly within Table 4.4-3.

Response 20

The potential for landslide failure due to the proposed development impacting the City of San Clemente is considered unlikely because no development is proposed immediately adjacent to the City except for road construction at Avenida Pico and Avenida Talega. Potential impacts to the City of San Clemente would be mitigated through the design of corrective grading (i.e., buttressing, flattening of slopes, etc.). These mitigation measures would reduce any potential impact to less than significant.

Response 21

The County requires all construction projects to develop a storm water pollution prevention plan (SWPPP) that include temporary Best Management Practices (BMPs) to control erosion and sedimentation during storm events. To verify compliance with these plans, the County conducts regular inspections to ensure that all BMPs are in place and operating as specified. For the post-construction (i.e., development phase), the County requires a Water Quality Management Plan that details the permanent BMPs, including site design BMPs and source control BMPs, that will address the pollutants and conditions of concern identified in the Conceptual WQMP. The applicant has prepared a Water Quality Management Plan to address both pollutants of concern and conditions of concern for the post development scenario. Please refer to Appendix C-2 of the Draft Program EIR.

Response 22

Standard of practice within Orange County is to prepare "in-depth geotechnical reports" at the tentative tract map and grading plan review stage. An understanding of the development layout is required to evaluate the geotechnical constraints at a more precise level of detail. The tentative tract map and grading permit are both discretionary actions. Please refer to Topical Response 3.1.1.3.

Response 23

The formulation of the Ranch development plan involved the application of watershed planning principles that had been developed as part of the NCCP/HCP process specific to the project watersheds. One of these basic planning principles focused on minimizing development within the pervious soil regions to minimize hydrologic modification and preserve groundwater recharge capabilities. Application of these principles as part of the development planning process required extensive technical studies to establish the baseline watershed hydrologic characteristics and conditions. These technical studies include the Baseline Geomorphic and Hydrologic Conditions, which mapped the locations of the permeable and impermeable surface soils that were used as guidance to identify potential development area limits. In addition, sediment sources to the riverine system were identified as part of the technical watershed studies so that the sediment transport of material within the mainstem could be preserved. Sediment transport studies were conducted as part of these technical investigations that demonstrated the creek hydraulic conveyance capacity was the limiting factor to sediment delivery to the beach and not the potential sediment generated from the watershed sources. However, the natural characteristics of the existing alluvial stream system and floodplain will be preserved to maintain the sediment transport continuity within this portion of the watershed. In addition, the primary areas of sediment sources directly adjacent and within the localized subwatersheds are to be primarily preserved so that the natural contributions of large sediment can be maintained for beach supply. A streambed monitoring program has been included as one mitigation measure to monitor the potential of erosion within the natural stream system in the future.

Response 24

The initial technical watershed studies have only evaluated the potential storage volume requirements of the stormwater detention basins to ensure that adequate space was available for these facilities. A more detailed "complex" regional hydrologic model will be developed as part of the next step in the planning process, which will evaluate the combined effect of the operation of multiple detention basins within the same watershed. The basins are intended to

mitigate the “localized” peak flow within a subwatershed to match existing conditions and since the unmitigated regional peak flow rate from the development within the mainstem of San Juan Creek do not indicate a significant increase, it is anticipated that the basins will not negatively effect the mainstem flows. However, the more detailed watershed study and analysis will be completed through the generation of a “complex” regional hydrological model following County procedures to quantify the effect of multiple detention basins. Please refer to Response 22 pertaining to what constitutes deferred mitigation.

Response 25

A detailed Water Quality Management Plan (WQMP) has been prepared for The Ranch Plan that outlines a variety of control measures that will be implemented at different levels within the development. These will be implemented as site design BMPs and source control BMPs, as well as regional water quality control features identified in the management program.

Response 26

There is the potential for vector issues within the stormwater basins that allow for the ponding of stormwater runoff volume or temporary storage of these flows. These vector issues can be addressed through the overall operational management program for these basins since temporary storage of these volumes is necessary for stormwater quality purposes. Potential management measures of vectors include (1) continuous inflow of flow into and through the basins to prevent water stagnation, (2) introduction of mosquito fish, (3) application of approved pesticides, (4) water quality circulation features within the basins. The drain time for the flow duration/water quality basins will be 48 hours which is considered too short for mosquito breeding to occur.

Response 27

Topical Response 3.1.7 discusses the project trip generation in detail, and includes an explanation of the internal capture. Additional information is also contained in Topical Response 3.1.7 that describes the traffic modeling for the traffic analysis. As noted in those two topical responses, the internal capture is derived from regional traffic modeling which takes into consideration the size of the project, the location of the project, the mix of uses within the project, and the uses in the surrounding area.

Topical Response 3.1.7 summarizes the internal capture by land use category and describes how some uses have a high internal capture (e.g., schools and retail) while other uses have a relatively low capture (e.g., business park and residential trips). In combination, the overall internal capture is considered reasonable as discussed in that topical response. Again, it should be emphasized that the internal capture is derived from traffic modeling and not from designated input values such as listed in this table. The tabular summary is simply to explain the underlying relationships as derived by the traffic model.

A second part of the comment suggests means to show project impacts with a lower internal capture. In this regard, it should be noted that project impacts occur from the two sets of commuters in the future—residents traveling out of the project, and workers traveling into the project. The magnitudes are similar. It would therefore be speculative to postulate that residential-only is a “worst case.” Similarly, a worst case for phasing could be if business park uses out-pace residential development. One of the functions of the interim traffic studies required by the conditions of approval will be to evaluate these aspects of project phasing.

The proposed project will be conditioned to include a development and circulation phasing plan and provide a traffic analysis prior to or concurrent with approval of the Master Area Plan for each planning area. These conditions will provide the basis for implementing transportation improvements as development occurs.

Response 28

As noted in the comment, the Institute of Transportation Engineers (ITE) Trip Generation rate for senior housing is based on relatively small sample size. The trip generation used in the traffic study is derived from socioeconomic data equivalents whereby this type of housing is converted to socioeconomic variables (persons per household, workers per household, income, etc.) and then socioeconomic trip rates applied. Application of the socioeconomic data trip rates results in trip generation that is comparable to the ITE average rates and rates from special studies (see Appendix B, Traffic Resource Material–Senior Housing Trip Rates, of this Responses to Comments document). Please refer also to the response to Comment 27.

Response 29

The additional development cited in the comment is based on OCP-2000 information for year 2000 and year 2025. The OCP data is the official socioeconomic forecast data for Orange County developed by the Center for Demographic Research and compiled using input from each jurisdiction in Orange County. It is the policy of the County regional modeling agency, OCTA, that this data be used in all traffic modeling efforts in Orange County in order to maintain traffic modeling consistency. Furthermore, with the City of San Clemente, the City's General Plan long-range database has been used as the traffic modeling input for the 2025 traffic forecasts.

Notwithstanding this, it is recognized that over the past several years, development in certain areas such as Ladera Ranch and Talega have been proceeding, and that some of the increase from 2000 to 2025 has already taken place. In forming the South County Roadway Improvement Program (SCRIP) such factors as this recent growth will be taken into account. Project shares in SCRIP will recognize actual development as of 2004 plus other factors such as development that cannot participate in the fee program because of prior approvals, development agreements, or other reasons.

Response 30

In using the General Plan information for the City of San Clemente, the County recognizes that there will be some areas that are not yet fully developed and may not develop to the full General Plan intensity. As such, the amount of traffic on the local roadway system could be less than predicted in the traffic study. As noted in the response to Comment 29, the SCRIP will take into account the potential growth in the City based on realistic estimates of future development rather than the development contained in OCP-2000. As suggested in the comment, the result could be a lesser level of development participating in SCRIP.

The future traffic impacts and mitigations analyzed in the Ranch Plan traffic study are based on data, which includes the 70-acre high school/commercial site as shown in the City General Plan/zoning. Based on this designation in the City's General Plan, the traffic analysis recommends certain circulation improvements within the City. Should the City not develop the 70-acre site consistent with this assumption, the City should re-evaluate the need for the mitigations proposed in the City by the Ranch Plan project.

Response 31

The SCRIP is the implementing mechanism for the mitigation measures defined in the Draft Program EIR. This improvement program is intended to mitigate cumulative development (including the proposed project) and is a comprehensive transportation improvement program for south Orange County. The SCRIP contains specific language with respect to timing of the second part of the SCRIP and what must be accomplished before grading starts.

It is the County's goal that Part 1 of the SCRIP program, which will establish the basic program, will be adopted concurrent with consideration of the Ranch Plan project and that Part 2 of SCRIP, which will further address implementation of SCRIP improvements requiring additional funding to supplement Ranch Plan contributions, will be adopted within 12 months of adoption of Part 1.

Response 32

The project shares shown in the Draft Program EIR use a standard formula for depicting the project traffic contribution to a given facility in a cumulative setting. The formula is that used by the County of Orange and jurisdictions within Orange County to determine a future project share on a given facility. The share calculated for a project depicts only the project share of future growth (i.e., existing development is not included), and this is the reason why traffic from existing uses is subtracted from the total in the denominator. Examples for two locations, one with an existing facility and the other for a future new facility, are provided in Appendix B, Traffic Reference Material–Traffic Share Examples, of this Responses to Comments document.

Response 33

The commenter is correct in noting that the need for improvements is based on peak hour demand. In this regard, sometimes the a.m. peak and sometimes the p.m. peak is the determining time period for needed improvements. Because of the complications in applying either an a.m. or a p.m. peak in a nexus formula, it is typical to use ADT as the basis for such shares. The results are generally similar, particularly for Nexus programs that consider both trip generation and trip length in the calculation. The traffic share program maintained by the City of San Clemente uses ADT volumes for this reason. The SCRIP would ensure that impacts are mitigated.

Response 34

Appendix B, Traffic Resource Material–Traffic Share Examples, of the Responses to Comments document includes an example of how the shares are assigned to a new facility. The formula recognizes that some traffic from existing development will utilize the new facility and since this traffic is not a participant in funding such a facility, it is subtracted from the total future traffic on the facility in calculating the share. The calculation requires assigning existing traffic to a future network to determine how much traffic from existing development is on the facility.

Response 35

The requirements for future traffic studies can be found in requirements for the processing of a Master Area Plan for each planning area.

Response 36

The commenter correctly notes that the Ranch Plan has a 21 percent share for Avenida La Pata extension. This does not imply that the project will participate in 21 percent of the cost, and the actual share will be based on a number of factors including the timing of the need for this facility. The responsibility of the project for Avenida La Pata will be further addressed in the project development agreement and as part of the SCRIP.

Response 37

The comment is noted with respect to the SCRIP. The assertion regarding "County established and adopted impact thresholds" is incorrect in that the performance criteria used in the impact analysis do follow County criteria and do identify "direct" and "cumulative" project impacts. The criteria is addressed in the SCRIP.

The SCRIP is the implementing mechanism for the mitigation measures defined in the Draft Program EIR. This improvement program is intended to mitigate cumulative development (including the proposed project) and is a comprehensive transportation improvement program for south Orange County.

It is the County's goal that Part 1 of the SCRIP, which will establish the basic program, will be adopted concurrent with the consideration of the Ranch Plan project, and that Part 2, which will further address implementation, will be adopted within 12 months of adoption of Part 1. Part 2 of the SCRIP will address those improvements requiring additional funding to supplement Ranch Plan contributions.

Response 38

Please refer to Topical Response 3.1.7.

Response 39

The traffic study analyzes a number of alternatives with respect to future transportation, including conditions under which the SR-241 extension is not built. An alternative that connects to I-5 via Cristianitos Road has not been analyzed as part of this Draft Program EIR. The South Orange County Transportation Infrastructure Improvement Project (SOCTIIP) has been the mechanism whereby alternative roadway improvements and connections in this area have been analyzed. The suggested roadway connection is not on the MPAH and is not part of the Ranch Plan mitigation program.

Response 40

Please refer to the response to Comment 39.

Response 41

A full traffic analysis was not carried out for Alternative B-9 because it was considered that the other alternatives that were analyzed identified the type of impacts associated with this alternative. A verification of this can be found from the material contained in Appendix B, Traffic Resource Material–Alternative B-9 Summary Information, of this document.

Response 42

Please refer to the response to Comment 32 which indicates that the shares given in the Draft Program EIR are only part of the information being used to establish traffic share responsibilities in the SCRIP.

Response 43

This ramp is shown to be deficient under conditions without the SR-241 extension. The deficiency is less than one percent of capacity (i.e., 1,510 vehicles in the peak hour versus a capacity of 1,500). Since the Highway Capacity Manual peak hour analysis showed the ramp intersection to operate adequately, it has been assumed that increasing the on-ramp to two lanes would not be necessary and that adequate intersection operation will ensure adequate ramp operation.

Response 44

The Draft Program EIR did provide an overview of each of the proposed traffic mitigation measures. Appendix D-2 provided a table outlining the scope of each improvement, the design status of each improvement, and aerial photographs or topographic maps of the proposed improvements. Engineering plans have been provided to each of the cities for their comments. The County continues to work with each of the cities regarding the improvements as part of the development of the SCRIP program.

Response 45

Page 4.7-4, above California Attainment Status and Page 4.7-5, last paragraph has been revised and incorporated into the Final Program EIR to note that California has proposed to classify the SCAQMD as a non-attainment area for PM_{2.5}.

Response 46

The only new or expanded wastewater facility in proximity to existing housing is the expansion of the Talega lift station (see Exhibit 4.15-3 in Draft Program EIR 589). The expanded facility would incorporate the same design features that exist in the current facility to reduce odor. Sewage odors that are typically associated with sewage pumping operation facilities are substantially reduced with the use of variable speed drive (VSD) units to adjust the pump-motor speed for varying pumping rates. SMWD design incorporates VSD units to adjust the pump-motor speed for varying pumping rates. The VSD units provides the ability to match the sewage inflow rates with the varying pumping rates, eliminating the collection of solids and wet-well debris normally accumulated in the wetwell during the off cycle pump operating mode. Additionally, proposed facilities are only in the conceptual stage. New or expanded wastewater facilities would be subject to separate environmental review that would assess all potential impacts, including odor impacts on existing homes.

Response 47

Mitigation Measure 4.1-3 does require that prior to the sale, lease or rental of any residential, commercial or industrial structure or portion thereof within Planning Area 5, the applicant/owner shall provide to each prospective purchaser, lessee, or tenant a notice and statement of acknowledgement that shall be executed by the prospective purchaser, lessee, or tenant that the property within Planning Area 5 is located immediately adjacent to Prima Deshecha Landfill,

a facility that will continue to operate until its scheduled closure in 2067 or until it reaches its design capacity in accordance with the 2001 General Development Plan and all subsequent amendments thereto. However, residents are not expected to be exposed to methane or other air toxics. Page 4.14-17 of the Draft Program EIR identifies that the project has been designed to address impacts from the Prima Deshecha landfill by incorporating setbacks from fill activities to avoid any potential exposure to potential hazardous materials impacts that may be associated with landfill activities. Specifically, the open space that is provided along the western edge of proposed development in Planning Area 5, including the ridgeline, would serve as a buffer between the proposed development and the landfill. The maps shown on several exhibits (e.g., Exhibit 3-20) clearly show the relationship between the proposed project site and the Prima Deshecha Landfill. Project Design Feature 4.14-1 (page 4.14-18) formalizes the commitment to setbacks as a protective measure and would thereby be subject to enforcement as part of the mitigation monitoring program to be adopted as part of the project.

It should also be noted that there is no current landfill activity near the Ranch Plan project site property line; proposed landfill activities in this area are anticipated to occur several years in the future. Notwithstanding, the County has recorded a Covenant and Declaration of Restrictions (Document No. 20020931492, recorded October 25, 2002) that makes specific commitments toward protection of the adjacent property. These commitments include, for example, (1) maintaining a buffer zone and natural barrier on the County's landfill property in order to minimize visual, noise, dust, and other affects of landfill operations on the Ranch Plan project site; (2) implementation of a gas control and monitoring program on the County's property to prevent gas migration onto the Ranch Plan project site; and (3) installation of surface drainage and subdrainage systems on the County's property to ensure that surface and ground water from the landfill does not adversely impact the project site.

Response 48

As addressed in Topical Response 3.1.8, Air Quality, the County received several suggestions regarding the mitigation of long-term operational air quality emissions that can be applied to the proposed project. However, other measures that were identified are not included because they are not cost effective at this time, are outside the County's jurisdiction, or are not within the project applicant's purview. For example, the requests to require the project to provide for alternative fuel distribution or charging stations are not appropriate because electric vehicles are not likely to be in widespread use at any time in the future. This is an area in great flux at the present time. Most automobile manufacturers are concentrating on hybrid vehicles that run on both gasoline and electricity, but generate electricity while in use rather than through recharging. The County will determine at the Master Area Plan stage whether new developments in this project need support facilities recommended by the SCAQMD or CARB. The County will work with the developer to determine the feasibility of specific measures at that time. However, it should be noted that there is nothing in the project that would preclude the establishment of these uses should there be sufficient demand to make them cost effective. The following mitigation measure has been incorporated into the Final Program EIR as follows:

MM 4.7-2 With the submittal of each Master Area Plan, the project applicant shall identify locations where alternative fueling facilities could be sited.

Similarly, measures pertaining to the provision of transit services, including bus service, bus turn-outs, and Dial-a-Ride, are the responsibility of the Orange County Transportation Authority, not the County of Orange. OCTA regularly evaluates the provision of transit services and modifies their routes to optimize the distribution of services to maximize effective use of resources. At the tentative tract map stage for each phase of the project, the County and the

developer will consult with OCTA to determine the feasibility and potential location of local transit service lines to the newly developed area. At this time, the two agencies will determine whether the developer should be required to incorporate support facilities such as bus benches and bus turnouts in the project design to facilitate transit usage. Again, there is nothing about the project that would preclude transit services from being provided to the Ranch Plan should OCTA determine that this is an effective use of resources. The project has committed to provide for bikeways and trails as a component of the project (Mitigation Measure 4.12-1).

Evaluation of energy efficient appliances, air conditioners and lighting is beyond the scope of approvals currently being requested.

Response 49

Page 4.8-3 has been corrected and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline)

The *Noise Ordinance* is part of the *County of ~~County~~ Orange Municipal Code* (Division 6, Section 4.6.1) and is enforceable throughout all unincorporated portions of the County. A project that proposes a zone change to residential uses must provide measures to ensure that existing noise sources do not violate the *Noise Ordinance* standards. The *Noise Ordinance* requirements cannot be applied to noise generated by vehicles traveling on public roadways, railroads, or aircraft. Federal and state laws preempt control of mobile noise sources on public roads. However, the County's *Noise Ordinance* can be applied to vehicles traveling on private property (e.g., parking lots or loading docks).

Response 50

The *Noise Element* of the County General Plan does not identify open space as a noise sensitive use. Additionally, noise from residential would not be of sufficient high levels to interfere with the conservation values of the Donna O'Neill Land Conservancy at Rancho Mission Viejo. Existing development in Talega is in closer proximity to the Conservancy than development proposed by the Ranch Plan.

Response 51

Section 8.48.20 of the San Clemente Municipal Code discusses 55 dBA as the maximum permissible ambient noise level at the exterior of a residential use between the hours of 7 a.m. and 10 p.m. It also gives 50 dBA as the maximum permissible ambient noise level at the exterior of a residential use between the hours of 10 p.m. and 7 a.m. It does not specify an averaging period such as CNEL. Based on the times given, it could not be a CNEL level. CNEL is a 24-hour weighted average noise level. Section 8.48.40, Exterior Noise Standards, gives the use the maximum permissible ambient noise. It is unlawful for any person on one property to cause a noise level exceeding the maximum permissible ambient noise level for more than ten minutes in an hour.

The City's Noise Element defines the City's standards relative to traffic noise. The City's Noise Element does not contain any specific noise standards except to require residential, and other "noise sensitive" uses exposed to noise levels greater than 60 Ldn to perform studies to reduce noise exposure levels to "acceptable limits" (Policy 14.1.1). However, acceptable limits are not defined. These uses are required to conduct an acoustical analysis and incorporate measures to reduce interior noise levels to below 45 Ldn, which would indicate an interior noise standard

of 45 Ldn. Noise Element Policy 14.2.2 states "Require new industrial, commercial, and related land uses, or the expansion of existing land uses demonstrate that such new or expanded uses would not be directly responsible for causing ambient noise levels to exceed and Ldn of 65 dB(A) exterior upon areas containing housing, schools, health care facilities, or other "noise sensitive" land uses as depicted on Figure 14-3." This would indicate a use of the 65 Ldn level as an "acceptable" exterior noise level in the City. This is consistent with the County and other municipalities in the County of Orange. Note that CNEL and Ldn are almost identical. In terms of traffic noise CNEL levels are approximately 0.5 dB higher than Ldn levels.

An analysis of the effects of existing noise barriers were performed for all roadways projected to experience noise level increases in excess of the threshold. This analysis showed that along Avenida Talega and Avenida Pico the future worst case exterior noise levels at residential uses would remain below 65 CNEL (and therefore, below 65 Ldn).

Response 52

Please refer to the response to Comment 51.

Response 53

The attenuation provided by a sound barrier is dependent on its height and location, distance and elevation, relative to the roadway, as well as the relative location of the receptor being analyzed to the roadway in terms of distance and elevation. Along most roadways these relationships vary over the length of the roadway resulting in an almost infinite variation in barrier attenuation for various receptors along a single roadway segment. This is especially true in areas where topography varies greatly such as along Avenida Pico and Avenida Talega. This information is not relevant to determining an impact.. Further the standards are not in terms of how much attenuation a barrier provides, but what the absolute noise level is projected to be. A receptor close to a roadway would require much more attenuation to meet a standard than a receptor further from the roadway.

During the analysis several potential worst-case (in terms of absolute noise level) receptors along each roadway segment with a projected noise level increase in excess of the threshold were identified through field observations. Pertinent information such as elevation, barrier height and distance from roadway to barrier and receptor were recorded during this field observation. This data was then entered into the FHWA noise model to determine the worst-case future noise level at these residences. This analysis concluded that all residential areas along roadways projected to experience a discernable noise level increase are projected to experience future worst-case noise levels of less than 65 CNEL except along Oso Parkway east of Antonio Parkway under Alternative B-5.

Response 54

The bridge is located more than 1,000 feet from the existing residences north of Avenida Pico and east of Camino La Pedriza. Further, the elevation at the highest point of the bridge is 40 feet lower than the elevation of the residences. The future worst-case 65 CNEL contour from Avenida Pico is projected to extend 144 feet from the centerline. That assumes a receiver 100 feet from the centerline, with an unobstructed line-of-sight to the roadway (i.e., no barrier). Because of the substantial distance between the bridge and the residences and the fact that the bridge is well below the residential pad elevation, the bridge will not substantially affect the noise levels experienced at the residences.

Response 55

No portion of the Ranch Plan project site is located within the City of San Clemente or its sphere of influence. The City of San Clemente's General Plan is not applicable to the Ranch Plan project area. The proposed project does not preclude the implementation of design and landscape features in compliance with City of San Clemente's General Plan Scenic Corridor Element. The land uses proposed are consistent and compatible with existing land uses in San Clemente and the community of Talega, but would result in changes to the visual character of the area that are considered significant. Please refer to the response to Comment 11.

Response 56

The City of San Clemente's General Plan and Scenic Corridor Element are not applicable to the Ranch Plan project area. Please also refer to the response to Comment 11.

Response 57

Landform in the project site would be significantly altered and visible from several viewpoints in the City of San Clemente. Planning Areas 5 and 6 would not be visible from San Clemente because as there is an intervening ridgeline along the southern portion of the Ranch Plan boundary that will buffer these proposed development areas from view. Planning Area 7 is buffered by the Donna O'Neill Land Conservancy on the western boundary, with over 1 mile of protected open space between the Talega and proposed Planning Area 7. View #18 in the Draft Program EIR reflects an example of the proposed development area.

View #21 reflects a conceptual example of the proposed development in Planning Areas 7 and 8. While the landform will be significantly modified in these development areas, the land uses proposed in Planning Area 7 and 8 are consistent and compatible with the existing land uses in Talega (as evident in the viewshed analysis) and are not considered to be significant impacts.

The proposed project would incorporate design features and would implement standard conditions and requirements and mitigation measures that would apply at the time of subsequent approvals, for the purpose of reducing visual disruption associated with these change in uses.

The Draft Program EIR does not state that some San Clemente residence will adapt to these view changes and others will always look upon the view as "blight" on the landscape. The Ranch Plan would no more represent "blight" than any of the other adjacent development in the City of San Clemente.

Response 58

As stated in the Draft Program EIR, the proposed project would introduce new sources of nighttime lighting and the potential for glare. The amount of light spill is a function of distance and intensity of the light source. Although these light sources are not expected to extend beyond the physical limits of the Ranch Plan project site, they have the potential to create night glow in an area that has very limited night light sources.

In Views #18, 20, and 21, night light sources created by the proposed project will be a continuation of the night light sources created by the existing and proposed development in Talega and San Clemente.

In Views #19a, 19b, and 22a, night light sources will have the potential to create a night glow. As a mitigation measure, all lighting along the perimeter of natural areas, particularly street lights, shall be downcast luminaries and shall be shielded and oriented in a manner that will prevent spillage or glare into the remaining natural and open space areas. After mitigation, there would be incremental increases in light levels that are considered significant and unavoidable.

Response 59

The City of San Clemente General Plan ridgeline protection ordinances are not applicable to the proposed Ranch Plan project because no part of the project site is within the jurisdictional boundary or sphere of influence for San Clemente. All modifications to ridgelines will occur within the Ranch project boundary and impacts to the surrounding cities were considered when the development areas were designed.

However, it should be noted that the Draft Program EIR visual analysis did take into consideration major ridgelines. Exhibit 4.10-42 depicts the impacted and non-impacted ridgelines in the project site in relation to the proposed development. The major ridgelines surrounding Planning Area 5 would not be impacted and would serve to buffer views of the development area from San Clemente and Talega. As proposed, the existing southern ridgelines in this planning area are higher than the proposed grading for this development.

Some of the ridgelines in Planning Area 7 and Planning Area 8 would be altered and viewable from the City of San Clemente. The intervening ridges in the Donna O'Neill Land Conservancy would serve to buffer most of these view points from Talega towards Planning Area 7 and the northern section of Planning Area 8. Portions of the ridgeline modification may be viewable from the southern portion of Talega, along Avenida Pico into Planning Area 8, although this view will be more than one mile away from the City of San Clemente boundary. The South Talega Ridgeline will remain as a backdrop for this area and not be impacted, as it is outside the Ranch project boundary in the northern portion of Marine Corps Base (MCB) Camp Pendleton.

Response 60

Section 4.10 of the Draft Program EIR specifically addresses landform and view impacts upon surrounding communities, including the City of San Clemente. The Draft Program EIR identifies impacts on as significant and unavoidable; however, the EIR describes specific PDFs, SCs and MMs that are intended to lessen the severity of said aesthetic impacts. Although specific measures are not prescribed for mitigating visual impacts upon the City of San Clemente, the general mitigation program identified in the EIR will help to alleviate impacts upon the community. As Master Area Plans are developed for the Project area, further consideration shall be given to design and aesthetic issues relative to the surrounding communities. During this subsequent review and approval process, the City of San Clemente shall have the opportunity to receive supplemental information concerning design and aesthetic issues and to provide comments thereon. Please also refer to the response to Comment No. 11 regarding the City of San Clemente General Plan.

Response 61

Please refer to Section 4.12, Recreation, of the Draft Program EIR and Topical Response 3.1.10, Recreation.

Response 62

A copy of the plan will be available for review at the time of closure of the Northrop Grumman Space Technology site.

Response 63

Please refer to Section 4.15, Public Services and Facilities, of the Draft EIR, as well as the comment letter from and responses to the Orange County Fire Authority contained within this Responses to Comments document.

Response 64

Please refer to Topical Response 3.1.12, Public Services and Facilities.

Response 65

Please refer to Topical Response 3.1.12, Public Services and Facilities. The Conceptual Water Quality Management Plan, Appendix C-2 identifies water conservation measures such as ETO-based irrigation and use of drought tolerant landscaping.

Response 66

As addressed in Section 4.15 of the Draft Program EIR, the applicant would be responsible for the payment of school fees as required by Senate Bill 50. The EIR section also notes that the applicant would be responsible for entering into and complying with the terms of a School Facilities Agreement with the school district. The comment is noted.

Response 67

As noted in the response to Comment 11 and in Section 3, Project Description, of the Draft Program EIR, annexation of the Ranch Plan project site in part or in whole to the City of San Clemente is not proposed by the project applicant. The project site, in its entirety, is within unincorporated Orange County. No part of the site is within the existing jurisdictional boundaries or the sphere of influence of any city. The project is not relying on the City of San Clemente to provide services to any part of the Ranch Plan. Should at some future time annexation of any portion of the Ranch Plan be considered, the potential impact associated with the City providing services would need to be evaluated. Through the annexation process, the Local Agency Formation Commission (LAFCO) would consider before approving annexation, if, as indicated by the commenter, the development of Planning Areas 5 through 8 would place a significant demand on the City to provide services. Since the Ranch Plan has provided for the provision of services without relying on the City, the development with current service providers would avoid impacts to City services.

As discussed in Topical Response 3.1.2.4 and the response to LAFCO (Commenter 191), since the project site is not within any city's sphere of influence, it would be speculative to evaluate annexation of part or the entire project to other jurisdictions. If the project were to be split between multiple jurisdictions without established spheres of influence or policy direction from LAFCO there would be numerous potential combinations of annexations possibilities, all of which are speculative. At the time incorporation, annexation, or sphere of influence change is proposed, there would need to be an evaluation to determine if the physical impacts associated with the project would change.

Response 68

Please refer to the response to Comment 11.

Response 69

Please refer to Topical Response 3.1.10, Recreation.

Response 70

During the preparation of the Draft Program EIR the County of Orange contacted adjacent jurisdictions, including the City of San Clemente, to ascertain the projects to be included in the cumulative impact analysis. As part of the form distributed to the jurisdictions, there was a question if each of the projects identified for consideration as a cumulative project were consistent with the OCP 2000M growth projections. The answer provided by each jurisdiction was further substantiated with the traffic model to be sure that the cumulative long-range analysis took into consideration specific projects, as well as projected regional growth. Using this methodology and the thresholds of significance for Population and Housing, it was determined that there would be no significant cumulative impact on Population and Housing. Specifically, the cumulative growth would not exceed the projected local and regional growth projects and the project would not contribute to a displacement of existing housing affecting a substantial number of people. Further discussion of the growth projections and the level of growth provided by the project is discussed in Section 4.3, Population and Housing in the Draft Program EIR.

Response 71

Exhibit 7.3-7 is hereby corrected and included in Section 4 of the Response to Comments document.

COMMENTS 29 ORANGE COUNTY SHERIFF-CORONER
Dated: August 6, 2004

Response 1

The Draft Fiscal Impact Report has been prepared. It is being processed independently of the Draft Program EIR. Any comments on the Fiscal Impact Report should be coordinated through the County Administrative Office.

COMMENTS 30 CITY OF LAGUNA NIGUEL
Dated: August 6, 2004

Response 1

The County believes that the Program EIR is adequate and complies with the requirements of CEQA.

Response 2

The committed improvements assumed in the traffic study include the additional lane at the southbound off-ramp intersection between I-5 and the Crown Valley Parkway. This is based on the definition of committed improvements which includes those improvements that are a condition of approval for a given project (in this case, the Gateway Specific Plan). The

assumption is that development of the project would require the implementation of the mitigation measures for that project as per the conditions of approval.

In subsequent discussions with the City, it is apparent that there may not be full funding for this and associated improvements, and additionally, the originally approved Gateway project may be changing in the future. Accordingly, such improvements are being included in the SCRIP, which will evaluate participation by the City and by others in the funding of such improvements.

Response 3

In the *Existing Plus Project* analysis, the two scenarios (i.e., without project and with project) are modeled using the South County Sub-Area Model (SCSAM). As such, a redistribution of trips occurs with the inclusion of the proposed Ranch Plan project. This is substantially different than simply taking the project trips and adding them to the roadway network as might be done for a small project EIR. A detailed discussion of this can be found in Topical Response 3.1.7, Transportation and Circulation. The proposed project would have both residential and non-residential development and not all the future workers for the non-residential development will come from inside the project. Accordingly, many of the work trips will be from the surrounding area including the cities of Mission Viejo and Laguna Niguel. Those trips would be on the roadway system without the project, and with the project their geographical patterns change. This redistribution effect is most apparent in the roadway section noted in the comment, namely Crown Valley Parkway. This is where "without project" trips will be on the roadway regardless of whether the project is developed or not. Users of this section of roadway are primarily trips generated in Laguna Niguel, Mission Viejo, or Ladera Ranch, and those trips will still be generated without the project but will have different origins or destinations. Hence, the modeled volumes depict the difference between a scenario in which the project is developed versus a scenario in which there is no project and different traffic patterns occur. Topical Response 3.1.7 contains a detailed discussion on the redistribution effect, including reference to Rancho Santa Margarita (past and present) as an example.

Response 4

The existing ADT counts listed in the report show differences at two locations from those in the City's traffic model data. On Crown Valley Parkway immediately west of I-5, only one volume is given in the Draft Program EIR where the City data has two different ADT volumes, one immediately west of the freeway and the other between Cabot and Greenfield. The weighted average used in the Draft Program EIR is intended to generally represent the overall volumes in this section of roadway, while the Laguna Niguel data recognizes it as two separate links.

On Paseo de Colinas, the Draft Program EIR ADT number (17,000 ADT) is a recent traffic count; whereas the Laguna Niguel database did not have the advantage of this count at the time it was prepared and therefore used an older count (three years).

Response 5

The comment is noted. The description of the Saddleback/I-5 connection is design concept F with ramps to and from the north. That is, it would add a southbound off-ramp from I-5 and a northbound on-ramp. Statistical information relating to the Saddleback/I-5 connection is included in the Response to Comments.

Response 6

The project shares given in the Draft Program EIR are for CEQA purposes using the standard formula for project shares under a cumulative setting. The SCRIP will define the actual responsibility of individual participants, including cities in the study area and the Ranch Plan project. The EIR shares will only be one of the factors to be considered, with acknowledgement of non-participating development such as projects that have already been approved or projects that have development agreements.

The SCRIP program proposes improvements and funding responsibilities that, if implemented, would provide mitigation for cumulative traffic and maintain and/or improve traffic levels of service. As noted, the SCRIP will involve the affected jurisdictions in the study area (see further discussion in the response to Comment 8, below).

Response 7

It is the County's goal that Part 1 of the SCRIP program, which will establish the basic program, will be adopted concurrent with consideration of the Ranch Plan project and that Part 2 of SCRIP, which will further address implementation of SCRIP improvements requiring additional funding to supplement Ranch Plan contributions, will be adopted within 12 months of adoption of Part 1. The requested information is addressed in the SCRIP.

Response 8

The County will use an Annual Monitoring Report ("AMR") program to monitor development of the Ranch Plan (and any other development subject to the SCRIP) and the related traffic. The development and traffic monitoring program for the Ranch Plan will be as outlined in the Ranch Plan Planned Community Program Text and will allow the Ranch Plan Program EIR traffic assumptions to be tracked over time.

The SCRIP will incorporate a phasing plan identifying needed transportation improvements for cumulative traffic impacts including anticipated Ranch Plan development. This improvement phasing plan will be consistent with the Ranch Plan development milestones set forth in the Ranch Plan Development Agreement. The phasing plan will be updated to respond to information derived from the AMR, as well as to respond to any significant developer-initiated changes in the Ranch Plan project phasing. The SCRIP also establishes procedures in which the involved cities participate as a technical task force/advisory team.

Response 9

A detailed discussion of the project trip generation and distribution can be found in Topical Response 3.1.7, Transportation and Circulation. This topical response explains the complexities involved in producing with and without project forecasts for a project of this size. As discussed there, the project trips are not just added to the roadway network but interact with the surrounding community in a matter that is simulated by the traffic model. For this reason, a project-only trip summary is not used in deriving project impacts (as it would be in an impact analysis for small project). Many of the trips that will travel to and from the proposed Ranch Plan project would be on the roadway network without that project (i.e., they are trips that originate or have destinations in the cities of Laguna Niguel and Mission Viejo).

Topical Response 3.1.7 addresses trip generation, and discusses the basis for the trip generation. Information is also given on internal capture, showing why the estimated internal trips are a reasonable estimate for a project of this size in this location.

Response 10

Please refer to Topical Response 3.1.7, Transportation and Circulation.

Response 11

Please refer to Topical Response 3.1.7, Transportation and Circulation.

Response 12

A discussion on this can be found in Topical Response 3.1.7, Transportation and Circulation.

Response 13

A detailed discussion of this can be found in Topical Response 3.1.7. With respect to the Ortega Highway link to Avery Parkway at the I-5, the comment is correct in noting that this is not part of the Ranch Plan proposal, nor part of any proposed mitigation.

COMMENTS 31 CITY OF SAN JUAN CAPISTRANO
Dated: August 9, 2004

Response 1

The opinions of the City of San Juan Capistrano are noted and will be provided to the decision makers as a part of their consideration of the proposed Ranch Plan project.

Response 2

As addressed in the Draft Program EIR, annexation of the project site in part or in whole to the City of San Juan Capistrano is not proposed by the project applicant. Please refer to Topical Response 3.1.2. The project site, in its entirety, is within unincorporated Orange County. No part of the site is within the existing jurisdictional boundaries or the sphere of influence of any city.

Response 3

Section 4.10, Aesthetics, of the Draft Program EIR acknowledges that implementation of the proposed Ranch Plan project would result in significant, unavoidable aesthetic impacts associated with changes in the character of the site, including landform modifications.

Response 4

As set forth in the Draft Program EIR, the project applicant will be responsible for the mitigation of project-specific impacts and the project's contribution to cumulative impacts.

Response 5

The Ranch Plan Draft Program EIR traffic study provides information on the traffic impacts and mitigation of the project pursuant to the 'Performance Criteria' contained therein. That analysis

does not show project impacts to the locations identified in the comment. Notwithstanding, the SCRIP Program will provide an opportunity for the County and affected jurisdictions/agencies to evaluate the opportunity for consideration of alternative/substitute improvements not specifically identified in the Draft Program EIR. Therefore, the SCRIP contains recommendations that address the issues raised in this comment.

Response 6

The traffic study identifies near-term (Year 2010) traffic improvements that are needed under cumulative traffic conditions (including development of a portion of the Ranch Plan). The SCRIP program proposes improvements and funding responsibilities that, if implemented, would provide mitigation for cumulative traffic and maintain and/or improve traffic levels of service.

Response 7

One of the focuses for the surface runoff program developed for the Ranch Plan employs an extensive system to ensure there is no "hydromodification" or changes to hydrologic conditions of concern, which includes maintaining the same flow rates and runoff volumes for a range of precipitation events. Runoff volumes and flow rates will be maintained to the existing levels through the application of a series of innovative structural control measures that provides a water and flow duration balance. Flow duration and water quality treatment basins will be utilized to maintain the water balance and the amount of available recharge to the groundwater supplies should actually increase through the use of these basins in areas of permeable soils. Diversion of flows would only be associated with one of the options for accommodating excess runoff volume above existing conditions which would not impact groundwater resources. In summary, the surface runoff management plan is designed to result in hydrologic conditions (flow magnitude and duration) in the receiving streams that are similar to existing conditions.

Response 8

Any future substantive changes to the project as approved would require supplemental environmental review. Such changes, should they occur, could be in response to a number of factors including the SR-241 extension. The commenter is directed to the SOCTIIP Draft Program EIR/SEIR regarding the differences in off-site impacts for a fixed land use plan and different SR-241 alignments.

Response 9

Please refer to Topical Response 3.1.1. The Ranch Plan Program EIR serves as the primary CEQA document associated with the proposed project. The Draft Program EIR acknowledges that project implementation would result in significant unavoidable impacts. As addressed in the noted Topical Response, as subsequent components are submitted to the County for consideration (e.g., Master Area Plans), these project components would be subject to CEQA review. All future discretionary actions would be subject to public notice, thereby providing the City of San Clemente with additional opportunities for input and comment.

Response 10

Please refer to Topical Responses 3.1.1 and 3.1.2. As addressed in Section 4.15, Public Services and Facilities, of the Draft Program EIR, the provision of and upgrades to existing infrastructure would be coordinated to avoid impacts to existing services.

Response 11

The Ranch Plan proposes approximately 5.2 million square feet of non-residential development. As indicated in the Draft Program EIR 589, Section 4.3, Population and Housing, the Ranch Plan would provide for a balance of uses on the site. The increased population generated by the Ranch Plan would support the retail, office, and business park development proposed for the project. The non-residential development is not reliant on the population base in the City of San Juan Capistrano to achieve economic viability. As such, the Ranch Plan would not have substantial economic impacts that would result in physical changes to businesses in San Juan Capistrano. CEQA does not require the evaluation of economic impacts.

Response 12

Please refer to Topical Response 3.1.2.

Responses 13

At this time the project is only requesting a General Plan Amendment/zone change. Without development plans it is not possible to address "specific aspects associated with the development of Planning Area #1." Based on the type of development proposed, the uses would be compatible. Furthermore, at such time as a Master Area Plan is developed for Planning Area 1, the City of San Juan Capistrano will have the opportunity to review and provide commentary upon the proposed Master Area Plan consistent with the provisions/procedures set forth in the *Ranch Plan Planned Community Text*." Please also refer to San Juan Capistrano response to Comment 53.

Response 14

Please refer to the response to Comment 13, above.

Response 15

The Draft Program EIR does not contain specific mitigation for the hillside buffer area separating the existing development in San Juan Capistrano and Ladera Ranch because the area is comprised of zoned open space area. The open space area as outlined in the Planned Community Program Text is a non-development area designed and regulated to remain as open space. Such regulated open space area would provide a non-development buffer area between the respective developments.

Response 16

The Urban Activity Center use regulations, as outlined in the Planned Community Program Text, have been revised to limit the height to 45 feet rather than the proposed 75 feet in height in Planning Area 1.

Response 17

The County will provide public notice consistent with applicable requirements and County policy for all future processing of the Ranch Plan project.

Response 18

The geotechnical report for Planning Area 1 will address the impact of the planned grading on adjacent areas, including corrective grading and slope stability. Standard of practice in the industry requires analysis of impacts from proposed grading to adjacent areas, particularly when areas adjacent to the proposed grading are existing developments.

Response 19

The geotechnical reports for Planning Area 1 will be available for review by the City of San Juan Capistrano during the geotechnical review process by the County of Orange.

Response 20

The County understands that, in accordance with city policies, the City of San Juan Capistrano may request photo-documentation for projects within its jurisdiction. However, the County does not have such a policy and does not routinely perform photo-documentation of grading projects. However, the geotechnical consultant of record may consider recommending photo-documentation in special circumstances where construction equipment could adversely affect existing structures.

Response 21

A next level of watershed planning and technical studies will include a more extensive watershed hydrology/hydraulic analysis to determine the locations and sizing of the flood control/drainage systems associated with the development areas. Formulation of the *Masterplan of Drainage* can be completed when sufficient information has been generated to perform this study that includes more detailed planning of the proposed development areas regarding internal roadways and grading for surface drainage patterns. Preparation of a *Masterplan of Drainage* in accordance with the requirements of the County of Orange is one of the required mitigation measures identified in the Program EIR for the Ranch Plan. A corresponding study has also been required as part of the Development Agreement and Program EIR mitigation measure regarding the funding requirements for the long term maintenance of these facilities is also required along with identification of the corresponding agency responsible for that maintenance.

Response 22

The extensive *Water Quality Management Plan* (WQMP) prepared for the Ranch Plan has identified the requirements for both wet weather and dry weather monitoring as part of the long-term adaptive management program for the stormwater quality plan specific to the project and to evaluate its effectiveness. The initial wet weather monitoring program that has been identified includes grab sample from influent and effluent flows at the Flow Duration Control and Water Quality Treatment (FD/WQ) Basins. Grab samples would be collected for two to three storm events per year at representative basins selected on a rotating basis. Dry weather monitoring identified in the WQMP would include field measurements of influent and effluent at representative FD/WQ basins. In addition, the Stream Monitoring program will evaluate the stability of the natural alluvial stream systems. This program is separate from the identified water quality monitoring/sampling program.

Response 23

The nature of the proposed development program within the Ranch Plan project site has been carefully planned related preserving or maintaining the existing hydrologic characteristics by minimizing hydromodification or maintaining a surface water balance. Although the primary focus of the hydrologic management program has been on surface water, this will inherently preserve and enhance the supply to groundwater based on the various measures employed in the development planning. Maintaining the surface water balance from the development area to the major natural water courses will assist in maintaining the delivery of surface water to the recharge areas. This occurs not only through preservation of areas with permeable soils by planning development in the more impermeable area, but also through recharge or infiltration basins used to mitigate increased runoff volumes. The infiltration basins will occur in areas of permeable soils that will allow recharge to the groundwater system. All of these features combine together to enhance the potential groundwater supplies and specific measures have been included to prevent migration of pollutants to the groundwater supply. Detailed groundwater modeling has not been performed for these initial technical studies since it can be demonstrated that the surface runoff water supplies will be able provide additional recharge potential through the availability of infiltration basins and preservation of the primary recharge areas within the natural streambeds. Groundwater water quality sampling is an ongoing program that consists of two grab samples from each of four monitoring wells. The data collected through the monitoring program and other data sources can be used to develop a more detailed report/analysis of the groundwater supplies within Ranch Plan area and perform a quantitative water balance study of both the surface and groundwater supplies that supports the assessment that there is not a negative impact to the groundwater supplies.

Response 24

Topical Response 3.1.7, Transportation and Circulation–Traffic Forecasts, discusses the project trip generation in detail, and includes an explanation of the internal capture. Additional information is also contained in Topical Response 3.1.7 which describes the traffic modeling for the traffic analysis. As noted in those two topical responses, the internal capture is derived from regional traffic modeling which takes into consideration the size of the project, the location of the project, the mix of uses within the project, and the uses in the surrounding area.

Topical Response 3.1.7 also addresses the internal capture by land use category and describes how some uses have a high internal capture (e.g., schools and retail) while other uses have a relatively low capture (e.g., business park and residential trips). In combination, the overall internal capture is considered reasonable as discussed in that topical response. Again, it should be emphasized that the internal capture is derived from traffic modeling and not from designated input values such as listed in this table. The tabular summary is simply to explain the underlying relationships as derived by the traffic model.

A second part of the comment suggests means to show project impacts with a lower internal capture. In this regard, it should be noted that peak hour project impacts occur from two sets of commuters in the future: residents traveling out of the project, and workers traveling into the project. The magnitudes are similar. It would, therefore, be speculative to postulate that residential-only is a “worst case.” Similarly, residential development occurring at a faster rate than non-residential may not be a worst case, and a worst case for phasing could be if business park uses out-pace residential development. The traffic analysis evaluates the proposed project using clearly defined assumptions. There is no “worst case” as suggested in the commenter. One of the functions of the interim traffic studies required by the conditions of approval will be to

evaluate these aspects of project phasing. The SCRIP Program also has the provision for submitting alternative mitigation measures within an overall financial ceiling.

Response 25

As noted in Topical Response 3.1.7, the Institute of Transportation Engineers (ITE) Trip Generation has a trip rate for senior housing, and as noted in the comment, it is based on relatively small sample size. The trip generation used in the traffic study is derived from socioeconomic data equivalents whereby this type of housing is converted to socioeconomic variables (persons per household, workers per household, income, etc.) and then socioeconomic trip rates applied. Application of the socioeconomic data trip rates results in trip generation that is comparable to the ITE average rates and rates from special studies (see Appendix B, Traffic Resource Material–Senior Housing Trip Rates, of the Responses to Comments document). The senior housing rates used in the Ranch Plan traffic analysis are supported by a number of data sources as discussed in the response; additional mitigation is not required.

Response 26

The additional development cited in the comment is based on OCP-2000 information for year 2000 and year 2025. The OCP data is the official socioeconomic forecast data for Orange County. It is developed by the Center for Demographic Research and compiled based on input from each jurisdiction in Orange County. It is the policy of the County regional modeling agency, OCTA, that this data must be used in all traffic modeling efforts in Orange County in order to maintain traffic modeling consistency. Notwithstanding this, it is recognized that over the past several years, development in certain areas such as Ladera Ranch and Talega have been proceeding, and that some of the increase from 2000 to 2025 has already taken place. In forming the South County Roadway Improvement Program (SCRIP) such factors as this recent growth are taken into account. Project shares in SCRIP recognize actual development as of 2004 plus other factors such as development that cannot participate in the fee program because of prior approvals, development agreements, or other reasons.

With respect to the growth projections referred to in the comment, these are taken directly from the City of San Juan Capistrano General Plan (see Topical Response 3.1.7, Transportation and Circulation–Traffic Forecasts). They are, therefore, directly related to predicted development in the City.

Response 27

The project shares shown in the Draft Program EIR are calculated using a standard formula for depicting the project traffic contribution to a given facility in a cumulative setting. The formula is that used by the County of Orange and jurisdictions within Orange County to determine a future project share on a given facility. The share calculated for a project depicts only the project share of future growth (i.e., existing development is not included), and this is the reason why traffic from existing uses is subtracted from the total in the denominator. Examples for two locations, one with an existing facility and the other for a future new facility, are provided in Appendix B, Traffic Resource Material–Traffic Share Examples, of the Responses to Comments document.

Response 28

The comment is correct in noting that the need for improvements is based on peak hour demand. In this regard, sometimes the a.m. peak, and sometimes the p.m. peak, is the determining time period for needed improvements. Because of the complications in applying either an a.m. or a p.m. peak in a nexus formula, it is typical to use average daily traffic (ADT) as the basis for such shares. This results in a generally similar result, particularly for Nexus programs that consider both trip generation and trip length in the calculation. The traffic share program maintained by the City of San Juan Capistrano uses ADT volumes for this reason.

Response 29

Appendix B, Traffic Resource Material–Traffic Share Examples, includes an example of how the shares are assigned to a new facility. The formula recognizes that some traffic from existing development will use the new facility and since this traffic is not a participant in funding such a facility, it is subtracted from the total future traffic on the facility in calculating the share. The calculation requires assigning existing traffic to a future network to determine how much traffic from existing development is on the facility.

Response 30

This is being prepared as part of the SCRIP and the intent is to adopt a basic framework for the SCRIP concurrent with approval of the project. The interim traffic studies will identify when traffic improvements need to occur. Such improvements are those in the overall program (i.e., it is not intended that “additional improvements” be identified) and the purpose is to assist in the phasing of the improvements.

Interim traffic analyses are required and prepared pursuant to the County *Transportation Implementation Manual* contained in the County General Plan. The project traffic analysis is consistent with this guideline, and any future project traffic studies will be carried out in accordance with this guideline.

Response 31

It is recognized that the City has a special analyses for sensitive locations. Because of the detail involved in that hot spot analysis, it is suggested that it be part of the engineering studies for individual improvements. The traffic share for this facility is being determined as part of the SCRIP.

Response 32

It is recognized that with the Avenida La Pata extension as a mitigation measure the project may need to ensure that this is constructed in a timely manner to mitigate project development (unless circumstances beyond the control of the County and/or project proponent preclude the ability to implement this improvement).

The comment correctly notes that the Ranch Plan has a 21 percent share for Avenida La Pata extension. This does not imply that the project will participate in 21 percent of the cost, and the actual share will be based on a number of factors including the timing of the need for this facility. The responsibility of the project for Avenida La Pata will be further addressed in the development agreement for the proposed project and as part of the SCRIP. The traffic share for this facility is being determined as part of the SCRIP.

Response 33

Based on comments received regarding the potential to extend Avery Parkway, the project applicant commissioned a study to assess the feasibility of this extension. The results of this study indicate feasibility of this extension is unlikely due to: 1) extreme topographical relief resulting in vertical alignments that do not meet arterial highway standards; 2) excessive costs to grade the alignment and to correct for geologic instability (even with excessive grades); 3) constraints associated with a conservation easement over the Ladera Ranch open space; 4) excessive costs to avoid impacts to a major detention/water quality basin installed to protect downstream properties; 5) proximity, noise and visual impacts to existing residents in the cities of San Juan Capistrano and Mission Viejo; 6) impacts to the Arroyo Trabuco Golf Course; and 7) opposition to this extension by the City of Mission Viejo. The cost for this extension is estimated to be in excess of \$70 million, not including the costs to mitigate arterial, intersection, and interchange improvements within the cities of Mission Viejo and Laguna Niguel. The Avery Parkway extension analysis is included in the Special Issues section of the Ranch Plan traffic study.

The analysis referred to in the City's comment does not make a finding as to whether the negative impacts of the Avery Parkway extension could be mitigated by conventional improvement measures. The primary issue is the Avery Parkway/I-5 interchange, where more than conventional measures may be needed.

Response 34

It is recognized that if a major reconstruction project at Avery Parkway interchange was to be undertaken, together with widening of Avery Parkway east of the freeway, it is possible that sufficient capacity could be provided for an Avery Parkway extension. At this time, such a project for the Avery Parkway/I-5 interchange is not included in the mitigation program nor is it a currently committed Caltrans project. Widening to the east of the interchange would be the subject of agreements with the City of Mission Viejo.

Response 35

The comment is noted. Please refer to the response to Comment 33.

Response 36

As noted in the response to Comment 33, the feasibility study supports the actions taken in 1995 with the concurrence of the City of Mission Viejo and the County to delete this segment from the MPAH.

Response 37

The comment is noted with respect to the SCRIP. The assertion regarding "County established and adopted impact thresholds" is incorrect in that the performance criteria used in the impact analysis do follow County criteria and do identify "direct" and "cumulative" project impacts.

The SCRIP is the implementing mechanism for the mitigation measures defined in the Draft Program EIR. This improvement program is intended to mitigate cumulative development (including the proposed project) and is a comprehensive transportation improvement program for south Orange County.

It is the County's goal that Part 1 of the SCRIP, which will establish the basic program, will be adopted concurrent with the Project approval and that Part 2, which will further address SCRIP implementation, will be adopted within 12 months of adoption of Part 1. Part 2 of the SCRIP will address those improvements requiring additional funding to supplement Ranch Plan contributions. The concerns noted by the commenter are addressed in the SCRIP.

Response 38

As noted in the comment, the City has adopted a strategic transportation plan with a number of options for consideration, including an Avery Parkway extension. Accordingly, traffic information for the Avery Parkway extension was contained in the traffic report. It should be noted that such an extension would need to be the subject of cooperative agreements between the City of San Juan Capistrano, City of Mission Viejo, and Caltrans. Since such agreements are not in place at this time, the traffic forecast data for this extension is provided solely for informational purposes.

Response 39

Please refer to Topical Response 3.1.7, Transportation and Circulation-Trip Generation for Age-Restricted Housing.

Response 40

It is recognized that there will be periods of construction activity over the 25-year buildout of the project. However, it would be speculative to identify the duration and intensity of construction activity over that period and, and it would more appropriately be addressed as part of tract map submittals. Since construction traffic occurs prior to occupancy, the amount of traffic generated at the time of construction is less than that analyzed for full occupancy.

Response 41

The following mitigation measures will be added to the construction section of the Ranch Plan Final Program EIR:

- All construction staging areas and stockpile sites will be located as far as feasible from residential areas. This provision will apply to currently existing residential areas and to future residential developments that are completed prior to later development stages.
- A vegetative buffer zone, including trees and shrubs, will be placed between grading sites and residential areas or other locations where sensitive receptors can be reasonably expected.

Response 42

The area in question is informally defined as "the block house," named because of the cement structure on the top of the ridge southeast of the intersection of Ortega Highway at Antonio Parkway. The airspace above this area is Class G airspace, otherwise known as "uncontrolled airspace" on FAA VFR navigation charts (the Los Angeles Sectional chart covers this area). Because it is uncontrolled from a regulatory perspective, the FAA has no real authority over flights in this area. Further, the regulations state that the minimum legal altitude that a pilot can fly in an unpopulated area is that altitude that will not endanger the lives of anyone on the ground. Literally, in this area, a pilot could skim the treetops legally. Additionally, the "block

house" area has three sub areas—one for each of the three canyons extending north from that generally area. They are (west to east) Chiquita (west valley), Gobernadora (central valley), and Bell (east valley). When the aerobatic pilots and trainees fly over from the area, airports that get on a common radio frequency (they are not in contact with Air Traffic Control (ATC) but with each other) and announce which valley they are going to be flying over (so that they do not collide). The central valley gets the least usage because of existing development in Coto de Caza. Similarly, the west valley is getting a less use because of the development of Ladera Ranch.

FAA regulations prohibit aerobatic flights over populated areas. Therefore, as the project is developed, aerobatic flights over the project will cease.

Response 43

The 4.8 dB increase was erroneously stated in the Draft Program EIR. Under the three traffic system scenarios, the traffic volume on Camino Capistrano north of Junipero Serra is projected to remain the same. Table 4.8-9 and the text on page 4.8-26 are here by revised in the Final EIR to make this correction.

Response 44

While JSerra High School is located on the north side of the Junipero Serra west of I-5, the only portion of the school within the 65 CNEL contour is the parking lot. This is not a sensitive use. The future worst-case 65 CNEL contour is projected to extend 126 feet from the centerline of Junipero Serra. The nearest building and non-parking lot area is located approximately 225 feet from the centerline of Junipero Serra, well outside the 65 CNEL contour. Therefore, the statement that there are no uses within the 65 CNEL contour is correct.

Response 45

Traffic noise CNEL levels along Ortega Highway are projected to increase by less than 3dB over existing conditions with the proposed Ranch Plan project. Noise level changes less than 3 dB are not readily perceptible and will not be noticed by most persons. Therefore, traffic noise generated by project does not significantly impact noise levels along Ortega Highway and mitigation is not required.

The existing average daily traffic volume on Ortega Highway, west of Avenida La Pata (the lowest traffic volume on Ortega Highway west of the project), is 23,000 vehicles per day. For construction traffic associated with the project to result in a considerable noise increase (i.e., an increase of more than 3 dB in traffic noise CNEL), the construction of the project would need to generate more than 3,000 daily heavy truck trips along this segment of road. This assumes that the trucks travel to and from the site along Ortega Highway equally over an 8-hour period starting at 6:00 a.m. Heavy trucks in terms of noise calculation are, generally, those with 3 or more axels. Along the remainder of Ortega Highway west of the project even more heavy trucks would need to be generated by the project for a significant impact to be identified.

Along Ortega Highway, one truck generates as much noise as 19 autos. Therefore, for every heavy truck less than the 3,000 heavy truck trips required to result in a considerable noise increase, 19 autos could pass-by. So, assuming 750 heavy trucks traveled to and from the site along Ortega Highway each day (much higher than the number expected), 14,250 autos could also travel to and from the site along Ortega Highway and the total noise level increase due to construction traffic would still be less than the barely perceptible 3 dB required for an significant

impact to be identified. Construction of the project is not expected to generate anywhere near this level of traffic.

Responses 46

Grading assumed for Planning Area 5 could impact the Radio Tower Ridge in the northwestern portion of the development site. Given that this Program EIR addresses potential impacts for a General Plan Amendment/Zone Change, in the event of such impacts, the proposed project would incorporate design and mitigation measures that would apply at the time of subsequent approvals for the purpose of reducing visual disruption associated with these changes in use. The Ranch Plan Program EIR serves as the primary CEQA document associated with the proposed project. The Draft Program EIR acknowledges that project implementation would result in significant unavoidable impacts. As addressed in Topical Response 3.1.1, as subsequent components are submitted to the County for consideration (e.g., Master Area Plans), these project components would be subject to CEQA review. All future discretionary actions would be subject to public notice, thereby providing the City of San Juan Capistrano with additional opportunities for input and comment.

It should be noted that the Draft Program EIR visual analysis did take into consideration major ridgelines. Exhibit 4.10-42 depicts the impacted and non-impacted ridgelines in the project site in relation to the proposed development. The major ridgelines surrounding Planning Area 5 would not be impacted and would serve to buffer views of the development area from San Clemente and Talega. As proposed, the existing southern ridgelines in this planning area are higher than the proposed grading for this development.

Response 47

The comment is noted. No part of the project site is within the jurisdictional boundary or sphere of influence for the City of San Juan Capistrano. As such, the City of San Juan Capistrano's General Plan policies are not applicable to the proposed Ranch Plan project. All modifications to ridgelines will occur within the Ranch project boundary and would result in changes to the visual character of the site that may be considered significant.

Response 48

The comment is noted. Please refer to the response to Comment 47. The proposed project does not preclude the implementation of design and landscape features in compliance with the City of San Juan Capistrano's General Plan elements. Landform in the project site would be significantly altered and visible from several viewpoints in San Juan Capistrano. The proposed project would incorporate design requirements and mitigation measures that would apply at the time of subsequent approvals.

Response 49

The comment is noted. The viewshed analysis provided in the Draft Program EIR provides a representative depiction of existing and changes to views that would occur associated with project implementation. The County does not believe that additional viewshed analysis is required for this Program EIR.

Response 50

Height limits of up to 75 feet for Senior Housing, Urban Activity Center and Business Park uses have been modified in the Ranch Plan Community Program Text, per comments received on the Draft Program EIR 589, to not allow the 75 feet height limit in Planning Area 1. Within Planning Area 1, the Ranch Plan Planned Community Program Text provides for a 45-foot height limit. The 75-foot height limit would still be allowed, per a public hearing, as applicable, within Planning Areas 2 through 8.

Response 51

The comment is noted. In Exhibit 4.10-1, three landscape zones were identified as part of the visual analysis. These zones are intended to assist the reader in understanding the visual character of the view shed and not to reflect the specific elevation of a ridgeline. These zones are depicted in color gradation, allowing the viewer to understand the geographic region in which the project is located. Ridgelines in the three landscape zones (foreground, middle ground, and background) were included on this exhibit. General Plan-designated ridgelines for the cities of San Juan Capistrano and San Clemente were depicted in Exhibits 4.10-1 and 4.10-24 in the Draft Program EIR. The Horno Road Ridge in the City of San Juan Capistrano is depicted in Exhibit 4.10-42, titled 'unnamed ridge,' and shows potential impacts to the ridgeline within the Ranch Plan project boundary.

Response 52

The comment is noted. Within the project site, Ortega Highway is designated a Landscape Corridor, west of Antonio Parkway to the San Juan Capistrano city boundary. In this location, Ortega Hwy is planned for widening to a four-lane road and landscaped as a landscape corridor as part of a future Caltrans road improvement project. These improvements are not a part of the proposed project or the responsibility of the applicant. Caltrans will work with appropriate jurisdictions and agencies to coordinate the improvement project. Please also refer to the response to Comment 45.

Response 53

The comment is noted. Presently, the exhibition of a 'worst-case' scenario for the identified view area would not produce substantive information that would assist in the analysis of aesthetic impacts. Specifically, the requested analysis calls for a Planning Area-level delineation that is beyond the scope, content and purpose of the Draft Program EIR. Indeed, the aesthetic analysis provided in the Draft Program EIR pertains exclusively to the GPA/ZC level. Specific design features and issues, such as the preliminary grading concepts, collector street locations, neighborhood, and UAC layouts, relative to Planning Area development will be subsequently addressed at the Master Area Plan-level. In connection with the preparation of individual Master Area Plans, the applicant shall provide more specific detail concerning preliminary grading concepts, collector street locations, neighborhoods and UAC layouts. Until such time as a Master Area Plan for Planning Area 1 is prepared and certain development variables are solidified, presentation of an accurate/appropriate visual impact analysis for Planning Area 1 is not possible. Were the County to attempt to prepare a visual 'worst case scenario' for Planning Area 1, the results thereof would be potentially misleading and inaccurate as the assumptions underlying the depicted development activity are likely to change in the future. Please also refer to the response to Comment 50.

Response 54

As a future Caltrans project, the road improvements would include road widening, traffic calming, and landscape improvements to landscape corridor design standards. Caltrans will work with appropriate jurisdictions and agencies to coordinate the road improvement project and its aesthetic view conditions. It would be speculative to determine the final landscape plan associated with this Caltrans project. However, it is not anticipated that the view of the project site would be significantly different.

Response 55

The comment is noted. The view shown in the photographs match the photo key shown in View 3. Note the yellow-cone area on the key map indicates a northwest view, as represented in the photo exhibits. While this view analysis will be supplemented with additional grading and design detail at the Area Plan level, no additional analysis or photographs are needed at this time to determine potential impacts. The Draft EIR notes "the change in character of the site from this public view and the introduction of night lighting is considered a significant impact because of the extent of the change."

Ortega Highway and Antonio Parkway (shown in this view) are designated landscape corridors and would incorporate design requirements and mitigation measures during the design phase.

Response 56

Your comment is noted. A revised Exhibit 4.10-6 depicting the cut slope is provided in Section 4 of the Responses to Comments document. However, this does not change the findings of the aesthetics evaluation. The Draft Program EIR found the change in views from this vantage point a significant impact. It should be noted, that this cut slope is over 1.25 miles away. Based on the thresholds of significance set forth in the Draft Program EIR, the change would not be considered a significant impact for the community of San Juan Capistrano.

Response 57

The proposed project does not preclude the implementation of design requirements and mitigation measures for the development interface between Planning Area 1 and the City of San Juan Capistrano. Currently, there is a 200-foot easement along the western edge of the project property for SCE transmission lines. This easement, which abuts the rural residential in the City of San Juan Capistrano, will be preserved. The Master Area Plan for Planning Area 1, which will be acted upon by the Planning Commission, will consider a buffer and urban edge treatment between the existing residential development in San Juan Capistrano and the proposed Ranch Plan development. No development or grading is proposed in Planning Area 11. This area will be retained as open space.

Response 58

The comment is noted.

3.6 INDIVIDUALS AND ORGANIZATIONS

COMMENTER 32 MR. GEORGE ANN PAVLISKA
Dated: June 24, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 33 CALIFORNIA NATIVE PLANT SOCIETY, ORANGE COUNTY CHAPTER
Dated: July 14, 2004

Response 1

The County acknowledges Mr. Robert's experience and expertise relative to rare plants in Orange County and agrees with many of his observations regarding the relationship between Weed's mariposa lily (*Calochortus weedii* var. *weedii*) and the intermediate mariposa lily *C. w.* var. *intermedius*) on the Ranch Plan project site. Areas of agreement are summarized as follows:

- The Ranch Plan project site represents a zone of intergradation between these two taxa (in this case two varieties of *Calochortus weedii*). This zone has resulted in a intergraded complex of plants where in many instance it is common to find two plants growing in close proximity that exhibit traits where one individual appears to be strongly influenced by *C. w.* var. *intermedius* and the other by *Calochortus weedii* var. *weedii*. In the vicinity of these are typically a number of plants that exhibit a complete range between the two.
- The gradient of intergrade characters on the Ranch Plan project site is from southeast to northwest with plants associated with the southeast quadrant of the site exhibiting much more influence by *C.w.* var. *weedii* than plants associated with the northwest quadrant of the Ranch Plan project site which exhibit more influence by *C.w.* var. *intermedius*.
- Petal colors for pure *C.w.* var. *weedii* typically are bright or deep yellow to golden yellow with varying degrees of maroon flecking or banding, whereas the *C.w.* var. *intermedius* typically is light yellow or champagne with purple or maroon banding.
- Hybridization and intergradation between varieties of this taxon and with other closely related taxa (e.g., *Calochortus plummerae*) occur outside of the Ranch Plan project site as well, and do not diminish the intermediate mariposa lily's standing as a taxon.
- All of the plants on the Ranch Plan project site exhibit at least some influence (albeit in some instances minimal) of *C.w.* var. *intermedius*.
- All of the plants on the Ranch Plan project site also exhibit at least some influence (in some instances minimal) of *C.w.* var. *weedii*.

Key areas of disagreement, including specific statements that are addressed in more detail below are summarized/listed as follows:

- “EIR 589 suggests that the intergradation within Rancho Mission Viejo is overwhelming.”
- RMV should adopt the “Hybrid Policy” developed by the Fish and Wildlife Service wherein a hybrid that exhibits over 50 percent of the characters of an endangered species would be considered endangered for purposes of conservation.
- “The majority of plants on RMV are “well over 50 percent intermediate mariposa lily genetically.”
- The population within the Southern Subregion represents nearly one-third of the geographic range of the intermediate mariposa lily and is therefore regionally significant.

Before addressing these specific differences, it is important to address the methods used in collecting the data summarized in Table 4.9-19 of the Draft Program EIR. Mr. Roberts is correct that flower color was used as the diagnostic character. As a part of the biological analyses prepared for the Draft Program EIR, pilot studies were conducted and the various characters used in the Jepson Manual and in *A Flora of Southern California* were used to distinguish between these taxa; these characters were not found to be definitive, including anther shape and to a lesser extent petal shape. After examining numerous individuals, petal color was determined to be the most reliable character for rapid field assessment. The biological analysis did not seek to characterize the intergrades relative to whether they appeared closer to *C.w. var. weedii* or *C.w. var. intermedius*. Plants that appeared to strongly exhibit the characters of either variety were characterized as *C.w. var. weedii* or *C.w. var. intermedius* as appropriate. All others were classified as intergrades.

One other important consideration relative to the methodology is that two other populations were included in the analysis, as noted in Appendix J-1. The plants at these locations were important in demonstrating the difference between the Ranch Plan project site population complex of *C.w. var. weedii* x *C.w. var. intermedius* and more “pure” stands of the *C.w. var. intermedius*. One of the two sampling locations, designated as “Tijeras” is included in Table 3 of Appendix J-1 of the Draft Program EIR and is listed as 97 percent *C.w. var. intermedius* and three percent intergrade. The plants in this sub-population are just outside of the project site boundary and, therefore, are not addressed in the Draft Program EIR relative to impact analysis. However, this plant site is within the Southern Subregion NCCP study area. This sub-population exhibited only minimal influence of *C.w. var. weedii* with very consistent light coloration and consistent purple tingeing on the tips of the petals (approximately one-fifth to one-quarter of the petal length). None of the nine sub-populations sampled on the Ranch Plan project site exhibited this type of consistency.

The other location/sub-population used for comparison/control purposes was from the Central/Coastal NCCP open space area in the East Orange environs. This area supports “pure” individuals of *C.w. var. intermedius* and it was comparison of the Ranch Plan project site lily complexes with these, as well as comparison of “Tijeras” population with the East Orange *C.w. var. intermedius* that supports the position that the Ranch Plan project site populations were obvious intergrades with more than just minimal influence of *C.w. var. weedii*.

First, even the Tijeras population, which consistently exhibited light petals with purple tingeing did not quite exhibit the same degree of purple tingeing or extent of tingeing, which in the case of many of the East Orange individuals, extended up to (or in a few cases) one-third of the petal length. Whereas both the Tijeras and East Orange populations exhibited consistency relative to light yellow or champagne petals with purple tingeing, none of the Ranch Plan project site sub-populations, including the two most northwesterly groups (Chiquadora Ridge and upper

Gobernadora), which were essentially identical relative to their intergrade characters (see Table 4.9-19), exhibited such consistency.

Given these considerations, the areas of disagreement can be addressed.

- EIR 589 Suggests that the Intergradation within Rancho Mission Viejo is Overwhelming

The Draft Program EIR presents the survey results in Table 4.9-19 and draws the conclusion that the intergraded population complex of *C.w. var. weedii* x *C.w. var. intermedius* is sufficiently mixed that it is not appropriately treated as a special-status taxon (i.e., *C.w. var. intermedius*) (see below under hybrid policy discussion). The Draft Program EIR does not otherwise characterize or describe the “degree” or “level” of intergradation. The locations sampled in Table 4.9-19 and Table 3 in Appendix J-1 comprise a “transect” that covers the length of the Ranch Plan project site from southeast to northwest along the longest axis possible on the site, a distance of between nine and ten miles. When the East Orange data are included, the distance is increased to nearly 20 miles. The County would not characterize the intergradation as “overwhelming.” However, the differences between the Gabino and upper Gabino populations associated with the southeast quadrant of the Ranch Plan project site and the Chiquadora Ridge and Upper Gobernadora groups was clear and obvious and when compared with the Tijeras and East Orange specimens became compelling. Most importantly, as noted below, the population complex on the Ranch Plan project site does not meet the minimum threshold, defined by the U.S. Fish and Wildlife Service, in an unadopted policy for addressing hybrids as listed species.

Mr. Robert's presents observations made on the Donna O'Neill Land Conservancy, which he characterizes as “typical of the taxon over much of the ranch, except perhaps in Gabino Canyon and to the southeast.” Mr. Roberts reports that approximately five percent of the plants detected in this area (n = 186) were bright yellow with little purple tingeing or mottling (i.e., plants with strong influence from *C.w. var. weedii*) and another one-third with intergrade traits. The Donna O'Neill Conservancy is on the westerly edge of the Ranch Plan project site, and since the gradient from *C.w. var. weedii* to *C.w. var. intermedius* is from southeast to northwest, westerly populations would be expected to exhibit less influence from *C.w. var. weedii* and more from the *C.w. var. intermedius*. This is not inconsistent with the observations of the Ranch Plan Program EIR biologists: Table 4.9-39 has been revised and incorporated into the Final Program EIR as follows:

TABLE 4.9-39
PERCENT OF EACH *C. WEEDII* SUBSPECIES WITHIN THE STUDY AREA

Population Name	Species in Percent (%)		
	Individuals with Floral Characteristics consistent with <i>C. w. weedii</i>	Individuals with Intermediate Floral Characteristics between <i>C. w. weedii</i> and <i>C. w. intermedius</i>	Individuals with Floral Characteristics consistent with <i>C. w. intermedius</i>
Gabino	51	42	7
Upper Gabino	40	51	9
Cristianitos (north of Northrup-Grumman)	30	45	25
Cristianitos Meadows	27	30	43
Donna O'Neill Conservancy	5	33	62
Trampas	20	50	30
Color Spot Nursery	6	84	10
Verdugo	4	71	25
Chiquadora Ridge	4	75	21
Upper Gobemadora	2	75	23
Tijeras	0	3	97
Source: GLA 2004			

First, the proposed policy addresses federally listed species. The intermediate mariposa lily is not a federally listed species and has not been proposed for such listing. Therefore, even if the policy were adopted through issuance of a final rule, the policy would not apply.

Second, the proposed policy was never adopted through promulgation of a final rule published in the Federal Register. As such, the proposed rule/policy has no regulatory authority over listed species and certainly no authority over non-listed species.

Third, Mr. Roberts states that under this policy, plants that exhibit over 50 percent of the characters of a listed species would be considered as the listed taxon for conservation purposes. This is not correct. The proposed policy/rule actually states that for a taxon to meet the test under the proposed policy it must "more closely resemble a parent belonging to a listed species than they resemble individuals intermediate between their listed and unlisted parents." In numeric/quantitative terms this means that the resemblance must actually exceed 75 percent in favor of the listed taxon.

Applying this to the Ranch Plan population, not including the "Tijeras" population (which would meet this test), using the column in the above table, "Strong *C.w. intermedius* influence" results in a population average of 25.5 percent similarity relative to *C.w. intermedius* influence. Taking an even more conservative approach where one half of the intergrades are considered to favor *C.w. intermedius* provides for an additional 27.8 percent or a combined total of 53.3 percent similarity for the population complex on the project site. This percentage is still well short of the 75 percent required by the proposed (unadopted) policy. Finally, if the intergraded population complex associated with the central and northwest quadrants of the Ranch Plan project site is considered separately from the southeast quadrant, where *C.w. var. weedii* exhibits the greatest influence, the percent-similarity using the same procedure reaches 57.3 percent for the population complex. As such, use of the proposed policy results in a clear determination that the complex of the Ranch Plan project site *C.w. var. weedii* x *C.w. var. intermedius* intergrades

would not be subject to treatment as a "listed" taxon (in this case by analogy as a CNPS List 1B taxon under CEQA).

- "...certainly the majority of plants on RMV are "well over 50 percent intermediate mariposa lily genetically

As specified above, 50 percent is not the threshold under the proposed policy. Greater than 75 percent is the threshold as noted above and as demonstrated, the Ranch Plan project site complex of *C.w. var. weedii* x *C.w. var. intermedius* intergrades does not meet this threshold based on studies conducted along a transect that encompassed the entire gradient from southeast to northwest across the project site.

- The population within the Southern Subregion represents nearly one-third of the geographic range of the intermediate mariposa lily and is therefore regionally significant

Based on the analysis prepared for the Draft Program EIR, the "Tijeras" population, just north of the Ranch Plan project site boundary appears to be at the southern limit of the range for *C.w. var. intermedius*, though even these individuals exhibit at least minimal influence from *C.w. var. weedii*. Applying the USFWS policy for hybrids to the *C.w. var. weedii* x *C.w. var. intermedius* intergrade complex yields less than the required 75 percent of similarity when considered as a whole population across the project site. Elimination of the plants associated with southeast quadrant from the calculation does not change the overall conclusion set forth in the Draft Program EIR.

COMMENTER 34 CONSTANCE SPENGER

Dated: July 28, 2004

Response 1

Refer to Topical Response 3.1.9.4 and 3.1.9.8 regarding wildlife movement and mountain lions, respectively. The work of Paul Beier was incorporated into the Draft Program EIR.

Response 2

Refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species, regarding the California gnatcatcher.

Response 3

The mule deer is included as NCCP Planning Species; however, this species has no other special conservation status designation by the USFWS and/or CDFG. Therefore, this species was not included within Table 4.9-3. It was included within the discussion of mountain lion and golden eagle on page 4.9-145 because it was deemed appropriate to analyze these species together since they are considered together in the discussion of "Other Planning Area-wide Species Considerations" in Section 5.3 of Appendix G-2, *Draft Southern NCCP/HCP Planning Guidelines*.

Response 4

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 35 **ED SCHLEGEL**
Dated: July 28, 2004

Response 1

Refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species, regarding steelhead trout.

COMMENTS 36 **CALIFORNIA CULTURAL RESOURCES PRESERVATION ALLIANCE, INC.**
Dated: July 31, 2004

Response 1

It should be noted that avoidance (preservation in place) is listed as the first mitigation option (MM 4.11-3, a), or preferred mitigation measure. Should this first option be infeasible, the second option (b), data recovery, would be implemented. It would fully mitigate the impacts of development on the archaeological sites and would be performed in accordance with standards of the State Office of Historic Preservation.

COMMENTS 37 **MARNI MAGDA**
Dated: August 2, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 2

The project would be required to comply with all applicable laws and regulations including, but limited to, the Federal Endangered Species Act, the California Endangered Species Act, and the Clean Water Act. The requirements of these laws and regulations are fully discussed in Section 4.9 of the Draft Program EIR. Additionally, it should be noted that current residents would not be responsible for provision of infrastructure to development in the Ranch Plan. The fiscal implications of the project have been addressed in a Fiscal Impact Report, which the County of Orange is reviewing through a process separate from the EIR. The project provides sufficient revenues to offset the cost of services. In addition mitigation measures outlined in the Program EIR require the project to enter into agreements with service providers regarding the provision of services and facilities. Refer to Topical Response 3.1.9

Response 3

The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. The project does not propose the use of desalinization to provide sufficient water for the project. Water supply is further discussed in Topical Response 3.1.12.

Response 4

The project does provide for the continuation of ranching activities. The water required for agricultural activities would continue to use groundwater; therefore, were not included in the calculations for future water usage. With regards to the cancellation of the Williamson Act, the applicant has withdrawn the request as part of the planning application. For further discussion of agricultural issues, please refer to Topical Response 3.1.4.

Response 5

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 6

Please see Topical Response, 3.1.2 pertaining to open space and Topical Response 3.1.9 pertaining to wildlife linkages and the mountain lion.

Response 7

The Revised Notice of Preparation (NOP) identified changes to the project since the circulation of the original NOP. The changes to the project did not pertain to threatened and endangered species, therefore, there was not specific discussion in the Revised NOP. The presence of these species was identified in the original NOP and discussed in the Draft Program EIR (see Section 4.9 of the Draft Program EIR).

Response 8

Please refer to Topical Response 3.1.3 regarding project interface with Marine Corps Base (MCB) Camp Pendleton.

Response 9

The Draft Program EIR evaluated the circulation impacts of the Ranch Plan both with and without the extension of southerly SR-241. The project does not rely on the construction of the toll road. The impacts associated with the toll road are addressed in the EIS/EIR prepared by the Transportation Corridor Agencies and Federal Highway Administration. Please refer to Topical Response 3.1.7.

Response 10

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 38 DONNA GOULD
Dated: August 2, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 2

The project does provide for the continuation of ranching activities. The water required for agricultural activities would continue to use groundwater; therefore, were not included in the calculations for future water usage. With regards to the cancellation of the Williamson Act, the applicant has withdrawn the request as part of the planning application. For further discussion of agricultural issues, please refer to Topical Response 3.1.4.

Response 3

Please refer to Topical Responses 3.1.2, for definition of open space and 3.1.9, regarding biological resources. The commenter is also referred to the Adaptive Management Program (Appendix J of the Draft Program EIR) proposed as a project design feature. A component of the Adaptive Management Program is a Wildland Fire Management Plan (Appendix J-5), which outlines a prescribed burn program to meet fire objectives while maintaining and increasing net habitat values.

Response 4

An environmental impact report is prepared when a project would have significant unavoidable impacts. If all impacts can be mitigated to a level of less than significant, a Mitigated Negative Declaration could be prepared for the project. The project does identify significant project and cumulative impacts associated with the Ranch Plan.

For further discussion of water supply, please refer to Topical Response 3.1.12. Traffic modeling is discussed in Topical Response 3.1.7.

Response 5

The Ranch Plan provides for continued ranching activities on the project site. A Grazing Management Plan (Appendix J-4 of the Draft Program EIR) has been developed as part of the Adaptive Management Plan for the Ranch Plan. The Grazing Management Plan provides for continued ranching activities, as well as the protection of natural resources in the open space areas. Additionally, the Planned Community Text provides for continued ranching and agricultural activities.

The comment supports development consistent with the zoning. This alternative was evaluated in the Draft Program EIR. This alternative assumed 3,265 dwelling units and continued sand and gravel operations. It should be noted this alternative would result in approximately 19,822 acres of the Ranch Plan area being subdivided. Approximately 66 percent of the project site would be in open space. However, the land would not be publicly dedicated, but would occur within small estate lot parcels owned by individual homeowners and along the ridges and slopes deemed unsuitable for development. This alternative was found to be less conducive to the maintenance of net habitat value over the long term because of fragmentation and lack of an Adaptive Management Plan.

COMMENTS 39 PHILIP G. FRASER
Dated: August 2, 2004

Response 1

The impacts to Caspers' Regional Park are evaluated in Section 4.12 of the Draft Program EIR. Page 4.12-14 of the Draft Program EIR states the following regarding Caspers Regional Park, "The Ranch Plan Project would not have a direct impact on Ronald W. Caspers Wilderness Park. The project does have the potential to have indirect impacts to due the proximity of development in relationship to the park." The analysis concludes that "Given the limited scale of visible development, and the protection of the surrounding areas in open space, there would be minimal impacts on the character of the park as a result of development." The reader is also referred to Section 4.9 of the Draft Program EIR and Topical Response 3.1.9.4, Wildlife Linkages/Corridors, regarding the connections between the open space proposed by the Ranch Plan project and adjacent protected open spaces such as Caspers Regional Park. Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 40 WILLIAM C. HOLMES
Dated: August 3, 2004

Response 1

The uses that would be allowed in the open space designation are defined in the Ranch Plan Planned Community Program Text. This is further discussed in Topical Response 3.1.2 pertaining to open space. The area contained in the open space designation would be subject to the Adaptive Management Plan (AMP) for the protection of the open space and, upon its dedication pursuant to a phasing program, maintenance of the net habitat value over the long-term. None of the designated open space would be available for future development by RMV. With implementation of the AMP the impacts and benefits of the open space would be the same whether the land is dedicated and part of the public domain or if it is protected with a Conservation Easement. This conservation strategy is further discussed in Topical Response 3.1.9.3.

Response 2

The traffic analysis conducted for the Draft Program EIR evaluated the potential traffic impacts on adjacent cities. The project proposes a Master Plan of Arterial Highways (MPAH) Amendment. For further discussion of traffic issues, please refer to Topical Response 3.1.7.

Response 3

The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. The project does not propose the use of desalinization to provide sufficient water for the project. Water supply is further discussed in Topical Response 3.1.12.

Response 4

Neither State law nor Orange County ordinance mandate that a particular project contain a minimum number or percentage of affordable housing units. Notwithstanding, and as discussed on pages 4.3-7 and 4.3-11 to -12 of the Draft Program EIR, State law does mandate that all regional councils of government in California identify existing and future housing needs for their respective regions. Consistent with this mandate, the Southern California Association of Governments (SCAG) has prepared a Regional Housing Needs Assessment (RHNA) that (i) evaluates current and future housing needs across several income categories for the southern California region and (ii) allocates to each city and county within SCAG's region a portion of the new housing units that must be built in order to achieve the RHNA projections. The November 2000 RHNA allocations for Orange County are set forth in Table VI-1 of Orange County General Plan Housing Element.

Consistent with State law, the County of Orange has prepared a 5-Year Housing Action Plan ("5-Year Plan") that is designed to satisfy and accommodate the new construction allocations set forth in the RHNA. See Orange County General Plan Housing Element at pp. X-145 *et seq.* Specifically, the 5-Year Plan identifies a series of goals, strategies and actions that will help the County to achieve its RHNA obligations by 2005. Notably, Strategy 1b of the 5-Year Plan contemplates that the development of new large-scale projects in the County include a sufficient range of housing types and densities in appropriate locations to facilitate the production of housing for all economic segments. Approval of the proposed Project would be consistent with this strategy. Specifically, the 14,000 dwelling units proposed for the Project will provide greater – and much needed – housing opportunities for individuals living and working in Orange County. The contemplated mix of dwelling types (*i.e.*, 7,020 single-family attached and detached units, 6,000 senior housing units [including both single-family and apartment units] and 980 multi-family units) is responsive to projected demographic housing needs for the South Orange County area and represents an appropriate balance of housing opportunities across various income and demand sectors. Furthermore, the new housing opportunities afforded by the Project will assist the County in achieving its future RHNA obligations for the Orange County region.

COMMENTS 41 DAN LEWIS
Dated: August 3, 2004

Response 1

Please refer to Topical Response 3.1.7 for detailed discussion pertaining to the traffic modeling done for the Ranch Plan project.

Response 2

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures. For further discussion of these issues please refer to Topical Response 3.1.9.

Response 3

Please refer to Topical Response 3.1.1.1 pertaining to the processing of the project and the NCCP/HCP and the SAMP/MSAA.

Response 4

Please refer to Topical Response 3.1.1.4 for a discussion of when recirculation of a Draft EIR is required.

COMMENTER 42 TOM AND PAULINE FAYE
Dated: August 3, 2004

Response 1

Please refer to Topical Response 3.1.7 for detailed discussion pertaining to the traffic modeling done for the Ranch Plan project.

Response 2

Please refer to Topical Response 3.1.2 pertaining to open space uses.

Response 3

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation. For further discussion of these issues please refer to Topical Response 3.1.9.

Response 4

Air quality is evaluated in Section 4.7, Air Quality and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation.

Response 5

The comment does not provide specific data on the inadequacies of the analysis in the Program EIR. Wildland fires are evaluated in Draft Program EIR in Section 4.14, Hazards. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. For further discussion of this issue please refer to Topical Response 3.1.11.

Response 6

Impacts to watersheds are discussed in the Draft Program EIR in Section 4.5, Water Resources. Appendices C (contained in nine volumes) and G-8 and G-9 address water resource issues. For additional discussion please refer to Topical Response 3.1.6.

Response 7

Please refer to Topical Response 3.1.1.4 for a discussion of when recirculation of a Draft EIR is required.

COMMENTS 43 MARYLYN AND JOHN REES

Dated: August 3, 2004

Response 1

Please refer to Topical Response 3.1.7 for detailed discussion pertaining to the traffic modeling done for the Ranch Plan project.

Response 2

Please refer to Topical Response 3.1.2 pertaining to open space uses.

Response 3

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation. For further discussion of these issues please refer to Topical Response 3.1.9.

Response 4

Air quality is evaluated in Section 4.7, Air Quality and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation.

Response 5

The comment does not provide specific data on the inadequacies of the analysis in the Program EIR. Wildland fires are evaluated in Draft Program EIR in Section 4.14, Hazards. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. For further discussion of this issue please refer to Topical Response 3.1.11.

Response 6

Impacts to watersheds are discussed in the Draft Program EIR in Section 4.5, Water Resources. Appendices C (contained in nine volumes) and G-8 and G-9 address water resource issues. For additional discussion please refer to Topical Response 3.1.6.

Response 7

Please refer to Topical Response 3.1.1.4 for a discussion of when recirculation of a Draft EIR is required.

COMMENTS 44 FLY FISHERS CLUB OF ORANGE COUNTY
Dated: August 5, 2004

Response 1

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species, regarding steelhead trout.

Response 2

The proposed Rancho Mission Viejo Regional Park would provide passive uses. While a General Development Plan for the park is not proposed, given the proximity to San Juan Creek, a native plant palette would be used. The Master Plan of Bikeways does call for a paved bikeway along the creek. However, it should be noted that the County may choose not to accept the applicant's proposal for a Rancho Mission Viejo Regional Park.

Response 3

Your comments are noted. The proposed project does not propose any hard structures to be constructed within the San Juan Creek that would result in an obstacle for fish passage. Refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species, regarding steelhead trout.

Response 4

The project proposes the removal of the Sand & Gravel zoning designation for San Juan Creek.

Response 5

The project would not result the extraction of groundwater that would result in lowering the headwaters water table.

Response 6

Your comments are noted. Refer to Topical Response 3.1.9.8 Biological Resources – Impacts to Species, regarding steelhead trout.

COMMENTS 45 JACK EIDT
Dated: August 5, 2004

Response 1

Please refer to Topical Response 3.1.1.1 pertaining to the processing of the project and the NCCP/HCP. Your opinion on the adequacy of the document is noted.

Response 2

Please refer to Topical Responses 3.1.5, pertaining to affordable housing, and 3.1.13 pertaining to alternatives.

Response 3

The evaluation of jobs/housing balance provided in Section 4.3 of the Draft Program EIR identified the south county region as being jobs poor based on *The New Economy and Jobs/Housing Balance in Southern California* prepared by the Southern California Association of Governments (2001). The project, given the seniors component, will be slightly jobs rich. The commenter appears to not recognize that the project would provide an estimated 16,508 jobs, as well as the proposed housing. It should also be noted that the regional projects assumes 20,468 dwelling units for the project study area.

Response 4

Please refer to Topical Response 3.1.6 for a discussion of water quality issues.

Response 5

The Draft Program EIR evaluated potential traffic impacts both with and without the extension of SR-241 (Foothill Corridor) because of the uncertainty of the timing of the facility.

Response 6

The commenter states the "consultants preparing the document chose to hide behind the Air Quality Management Plan instead of taking responsibility for the significant increase in air pollution associated with turning a rural ranch into a home for 50,000 people." This statement is incorrect. The Draft Program EIR identified air quality impacts as a significant, unavoidable adverse impact at both the project and cumulative level. Additionally, it should be noted, the projected population for the site with the Ranch Plan is 32,823.

Response 7

The commenter is referred to the Adaptive Management Plan (Appendix J of the Draft Program EIR). The issue of mitigation and protection of habitat values is further discussed in Topical Response 3.1.9.3 for the Adaptive Management Plan. Also refer to Topical Response 3.1.1.1 pertaining to the processing of the project and the NCCP/HCP and Topical Response 3.1.6 pertaining to Water Quality.

Response 8

The Draft Program EIR did identify significant visual impacts, including those associated with changes in the character of the project site; however, it did not identify "blight" as indicated by the comment. Your comment is noted.

COMMENTS 46 **TODD VAN ETEN**
Dated: August 5, 2004

Response 1

Please refer to Topical Responses 3.1.1.1 and 3.1.9 for discussions of the NCCP/HCP and biological resources.

Response 2

Please refer to Topical Response 3.1.7 for a discussion of the traffic modeling done as part of the Draft Program EIR.

Response 3

The Draft Program EIR identified air quality impacts as a significant, unavoidable adverse impact at both the project and cumulative level. For additional discussion of air quality issues, please refer to Topical Response 3.1.8.

Response 4

Please refer to Topical Response 3.1.11 pertaining to wildland fires.

COMMENTS 47 TALEGA ASSOCIATES
Dated: August 6, 2004

Response 1

As discussed on page 4.0-1, the mitigation program consists of Project Design Features, Standard Conditions and Requirements, and mitigation measures. The inclusion of the Standard Conditions of Approval in no way delays or piecemeals the implementation of the mitigation program. The Standard Conditions provide the reader with an understanding of the type of conditions routinely applied to projects at subsequent levels of approval. Since the project is only requesting a General Plan Amendment and zone change certain measures would not be applied at this time. For example, the payment of fees for the Major Thoroughfare and Bridge Fee Program for the Foothill/Eastern Transportation Corridor is done at the building permit level of approval. If the Standard Condition was not identified, a reader not familiar with the County's development processing requirements may not understand that the project would be required to pay road fees. Additionally, by including all of these components in the mitigation program they are all be tracked in the Mitigation Monitoring and Reporting Program.

Response 2

An exhibit depicting the traffic analysis study area is provided as Exhibit 4.6-1 and Figure 1-2 (page 1-4) in the traffic report, both in the Draft Program EIR.

Response 3

The source of the buildout assumptions are clearly identified in the Draft Program EIR and the traffic study as being from OCP-2000. These are the demographic data forecasts adopted by the Orange County Board of Supervisors for use in transportation planning and other applications throughout Orange County. They are consistent with the assumptions used by the Orange County Transportation Authority (OCTA) in their Orange County Traffic Analysis Model (OCTAM). In the SCSAM, some modifications were made to the OCP-2000 traffic forecasts, in which General Plan land uses for certain areas have been substituted for OCP-2000. As described in the traffic model description for the South County Sub-Area Model (SCSAM), these buildout land uses are almost identical to the OCP-2000 since the Cities involved are built out by year 2025. Comparative data can be found in the SCSAM Model Description and Validation report.

Response 4

Only a partial extension of Avenida Talega is assumed as committed, this being the part required by the City of San Clemente as Conditions of Approval for Talega.

Response 5

The proposal to include an arterial along SR-241 alignment (if SR-241 is not constructed) is proposed as part of the roadway system for the project. As with any major roadway, it would require construction level environmental documentation prior to construction.

COMMENTER 48 ALAN L. WHITE
Dated: August 6, 2004

Response 1

Please refer to Topical Response 3.1.7 pertaining to traffic modeling.

Response 2

The Draft Program EIR does provide specifics regarding the air emissions associated with the project. Quantities of emissions are given for carbon monoxide, volatile organic compounds, oxides of nitrogen, oxides of sulfur, and particulate matter (PM₁₀). This data is further quantified in the Draft Program EIR by maximum construction emissions per day prior to mitigation (Table 4.7-4), peak quarterly construction emissions prior to mitigation (Table 4.7-5), existing conditions plus project build out for operational emissions (Table 4.7-6), and year 2025 plus project build out for operational emissions.

Response 3

The water rights and entitlements are discussed as part of the water supply assessment, which is summarized in Section 4.15, Public Resources and Facilities. The Water Supply Assessment prepared by the Santa Margarita Water District is provided as Appendix K of the Draft Program EIR. Water supply is further discussed in Topical Response 3.1.12.

Response 4

Water quality impacts and the effect on wildlife were discussed in the Draft Program EIR in Section 4.5, Water Resources. Additionally, please refer to Topical Response 3.1.6.

Response 5

The threshold of significance for the population and housing was derived from the CEQA checklist. The threshold is if the project would exceed adopted regional or local population projections. The regionally and locally adopted population projections for the project study area assume 20,468 dwelling units by the year 2025. The project would not exceed these projections; therefore, though the project would add to the population it would not be considered a significant impact.

COMMENTS 49 LYN HARRIS HICKS
Dated: August 7, 2004

Response 1

Given the size and complexity of the project if the information were to be all overlaid on a single map it would be incomprehensible. Even overlaying all the biological resources onto one map would be very difficult to read because of the size of the project and the numerous resources that were mapped.

Response 2

Your position on the project is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Response 3

Water resources were discussed in the Draft Program EIR in Section 4.5, Water Resources. Further discussion of this topic is provided in Topical Response 3.1.6. Additionally, please refer to Topical Responses 3.1.7 and 3.1.8 for a discussion of Air Quality and Transportation and Circulation, respectively.

Response 4

The Water Supply Assessment prepared by the Santa Margarita Water District, which is summarized in Section 4.15, Public Resources and Facilities and provided as Appendix K of the Draft Program EIR, discussed water availability. Water supply is further discussed in Topical Response 3.1.12.

Response 5

The regional growth projections and Regional Housing Needs Assessment is discussed in the Draft Program EIR in Section 4.3, Population and Housing. The growth projections for the Ranch Plan area adopted by the Southern California Association of Governments (SCAG) for the project study area include 20,468 dwelling units. The project is only providing 68 percent of the housing identified for the site. The 14,000 dwelling units is project to have a population of 32,823 at build out. The project would provide services, such as parks, shops and restaurants that would serve the future population.

Response 6

The roadways, median strips, and golf courses are not included in the calculations of open space. Please refer to Topical Response 3.1.2 for a more detailed discussion of open space.

COMMENTS 50 BARBARA ROSENBAUM
Dated: August 7, 2004

Response 1

Alternatives evaluating different potential densities were evaluated in the Draft Program EIR in Section 5, Alternatives. Table 5.4-1 in the Draft Program EIR provided a comparison of key characteristics of the alternatives carried forward. Table 5.4-2 provided a comparison summary table of the impacts associated with each alternative. The alternatives carried forward were

developed through the NCCP/HCP and SAMP/MSAA process and developed by the County of Orange. In addition to alternatives carried forward the Draft Program EIR the NCCP/HCP and SAMP/MSAA process identified four alternatives that were not being carried forward as part of those processes. Those four alternatives were summarized and the reasons for not carrying them forward were identified. The following alternatives were evaluated in the Draft Program EIR:

- No Project (no new development) (Alternative A-1 from the NCCP/SAMP process)
- Development consistent with existing zoning (3,265 units on 19,822 acres and a continuation of sand and gravel extraction) (Alternative A-2 from the NCCP/SAMP process)
- Alternative B-5 (14,000 dwelling units and 5.58 million square feet of employment on 7,170 acres) (Developed as part of the NCCP/SAMP process)
- Alternative B-6 (14,000 dwelling units and 5.58 million square feet of employment on 6,740 acres) (Developed as part of the NCCP/SAMP process)
- Alternative B-8 (8,400 dwelling units and 2.48 million square feet of employment on 3,680 acres) (Developed as part of the NCCP/SAMP process)
- Alternative B-9 (13,600 dwelling units and 5.2 million square feet of employment on 6,582 acres) (Developed as part of the NCCP/SAMP process)
- Alternative B-10 (14,450 dwelling units and 5.595 million square feet of employment on 7,683 acres) (Developed addressed by the County of Orange)
- Alternative B-11 (19,200 dwelling units and 3.64 million square feet of employment on 8,621 acres) (Developed addressed by the County of Orange)
- Alternative B-4 Reduced (10,800 dwelling units and 2.7 million square feet of employment on 6,589 acres)

For additional discussion of alternatives, please refer to Topical Response 3.1.13.

Response 2

The project is not precluding alternative modes of transportation. As development plans are processed provisions such as bus turn-outs will be considered and coordinated with the Orange County Transportation Authority. Additionally, the project will incorporate regional bikeways and trails, as well as a network of community trails.

Response 3

The Water Supply Assessment prepared by the Santa Margarita Water District, which is summarized in Section 4.15, Public Resources and Facilities and provided as Appendix K of the Draft Program EIR, discussed water availability. Water supply is further discussed in Topical Response 3.1.12. Fire protection services are also addressed in Section 4.15 of the Draft Program EIR. Wildland fire hazards are discussed in Section 4.14, Hazards. A Wildland Fire Management Plan is proposed as part of the Adaptive Management Program for the Ranch Plan. This plan is contained in Appendix J of the Draft Program EIR.

Response 4

The project would be required to comply with the Uniform Building Code which requires energy and water saving devices be used in new development projects.

Response 5

Your support for the B-11 Alternative is noted. It should be pointed out that the Ranch Plan, as well as other alternatives incorporates an Urban Activity Center that would provide the opportunity for a mix of uses.

Response 6

Potential water quality impacts and measures to reduce the impacts were discussed in Section 4.5 of the Draft Program EIR and in the Concept Water Quality Management Plan (Appendix C-2). This issue is further discussed in Topical Response 3.1.6.

Response 7

A Golf Course Management Plan is required for each proposed golf course. Use of natural treatments would be incorporated into the plan. Landscape plans would be developed as part of each development plan, which would incorporate trees. Additionally, the project proposes to maintain 15,121 acres in open space.

Response 8

The commenter is referred to page 3-32 of the Draft Program EIR where the locations of bridges and their characteristics (length, width, and height) are identified. These locations are also depicted on Exhibit 3-23. These bridges facilitate wildlife movement corridors. This issue is further discussed in Topical Response 3.1.9.4, Biological Resources–Wildlife Linkages/Corridors.

Response 9

Your comments are noted. Loss of agricultural lands was addressed in the Draft Program EIR (Section 4.2) and Topical Response 3.1.4. As discussed in Section 4.2 of the Draft Program EIR and in Topical Response 3.1.4.1, the loss of Important Farmland is considered a significant and unavoidable impact of Project development. The severity of this impact has been reduced by elements of the Project which provide for (i) the planting and interim cultivation of 100 acres of new citrus and avocado orchards and (ii) the continuation of existing agricultural operations on an interim basis until such time as development actually occurs on the affected properties. Pending development and conversion of the affected agricultural acres, said properties will continue to generate important crops and, where appropriate, serve as wildlife habitat areas. Additionally, please refer to Topical Response 3.1.9.8j regarding the tricolored blackbird and Topical Response 3.1.9.8l regarding the grasshopper sparrow.

Response 10

As discussed in the Draft Program EIR, biological resources outside of the proposed project impact area shall be protected during construction. To ensure this protection, Mitigation Measure 4.9-30 requires the project applicant to prepare and implement a Biological Resources Construction Plan (BRCP) that provides for the protection of the resource and established the

monitoring requirements. The BRCP will include, among other items, provisions for monitoring during construction activities to ensure compliance and success of each protective measure. The monitoring procedures will (1) identify specific locations of wildlife habitat and sensitive species to be monitored; (2) identify the frequency of monitoring, monitoring methodology (for each habitat and sensitive species to be monitored); (3) list required qualifications of biological monitor(s); and (4) identify reporting requirements.

Appendix G-7 of the Draft Program EIR identifies elements of the Adaptive Management Program (AMP) for the RMV Open Space that contribute to maintaining and enhancing the long-term net habitat value in the region. The AMP is contained within Appendix J of the Draft Program EIR. Both appendices identify the guidelines for the establishment of the monitoring efforts within the BRCP. The County will review the BRCP to ensure that the plan is consistent with the AMP and provide for the required level of biological monitoring.

Response 11

Your comment noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 51 LEE CARRANZA
Dated: August 8, 2004

Response 1

These comments are a summary of specific comments raised in the attachment to the letter of comment and are addressed below. Contrary to the comment regarding the lack of availability of Draft Program EIR 589 on CD ROM, in fact the document was available both in hard (i.e., paper) copy and on CD ROM.

Response 2

The proposed project would not have significant unmitigated impacts to preserve design. As discussed in Topical Response 3.1.1.1, Project Processing, moving forward with the GPA/ZC will not preclude a future NCCP/HCP and SAMP/MSAA. For a discussion on edge effects and fuel modification, please refer to Topical Response 3.1.9.6, Biological Resources–Indirect Impacts.

The comment that the proposed Ranch Plan project does not build on any of the existing preserves nor provide any large blocks of habitat is incorrect. The Biological Resources section of the Draft Program EIR states, "A fundamental premise of the Proposed Project is that land use planning within the for both open space and development should build upon the significant open space planning, protection, and management efforts on the part of local government, state and federal agencies, and private and quasi-public landowners that have already taken within the Southern Subregion" (Draft Program EIR, page 4.9-1). The manner in which the proposed project addresses this premise is extensively discussed in the SRP Tenets of Reserve Design consistency analysis presented in the Draft Program EIR (see pages 4.9-178 through 4.9-195). In particular, the consistency analysis for "SRP Tenet 2: Larger Reserves are Better" discusses habitat blocks and finds that the contributions of the RMV Open Space to already protected open space in the Southern Subregion will result in the protection of six major habitat blocks (Caspers block [12,674 acres], the San Mateo block [5,687 acres], the Lower Chiquita block [4,184 acres], the Upper Chiquita block [3,057 acres], the Arroyo Trabuco block [1,832 acres]

and the Donna O'Neill Conservancy block [1,455 acres]), as depicted on Exhibit 4.9-22 of the Draft Program EIR.

Response 3

Please refer to Topical Response 3.1.9.4, Biological Resources–Wildlife Linkages/Corridors for further discussion on the analysis contained in the Draft Program EIR of wildlife movement. Regarding impacts to the arroyo toad please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species, for further discussion of the arroyo toad.

Response 4

The Draft Program EIR discusses the elevations of vegetation communities provided by the RMV Open Space and already protected open space on page 4.9-192 and in Table 4.9-40. As noted in the Draft Program EIR regarding Table 4.9-40 “A comparison of the “ percent Within Vegetation Community” columns for the planning area and combined RMV Open Space and already protected open space shows that the elevational distributions of the vegetation communities in the combined RMV Open Space and already protected open space generally track the existing distributions in the planning area, but with a slight bias toward under-representations of the upland vegetation communities at less than 800 feet. The protection of riparian vegetation shows no elevational bias. The maximum under-representation at -4 percent is grassland at less than 400 feet. The maximum over-representation at +4 percent is coastal sage scrub at 801 to 1,200 feet.” Topography of the project site can be seen in various exhibits included in the Draft Program EIR such as Exhibit 4.1-1 and all land use related exhibits which feature and aerial photograph base (Exhibits 4.1-3 through 4.1-10).

Response 5

Appendix M examines the environmental impacts associated with all alternatives to the proposed project, including the B-8 Alternative. For each topical area discussed in the Draft Program EIR for the Proposed Project a similar analysis is provided for all alternatives. Please also refer to Topical Response 3.1.13, Alternatives, in the Responses to Comments document.

Response 6

Please refer to Topical Response 3.1.2, Project Description–Definition and Preservation of Open Space, regarding clarification of uses permitted within open space.

Response 7

Exhibit 3-23 in the Draft Program EIR shows the locations of all proposed bridges and wildlife culverts. Bridges are proposed over all major creeks (i.e., San Juan, Gobernadora, Chiquita, and Gabino). Wildlife culverts are proposed for wildlife movement corridor/habitat linkages D, E, N and Blind Canyon. Minimization/avoidance measures 4.9-22 and 4.9-23 define performance standards for bridges and wildlife culverts, including fencing, as modified (changes are in cross-out and underline):

“Minimization/Avoidance Measure 4.9-22: Prior to issuance of a grading permit for construction of Cristianitos Road and New Ortega Highway, the applicant shall demonstrate to the satisfaction of the County’s Director of Planning Services Department or his/her designee that the design for Cristianitos Road and New Ortega Highway includes the following features to facilitate wildlife movement:

- The bridge shall have minimum height dimensions of 20 feet.
- Chain link fencing of 10 feet in height shall be installed on the north and south approaches to the bridge culvert for a distance of 100 feet to deter wildlife from accessing the roadway.
- ~~If required for public health and safety, a~~ All lighting on the bridge, if required for public health and safety, shall be shielded to prevent spill-over effects.

Minimization/Avoidance Measure 4.9-23: Prior to issuance of a grading permit for construction of Cristianitos Road, the applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the design for Cristianitos Road includes the following features to facilitate wildlife movement:

- The culvert shall have minimum dimensions of 15 x 15 feet.
- The bottom of the culvert shall be natural substrate.
- Light shall be visible from one end of the culvert to the other.
- Vegetation installed at either end of the culvert shall be native-low growing species to prevent predator-prey stalking.
- Chain link fencing of 10 feet in height shall be installed on the north and south approaches to the bridge for a distance of 100 feet to deter wildlife from accessing the roadway.
- If required for public health and safety, all lighting on the road above the culvert shall be shielded to prevent spill-over effects." (Draft Program EIR at 4.9-173)

Please also refer to Topical Response 3.1.9.4, Biological Resources–Wildlife Linkages/Corridors.

Response 8

The Draft Program EIR does not rely on upon an active military base, such as Marine Corps Base (MCB) Camp Pendleton to achieve wildlife protection. As discussed in the Draft Program EIR, the proposed project Conservation Strategy involves the preservation of 15,121 acres of open space in the habitat blocks noted on Exhibit 4.9-22, which includes a 5,687-acre block of habitat adjacent to Caspers Regional Park, the Cleveland National Forest, and MCB Camp Pendleton. In addition, the proposed project Conservation Strategy also calls for implementation of an Adaptive Management Plan (Appendix J-2) to manage the resources within the protected open space.

The potential impacts associated with residential uses in proximity to MCB Camp Pendleton were addressed in the Draft Program EIR in Section 4.1, Land Use and Related Planning Programs. Mitigation measures were proposed that would reduce this impact to less than significant. Mitigation Measure 4.1-2 requires at the time of Area Plan approval for Planning Area 8, the Planning Director evaluate the most current RCUZ for MCB Camp Pendleton to ensure that noise sensitive land uses are not constructed in areas that would exceed state noise standards. The Marine Corps in their comment on the Draft Program EIR found this measure to

be satisfactory (please refer to the response to Comment 15 in the MCB Camp Pendleton letter). Military interface is also discussed in Topical Response 3.1.3.

Response 9

Please refer to Topical Response 3.1.9, Biological Resources—Impacts to Species, for further discussion on the California gnatcatcher and the Adaptive Management Program/Mitigation regarding how the proposed Conservation Strategy will mitigate for the identified significant project impacts.

Response 10

Please refer to Topical Response 3.1.9.4, Biological Resources—Wildlife Linkages/Corridors and Mountain Lion for further discussion on the analysis contained in the Draft Program EIR of wildlife movement and the mountain lion. Please also refer to the response to Comment 7 above regarding bridges and culverts.

Response 11

Impacts to grasslands including native grasslands are discussed on page 4.9-129 of the Draft Program EIR and are repeated here:

"Grasslands are scattered throughout the lower elevations of the study area, with the largest, contiguous concentration in the southern portion of the study area. Areas supporting large patches of grassland include the Radio Tower Road mesa, Trampas Canyon, Cristianitos Canyon, the Northrop Grumman lease area, and upper Gabino Canyon. A total of 5,040 acres of grasslands, including both annual and native grasslands, occur in the study area.

Major areas of native grassland include Cristianitos Canyon (approximately 405 acres) and upper Gabino Canyon (276 acres), with smaller areas of native grassland in Blind Canyon (102 acres) and middle and lower Chiquita Canyon (76 acres). There are likely to be several smaller patches of unmapped native grassland scattered throughout the study area, but individual patches are unlikely to be more than a few tens of acres in size. The cumulative total of these unmapped areas is likely to be no more than a hundred acres. There are approximately 1,100 acres of native grassland mapped for the study area.

Project Impacts

Impact 4.9-61: *The Proposed Project would significantly impact 2,413.6 acres of grassland, including 505.1 acres of native grassland. In addition, construction and maintenance of infrastructure facilities within the RMV Open Space would temporarily impact 41.3 acres of grassland, including 5.2 acres of native grassland.*

The Proposed Project would result in impacts on 2,413.6 acres (48 percent) of grasslands on RMV. Of the grasslands impacted, 505.1 acres (21 percent) are native grasslands and 1,908.5 acres (79 percent) are annual grasslands. Although annual grasslands are considered to have relatively low biological value when compared to native vegetation communities, they do provide habitat for grassland species and foraging raptors. Impacts on annual grasslands would be considered potentially significant due to the substantial amount that would be impacted. Native grasslands are

considered a sensitive vegetation community due to their limited distribution and their potential to support sensitive plant species. All impacts on native grassland would be considered significant.” (Draft Program EIR, at page 4.9-129)

Impacts to vegetation communities, including grasslands are illustrated on Exhibits 4.9-11a and 4.9-11b of the Draft Program EIR.

Mitigation for impacts to grassland is discussed in Table 4.9-41 and re-stated here. Minimization/avoidance for impacts to grassland is as follows: The Proposed Project would conserve 2,627.3 acres (52 percent) of grassland through implementation of Project Design Feature (PDF) 4.9-1. Please refer to the prior summary discussion and Appendix G-7 regarding how the Conservation Strategy (PDF 4.9-1 and 4.9-2) contributes to the mitigation of significant impacts and helps maintain and enhance net habitat value of resources protected through the creation and adaptive management of the RMV Open Space. In particular refer to Annual and Native Grasslands Vegetation Community—Goals, Objectives, Potential Stressors and Management, Enhancement and Restoration Actions. Also refer to the Habitat Restoration Plan regarding restoration of upland habitat types including native grassland. The proposed project would implement 82 acres of recommended native grassland restoration and 60 acres of coastal sage scrub/native grassland restoration.” Impacts to grasslands are less than significant with implementation of the AMP and restoration measures. (Draft Program EIR at page 4.9-217) Therefore, no mapping of valley needlegrass grassland is needed.

Response 12

Indirect impacts resulting from the proposed project are discussed beginning on page 4.9-250 of the Draft Program EIR and are further discussed in Topical Response 3.1.9.6, Biological Resources—Indirect Impacts. Compatibility of the proposed project with surrounding land uses is discussed in Section 4.1, Land Use and Related Planning Programs, and the O’Neill Conservancy is specifically discussed on page 4.1-19 of the same section of the Draft Program EIR.

Response 13

Please refer to the response to Comment 11 above.

Response 14

The Draft Program EIR identifies on page 4.9-132 in Table 4.9-30 the acres of wetlands, waters and riparian habitats subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) and California Department of Fish and Game (CDFG) that would be impacted by the Proposed Project. Project impacts total 29.77 acres of permanent wetland impacts subject to USACE jurisdictional and 152.77 acres of permanent riparian habitat impacts subject to the jurisdiction of CDFG. The proposed project would protect the following aquatic habitats as set forth in Table 4.9-31 of the Draft Program EIR: Riparian: 1,507.4 acres; Open Water: 63.1 acres; Freshwater Marsh: 16.3 acres; Watercourses: 13.2 acres; and Vernal Pools: 19.9 acres.

The project has minimized impacts to these habitat types. In addition the Habitat Restoration Plan (Appendix J-2) identifies several potential habitat creation/restoration areas including GERA, Gobernadora Canyon, Gobernadora Canyon/Fertile Crescent, Sulphur Canyon, Chiquita Creek between the “Narrows” and the SMWD Treatment Facility, Chiquita Canyon between SMWD Treatment Facility and New Ortega Highway in addition to stream restoration opportunities within Gobernadora at the knick point, Chiquita Creek between the “narrows” and

the SMWD Treatment Facility and upper Gabino Creek and invasive species control in San Juan Creek for giant reed (*Arundo donax*). Implementation of invasive species control in San Juan Creek is expected to increase functions of San Juan Creek.

Response 15

The County's biological mitigation measures, and the discretion of the Director PDS in applying those biological mitigation measures, does not replace or alleviate the need for the project applicant to obtain all applicable federal/state permits and approvals, and to develop in accordance with those approvals. Those federal/state agencies will ensure compliance with their own permit requirements. Furthermore, it should be noted that the Director PDS is required to proceed in accordance with the zoning regulations and protocols set forth in the PC Text. These regulations/protocols specifically require that, before developing in sensitive areas, the project applicant must provide evidence that the development is consistent with and in accordance with the federal/state permits. This evidence could include verification from the permitting agencies.

The term "substantially avoided" is not open-ended when all aspects of the proposed mitigation program/conservation strategy are considered together. The detailed planning principles and guidelines provide enough clarity to enable a determination by the Director of whether resources are being substantially avoided. Again, the resource agencies themselves will make their own determinations in granting their respective permits.

Regarding the potential for locating new populations of species (i.e., brodiaea), please refer to Responses 20 and 21 below. As described therein, the study area has been surveyed and resurveyed to ensure that all locations have been properly identified.

Response 16

Impacts to USACE and CDFG jurisdiction have been determined to be significant as detailed in Table 4.9-41 of the Draft Program EIR. The amount and types of mitigation required to compensate for impacts to USACE and CDFG jurisdiction will be determined in coordination with the USACE and CDFG through the Section 404 and Section 1600 programs administered by these agencies. The assertion that "...the appropriate mitigation should be at least 3:1" is not correct and in no way consistent with written guidance/policy from the agencies. For example, in the most recent guidance on mitigation, the Los Angeles District of the USACE the following statement is provided:

The Corps strives to avoid or minimize adverse impacts to waters of the U.S., and to achieve a goal of no net loss of wetland functions and values. To achieve these goals, compensatory mitigation is generally required at a minimum 1:1 replacement ratio. In the past, the Corps has accepted acreage as a surrogate for functions and values because the former parameter is easier to measure. The proliferation of habitat assessment tools in recent years has allowed the Corps to utilize estimates of functions and values increasingly to determine replacement ratios.⁵²

The USACE goes on to note that the final determination of ratios is determined by a number of factors such as temporal loss, scarcity of the resource, site hydrology and potential for success.

⁵² U.S. Army Corps of Engineers, Los Angeles District. 2004. *Special Public Notice: Final Mitigation Guidelines and Monitoring Requirements*. Public Notice N.: 970031200-RRS, April 19, 2004.

Chapter 3 of Appendix J-2: Habitat Restoration Plan is an "Aquatic Resources Habitat Restoration Plan" that addresses the proposed habitat creation and enhancement areas that will provide for replacement of the lost wetland and riparian functions and values while ensuring no net loss both in terms of total acres and functions and values. As discussed above in response 14 Figures 2 through 6 of Appendix J-2 identify specific areas that will be targeted for various creation, restoration, or enhancement activities.

In addition, the project applicant has a proven track record in wetland and riparian creation or restoration, having installed approximately 120 acres on the Ranch Plan project site over the last 15 years. Most recently, 43 acres of alkali marsh, meadow and riparian habitats created to compensate for impacts associated with Ladera Ranch were determined to be successful by the USACE and CDFG as was 7.65 acres created to compensate for the impacts associated with Tesoro High School. The 50+ acres of wetland/riparian habitats were monitored using the USACE HGM approach in an USACE- and CDFG-approved monitoring program that incorporated the USACE' HGM approach for measure wetland functions. All 50+ acres of created/restored wetlands were determined to meet or exceed the functions of the wetlands that were the subject of compensation. Further information on the science of wetland restoration is provided in Appendix G of the Responses to Comments document.

Impacts to wetlands subject to the jurisdiction of the USACE are provided in Table 14 by habitat type.

TABLE 14
WETLAND HABITAT TOTALS WITHIN THE RANCH PLAN

Habitat Type	PA 1	PA 2	PA 3	PA 4	PA 5	PA 6	PA 7	PA 8	PA 9	Totals
Alkali Meadow (5.2)	0.04		0.19			1.20		0.12	0.88	2.43
Seasonal Pond (5.3)					0.12	0.17	0.03			0.32
Coastal Freshwater Marsh (6.4)			0.55		0.65	0.73	3.05		0.77	5.75
Riparian Herb (7.1)					0.01		0.22			0.23
Southern Willow Scrub (7.2)			0.65			0.19	0.08	0.10	1.57	2.59
Mulefat Scrub (7.3)						2.90	1.36		0.19	4.45
Sycamore Riparian Woodland (7.4)			0.01							0.01
Oak Riparian Woodland (7.5)										0.00
Arroyo Willow Forest (7.6)			5.47			0.08				5.55
Total	0.04	0.00	6.87	0.00	0.78	5.27	4.74	0.22	3.41	21.33

Impacts to riparian habitats subject to the jurisdiction of the CDFG is provided in Table 15 by habitat type.

TABLE 15
RIPARIAN HABITAT TOTALS WITHIN THE RANCH PLAN

Habitat Type	PA 1	PA 2	PA 3	PA 4	PA 5	PA 6	PA 7	PA 8	PA 9	Totals
Alkali Meadow (5.2)	0.04	0.29	0.22		0.42	1.63		0.12	0.91	3.62
Coastal Freshwater Marsh (6.4)			0.54		0.65	1.00	3.05		0.78	6.02
Riparian Herb (7.1)	0.09				1.37	1.03	0.37			2.86
Southern Willow Scrub (7.2)	1.50	0.46	5.13		0.48	0.61	1.23	2.19	1.94	13.54
Mulefat Scrub (7.3)	0.66	1.51	2.33	3.82	4.53	3.91	3.45	0.27	2.45	22.92
Sycamore Riparian Woodland (7.4)		0.69	5.91	0.05		0.67		2.62	9.36	19.29
Oak Riparian Woodland (7.5)		3.62	4.72	0.63	11.34	0.41	0.37	5.72	4.29	31.09
Arroyo Willow Forest (7.6)	0.75	0.02	15.49	0.47	3.87	0.20				20.81
Total	3.04	6.59	34.33	4.98	22.66	9.45	8.47	10.91	19.72	120.16

Regarding the selection of a LEDPA, the commenter is correct that in accordance with Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers will select the Least Environmentally Damaging Alternative (LEDPA) as part of future permitting for the proposed project. This determination likely will be made as part of the ongoing SAMP/MSAA process. The FWHA has no role in selection of a LEDPA for the SAMP/MSAA.

Response 17

Please refer to Topical Response 3.1.13, Alternatives, regarding selection of an environmentally superior alternative.

Response 18

Your comment is noted. The project objectives are set forth in the Draft Program EIR and do not include establishment of a mitigation bank for future road projects in south Orange County.

Response 19

The "ERROR! Reference source not found" statements are a word processing error related to a connection between the text and the accompanying table. This error does not change the conclusions of the Draft Program EIR. The correct reference information was provided in the Errata sent out to everyone on the distribution and notification lists.

Response 20

Focused botanical surveys have been conducted throughout the project site over the course of the last 8 years unrelated to those conducted for the Foothill Transportation Corridor–South, which provided very detailed data relative to special-status plants. These surveys included surveys by Dudek in 1998, Glenn Lukos Associates (GLA) in 1997, 1998, 2001 and extensive surveys by GLA in 2003. In particular, the 2003 GLA surveys addressed all un-surveyed or under-surveyed portions of the project site, with a substantial emphasis on the southeast quadrant and eastern portions of the Ranch Plan project site, such as Verdugo Canyon, as well as all proposed development "bubbles."

The 1997, 1998, 2001, and 2003 surveys conducted by GLA were performed by expert botanists Tony Bomkamp and/or David Moskovitz. Mr. Bomkamp is very familiar with the

botanical resources on the Ranch Plan project site having conducted and directed surveys for the FTC-south in 1995-1996 and 2001 as well as conducting/directing the 1997, 1998 and 2003 surveys. In addition to conducting hours of botanical surveys, Mr. Bomkamp has spent numerous hours conducting fairy shrimp surveys, jurisdictional delineations, and gnatcatcher surveys, all which have allowed for further botanical investigations on the Ranch Plan project site and opportunistic observation of special-status plants. For example, Mr. Bomkamp and Mr. Moskovitz are responsible for initial discovery of the following special-status species on the site that were unknown previously from the site: thread-leaved brodiaea, mud nama, salt-spring checkerbloom, beaked spikerush, western dichondra, upright burhead, vernal barley, small-flowered microseris, and Fish's milkwort.

Regarding the species: *Deinandra paniculata*, *Convolvulus simulans*, *Navarretia prostrata*, *Quercus engelmannii*, and *Viguiera purissimae*, two of these species have never been detected on the Ranch Plan project site: *Navarretia prostrata* and *Viguiera purissimae*, and would not be affected by the proposed project. *Quercus engelmannii* is only known from the Donna O'Neill Conservancy and would not be affected by the project. *Convolvulus simulans* is a CNPS List 4 taxon known from two locations: the Donna O'Neill Conservancy and Cristianitos Canyon. The population in the Conservancy, numbering about 200 would be preserved. The population in Cristianitos Canyon, which numbers a few hundred individuals, would be impacted. However, in implementation of Minimization/Avoidance Measure 4.9-12, substantial avoidance of this population would be provided as the *Convolvulus simulans* and the Coulter's saltbush addressed in the measure are in close proximity resulting in substantial avoidance. *Convolvulus simulans* is widespread and still relatively common and the loss of a portion of this population would not be considered significant. Preservation of the population associated with the Donna O'Neill Conservancy and a portion of the Cristianitos population would ensure persistence of this species on the project site. *Deinandra paniculata* is a CNPS List 4 taxon that occurs in a variety of habitats and disturbed or ruderal areas in Riverside, Orange, and San Diego counties, extending into northern Baja California, Mexico. Where it occurs, this species often is very common in open coastal sage scrub, native grassland, non-native grassland, agricultural lands/disc'd fields and disturbed areas. On the proposed project site, this species is widespread over the ranch with concentrations in Chiquita Canyon, Gobernadora Canyon, the Donna O'Neill Conservancy, Cristianitos Canyon and Gabino Canyon. Implementation of the project would result in the loss of grassland areas and agricultural fields occupied by this species. However, due to its prevalence on the project site, impacts to this species would not be considered significant.

Response 21

The commenter is not correct that data were collected for thread-leaved brodiaea (*Brodiaea filifolia*) in only 2001. As set forth on pages 4.9-3 and 4.9-4, surveys for thread-leaved brodiaea have been conducted on the project site lands during 1995, 1998, 2001, and 2003. As further noted in the response to Comment 20, surveys conducted by Glenn Lukos Associates (GLA) in 1998 and 2003 were ranch-wide and the surveys in 2003 were also ranch-wide and also focused extra attention on areas that were potentially unsurveyed or under-surveyed, with an emphasis on development areas to ensure that all impacts to special-status plants were addressed. The 2003 surveys identified new populations of thread-leaved brodiaea in Planning Areas 4, 5, 7, and 8.

During these surveys on the Ranch Plan project site, 9,314 flowering stalks were counted in 30 locations with the number of flowering stalks per location ranging from one individual to 3,000 individuals. The number of 4,400 individuals noted by the commenter is not a number present

in the Draft Program EIR and is not properly associated with the Draft Program EIR and associated analysis.

As set forth under Impact 4.9-66, on page 4.9-135 of the Draft Program EIR, the project as proposed prior to avoidance measures, would impact 21 of the 30 locations and 6,392 of the 9,314 individuals identified on the Ranch Plan project site. This was identified in the Draft Program EIR as a significant impact.

In accordance with the NCCP/HCP Sub-Basin Consistency Analysis described on page 4.9-164 and detailed in Tables 4.9-32 and 4.9-36, impacts to thread-leaved brodiaea would be reduced to less than significant through a program based largely on avoidance, with translocation as a minor component of the program. Specifically, avoidance would result in preservation of 8,936 (93 percent) of flowering stalks, including all major and important populations. As part of the RMV Open Space design and Adaptive Management Program, additional measures would be implemented including control of main stressors, incorporation of timed grazing and fire management, and translocation of small populations to be impacted by the project as set forth on page 4.9-214 of the Draft Program EIR and detailed in Appendix J-1: Plant Species Translocation, Propagation, and Management Plan.

Finally, the commenter notes "...relocation of Brodiaea has not shown long-term success to-date". While relocation is only a limited component of the program that ensures that there would be no significant impacts on tread-leaved brodiaea, the nearby Forster Ranch thread-leaved brodiaea relocation and monitoring program has been ongoing since summer of 1999. To date, approximately 13,000 flowering stalks have been counted with a trend that shows an increase in flowering stalks each year since the program's inception. As such, while only a limited component of the overall program of avoidance, management and translocation, the potential for successful translocation is very high and is expected to contribute to the long-term persistence of thread-leaved brodiaea in the region.

Response 22

Please refer to the response to Commenter 33.

Response 23

Refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species regarding further discussion on the arroyo toad.

Response 24

Your comment is noted regarding the South Orange County Transportation Infrastructure Improvement Program (SOCTIIP) being conducted by the Transportation Corridor Agencies (TCA) and the Federal Highway Administration (FHWA). The County of Orange does not have jurisdiction over the toll road. The TCA and FHWA have prepared an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) evaluating impacts associated with extension of State Route 241 as part of the SOCTIIP, including the effects on the O'Neill Conservancy. The impacts associated with the SOCTIIP have been considered in Section 7, Cumulative Impacts, of the Ranch Plan Draft Program EIR. In particular, the Draft Program EIR notes that the FEC-W, FEC-M, and A7C-FEC-M alignment alternatives would fragment the O'Neill Conservancy habitat block depicted on Exhibit 4.9-22. The EIS/EIR prepared for the SOCTIIP also addresses the Ranch Plan as a cumulative project.

Response 25

As noted in the comment, the Draft Program EIR provides an extensive discussion on how the proposed project and its associated Conservation Strategy addresses both the Tenets of Reserve Design developed by the Scientific Review Panel (see pages 4.9-178 through 4.9-195) and the 2002 NCCP Standards (see pages 4.9-220 through 4.9-224). This is also addressed in Topical Response 3.1.9.5, Biological Resources–Reserve Design/NCCP Standards and 3.1.9.3–Adaptive Management Program/Mitigation. The comment also makes reference to development in Planning Areas 10, 11, and 12. As noted on Table 3.4-2 and depicted in Exhibit 3-20 Planning Areas 10, 11, and 12 are open space planning areas containing 845, 1,015, and 1,348 acres, respectively, of open space. No urban development, except for certain infrastructure depicted on multiple of the biological resource exhibits and discussed in Topical Response 3.1.2.2, Definition and Preservation of Open Space, will occur in these planning areas. For a discussion on why proceeding with the GPA/ZC at this time will not preclude effective NCCP/HCP and SAMP/MSAA planning, please refer to Topical Response 3.1.1, Project Processing.

Response 26

Please refer to Topical Response 3.1.9.3, Biological Resources–Adaptive Management Plan/Mitigation, for a discussion on how the proposed Conservation Strategy mitigates for the proposed project's impacts.

Response 27

As noted by the commenter, for any significant and unmitigated impacts, the County will be required to state specific reasons to support any actions approving the project based on the Final EIR and/or other evidence in the record. Whether or not such findings can be made will be a decision for the County Board of Supervisors to make.

Also, as further noted by the commenter, the County has an obligation to attempt to mitigate all significant impacts even if the impact cannot be reduced to a level of insignificance. The preparers of the Draft Program EIR believe that this requirement has been met, but this will ultimately be a decision for the County Board of Supervisors to make.

Response 28

The comment is correct that the U.S. Army Corps of Engineers is working on a Special Area Management Plan (SAMP) for the San Juan Creek Watershed and western San Mateo Watershed in cooperation with the California Department of Fish and Game who is preparing a Master Streambed Alteration Agreement (MSAA) for the same area. The separation of the Ranch Plan from the NCCP/HCP and SAMP/MSAA is discussed in Topical Response 3.1.1.1, Project Processing. Impacts to wetlands and the LEDPA are discussed in the responses to Comments 14 and 16 above.

COMMENTS 52 KIM HERKEWITZ
Dated: August 8, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 2

Cumulative impacts were evaluated in Section 7 of the Draft Program EIR. Further discussion is provided in Topical Response 3.1.15.

Growth-inducing impacts were also addressed in the Draft Program EIR. Section 6 of the Draft Program EIR addressed the potential growth inducing effect of the project on the surrounding area in Orange, Riverside, and San Diego counties. Growth-inducing impacts are further discussed in Topical Response 3.1.14.

COMMENTS 53 JUANENO BAND OF MISSION INDIANS, ACJACHEMEN NATION

Dated: August 8, 2004

Response 1

Consultation with representatives of the Juaneño Band of Mission Indians was initiated by the project archaeologist (ARMC) by mail and followed up by telephone. Letters were mailed to David Belardes (2/16/00), Sonia and Darrell Johnson (2/16/00), and Jean Fietze (3/7/00). David Belardes and Joyce Perry responded by telephone and through Nancy Evans, the project ethnohistorian. They asked for and received permission to visit the Ranch on March 16, 2000, accompanied by ARMC personnel. The purpose of the field trip was to explore the possible identification of several named historic Juaneño villages with recorded archaeological sites in the study area. At the conclusion of the visit, Belardes and Perry asked to be included in the ongoing review process to which ARMC personnel readily agreed.

Jean Fietze responded by telephone regarding several issues. She expressed a desire to obtain a copy of the survey report and asked that any collected artifacts be turned over to the Juaneño Band. Fietze was referred to the Ranch to make her requests directly.

Sonia and Darrell Johnston did not respond to the letter or to a follow-up telephone call.

Response 2

Your comments are noted. Project design was carried out to eliminate insofar as possible potential impacts to known archaeological resources. Where project design could not avoid or otherwise preserve these resources, mitigation measures have been proposed that will reduce these potential impacts to a level that is considered less than significant.

Response 3

Your comments are noted. The areas designated for open space would not be open to the public with the exception of a few designated trails. The trails would be sited away from any known archaeological resources, and public access would be limited to the trails proper. These measures should protect the archaeological resources from impacts.

Response 4

Your comment is noted. Project Design Feature 4.11-1, requiring a design to avoid or minimize impacts, will be enforced at the various subsequent approvals. Additionally, Mitigation Measure 4.11-1 requires preparation of a Cultural Resources Management (CRM) Plan prior to the approval Area Plans.

Response 5

The archaeological reports for the Ranch Plan will be processed consistent with County procedures.

Response 6

The Cultural Resources Management Plan for the Ranch Plan will be processed consistent with County procedures.

Response 7

Your comment is duly noted. Native American monitors will be present during grading on any site where human remains have been previously discovered.

Response 8

Your comments are noted.

Response 9

Mitigation measure 4.11-3 would be implemented in full compliance of the law in the event of the discovery of human remains.

Response 10

Your comments are noted. In the continuing review process, the County and project applicant will consult with local Native Americans from the list provided by Ron Wood of the Native American Heritage Commission.

COMMENTER 54 BUILDING INDUSTRY ASSOCIATION, ORANGE COUNTY CHAPTER
Dated: August 9, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 2

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 55 SEA AND SAGE AUDUBON
Dated: August 9, 2004

Response 1

Your comments are noted. The comment does not identify specific topical areas that are omitted or disjointed. The Draft Program EIR contains an evaluation of every topical area on the CEQA checklist. The unavoidable impacts associated with the project are identified at the end of each topical area. Cumulative impacts are addressed in Section 7 of the Draft Program

EIR. The information provided is complex due to the size and nature of the project. To ensure all potential impacts have been addressed extensive data has been provided.

Response 2

Please reference Topical Response 3.1.9.1 regarding the use of the NCCP reserve design and standards as part of the evaluation in the Draft Program EIR.

Response 3

Your comment is noted. Please refer to Topical Response 3.1.1.5 regarding when to recirculation of an EIR. Topical Response 3.1.1.1 addresses the Separation of the Ranch Plan from the Processing of the NCCP/HCP and the SAMP/MSAA.

COMMENTS 56 THE KENNEDY COMMISSION

Dated: August 9, 2004

Responses 1

The comment is noted. Although the November, 2000 Regional Housing Needs Assessment (RHNA) for Orange County does not currently assume any residential construction within the Ranch Plan area, it is recognized that future compliance is necessary. The Draft Program EIR states on page 4.3-11 that the Ranch Plan would be responsible for contributing to the County's portion of RHNA allocations compliance.

Response 2

The comment is noted. The Draft Program EIR does identify the affordable categories and the share of the region's future housing for the unincorporated Ranch Plan area. The proposed 14,000 dwelling units will provide needed housing opportunities for those individuals living and working in Orange County. Although this amount of housing is less than the 20,468 dwelling units forecast for the Ranch Plan area in the OCP-2000M projections, it is recognized, as reflected on page 4.3-11 of the Draft Program EIR, that implementation of the Ranch Plan will do much more toward achieving regional projections than maintaining the status quo. The proposed age-restricted senior dwelling units will also provide a mix of dwelling unit types including both single-family and apartment units which will be responsive to projected demographic housing needs for the area.

Response 3

The comment is noted. Exhibit 3-20 of the Draft Program EIR identifies the number of dwelling units over a gross acreage of development area including other uses of roads, parks, internal landscaped areas, and utilities that are also components of a residential development area. This gross acreage does not reflect the actual net densities that would be permitted by the proposed General Plan and Zoning designation requests by the project. The General Plan "1B" designation would permit up to 18 dwelling units per acre on a gross acreage basis and higher possible densities on a net basis. The proposed Planned Community zoning categories allows for these potential higher net densities as well as special height limits of 45 and up to 75 feet in certain areas allowing for multiple-story residential densities. In addition to the allowable densities, the project proposes a mix of dwelling unit types (i.e., single-family attached and detached units, apartments, and multi-family dwelling units) in response to projected

demographic housing needs for the area and represents an appropriate balance of housing opportunities across various income and demand sectors.

Neither State law nor Orange County ordinance mandate that a particular project contain a minimum number or percentage of affordable housing units. Notwithstanding, and as discussed on pages 4.3-7 and 4.3-11 to -12 of the Draft Program EIR, State law does mandate that all regional councils of government in California identify existing and future housing needs for their respective regions. Consistent with this mandate, the Southern California Association of Governments (SCAG) has prepared a Regional Housing Needs Assessment (RHNA) that (i) evaluates current and future housing needs across several income categories for the southern California region and (ii) allocates to each city and county within SCAG's region a portion of the new housing units that must be built in order to achieve the RHNA projections. The November 2000 RHNA allocations for Orange County are set forth in Table VI-1 of Orange County General Plan Housing Element.

Consistent with State law, the County of Orange has prepared a 5-Year Housing Action Plan ("5-Year Plan") that is designed to satisfy and accommodate the new construction allocations set forth in the RHNA. See Orange County General Plan Housing Element at pp. X-145 *et seq.* Specifically, the 5-Year Plan identifies a series of goals, strategies and actions that will help the County to achieve its RHNA obligations by 2005. Notably, Strategy 1b of the 5-Year Plan contemplates the development of new large-scale projects in the County that include a sufficient range of housing types and densities in appropriate locations to facilitate the production of housing for all economic segments. Approval of the proposed project would be consistent with this strategy. Specifically, the 14,000 dwelling units proposed for the project will provide greater—and much needed—housing opportunities for individuals living and working in Orange County. The contemplated mix of dwelling types (i.e., 7,020 single-family attached and detached units, 6,000 senior housing units [including both single-family and apartment units] and 980 multi-family units) is responsive to projected demographic housing needs for the South Orange County area and represents an appropriate balance of housing opportunities across various income and demand sectors. Furthermore, the new housing opportunities afforded by the project will assist the County in achieving its future RHNA obligations for the Orange County region.

Response 4

The comment is noted. The proposed General Plan designations and zoning for the Ranch Plan as noted in the response to Comment 3 would allow for net densities of 25 units/acre or greater.

Response 5

The comment is noted. As noted in the responses to Comments 2 and 3, the proposed project is for an additional 14,000 dwelling units which will include a mix of housing types and range of densities. The project housing is proposed in conjunction with 5.2 million square feet of employment uses in order to create a balanced community along with the benefits of reduced trip lengths and other related impacts. The Ranch Plan would provide a slightly higher jobs/housing ratio than SCAG's assumed ratio for Orange County. This would increase the overall jobs/housing balance for southern Orange County, which is currently below the SCAG ratio (PDF 4.3-1).

Response 6

The comment regarding timing is noted. The timing of specific housing projects, types, and densities will be the subject of additional public hearings as part of subsequent processing of Area Plans for development of the project. Housing will be monitored through zoning statistical table with the Master Area Plan and Subarea Plan analysis/consideration by the County and the project's Mitigation Monitoring and Reporting Program for the Ranch Plan Program EIR. The project applicant's commitment to no net loss of housing and relocation of existing housing with the project which may be displaced during project development should also be acknowledged (PDF 4.3-2 and MM 4.3-1). There is no current County of Orange requirement for an Affordable Housing Plan, but the comment is noted.

COMMENTS 57 **SHUTE MIHALY & WEINBERGER, LLP**
Endangered Habitats League
Sierra Club
Laguna Greenbelt, Inc.
Defenders of Wildlife
Sea and Sage Audubon Society
Dated: August 9, 2004

Response 1

The opinion of the commenter is noted.

Response 2

The commenter incorrectly states that much of the open space would be "little more than private backyards." The project provides for an integrated open space area that is adaptively managed. The definition of the open space is fully discussed in Topical Response 3.1.2, Project Description.

Response 3

Please refer to Topical Response 3.1.1, Project Processing.

Response 4

Please refer to Topical Response 3.1.9, Biological Resources.

Response 5

Please refer to Topical Response 3.1.9, Biological Resources and Topical Response 3.1.11, Hazards and Hazardous Materials.

Response 6

Please also refer to Topical Response 3.1.5, Population and Housing, Topical Response 3.1.7, Transportation and Circulation, and Topical Response 3.1.13, Alternatives.

Response 7

Please refer to Topical Response 3.1.1, Project Processing and Topical Response 3.1.2, Project Description.

Response 8

Please refer to Topical Response 3.1.1, Project Processing.

Response 9

Please refer to Topical Response 3.1.1, Project Processing and Topical Response 3.1.2, Project Description. Please also refer to Appendix J of the Draft Program EIR.

Response 10

Please refer to Topical Response 3.1.9, Biological Resources.

Response 11

Please refer to Topical Response 3.1.2, Project Description.

Response 12

Please refer to Topical Response 3.1.2, Project Description.

Response 13

The commenter should note that Section 3, Project Description, and Section 4.1, Land Use and Related Planning Programs, of the Draft Program EIR identify land uses that would be permitted or conditionally permitted in the various open space areas of the Ranch Plan project site. As with most jurisdictional general plans, the jurisdiction's zoning code provides more specificity related to allowable land uses than the level of detail provided in a general plan. The Orange County General Plan is no different. For this reason, the County's Zoning Code, supplemented by the proposed Ranch Plan Planned Community text provides for greater detail with respect to types of land uses. Draft Program EIR 598 (page 3-21 and 3-22) identifies the type of uses allowed in the open space. The uses identified by the commenter, such as golf-courses, clubhouse facilities, and restaurants would not be allowable uses in open space. Though open space would be incorporated into the golf course in Planning Area 9, as well as the other proposed golf courses, the calculation of open space acreage assumes the entire golf course area as part of the development area. This is clearly indicated in the Ranch Plan Statistical Summary, which is provided in Table 3.4-2 of the Draft Program EIR. Please also refer to Topical Response 3.1.2, Project Description, which provides more detailed explanation of the open space uses and Topical Response 3.1.9.6b which addresses the fuel modification zones.

Response 14

The commenter is incorrect that the Draft Program EIR does not provide any quantification of casitas, club houses, and caretaker housing. For example, page 3-29 of the Draft Program EIR states:

Planning Area 9. Planning Area 9 is 9,272 acres and located in the southeastern portion of the project site. All but 420 acres would be retained as open space...The development would include an approximately 218-acre golf course, 20-acre site for development of 120 residential casitas, and 100 estate residential lots. A casita is defined in the *Ranch Plan Planned Community Program Text* as a dwelling unit constructed in association with estate residential units..."

With respect to caretaker housing, such units would only occur as permitted and addressed in the Planned Community Text, but is expected to be minor. With respect to clubhouses, it is assumed in the non-residential land uses for the project. Replacement housing for agricultural workers would be within the development areas. The location of the 20 acres of casitas is shown on all of the impact graphics within the Biological Resources section; see for example Exhibit 4.9-17a which shows the proposed golf course and the residential (casitas) land use and associated infrastructure for Planning Area 9.

Response 15

Please refer to Topical Response 3.1.2, Project Description.

Response 16

Please refer to Section 4.1.15, Public Services and Facilities, of the Program EIR. Please also refer to Topical Response 3.1.2, Project Description, and Topical Response 3.1.12, Public Services and Facilities.

Response 17

Section 5, Alternatives to the Proposed Project, include land use alternatives that do not include a regional park in Planning Area 13. Please also refer to Topical Response 3.1.10, Recreation.

Response 18

The implementation of Ranch Plan Senior Housing will be monitored along with other housing types and other land uses through the County's planning process. Individual development projects (including the senior housing component) will be identified and considered through the Master Area Plan, Suburban Plan, subdivision and site plan process and monitored over time through the County's Annual Monitoring Program (PDF 4.1-2 and 4.1-3). Additionally, project related traffic and trip generation will also be programmatically monitored through the additional traffic analysis required for each planning area at the Master Area Plan Level where ongoing compliance of project traffic generation will be measured for any change or alteration of housing or other land uses (MM 4.6-2).

Please refer to Topical Response 3.1.7.8 for discussion explaining generation rates for senior housing.

Response 19

Please refer to Topical Response 3.1.1, Project Processing.

Response 20

Please refer to Topical Response 3.1.9, Biological Resources.

Response 21

Please refer to Topical Response 3.1.9, Biological Resources.

Response 22

Please refer to Topical Response 3.1.1, Project Processing and Topical Response 3.1.9, Biological Resources.

Response 23

Please refer to Topical Response 3.1.7, Transportation and Circulation.

Response 24

Please refer to the subsequent responses to Comments 146 through 163.

Response 25

As described in Chapter 6 - Long Term Adaptive Management of the Conceptual Water Quality Management Plan (Appendix G-2 to the Draft Program EIR) inspection and monitoring of the structural BMPs will be conducted by the Homeowners Association or other designated agency and will include:

- a. BMP Inspection and Performance Monitoring, including wet and dry weather monitoring
- b. Hydrologic Monitoring, including groundwater, base flows and peak discharges
- c. WQMP Review and Evaluation
- d. Corrective Measures
- e. Documentation and Reporting

Response 26

Please refer to Topical Response 3.1.11, Hazards and Hazardous Materials

Response 27

Please refer to Topical Response 3.1.11, Hazards and Hazardous Materials that pertains to wildland fires. As indicated in the Topical Response, the topographic information is provided in the Wildland Fire Management Plan. There are not requirements to avoiding development on slopes in excess of certain percentage. The fire behavior modeling computer program done for the project, considers such factors as intensity, rate of spread, flame length, fire size, and perimeter estimates under varying weather conditions such as dead fine fuel moisture, live fuel moisture, mid-flame wind speed, percent slope and direction of fire spread based on a single, specific ignition. Pertaining to Planning Area 9, the Draft Program EIR did find that even with the OCFA performance objectives may not be achievable. This would be considered a significant, unavoidable impact. Additionally, it stated if Verdugo Road did not provide sufficient fire safety access, additional improvements would be required. The Draft Program EIR acknowledged it is possible that the impacts associated with necessary roadway improvements in Planning Area 9 would exceed the level of impact assumed in this Program EIR. Should that occur, supplemental CEQA documentation would be required.

Response 28

Please refer to Topical Response 3.1.10, Recreation. It should be noted, active recreation would only be allowed within the development area of the DSA.

Response 29

Please refer to Topical Response 3.1.10, Recreation.

Response 30

Please refer to Topical Response 3.1.10, Recreation. Regarding uses within open space, please refer to Topical Response 3.1.2, Project Description.

Response 31

Please refer to Topical Response 3.1.2, Project Description pertaining to Governance and the responses to LAFCO (Commenter 191) for a discussion of LAFCO policies. The comment raises the question of the ability for the projected growth to occur within other areas of the County. The growth projections for the County are developed through the Orange County Council of Governments. The development of the projections (the adopted projections being OCP-2004) is done through an iterative process involving the County and cities within Orange County. Growth trends, the various General Plans, and State growth projections are all considered when establishing the long-term growth projections for the County. This effort is coordinated by the Center for Demographic Research at the California State University at Fullerton. To ensure that the adopted socioeconomic data is reflective of the current conditions in Orange County, the data sets are updated approximately every 4 to 5 years. By having this iterative process, the agencies that use this data (SCAG, OCTA, County of Orange, and local jurisdictions) are able to factor in variables such as changes in employment patterns, economic considerations, and migration patterns that occur over time. These growth projections are incorporated into the SCAG baseline analysis and used for the various regional planning programs. Given this process, the County of Orange is not in a position to determine that the growth can occur in other locations within the County without agreement to such assumptions by the affected jurisdictions. The recognition that projected growth would occur within the project study area was through the recognition that undeveloped land would be needed to realize the growth levels assumed for Orange County by the State and regional planning agencies.

Response 32

Please refer to Topical Response 3.1.2, Project Description, and Topical Response 3.1.3, Land Use.

Response 33

The potential impacts associated with residential uses in proximity to MCB Camp Pendleton were addressed in the Draft Program EIR in Section 4.1, Land Use and Related Planning Programs. Mitigation measures were proposed that would reduce this impact to less than significant. The project does not propose to use only County of Orange standards for determining if there would be an impact to residential uses in Planning Area 8. Mitigation Measure 4.1-2 requires at the time of Area Plan approval for Planning Area 8, the Planning Director evaluate the most current RCUZ for MCB Camp Pendleton to ensure that noise sensitive land uses are not constructed in areas that would exceed state noise standards or where there would be a land use incompatibility, as determined by the Marine Corps. The Marine Corps in their comment on the Draft Program EIR found this measure to be satisfactory (please refer to the response to Comment 15 in the MCB Camp Pendleton letter). Military interface is also discussed in Topical Response 3.1.3.

Response 34

Please refer to Section 4.3, Population and Housing, page 4.3-12, which states:

"As discussed in Section 4.1, Land Use and Related Planning Programs, the proposed project would displace approximately 11 housing units. These housing units are owned by RMV and occupied by people affiliated with RMV. These residents would be relocated to comparable housing units by Rancho Mission Viejo (emphasis added). Because of the small number of units affected, as well as relocation of the residents by RMV, the impact resulting from the displacement of housing would be less than significant.

4.3.4 MITIGATION PROGRAM

Project Design Features

PDF 4.3-2 Rancho Mission Viejo would relocate displaced residents (emphasis added) prior to approval of demolition permits. Mitigation Measure 4.3-1 further supports this project design feature...

Mitigation Measures

MM 4.3-1 In conjunction with approval of an Area Plan for those portions of Planning Areas 1 and 3 where existing residential units would be displaced, the applicant shall provide evidence of relocation of any remaining residents (emphasis added)."

Please also refer to Topical Response 3.1.5, Population and Housing.

Response 35

Please refer to OCFA's comment letter and the County's responses to this letter, as well as Topical Response 3.1.11,. With respect to Planning Area 1, this planning area was initially excluded from the proposed Secured Fire Protection Agreement due to partial coverage of Planning Area 1 by an existing fire station facility located in adjacent San Juan Capistrano and partial coverage by approved Secured Fire Protection Agreement for the adjacent Ladera community. Mitigation Measure 4.15-1 has also been revised to require the developer to enter into a Secured Fire Protection Agreement with OCFA prior to approval of the first subdivision anywhere in the proposed project.

MM 4.15-1 The Ranch Plan Fire Protection Program shall be approved prior to the approval of the first Area Plan. The Ranch Plan project shall conform to the Orange County Fire Authority (OCFA) Secured Fire Protection Agreement (SFPA)/Very High Fire Hazard Severity Zone (VHFHSZ) Guidelines and exclusions shall be applied to the project by application on a subarea basis in conformance with the Ranch Plan Fire Protection Program. The project applicant shall participate in, and maintain an approved OCFA Wildland Management Plan for all wildland interface areas and designed open spaces. Prior to approval of the first subdivision Subarea Plan, except for Planning Area 1, the developer shall enter into a Secured Fire Protection Agreement with OCFA for the provision of necessary facilities, apparatus, and fire and rescue supplies and equipment for the Ranch Plan. This

comprehensive plan will address fire and emergency medical service delivery within the project site, and will specify the timeframes and trigger points for initiation of services within the project by geographic area. The Secured Fire Protection Agreement shall ensure that OCFA fire protection and emergency medical performance objectives can be achieved for the Ranch Plan area. The applicant will ensure that development is phased in a manner that allows the maximum use of existing fire protection resources before new resources are required to be established.

The project proposes to provide new stations to provide fire protection to the project site. Should any portion of the project rely on existing facilities prior to approval of the Master Area Plan, the project would be required to demonstrate the ability to meet OCFA guidelines. It should be noted that the UAC designation permits medical facilities. It is reasonable to assume that such facilities would be constructed within the Ranch Plan project site.

Response 36

The Orange County Sheriffs Department is the primary law enforcement provider for the study area with the CHP providing back up. The Draft Program EIR acknowledges the need for new a sheriff facility in the project study area and has identified a new substation within the project limits. The project does not assume that the project site and new substation would rely on only existing personnel. The need for new personnel is not an environmental impact; and therefore, is not addressed in the Draft Program EIR. Fiscal issues have been addressed in the Fiscal Impact Report, prepared concurrently with the Draft Program EIR. Please refer to Topical Response 3.1.1, Project Processing, and Section 4.15, Public Services and Facilities, of the Draft Program EIR.

Response 37

Please refer to Topical Response 3.1.12, Public Services and Facilities.

Response 38

Contrary to the commenter's assertion, Section 4.15, Public Services and Facilities of the Draft Program EIR, the Water Supply Assessment (WSA), and the individual reports, plans and programs described/reproduced therein provide a detailed and comprehensive analysis of the water supply resources that are, and will be, available to meet both the potable and non-potable water demands of the Ranch Plan project. The analysis and supporting documentation fully comply with the reporting/evaluation requirements of CEQA; furthermore, said analysis and documentation fully satisfy the water supply analysis mandates prescribed in the Water Code.

Notwithstanding, in an effort to resolve certain misunderstandings inherent in the comments, Topical Response Number 3.1.12, Public Services and Facilities–Water Supply Assessment provides additional information/analysis concerning the availability and reliability of water resources that will serve the proposed project. In relevant part, Topical Response Number 3.1.12 provides supplemental discussion concerning (i) water supplies derived from the Colorado River Aqueduct and the State Water Project; (ii) MWD's water supply planning process; (iii) the reliability of MWD's water resources; and (iv) water shortage contingency planning by the Santa Margarita Water District (SMWD) and the project applicant. The net result of the cumulative analysis is a demonstration that sufficient quantities of water will be available to serve the needs of the proposed Ranch Plan project under normal, single-dry and multiple-dry year conditions. This conclusion is reflected/reiterated in a supplemental analysis

and comment letter prepared by the Metropolitan Water District (MWD) (see Appendix E of the Responses to Comments document) that directly responds to questions concerning the adequacy of the Draft Program EIR and the WSA, and the reliability of MWD as a long-term water source for the Ranch Plan project.

As demonstrated in the Draft Program EIR and the cumulative materials analyzed and provided in support thereof, SMWD's (and the project applicant's) reliance on MWD as a dependable source of long-term water supply is not misplaced. Furthermore, the commenter's suggestion that SMWD may not legitimately rely on MWD's reports and studies as a basis for reliable water supply information is incorrect. As set forth in Water Code Section 10631(j), an urban water supplier is statutorily authorized/entitled to rely upon water supply information provided by a wholesale agency in fulfilling its urban water management planning obligations. Accordingly, SMWD's reliance upon the 2003 *Report on Metropolitan's Water Supplies*, the 1999 *Water Supply and Drought Management Plan*, and other items prepared by MWD that pertain to regional water supply issues is both appropriate and warranted.

Response 39

The commenter seeks clarification concerning (i) whether the water supplies that will be used to support casita and accessory uses within the project area have been properly accounted for in the project's water demand/supply assessment and (ii) the source of water that will serve interim and future agricultural uses on the project site.

- A. Casitas and Accessory Uses. In preparing the Water Supply Assessment (WSA) for the proposed project, SMWD relied upon the land use assumptions and water demand factors set forth in the November, 2003 *Plan of Works for Planning Areas 4C, 4E, 5 and 6 (Plan of Works)* (see Draft Program EIR at Appendix L). Table 1-2 of the *Plan of Works* specifically acknowledges casitas, golf courses and other facilities as contemplated project uses. Furthermore, the *Plan of Works* estimates and ascribes water consumption for these individual uses in the context of overall water demand for the individual improvement districts evaluated in the *Plan of Works*. See *Plan of Works* at Tables 2-4 and 2-5. Consistent with this estimation/analysis, the WSA identifies demand factors for each category of proposed project use and incorporates said information into the WSA's overall water evaluation and projections for the project. See WSA Figures 2.1, 2.2, 2.3, and 2.11. Accordingly, both the WSA and the Draft Program EIR properly account for water demand associated with casitas, golf courses and other uses, and demonstrate that adequate water supplies will be available to accommodate the water demand associated with this uses and all other project-related uses.
- B. Water Supporting Agricultural Activities. Water supplies used to support current and historical agricultural activities on the project site have been derived/generated from private water rights held by the property owner. Specifically, Rancho Mission Viejo holds (i) riparian and pre-1914 appropriative water rights relative to surface and subsurface flows occurring within San Juan Creek and Trabuco Creek and (ii) percolating groundwater rights relative to subterranean water resources located within the San Juan Groundwater Basin. As recognized by the San Juan Basin Authority in its 1995 Groundwater Management and Facility Plan, Rancho Mission Viejo has historically used 3,500 acre-feet per year (AFY) of San Juan Basin water production rights to satisfy all project-area water demands. In recent years, Rancho Mission Viejo has pumped approximately 2,300 to 2,600 AFY from the San Juan Basin to support its on-site agricultural activities. Accordingly, Rancho Mission Viejo has been able to fully satisfy its agricultural water demands through utilization of its San

Juan Basin water supplies; acquisition and importation of off-site water have not been required.

Implementation of the proposed project contemplates that future agricultural activities within the project area will continue to be supported and served by San Juan Basin water resources. As discussed on pages 4.2-4, 4.2-9, and 4.2-10 of the Draft Program EIR, the proposed project (upon buildout) will have 185 total acres of orchards located in Planning Areas 2, 7 and 10 (*i.e.*, approximately 146 acres of citrus and 39 acres of avocado). Upon reaching full maturity, each acre of citrus will consume approximately two to three AFY; similarly, each acre of avocado (at maturity) will consume approximately three to four AFY. Thus, total anticipated water consumption for agricultural activities conducted within the project area, assuming peak agricultural use/period, will be approximately 409 to 594 AFY. This amount is well-within Rancho Mission Viejo's recognized/historical production volume of 3,500 AFY within the San Juan Basin.

The commenter seeks clarification concerning why the WSA does not address agricultural activities as a component of the project water demand assessment. As indicated above, agricultural water demand for the proposed project will be satisfied by utilizing riparian/groundwater resources located within the San Juan Basin. The proposed project does not envisage the acquisition of water from SMWD or any other water service provider to support interim and long-term agricultural water activities on the project site. Accordingly, the water demand estimates set forth in the WSA properly exclude any reference to agricultural uses within the project area; said water demand factors were beyond the scope of the WSA and SMWD's service area obligations.

Response 40

As discussed in Section 4.15 of the Draft Program EIR, Topical Response to Comment Number 3.1.12, Appendix E to the Response to Comments Document, and the response to Comment 38 (see above), the water supply projections and estimates provided by MWD properly account for and address potential uncertainties in the availability of SWP and CRA water supplies. By virtue of MWD's long-range planning and diversified storage, reclamation, purchase and transfer strategies, issues concerning SWP and CRA supply reliability have been resolved.

The comments concerning alleged inaccuracies in MWD's reports and assumptions are duly noted. However, assuming, *arguendo*, the accuracy of the commenter's identified charges against MWD and its methodologies, the net result is without consequence. Specifically, the applicant and SMWD have taken affirmative steps to insulate the Project against the ill-effects of any future shortcomings in MWD deliveries. As discussed in Topical Response 3.1.12.1, SMWD has entered into two supplemental supply agreements with the Cucamonga Valley Water District and the Southern California Water District that will, collectively, satisfy approximately 67 percent of the Project's domestic water needs during a single dry year and approximately 51 percent of the Project's domestic water needs during multiply dry years. Accordingly, a reduction in MWD supply deliveries as a result of SWP and/or CRA reporting inaccuracies will not adversely impact the Project or its future residents. Please refer to the response to Comment 38.

Response 41

Please refer to the response to Comment 38.

Response 42

SMWD operates its recycled water system under San Diego Regional Water Quality Control Board Order No. 97-52, Waste Discharge and Water Recycling requirements for the Production and Purveyance of Recycled Water by Member Agencies of the South Orange County Reclamation Authority, Orange County. Santa Margarita Water District is a member agency of South Orange County Wastewater Authority which is the successor agency to the South Orange County Reclamation Authority. The order establishes effluent limits for recycled water and rules and regulations for recycled water users. SMWD has adopted Rules and Regulations for Non-Domestic Water Service which incorporate the rules established under Order 97-52. Order 97-52 establishes pollutant limitations for the discharge of landscape irrigation and other land disposal projects.

As described in the Conceptual Water Quality Management Plan (WQMP) for the Proposed Project, both non-structural and structural Best Management Practices (BMPs) will be used to control and treat discharges from the development portions of the project. Non-structural BMPs include the use of efficient irrigation systems and drought tolerant landscaping amongst others. Through the use of these BMPs it is anticipated that discharges from irrigation will be minimal. Those dry weather low flow discharges that do occur will be treated by infiltration and other measures in the various BMPs that constitute the proposed combined control system. The effectiveness of BMPs is discussed in Topical Response 3.1.6.5. No significant impacts to water quality or biological resources resulting from the use of non-potable water for irrigation purposes will occur after implementation of PDF 4.5-3, implementation of the Conceptual WQMP and WQMPs required at subsequent levels of entitlement as set forth in mitigation measures 4.5-3 and 4.5-4.

Response 43

The comment reflects a misunderstanding of the purpose/required content of a water supply assessment (WSA). As mandated by Water Code Section 10910(c), a WSA must discuss whether the identified public water system's (in this case, SMWD's) total water supplies available during normal, single dry and multiple dry water years during a 20-year projection period will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses. The WSA clearly provides this information, and ultimately demonstrates that SMWD's total water supplies will exceed anticipated Ranch Plan water demands beyond the 20-year planning horizon – even under multiple dry-year conditions (and assuming full deliveries to existing and planned uses within SMWD's service area).

The commenter's suggestion is correct that additional detailed information is needed concerning future water supplies/rights to support the Ranch Plan project. Pursuant to Water Code Section 10910(c), a WSA is sufficient if:

- The projected water demand associated with the proposed project was accounted for in the public water system's most recently adopted urban water management plan (UWMP), and the public water system incorporates information from the UWMP into the WSA; or
- In the absence of a current UWMP, the WSA *identifies* existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project (with a description of the quantities of water received in prior years by the public water system).

Despite the alternative nature of these tests/requirements, the WSA prepared by SMWD for the proposed project conservatively satisfies the elements of each mandate. As discussed on pages 5 and 6 of the WSA, projected water demand for the Ranch Plan was substantially accounted for in SMWD's Year 2000 UWMP. Furthermore, the WSA provides detailed information concerning the individual water supply entitlements, water rights and contracts held by SMWD which can/will be called upon to satisfy the anticipated water demands of the Ranch Plan project. Additionally, and as required by SB 610 (ala Water Code Section 10910(e)), the WSA includes updated information concerning groundwater supplies not specifically addressed in the Year 2000 UWMP.

As emphasized in the second bullet-point, above, the Water Code does not require that a WSA be accompanied by copies of contracts, financing plans, etc. underlying the provision of needed water supplies. Rather, Water Code Section 10910(d)(2) specifically declares that identification/discussion of said items is sufficient; such identification/discussion is provided in the WSA.

In summary, the WSA complies with the requirements of Water Code Section 10910. The commenter is referred to Topical Response Number 3.1.12 for additional discussion concerning Colorado River supplies as a component of MWD's regional water resource program.

Response 44

As discussed on page 4.15-37 of the Draft Program EIR, the Chiquita Water Reclamation Plant (CWRP) was master planned in 1984 to accommodate an ultimate primary/secondary treatment capacity of 18.0 million gallons of wastewater per day (MGD). Concurrent with the master-planning process, an EIR and supplemental EIR (SEIR) were prepared that (i) analyzed the significant, unavoidable impacts that would result from development and operation of the full CWRP facility and (ii) identified specific mitigation measures to eliminate or otherwise reduce the identified impacts. The EIR and SEIR were both certified by the Santa Margarita Water District (SMWD) in 1984, and the initial phase of the CWRP facility (vis-à-vis 3.0 MGD capacity) was constructed in 1985.

Since 1985, the CWRP has been expanded on two separate occasions to achieve its current capacity of 9.0 MGD. At each expansion phase, SMWD has performed supplemental analyses/evaluations relative to the potential environmental impacts associated with the contemplated expansion(s). Appropriate mitigation, as necessary, has been incorporated into the CWRP at each expansion phase.

Upon complete buildout, the proposed project is anticipated to generate approximately 5.21 MGD of wastewater under average dry-weather conditions and approximately 7.58 MGD under peak dry-weather flow conditions. See Draft Program EIR at Appendix L (November 2003 *Plan of Works for Improvements Districts 4C, 4E, 5 and 6* at Sections 3.3.1 and 3.3.2). As identified in the Draft Program EIR and the *Plan of Works*, the majority of wastewater flows generated by the proposed Project will be conveyed to and treated at the CWRP.⁵³ Cumulative demand projections for SMWD's entire service area (i.e., assuming existing customers-plus-full buildout of the project area-plus-buildout of all other areas within SMWD's service area) suggest an ultimate treatment demand of 12.92 MGD for the CWRP. This aggregate amount is well within the ultimate, approved 18.0 MGD design capacity of the facility.

⁵³ As identified/discussed in Section 3.1 of the *Plan of Works* (see, e.g., Table 3.1), it is assumed that a majority of wastewater flows generated in Gabino Canyon (i.e., approximately 0.43 MGD) will be treated at a development-site package treatment plant located within Planning Area 9. Accordingly, these flows are not included in the aggregate, Project-related wastewater flows that will be conveyed to the CWRP for treatment.

Currently, the CWRP treats approximately 6.0 MGD of wastewater to secondary standards. Accordingly, approximately 3.0 MGD of primary/secondary treatment capacity is immediately available within the CWRP to accommodate the demands of the proposed project as well as other development occurring within SMWD's service area. As the commenter has identified (and as discussed in the Draft Program EIR and *Plan of Works*), the project owner does not presently own any treatment rights in the CWRP. Accordingly, as development of the proposed project proceeds, the project owners will need to acquire treatment rights in the facility by either (i) acquiring excess, unused treatment capacity held by the current CWRP capacity owners or (ii) coordinating with SMWD for expansion of the CWRP beyond its current capacity (but within the ultimate, approved capacity). In light of the proposed development schedule for the project (i.e., phased over a period of 20-25 years) and the amount of surplus treatment capacity that currently exists (and may hereafter exist) in the CWRP, it is not presently known when or if the CWRP will need to be expanded to accommodate project-related flows. Notwithstanding, in the instance that expansion of the existing CWRP facility becomes necessary, additional CEQA review will occur at that time. Once again, however, it must be noted that environmental review has been previously performed relative to the CWRP and its ultimate, approved 18.0 MGD design capacity. Given that cumulative treatment demand upon the CWRP is not expected to exceed 12.92 MGD under average dry year conditions, the existing, master-planned footprint for the CWRP should be sufficient to accommodate any necessary expansions of the facility (with the possible exception of an overflow basin that may be constructed just south of the facility). No further environmental analysis concerning the capacity of the CWRP is warranted at the present time.

Response 45

Standard Condition 4.4.4 set forth on page 4.4-19 requires that:

"Prior to issuance of grading permits, the Manager of Subdivision and Grading shall determine that the proposed grading is consistent with the grading depicted within the approved planning application. (County of Orange Standard Condition of Approval, G09)"

The commenter's concern that the proposed project will result in impacts not discussed in the Draft Program EIR is unfounded as the proposed project must be consistent with the approved planning application that will include a Final Program EIR. Also as discussed in the Draft Program EIR and further clarified in Topical Response 3.1.1, Project Processing—Subsequent Project Processing Requirements, a GPA/ZC is the first of many approvals that would be required prior to development of the proposed project that will provide project specific details of the development. Nevertheless, the Draft Program EIR does include sufficient information in the form of a geotechnical report to support the determinations of significant impacts (or lack thereof) made in the Draft Program EIR. No development would be permitted outside of the approved limits of impact.

As stated on page 4.4-11 of the Draft Program EIR, no known active or potentially active faults cross the site, nor is any part of the site within an Alquist-Priolo Earthquake Fault Zone. In accordance with standard practice within the County, any unconsolidated soils encountered will be removed and re-compacted as engineered fill as appropriate.

The Draft Program EIR does not omit any consideration of the location of fill sites, as explained on page 3-22 of the Draft Program EIR:

"Grading necessary for the development, including remedial grading, would occur and balance within the boundary of the development area, unless otherwise noted in the text below.⁵⁴ Grading concepts were developed by EDAW, the land-planning firm for the proposed development of Planning Areas 1 through 9. Subsequently, the civil engineering firm of Huitt-Zollars digitally captured the grading concepts and produced analysis of the cut-fill quantities as measured between the proposed landform alterations and existing terrain. The analysis was conducted at varying scales between one-inch equals 200 feet and one inch equals 400 feet (depending on the size and required detail for the planning area). The raw data was then analyzed for adjustments in elevation required to affect a balance between mass excavation and mass fills for each planning area. The data was also reviewed by the geotechnical consultant for feasibility including the estimations of quantities associated with the removal, replacement and re-compaction of low-density materials, the stabilization of slopes and landslides as required and other buttressing, over-excavation and remedial work estimated to construct the project in accordance with the current standards of practice in the County of Orange. An exhibit of the grading concept plan is provided in Section 4.4, Geology and Soils." (emphasis added in response).

The commenter is not correct in stating that the Draft Program EIR has failed to analyze the effect of hauling cut and/or fill material on noise, air quality or traffic. As stated on page 4.7-11 regarding air quality:

"Project implementation would require approximately 288,461,000 cubic yards (cy) of cut and fill grading, inclusive of remedial grading. Of this amount, 107,957,000 cubic yards of soil movement are expected to occur in Phase 6, resulting in an average of 26,989,250 cy in the year. Assuming 22 workdays per month, this would average 102,232 cy per day. During each development phase, all soil will be balanced (retained) on the site. Therefore, the model assumes no on-road truck travel." (emphasis added in response)

The Draft Program EIR did not fail to analyze the impact, rather the Draft Program EIR determined that since the project will balance internally, no noise, traffic or noise impacts resulting from hauling would occur. As noted in the analysis, excavated soil would be balanced on site in each of the phases. Emission estimates were based on the types and number of pieces of equipment that the engineers estimated would be required for each phase.

Response 46

CEQA does not require "a visual representation of all agricultural areas in Orange, Riverside and San Diego Counties" – these areas are located outside of the identified study area, and any information presented by such a graphic representation would not assist the Lead Agency or the public in obtaining a better understanding of any issue of consequence regarding agricultural impacts associated with Project implementation. Furthermore, CEQA does not require an analysis of how or whether the agricultural support system in Orange County may/will continue to function in the absence of revenues generated by RMV agricultural activities.

⁵⁴ Generally all grading will be within the area defined as the development footprint (see Exhibit 3-21). There are a few infrastructure improvements, such as roadways, trails, pipelines water quality basins, and water storage facilities that would be constructed outside of the development footprint. The conceptual locations of the roads are depicted on Exhibit 3-22 and the water facilities are depicted in Exhibits 4.15-1 and 4.15-2. The general location of trails and bikeways are shown in Exhibit 4.12-2 and 4.12-3, respectively, though precise alignments for these facilities have not been determined. The Program EIR addresses the impact for implementation of these facilities. Section 4.9, Biological Resources makes an assumption on the size, location and extent of habitat removal and species impacts as part of this GPA/ZC evaluation.

The future planting of 100 acres of citrus and avocado orchards was identified as part of the full disclosure in the Draft EIR. These plantings are not considered part of the Ranch Plan and would not impact sensitive habitat. These plantings are a planned activity associated with the ongoing agricultural operations on the Ranch. The impacts to Agricultural Resources are properly described in the Draft Program EIR as required by CEQA in Section 4.2, Agricultural Resources. For additional information, please refer to Topical Response 3.1.4, Agricultural Resources.

Response 47

Please refer to Topical Response 3.1.9, Biological Resources. Exhibit 4.2-1 in the Draft Program EIR shows the location of proposed expansion of citrus production in Planning Area 7. As noted on page 4.2-4 of the Draft Program EIR, this 200-acre area is a candidate site within which 100 acres would be planted depending on soil type, water availability, and exposure. Existing habitat types would also be considered in an effort to avoid potential environmental impacts including those to listed and rare plant species. Surveys have been conducted within the entirety of Planning Area 7. Therefore, data regarding the presence/absence of these species are available for determining the appropriate location for the citrus expansion. All infrastructure necessary to support the expansion of citrus within Planning Area 7 exists on the site. There is no requirement to maintain existing orchards or prohibition from planting new ones.

Response 48

Please refer to Topical Response 3.1.4, Agricultural Resources and the response to Comment 47.

Response 49

Please refer to Topical Response 3.1.4, Agricultural Resources and the response to Comment 47.

Response 50

Please refer to Topical Response 3.1.10, Recreation, and Topical Response 3.1.15, Cumulative Impacts.

Response 51

Please refer to Topical Response 3.1.14, Growth-Inducing Impacts, and Topical Response 3.1.15, Cumulative Impacts.

Response 52

Please refer to Topical Response 3.1.14, Growth-Inducing Impacts.

Response 53

Please refer to Topical Response 3.1.9, Biological Resources, Topical Response 3.1.11, Hazards and Hazardous Materials, and Topical Response 3.1.13, Alternatives.

Response 54

Please refer to Topical Response 3.1.14, Growth-Inducing Impacts and Topical Response 3.1.13, Alternatives.

Response 55

Please refer to Topical Response 3.1.14, Growth-Inducing Impacts and Topical Response 3.1.13, Alternatives.

Response 56

Please refer to Topical Response 3.1.14, Growth-Inducing Impacts and Topical Response 3.1.13, Alternatives.

Response 57

Please refer to Topical Response 3.1.14, Growth-Inducing Impacts and Topical Response 3.1.13, Alternatives.

Response 58

The County disagrees with your position that the project is inconsistent with the policies of the General Plan. The commenter states that the Draft Program EIR finds the project consistent with the General Plan based on a vague and noncommittal project description. The project is for a General Plan Amendment and zone change. Sufficient detail is provided to fully address the potential impacts and General Plan consistency associated with this level of approval. The commenter is referred to Topical Response 3.1.1.2 for a discussion of a Program EIR versus a Project EIR. The *Land Use Element* is intended to meet three purposes: (1) provide land use patterns for unincorporated Orange County including population density and building intensity; (2) provide a basis for the evaluation of physical development and growth trends in order to achieve General Plan goals; and (3) determine land use capacities and the appropriate level of public services and infrastructure necessary to support these capacities. The project clearly satisfies all three of these purposes. The project has identified the location for future development and the corresponding General Plan land use designations. The Draft Program EIR identifies the projected population and employment associated with the project and ability of the infrastructure to meet the demand of the generated by the project.

The commenter identifies three of the Land Use Element policies they believe the project would be inconsistent with: Policies 4, 6, and 13. These are discussed below.

Policy 4: Land Use/Transportation Integration – To plan an integrated land use and transportation system that accommodates travel demand.

The Draft Program EIR found the project consistent with this policy because the project would provide a comprehensive circulation plan for the project area, connecting internal streets to key arterials. This circulation plan would be created to accommodate proposed land uses and the anticipated traffic volumes resulting from the project. The commenter states the consistency evaluation is flawed because it was based on flawed traffic analysis that underestimates the project generated traffic and uses unorthodox methodologies. There is a reference to subsequent comments submitted on the traffic analysis. The commenter is referred to the responses to those comments (responses 119 through 145). These responses demonstrate

that the traffic analysis was conducted consistent with the adopted Orange County model. The traffic modeling effort is discussed in more detail in Topical Response 3.1.7.1. Based on this analysis, the County supports the finding of consistency with this policy of the General Plan.

Policy 6: New Development Compatibility – To require new development to be compatible with adjacent areas.

Please refer to Topical Response 3.1.3.1 regarding the compatibility of development in Planning Area 8 with MCB Camp Pendleton.

Policy 13: Urban and Storm Water Runoff Regulations-Establishes framework for the reduction of water pollution.

The commenter's concern that the project is not consistent with this General Plan policy is based on a mistaken understanding of the uses within the open space area. Please refer to Topical Response 3.1.2.2 for a discussion of the uses within the open space designation.

Response 59

To address the commenter's concern regarding the traffic analysis conducted for the project, the commenter is referred to responses 119 through 145 and the Topical Responses pertaining to traffic (Topical Responses 3.1.7). The project identifies a number of circulation improvements that would address both project related and cumulative traffic impacts.

The commenter questions the project's consistency with Goal 6, which pertains to implementation of Transportation Demand Management (TDM) and Transportation Systems Management (TSM) strategies. As indicated on page 4.1.37 of the Draft Program EIR, a major component of the project serves as a TSM strategy. The travel characteristics associated with 6,000 senior units would reduce the number of peak hour trips compared to conventional non-age-restricted development. As for TDM measures, this is complied with through the Transportation Demand Management Ordinance, which is implemented at the tentative tract level of approval. This is identified as Standard Condition 4.6-1. Other measures identified by the commenter, such as the creation of park and ride facilities and bicycle linkages, would also be incorporated at subsequent levels of approval. At the General Plan/zone change, the precise uses and configuration of uses are not known. It would be premature to identify such uses at this time. The project demonstrates compliance with regional trails and bikeways designated on the General Plan. It acknowledges that additional facilities would be provided at subsequent levels of approval. Specifically, Mitigation Measure 4.12-1 requires the applicant to develop a Master Trail and Bikeway Implementation Plan in conjunction with the first Master Area Plan.

Response 60

The commenter raises questions regarding consistency with two objectives and one policy within the *Resources Element*. The first is Objective 1.1 of the Natural Resources Component, which reads, "To prevent the elimination of significant wildlife and vegetation through resource recovery and management strategies." The project fully complies with this objective. The project proposes to maintain 66 percent of the project site in open space, there is an Adaptive Management Plan proposed to protect and enhance natural resources, and the development/open space interface has been determined based on a close evaluation of the resources on the site. These project design features were all fully discussed in the Draft Program EIR (Section 3, Project Description; Section 4.9, Biological Resources; and Appendix

J, Adaptive Management Plan). The reader is also referred to Topical Response 3.1.1.1 regarding the processing of the project prior to the approval of the NCCP/HCP and Topical Response 3.1.9.3 pertaining to the Adaptive Management Plan.

Policy 2 of the Natural Resources Component pertains to agricultural resources. The General Plan policy states "to encourage to the extent feasible the preservation and utilization of agricultural resources..." The General Plan, by the very wording of the policy ("to the extent feasible"), recognizes that trade-offs are necessary to accommodate all the needs of the County. While it recognizes benefits can be derived from agricultural operations, there is also a need to accommodate the projected growth for the area and protect biological resources. As indicated in the Draft Program EIR, the locations for development evaluated the potential impact to sensitive habitat and species. In an effort to meet a portion of the future housing demand and protect natural resources it was recognized that some agricultural acreage would be displaced. The project attempts to preserve some of the agricultural uses and phase development, which provides for the continued agricultural uses to minimize the overall loss of resources. Additionally, it should be noted that approximately half of the agricultural acreage that will be displaced is container plant nurseries operating on leases that expire by 2006. While the displacement of these uses is identified as an impact because they are existing uses, the continuation of these uses is not expected beyond the current lease provisions. As the administrator of the General Plan, the County disagrees with the commenter's assessment that the project does not meet the intent of this policy.

The final policy of *Resources Element* that the commenter questioned was Objective 1.1 of the Open Space Component. This policy pertains to designating and preserving open space areas. The project proposes to maintain 66 percent of the project site in open space. The reader is directed to Topical Response 3.1.2.2 pertaining to Definition and Preservation of Open Space.

Response 61

The commenter raises question about consistency with Goal 1 and Objective 1.1 in the Regional Recreation Facilities Component and Goal 1 and Objective 1.1 of the Local Recreation Facilities Component of the *Recreation Element*. Pertaining to the Regional Recreation Facilities Component, the project applicant is proposing the Rancho Mission Viejo Regional Park. The characteristics of the park are not unlike those of the Arroyo Trabuco portion of O'Neill Regional Park. Even if the park is not accepted as a regional park, the project would still not be inconsistent with the goals and objectives of the Regional Recreational Facilities Component. The County does not have a requirement for projects to dedicate regional recreational facilities. There are no proposed regional facilities within the project limits where dedication would be a logical condition. The General Plan goals and objectives are designed to guide the planning effort for the County of Orange, not private applicants. It has been through implementation of these goals and objectives that the County has designated the regional facilities that are designated on the Master Plan of Regional Recreational Facilities. To the extent the Rancho Mission Viejo Regional Park would enhance the County's ability to provide regional facilities, the project would provide a benefit.

Pertaining to consistency with the Local Recreational Facilities Component, the project clearly identifies that it would be required to comply with the Local Park Code, which implements the Quimby Act. A sports park(s) was an early commitment to such a facility. Identification of local parks is done in conjunction with tentative tract maps. This is clearly identified on page 4.12-11 and in Standard Condition 4.12-1. Additionally, please refer to Topical Response 3.1.10.2.

Response 62

Your comment is noted. The County of Orange does not have an inclusionary housing requirement that establishes a mandatory affordable housing component. The project applicant has committed to providing a range of housing types, such as rental and multi-family, as well as single family and senior housing. Please refer to Topical Response 3.1.5.1.

Response 63

The County does not believe that the Ranch Plan Program EIR meets the CEQA Guidelines requirements for recirculation. Please refer to Topical Response 3.1.1, Project Processing.

Response 64

The County believes the Ranch Plan Program EIR is adequate and complies with the requirements of CEQA and the CEQA Guidelines.

Response 65

Please refer to Topical Response 3.1.9, Biological Resources.

Response 66

The first three issues raised in this comment are addressed in Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts. The fourth issue is addressed below.

As noted in Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts, the commenter is correct that a summary of the consistency analysis is presented in simple numeric form in the Draft Program EIR. However, this summary of consistency for both the Draft Southern NCCP/HCP Planning Guidelines and Watershed Planning Principles is intended to give the reader a broad understanding of the performance of the proposed project and each of the alternatives. The percent summary is not intended as a substitute for the detailed analysis of consistency contained in Appendix G-5 and G-6 for the proposed project and Appendix M for the alternatives. Also, the percent summary per se is not the basis upon which determinations of significance were made. Significance determinations in part were made based on whether the proposed project was “consistent,” “not consistent,” or “could be consistent” with specific Guidelines or Principles, as described in detail in the Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts.

As described in the Draft Program EIR and in Topical Response 3.1.9, the Draft Southern NCCP/HCP Planning Guidelines and Watershed Planning Principles were developed over several months in coordination with the NCCP/SAMP Working Group including the USACE, USFWS, and CDFG to provide guidance to decision makers that are keyed to local biologic, hydrologic and geomorphic conditions and while a “work in progress” present the most current thinking regarding protection, restoration, and management priorities for resources within the study area (page 4.9-5). The Planning Guidelines and Watershed Principles are initially sub-basin specific and build to the broader SRP Tenets of Reserve Design and SAMP Tenets, and as such do not lend themselves to differential weighting as the commenter appears to be suggesting. While in principle, a weighting scheme could be developed, there is no purely objective or unbiased biological method by which one could numerically weight each of the

Guidelines or Principles as any weighting system would reflect a subjective bias towards one resource over another (e.g., wetlands are more important than coastal sage scrub or gnatcatchers are more important than many-stemmed dudleya) that depends on the person or agency making the decision regarding weighting. The value of the Guidelines and the Principles is not that they can be consolidated into a numerical compilation, but rather that they each provide a concrete, objective measure for making conservation decisions. That is why the Draft Program EIR goes into such detail regarding exactly which Guidelines or Principles are "could be consistent" and "not consistent." For example, on page 4.9-112 regarding the thread-leaved brodiaea, it states that, "the Proposed Project is 60 percent consistent, 33 percent 'could be consistent' and 7 percent not consistent." Taken alone, this is not very informative beyond a superficial comparison to the other alternatives. However, this statement goes on to say:

"The "could be consistent" findings relate to project design features in the lower Chiquita and Cristianitos development areas. Guideline 8 recommends avoiding two of the four populations of thread-leaved brodiaea in lower Chiquita in addition to the large population on Chiquadora Ridge. Guidelines 90 and 130 recommend avoiding the three locations totaling 4,500 flowering stalks in lower Cristianitos and Gabino canyons. Guideline 91 recommends avoiding at least 10 of the 13 scattered locations in Cristianitos Canyon. Finally, Guideline 148 recommends avoiding the four scattered thread-leaved brodiaea locations east of the Northrop-Grumman facility."

The Draft Program EIR, using the results of the Consistency Analysis, goes beyond relying on the numerical summary and details what would need to be done to protect the federally- and state-listed thread-leaved brodiaea in the study area and reduce impacts to a less than significant level.

Guidelines that appear for multiple sub-basins such as salvaging clay soils, collecting seed, and translocating plants acknowledge the importance of mitigating for any impacts to the specified plant species within that sub-basin and are therefore not "easy" and do not artificially inflate the consistency analysis for the species in question. The restoration and management recommendations contained in the NCCP Planning Guidelines were developed independent of the proposed project and the alternatives and would contribute to the maintenance of net habitat value within the study area. The degree to which either the proposed project or the alternatives can achieve or are consistent with the restoration or management recommendations is therefore a legitimate metric for impact assessment.

The County disagrees with commenter's assertion that "many of the guidelines include the clause to the extent feasible." Of the 166 NCCP Planning Guidelines, nine contain the language "to the extent feasible" or some variation thereof. Seven of 39 Watershed Planning Principles contain similar language. Also, for Guidelines and Principles where "to the extent feasible" is used there generally is some flexibility in the protection requirements for the biological resource. For example, Guideline 4 states "Protect breeding habitat and, to the extent feasible, foraging habitat for raptors and other species along Chiquita Creek." This Guideline acknowledges that foraging habitat for raptors in Chiquita Canyon is important, but that some land uses may be consistent and others not. B-4 would be consistent because the proposed golf course north of the treatment plant and avoidance of major side canyons would maintain raptor foraging habitat while B-5 would not because of extensive development throughout Chiquita Canyon. Planning Principle # 17 notes that, "Trampas Canyon is suitable for development." This is the only principle of this type in the Planning Principles and reflects that 1) Trampas Canyon is currently the site of the ONIS mining operation and 2) there is no disagreement regarding development of this particular location. This is further supported by the fact that the proposed project and all the alternatives, including the alternative developed by the environmental community (B-8), propose

development within Trampas Canyon (Planning Area 5). The proposed project and all the alternatives are consistent with this guideline, thus there is no “artificial inflation of apparent consistency.” Finally, CEQA does not require infeasible mitigation.

Please also refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species, for further discussion on the golden eagle consistency analysis.

Response 67a

The County believes that the Ranch Plan Program EIR is adequate and complies with the requirements of CEQA and the CEQA Guidelines.

Response 67b

The Draft Program EIR clearly sets forth the thresholds used to determine whether or not the proposed project would result in a significant impact on page 4.9-96. Accordingly the impact analysis tracks these thresholds through the impact and mitigation sections, including a consistency analysis with the NCCP Planning Guidelines and the Watershed Planning Principles and an impact analysis based on the CEQA Guidelines Appendix G thresholds on vegetation communities (pages 4.9-129 through 4.9-134) and impacts to sensitive species (pages 4.9-134 through 4.9-151). Impacts to sensitive species are further divided according to the following categories: 1) Listed NCCP Planning Species, 2) Other listed species, 3) Unlisted NCCP Planning Species, 4) other sensitive wildlife species, and 5) other sensitive plant species. Some species such as the golden eagle, mule deer, and mountain lion are considered under both the CEQA Guidelines Appendix G thresholds (Impacts to Sensitive Species–Unlisted NCCP Planning Species, page 4.9-145, Draft Program EIR) and the NCCP Planning Guidelines consistency threshold. The American badger is discussed under Other Special Status Wildlife Species on page 4.9-148 and further discussed in Topical Response 3.1.9.8, Biological Resources–Impacts to Species. The coyote, bobcat, red-tailed hawk, and great-horned owl are not considered sensitive by CDFG or USFWS, but are mentioned as potential umbrella species by the Science Advisors. Umbrella species discussed in the NCCP Guidelines, and adopted by the Guidelines in coordination with the resource agencies as Planning Species, are the mule deer, mountain, and golden eagle.

Response 67c

Please refer to Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts.

Response 67d

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 67e

Science Advisors sensitive species are identified in Table 4.9-3 within their own column, and are discussed in detail in Appendix G-2 of the Draft EIR titled *Draft Southern NCCP/HCP Planning Guidelines*.

Response 67f

The mule deer is included as NCCP Planning Species; however, this species has no other special conservation status designation by the USFWS and/or CDFG. Therefore, this species was not included within Table 4.9-3. It was included within the discussion of mountain lion and golden eagle on page 4.9-145 because it was deemed appropriate to analyze these species together since they are considered together in the discussion of "Other Planning Area-wide Species Considerations" in Section 5.3 of Appendix G-2, *Draft Southern NCCP/HCP Planning Guidelines*.

Response 67g

For ease of reading within the EIR, these species were grouped together taxonomically because of their similar conservation status by the CDFG and USFWS. Impacts to these herptiles were evaluated on a habitat basis, in terms of the potential or occupied habitat that would be lost by project implementation.

Response 67h

For ease of reading within the EIR, these species were grouped together taxonomically because of their similar conservation status by the CDFG and USFWS. Impacts to these species were evaluated on a habitat basis, in terms of the potential or occupied habitat that would be lost by project implementation. The vast array of habitat types that these species could occur in was considered in the evaluation of impacts on these species.

Response 67i

For ease of reading within the EIR, these species were grouped together taxonomically because of their similar conservation status by the CDFG and USFWS and their dependence on riparian resources. Impacts to these species were evaluated on a habitat basis, in terms of the potential or occupied habitat that would be lost by project implementation.

Response 67j

Please refer to Topical Responses 3.1.9.8, Biological Resources–Impacts to Species with respect to the southern grasshopper mouse and American badger. The northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), Dulzura California pocket mouse [*Chaetodipus* (*Perognathus*) *Californicus femoralis*], and San Diego desert woodrat (*Neotoma lepida intermedia*) all overlap in habitat use, although their relative distributions vary in specific habitats. For example, northwestern San Diego pocket mouse occurs in more xeric sparse sage scrub compared to Dulzura California pocket mouse, which tends to occur in more mesic dense sage scrub and chaparral. San Diego desert woodrat occurs in more xeric sage scrub (compared with the sympatric congener dusky-footed woodrat which occurs in more dense sage scrub and chaparral), but favors areas with appropriate den sites such as rocky outcrops and cactus patches. The Natural Environmental Study for the proposed SR-241 South extension project reported that the San Diego pocket mouse primarily was captured in open habitats during focused trapping studies for the federally-listed endangered Pacific pocket mouse (Michael Brandman Associates, 1996). The precision on vegetation mapping detail for the study area, however, does not allow these microhabitat characteristics to be reliably parceled out.

The best available habitat surrogate for assessing impacts and conservation for northwestern San Diego pocket mouse and San Diego desert woodrat in the study area is coastal sage scrub, of which 2,024.8 acres (26 percent) would be impacted and 5,657.2 acres (74 percent) would be conserved. The best available habitat surrogate for the Dulzura California pocket mouse is coastal sage scrub and chaparral, of which 2,736.6 acres (24 percent) would be impacted and 8,738.3 acres (76 percent) would be conserved. Impacts on the northwestern San Diego pocket mouse, Dulzura California pocket mouse and San Diego desert woodrat are considered less than significant because of the large amount of habitat that would be conserved and managed in proposed RMV Open Space and because of their wide range and relatively common occurrence in southern California shrub habitats.

The San Diego black-tailed jackrabbit is considered a rare inhabitant in southern Orange County. Bloom, for example, reports never having observed the jackrabbit on the Ranch Plan project site in 12 years of surveys (as cited in Michael Brandman Associates, 1996). However, the grasslands on the project site provide potential habitat for the black-tailed jackrabbit, of which 2,413.6 acres (48 percent) would be impacted and 2,624.4 acres (52 percent) would be conserved. Impacts on potential habitat for the San Diego black-tailed jackrabbit are considered less than significant because of the substantial amount of grassland conservation and management in proposed RMV Open Space, the species' rarity in the study area, and its widespread occurrence outside the study area. Impacts to 2,413.6 acres of grassland in the study area would not have a substantial adverse effect on this species.

Response 67k

As discussed in the response to Comment 67b and Topical Response 3.1.9.1, Biological Resources—Methodology for Determining Biological Resource Impacts, impacts to species are clearly stated according to the significance thresholds established for the proposed project. For example, impacts to the gnatcatcher are examined in terms of 1) consistency with applicable NCCP Planning Guidelines (see page 4.9-112 and Table 4.9-28) and 2) Appendix G CEQA Guidelines thresholds (pages 4.9-137 and 4.9-138). Impact Exhibits 4.9-12a, 4.9-12b, and 4.9-13 supports these analyses.

Response 67l

Please refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species.

Response 67m

Please refer to Topical Response 3.1.9.1, Biological Resources—Methodology for Determining Biological Resource Impacts.

Response 67n

Vegetation communities were utilized to represent potential habitat for a given species. It is not practical to analyze the life requisites and other features such as soil substrate, topographic features, and species composition within the vegetation types for each species potentially present in the region. The use of vegetation communities is a reasonable approach to habitat suitability.

Response 67o

Impacts for upland vegetation and land cover impacts are reported to the 10th of an acre, not 100th of an acre, such as reported in Table 4.9-29. The County does not agree with the comment that reporting impacts to the 10th of an acre for upland impacts is “disingenuous” and leads to a “false sense of security.” The only impacts reported to the 100th of an acre are project impacts on USACE and CDFG jurisdiction areas, which are based on project-level state and federal jurisdictional delineations of the study area conducted by Glenn Lukos Associates (GLA, 2004). In such highly refined and precise jurisdiction delineations, impacts typically and appropriately are reported to the 100th of an acre. It is unclear how a rounded number would provide a more accurate depiction of potential impacts. The potential impacts from infrastructure are based on the best available information for siting- and construction-related impacts, such as typical permanent impact areas and temporary construction zones for the particular type of infrastructure, e.g., roads, water lines, sewer lines, pump stations, lift station, tank sites, trails, etc. While the infrastructure estimates are conceptual and will be refined as the design of the project progresses, these estimates are considered worst-case scenarios for the purposes of the Draft Program EIR because they were provided by individuals with many years of experience in designing and constructing the facilities in the region and were intended to provide maximum flexibility in work areas for the particular facility. For example, construction of pipelines assumes a standard 30-foot wide temporary construction impact zone along all proposed pipelines and does not include an accounting for design and construction techniques that can avoid and reduce impact levels. Using various construction techniques and equipment, construction areas can be reduced to avoid and minimize impacts to sensitive resources, or techniques such as tunneling can be used to avoid impacts altogether (e.g., under riparian areas). Standard BMPs and construction monitoring also would be implemented to avoid and minimize impacts to sensitive biological resources.

Response 68a

The County agrees that the environmental analysis and in particular the Biological Resource analysis for the proposed project is complex and lengthy. Section 4.9 is broken into 1) Existing Setting, 2) Impacts, and 3) Mitigation. The later two sections have explanatory outlines at the beginning of each section to assist the reader in understanding the analyses. In addition, several summaries (for example, see impact summary on pages 4.9-123 through 4.9-128 for the NCCP Planning Guidelines and Watershed Planning Principles consistency analysis) are included in these sections to further assist the reader in understanding the impacts of the proposed project. The complexity of the proposed project, issues raised by the public and the desire of the project applicant and the County to consider the proposed project within a regional context, are factors that contribute to a lengthy Biological Resources analysis.

Tables 4.9-3 and 4.9-4 set forth sensitive species occurring or potentially occurring in the study area and notes their State or Federal status, whether or not the species is an NCCP Planning Species and if the species is a Science Advisors species and if so what group. The subsequent grouping of species throughout the impact and mitigation section is reflective of: 1) Listed NCCP Planning Species, 2) Other listed species, 3) Unlisted NCCP Planning Species, 4) other sensitive wildlife species and 5) other sensitive plant species. Each of these categories is then examined in terms of the significance thresholds, for example impacts to the gnatcatcher, a Listed NCCP Planning Species, are examined in terms of 1) consistency with applicable NCCP Planning Guidelines (see page 4.9-112 and Table 4.9-28) and 2) CEQA Guidelines Appendix G thresholds (pages 4.9-137 and 4.9-138). Impact Exhibits 4.9-12a, 4.9-12b and 4.9-13 supports these analyses. Where the consistency analysis identified a potentially significant impact for this species e.g., Impact 4.9-16, Table 4.9-32 reviews minimization measures for that impact.

Mitigation for impacts to the gnatcatcher identified according to the Appendix G thresholds is discussed under the section titled "Minimization/Avoidance and Mitigation Measures for Potential Direct Impacts to Listed NCCP/HCP Planning Species and Other Listed Species" on page 4.9-224 and in Table 4.9-42. To reduce the number of tables, categories 1 and 2 above were combined.

Response 68b

Your comment is noted. When summarizing the significant impact Table 1.7-1 should have identified the biological impacts as "will" rather than "may." However, this does not change the findings of the Draft Program EIR or of the Summary Table. The identified the impacts as significant and referred the reader to the detailed evaluation contained in the body of the report. Table 1.7-1, Summary Table is hereby modified in the Final EIR.

Comment noted regarding the percentage "not consistent/significant" for the arroyo toad. The percent "not consistent/significant" should read 0 percent.

As the commenter notes, Table 4.9-29 sets forth the impacts to vegetation communities/land covers in the study area. This is appropriate as this table is in the impacts section. Table 4.9-1, in the existing setting section, sets forth the vegetation communities/land covers in the study area. The commenter is incorrect in stating that Table 4.9-29 shows only impact resulting from development. In addition to showing impacts from development Table 4.9-29 also shows permanent impacts from infrastructure and temporary impacts from infrastructure. Table M-29 contains formatting errors. A corrected version is included in the Final Program EIR as follows.

TABLE M-29
OVERALL PROTECTION OF MAJOR VEGETATION COMMUNITIES IN THE
B-10 OPEN SPACE WITHIN WATERSHEDS

Vegetation Community	Planning Area		B-10 Alternative		
	Planning Area Acres ¹	% of Vegetation Community	Open space Acres (% of total)	% of Vegetation Community	% Deviation from Planning Area
Coastal Sage Scrub	19,724		16,610 (84%)		
San Juan Creek	15,056	76%	12,682 (84%)	76%	0%
San Mateo Creek	3,772	19%	3,335 (88%)	20%	+1%
Other Watersheds ²	896	5%	593 (66%)	4%	-1%
Chaparral	7,333		6,131 (84%)		
San Juan Creek	4,219	58%	3,217 (76%)	52%	-6%
San Mateo Creek	2,748	37%	2,626 (95%)	43%	+6%
Other Watersheds	366	5%	288 (79%)	5%	0%
Grassland	14,979		10,031 (67%)		
San Juan Creek	8,215	55%	5,574 (68%)	56%	+1%
San Mateo Creek	3,093	21%	2,228 (72%)	22%	+1%
Other Watersheds	3,671	24%	2,229 (61%)	22%	-2%
Woodland & Forest	1,824		1,513 (83%)		
San Juan Creek	1,537	84%	1,286 (85%)	85%	+1%
San Mateo Creek	257	14%	209 (81%)	14%	-%
Other Watersheds	30	2%	18 (60%)	1%	-1%
Riparian	5,213		4,348 (83%)		
San Juan Creek	3,967	76%	3,285 (83%)	75%	-1%
San Mateo Creek	1,024	20%	946 (92%)	22%	+2%
Other Watersheds	222	4%	117 (53%)	3%	-1%

¹ Acreages exclude Existing Use areas.

² Other Watersheds include the San Clemente and Aliso Hydrological Areas

Tables M-13, M-14 and M-15 are correct. The following revisions to the text are incorporated into the Final Program EIR (changes are underlined).

- ***Tenet 5: Reserves should be biologically diverse.***

Table M-13 shows the amount and percentage of the major vegetation communities protected by the B-5, both in the overall B-5 open space and broken down by watersheds. Overall, the B-5 protects the large majority of the major vegetation communities. Protection ranges from a low of 72 percent for grassland to a high of 87 percent for chaparral. Other than grassland, the lowest overall conservation percentage of the major vegetation communities is 80 percent for woodland and forest. Because the B-5 Alternative focuses development in the San Juan Watershed, there is a bias toward protection of the major vegetation communities in the San Mateo Watershed compared to the Proposed Project, B-6 and B-9 alternatives. For example, 82 percent of the coastal sage scrub in the San Juan Watershed is protected compared to 99 percent in the San Mateo Watershed. In contrast, for Proposed Project the protection percentages are 87 percent for San Juan and 82 percent for San Mateo. The largest discrepancy in protection between watersheds is grassland, with 60 percent protection in the "Other Watersheds" (primarily the San Clemente Hydrological Area), 67 percent protection in the San Juan Watershed, and 98 percent protection in the San Mateo Watershed; a reflection of the extensive development in Chiquita Canyon (PA 2). As with the other alternatives, the protection of major vegetation communities in the San Clemente and Aliso Hydrological areas is substantially less than the San Juan and San Mateo watersheds, reflecting the existing urban character of these smaller watersheds.

Table M-14 compares the representation of the major vegetation communities in the B-5 Alternative with their representation in the planning area as a whole. For example, coastal sage scrub accounts for 40 percent of the total of the five major vegetation communities in the planning area and 42 percent of the total in the B-5 open space; i.e., coastal sage scrub is "over-represented" by 2 percent in the B-5 open space in relation to its occurrence in the planning area. Likewise, grassland is "under-represented" in the B-5 open space by three percent compared to the planning area. With maximum ranges of only -3 percent for grassland and +2 percent for coastal sage scrub, overall the five major vegetation communities are adequately represented in the B-5 Alternative in relation to their occurrence in the planning area.

The same comparison was applied to watersheds, with similar results. The maximum deviations from the planning area are grassland at three percent under-represented in the San Juan Watershed and over-represented by two percent in the San Mateo Watershed. Woodland and forest and riparian show almost no bias between the watersheds, with a maximum 1 percent over-representation of riparian in the San Mateo Watershed. Overall, the B-5 provides a balanced representation of the existing distribution of the major vegetation communities in the different watersheds.

Table M-15 compares the elevational distribution of the major vegetation communities in the planning area and the B-5 open space. As with the proposed project, the protection percentages increase with elevation for all the major vegetation communities. A comparison of the "% Within Vegetation Community" columns for the planning area and B-5 open space shows that the elevational distributions of the vegetation communities in the B-5 open space generally track the existing distributions in the planning area, but with a slight bias toward under-representations of the upland vegetation communities at less than 800 feet. For example, coastal sage scrub is under-represented by six percent

under 800 feet and over-represented by five percent above 800 feet. Chaparral, grassland and woodland and forest show similar elevational biases. The protection of riparian vegetation shows no elevational bias. Compared with other alternatives, the B-5 open space has the greatest under-representation of grassland at the lowest elevation range (<400 ft), with six percent less in the open space (21 percent) at less than 400 feet compared to existing conditions (27 percent). This is a result of impacts to grasslands in Chiquita Canyon and no impacts to grasslands in Cristianitos Canyon. This relative difference also is demonstrated in Table M-13, showing a -4 percent representation of grassland in the San Juan Watershed and a +7 percent representation in the San Mateo Watershed.

The revised table M-19, including percentages is provided below.

**TABLE M-19
ELEVATIONS OF VEGETATION COMMUNITIES PROTECTED BY THE
B-6 ALTERNATIVE OPEN SPACE AND ALREADY PROTECTED OPEN
SPACE COMPARED TO PLANNING AREA**

Vegetation Community	Elevation Range (ft.)	Planning Area		B-6 Alternative		
		Planning Area Acres ¹	% Within Vegetation Community	Open Space Acres (% of Total)	% Within Vegetation Community	% Deviation from Planning Area
Coastal Sage Scrub	0-400	1,414	7%	887 (63%)	5%	-2%
	401-800	9,825	50%	8,050 (82%)	47%	-3%
	801-1,200	6,562	33%	6,145 (94%)	36%	+3%
	>1,200	1,923	10%	1,875 (97%)	11%	+1%
Total		19,724		16,957 (86%)		
Chaparral	0-400	166	2%	99 (60%)	2%	0%
	401-800	4,640	63%	3,853 (83%)	60%	-3%
	801-1,200	2,010	27%	1,946 (97%)	30%	+3%
	>1,200	518	7%	514 (99%)	8%	+1%
Total		7,334		6,412 (87%)		
Grassland	0-400	4,005	27%	2,174 (54%)	22%	-5%
	401-800	8,121	54%	5,609 (69%)	56%	+2%
	801-1,200	2,551	17%	1,900 (74%)	19%	+2%
	>1,200	299	2%	287 (96%)	3%	+1%
Total		14,976		9,970 (66%)		
Woodland & Forest	0-400	174	10%	95 (54%)	6%	-4%
	401-800	1,005	55%	776 (77%)	53%	-2%
	801-1,200	509	28%	468 (92%)	32%	+4%
	>1,200	135	7%	135 (100%)	9%	+2%
Total		1,823		1,474 (81%)		
Riparian	0-400	1,289	25%	1,043 (81%)	24%	-1%
	401-800	3,088	59%	2,575 (83%)	59%	0%
	801-1,200	730	14%	656 (90%)	15%	+1%
	>1,200	106	2%	104 (98%)	2%	0%
Total		5,213		4,378 (84%)		

1. Acreages exclude Existing Use areas.
Source: Dudek 2004

Response 69

See Response 68b pertaining to Table 1.7-1.

Response 70

For comment regarding global and regional significance of the study area to biodiversity conservation and ecosystem health, please refer to Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts.

For comment regarding cactus wren, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species. With respect to the cactus wren, the Draft Southern NCCP/HCP Planning Guidelines Species Accounts in Section 4 acknowledges the importance of the cactus wren population in the study area:

“The cactus wren is widely distributed throughout the Southern NCCP/HCP planning area (*Figure 4-8*). Although population numbers are not available for the northern portions of the cactus wren’s range (i.e., Ventura, Los Angeles and western San Bernardino counties), the Southern NCCP/HCP planning area clearly supports a substantial portion of the remaining cactus wren population; about 44 percent of the locations within Orange, Riverside and San Diego counties are in the Southern Subregion (*Table 4-7*) (emphasis added).

Within the planning area the cactus wren is widely distributed in the San Juan and San Mateo watersheds with essentially continuous connectivity among occupied areas (*Figure 4-8*). Within the context of the coastal populations of the cactus wren, the population in the planning area constitutes a major population. Because of its widespread distribution in the planning area, however, it was not appropriate to identify specific portions of the population as *key locations* in the subregion. The population in the planning area is strategically located as a linkage between the San Diego County populations on Camp Pendleton and protected populations in the Central and Coastal Subregion Habitat Reserve. Substantial protection of this species in the planning area and maintaining connections both within the planning area and between the planning area population and protected locations in the Central and Coastal Subregion Habitat Reserve and populations located on Camp Pendleton will contribute to conservation of the species in the subregion” (emphasis added) (page 4-59, Draft NCCP/HCP Planning Guidelines, May 2004).

Response 71

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 72

Please refer to the following responses to specific comments.

Response 73

Please refer to Topical Response 3.1.9.6, Biological Resources–Indirect Impacts.

Response 74

Please refer to Topical Response 3.1.9.6, Biological Resources–Indirect Impacts.

Response 75

In Section 4.9-5 of the Draft Program EIR, edge effects were identified as potentially significant impacts because of the likelihood of the degradation of habitat in areas proximal to residential/infrastructure development and construction. Edge effects are discussed extensively within the Draft Program EIR, beginning on page 4.9-103 of the Draft Program EIR under the heading of: *Potential Long-Term Indirect Impacts on Biological Resources—the Role of NCCP Guidelines General Policy 5 in Establishing Criteria for the Assessment of Potential Indirect Impacts Caused by the Proposed Project.*

Potential long-term indirect impacts resulting from future development within the study area are addressed by General Policy 5 of the NCCP Guidelines as follows:

“General Policy 5: Long-Term indirect impacts to the Habitat Reserve and other areas being preserved for species protection shall be managed through creation of an urban/wildlands interface zone separating the Habitat Reserve and the non-reserve/urban areas. Management within the interface zone would:

- Create fuel management zones combining irrigated and non-irrigated native plantings separating the Habitat Reserve from adjacent urban uses.
- To the extent that fuel management zones are comprised of native habitats and can support Identified Species and other species, or be enhanced or managed to support Identified Species and other species, this should be encouraged.
- Fuel management zones and practices will be set forth in a “fuel management plan” as part of the NCCP/HCP and aquatic resources protection program.
- Prohibit plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California from development and fuel management zones adjoining the Habitat Reserve.
- Manage pesticide and herbicide use and fertilizer application techniques in landscaped areas including golf courses, located adjacent to the Habitat Reserve or preserved wetlands and provide comprehensive water quality treatment, which may include, but not be limited to, the use of natural treatment systems prior to discharge or urban runoff into the Habitat Reserve;
- Shield and/or direct lighting away from habitat areas through the use of low-sodium or similar intensity lights, light shields, native shrubs, berms and other shielding methods; and
- Provide barriers, fencing, signs, walls etc., to manage and direct access by the public and domestic animals (e.g. pets) to protect sensitive habitat and species.

Potential long-term indirect impacts and the application of the above avoidance and minimization measures are reviewed Section 4.9-5 of the Draft Program EIR. Potential short-term indirect impacts on hydrologic and geomorphic resources and potential long-term water quality indirect impacts are also reviewed in the Water Resources section of the Draft Program EIR. Please also refer to Topical Response 3.1.9.8, Biological Resources—Indirect Impacts.

Response 76

Indirect impacts to biological resources from the construction and use of arterials within the project site are discussed extensively within the Draft Program EIR in terms of fuel management, exotic species management, pesticide, herbicide, and fertilizer management, the direction of lighting away from habitat areas, and the management of access by the public and domestic animals (e.g. pets) to protected sensitive habitat and species.

Potential Impacts of roads and other infrastructure on biologic, hydrologic, and geomorphic resources are discussed extensively within the Draft Program EIR, beginning on page 4.9-102 under the heading of *Potential Impacts of Roads and Other Infrastructure on Biologic, Hydrologic and Geomorphic Resources—the Role of NCCP Guidelines General Policy 4 in Establishing Criteria for Assessing Resource Impacts Potentially Caused by the Siting and Design of Roads and Other Infrastructure*.

General Policy 4 of the NCCP Guidelines provides policies for avoiding and minimizing the potential impacts of roads and infrastructure on habitat, habitat linkages and movement corridors as follows:

General Policy 4: Roads and infrastructure should be located outside the Habitat Reserve to the maximum extent feasible. The siting and design of roads and infrastructure should provide for protection of habitat linkages and movement corridors.

The supporting text in the NCCP Guidelines for General Policy 4 provides the following prescriptions for avoiding and minimizing potential impacts on biological resources:

- To the maximum extent feasible, roads and infrastructure should be located outside the Habitat Reserve.
- Roads that are necessary to serve approved land and water uses located inside or outside the Habitat Reserve shall be designed and sited to minimize impacts on designated Identified Species, to accommodate wildlife movement to the maximum extent feasible, and to minimize impacts to habitat and associated species. Where roads are necessary [under approved plans] they will be designed consistent with safety, roadway design criteria that are appropriate for the setting and desired roadway function. Roadway design shall include bridges and/or culverts large enough to accommodate fish and wildlife movement and, where appropriate and feasible, wildlife over crossings. In addition, bridges and culverts should maintain appropriate sediment movement for existing streams. As appropriate, fencing, grading and plant cover will be provided to serve wildlife crossings consistent with conservation principles and the adaptive management program. Where feasible and safe, lighting along roadways within the Habitat Reserve should be avoided. Where roadway lighting within the Habitat Reserve is necessary for public safety reasons, it should be low-sodium or similar low intensity lighting that is directed away or shielded from the Habitat Reserve.
- Other infrastructure facilities (e.g. pipelines, transmission lines, etc.) that are necessary to serve approved uses or regional needs also shall be sited and designed to accommodate wildlife movement and, to the extent feasible, to minimize impacts to habitats and designated Identified Species located inside and outside the Habitat Reserve. To the extent feasible, infrastructure facilities within the Habitat

Reserve should be located within or immediately adjacent to existing roadways or other developed landscapes.”

Potential impacts of circulation system elements, along with potential avoidance and minimization measures addressing the above policy prescriptions, are reviewed in the Draft Program EIR Section under the heading “Circulation Systems Consistency Analysis” (this analysis is undertaken using a “without SOCTIIP” scenario; a “with SOCTIIP” scenario is reviewed under the Cumulative Impacts section). Please also refer to Topical Response 3.1.9.6, Biological Resources–Indirect Impacts and 3.1.9.8, Impacts to Species, specifically mountain lions

Response 77

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 78

Please refer to Topical Response 3.1.9, Biological Resources.

Response 79

For a discussion of the potential direct and indirect impacts from infrastructure improvements associated with the proposed project, please see Topical Response 3.1.9.6, Biological Resources–Indirect Impacts.

Response 80

The comment is inaccurate that there will be a direct take of 69 percent of thread-leaved brodiaea. Under the proposed project, without avoidance and minimization, 21 locations and 6,792 flowering stalks would be impacted. This was identified in the Draft Program EIR as a significant impact (Impact 4.9-66 on page 4.9-135). Minimization/Avoidance measures listed in Table 4.9-42 on page 4.9-225 include site-specific avoidance and minimization measures as required by the NCCP Guidelines for the *major populations/key locations* in Chiquita Canyon/Chiquadora Ridge and lower Cristianitos/Gabino canyons, as well as the *important populations* in Cristianitos Canyon and the Talega sub-basin. Also see Mitigation Measures 4.9-1, 4.9-9, 4.9-10, 4.9-18, and 4.9-20 in Table 4.9-32 on pages 4.9-165 to 4.9-169 of the Draft Program EIR. The avoidance and minimization measures will result in a net conservation of 93 percent of flowering stalks and 60 percent of locations (the difference in percentages occurs because the impacted locations tend to be those with the smallest numbers of flowering stalks and thus less important for overall conservation of the brodiaea). The commenter’s reference to “vague promises of the Adaptive Management Program” for the thread-leaved brodiaea are unfounded; the program is thoroughly described in Appendix J, Adaptive Management Program, and Appendix J-1, Plant Species Translocation, Propagation and Management Plan. The translocation plan, for example, includes details on pre-translocation monitoring, seed collection, selection of receptor sites, site preparation (including exotics control, creation of native habitats [with plant palette], and translocation of existing populations [including flagging, removal of brodiaea clumps, and installation of brodiaea clumps]), direct seeding at translocation sites, and long-term maintenance and monitoring. With respect to the thread-leaved brodiaea and the cactus wren, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 81

Please refer to Topical Response 3.1.9.9, Biological Resources–Cumulative Methodology to Biological Resources.

Response 82

Please refer to Topical Response 3.1.9.3, Biological Resources, with respect to the Adaptive Management Plan and Topical Response 3.1.13, Alternatives.

Response 83

Please refer to Topical Response 3.1.13, Alternatives.

Response 84

Please refer to Topical Response 3.1.9.2, Biological Resources–Comments Regarding Impact Assessment in the Draft Program EIR.

Response 85

The comment is noted.

Response 86

With respect to comments regarding the western spadefoot toad, please refer to Topical Responses 3.1.9.8, Biological Resources–Impacts to Species.

Response 87

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 88

Please refer to Topical Response 3.1.9.6, Biological Resources–Indirect Impacts.

Response 89

With respect to comments on the long-eared owl, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 90a

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 90b

With respect to comments on the tricolored blackbird, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 91

With respect to comments on the cactus wren, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 92

With respect to comments on the grasshopper sparrow, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 93

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 94

With respect to comments on the mountain lion, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 95

With respect to comments on the southern grasshopper mouse, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 96

Please refer to Topical Response 3.1.2.2, Project Description–Definition and Preservation of Open Space and Topical Response 3.1.9.3.

Response 97

Please refer to Topical Response 3.1.9.3, Biological Resources–Comments Regarding the Proposed Mitigation Program.

Response 98

The commenter should be aware that, as stated in the Draft Program EIR, the Project Applicant has actively managed the study area since 1882 through managed grazing, invasives species control, fuel modification/management and other similar activities the result of which is that as the commenter states “the natural lands on RMV have conserved biological diversity exceptionally well over the long term.” Thus active and adaptive management have long been practiced on Rancho Mission Viejo.

The County has consulted with its experts Drs. Dennis Murphy and Barry Noon regarding the subject of adaptive management and its relationship to a properly designed habitat reserve. According to Drs. Murphy and Noon, “Conservation scientists long have dismissed the idea that saving species of concern in the county can be achieved simply by setting aside thousands of acres of open space. More recently, common threats in southern California such as wildfire, invasive species and extreme weather events have emphasized that reserve management may be even more important than reserve extent”. An example of a threat to federally listed species within the study area that is unrelated to development, but that is proposed for management under the proposed Conservation Strategy is the arundo infestation in San Juan Creek. This infestation, the extent of which is documented in Appendix J-3 of the Draft Program EIR,

threatens a federally listed species that breeds in the Creek (the arroyo toad) and displaces habitat potentially available to another listed species (the least Bell's vireo). The invasive species control plan element (Appendix J-3) of the proposed Adaptive Management Program proposes to treat this species amongst others however the provision of a constant funding for ongoing eradication efforts is key to the successful control of this species within the study area. Drs. Murphy and Noon further state that "Facing finite resources for conservations, some balance between reserve acres and reserve management will have to be achieved; a larger reserve with a lesser commitment to management may compete with a smaller reserve that could provide similar conservation benefits by providing more intensive management" (Murphy and Noon, 2004).

The County believes that a smaller reserve with intensive management (that in some cases is an extension of the existing RMV management practices e.g., rotational grazing) as proposed by the Ranch Plan Conservation Strategy can achieve similar conservation benefits as may be gained by a larger reserve system with less management (like the B-8 Alternative) while still meeting the non-biological project objectives (i.e., provision of housing) that the County must consider when determining whether to grant the applicants request for a General Plan amendment and Zone Change.

Response 99

Please refer to Topical Response 3.1.2.2, Project Description–Definition and Preservation of Open Space.

Response 100

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 101

The commenter is incorrect as the measures are not identical. Mitigation Measure 4.9-8 (reference Planning Guideline 90) in the Draft Program EIR addresses the major population of 4,500 flowing stalks in three locations on the hill outcrop adjacent to the clay pits in southern Cristianitos. Mitigation Measure 4.9-9 (reference Planning Guideline 91) addresses an important population in a key location that calls for protection of 10 of the 13 locations of thread-leaved brodiaea. Mitigation Measure 4.9.9 (the middle column on page 4.9-166 does have a typographical error that has been corrected. The "three" in the sixth line of the measure should be changed to "ten" to make it consistent with Planning Guideline 91 which is the intent of the measure. Table 3.9-32 has been revised and incorporated into the Final Program EIR as follows:

Impact 4.9-10: Implementation of the Proposed Project may result in impacts to thread-leaved brodiaea locations that contribute to protection of <i>important populations</i> in <i>key locations</i> in the Cristianitos sub-basin (Planning Guideline 91).	Measure 4.9-9: Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all <u>three</u> <u>ten</u> of 13 locations of thread-leaved brodiaea that contribute to protection of an important population in <i>key locations</i> in the Cristianitos sub-basin are protected.	Less than Significant
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In addition please see Topical Response 3.1.9.8 regarding specific species.

Response 102

Please refer to Topical Response 3.1.9.4, Biological Resources–Wildlife Linkage/Corridors

Response 103

The agricultural fields referred to in the comment primarily are barley fields in Chiquita and Gobernadora Canyon sub-basins totaling about 2,003 acres. Of these, about 1,087 acres (53 percent) would be in RMV Open Space and 946 acres (47 percent) within these sub-basins would be developed, similar to the overall conservation of 52 percent of grasslands. The wildlife value of these barley fields varies from year to year depending on whether they are in active cultivation or left fallow. For example, in 2003 barley was cultivated in Chiquita and Gobernadora Canyons as illustrated in Exhibit 4.1-2. As stated on page 4.2-2 of the Draft Program EIR, "RMV plants between 800 and 1,000 acres of barley in several locations north of the Ortega Highway. In 2003, 886 acres of barley were planted. The fields are not irrigated and levels of production are inconsistent dependent on weather conditions (i.e., amount of rainfall)." When the barley fields are left fallow, they provide suitable nesting habitat for the grasshopper sparrow, but when cultivated they do not (see topical response for grasshopper sparrow in Section 3.1.9; note that agricultural acreage totals in grasshopper sparrow response are slightly smaller because they are confined to areas in the *major population/key location*). Raptors and non-nesting species such as horned lark, loggerhead shrike, and tricolored blackbird (which feed on seeds as well as insects) likely forage in both actively cultivated and fallow fields.

The reference in the comment to the six percent under-representation of grassland in the combined RMV Open Space and already protected open space is taken out of context in regard to the level of significance of the impacts to grasslands. The discussion at Draft Program EIR page 4-190 is pertinent to SRP Tenet 5 that reserves should be biologically diverse. One of the criteria for assessing biological diversity is whether the vegetation communities in the open space are representative of their occurrence in the NCCP planning area, and one of four ways of measuring this was to examine the proportional relationship between existing grassland and other major vegetation communities before the project and protected grassland after the project is built. As shown in Table 4.9-39 on page 4.9-192, grassland currently comprises 30 percent of the major vegetation communities in the planning area and after project build out it would comprise 24 percent of the combined RMV Open Space and already protected open space, an under-representation of 6 percent. The conclusion drawn was that this 6 percent under-representation was not significant with regard to the biological diversity of the open space because grasslands would be adequately represented in the open space, especially in light of the dynamic nature of habitat successions between grassland, coastal sage scrub and chaparral.

With regard to the sensitive species listed in the second paragraph of the comment, see topical responses for thread-leaved brodiaea, western spadefoot toad, golden eagle, long-eared owl, burrowing owl, loggerhead shrike, grasshopper sparrow, tricolored blackbird, southern grasshopper mouse and American badger. For the remaining species referenced, northern harrier, white-tailed kite, ferruginous hawk, and prairie falcon, only the kite is a documented breeder in the study area and northern harrier potentially could nest in the study area. The ferruginous hawk and prairie falcon are winter visitors that only forage in the study area.

The significance of impacts on grasslands under CEQA should be analyzed in terms of impacts on these special status species. The CEQA threshold for significance for special status animal species is a "substantial adverse effect" (see Draft Program EIR at page 4.9-96). For the wide ranging and widely distributed northern harrier, ferruginous hawk and prairie falcon (all three

occur in open lowlands throughout California), there are no empirical data to suggest that conservation and management of 2,627 acres of grassland and conservation 1,023 acres of agriculture, totaling 3,650 acres in RMV Open Space, in combination with already conserved grassland (6,774 acres) and agriculture (1,136 acres) in a configuration of several large, intact habitat blocks would not be adequate to support continued foraging in the study area by these three species. Thus, the proposed project, with implementation of the proposed Conservation Strategy (Project Design Features 9-1 and 9-2) would reduce significant impacts to a level less than significant. Based on the proposed Conservation Strategy, the findings of no significant impacts to grasslands, as foraging habitat for these three species, after mitigation, is justified.

The white-tailed kite is analyzed separately from the northern harrier, ferruginous hawk and prairie falcon because it does breed on-site and foraging habitat in proximity to nesting sites is important for this species. Protection of the white-tailed kite under the proposed project in terms of conservation of viable nest sites, was analyzed by determining how much suitable foraging habitat (grassland and agriculture) would be conserved within a 0.5-mile radius of the 13 conserved historic kite nesting sites (an approximately 500-acre circular area around the nest site) based on the observation by Hawbecker (1942) that kites seldom forage farther than 0.5 mile from the nest during the breeding season and upon the recommendation of Faanes and Howard (1987) that the minimum habitat area around a nest should be at least 50 acres. This conservation analysis is thus conservative because it limits foraging habitat to grassland and agriculture and does not count other natural habitats within the 0.5-mile radius. Kites are opportunistic and will forage in other open habitats such as open coastal sage scrub, wetlands, open woodlands, etc. that support prey. It should be noted that the nest sites in the database are historic sites documented since about 1990 and all are not used in all years; typically only a few kites nest on the Ranch Plan project site in any given year. Therefore, it was assumed that kites would not be directly competing for foraging habitat in areas where there are several nest sites in close proximity to one another, such as in GERA or along San Juan Creek. The analysis shows that amount of protected grassland and agriculture protected within a 500-foot radius of the 13 protected historic nest sites ranges from 24 to 259 acres, with a median protection of 58 acres and an average of 107 acres. Notably, the two nests sites with the fewest acres of protected grassland/agriculture are located in middle Gabino Canyon (24 acres) and La Paz (29 acres) well removed from proposed conventional residential development. Presumably, kites using the middle Gabino nest site would forage in open grassland in upper Gabino and La Paz Canyons and the La Paz Canyon kites would forage to the west in Cristianitos and Blind Canyons. For the middle Gabino site, kites would have to travel farther than the 0.5-mile radius to forage in upper Gabino and upper La Paz Canyons, but adequate grassland habitat would be protected in these areas. Based on the analysis for other nest sites in proximity to the La Paz Canyon site (i.e., a site in lower/middle Gabino and one in Blind Canyon), the La Paz site would have adequate foraging, although it would have to travel slightly beyond the 0.5-mile radius. Based on this foraging habitat analysis, the Proposed Project and the Conservation Strategy will provide adequate foraging habitat for all 13 protected nest sites and thus impacts on grassland and agriculture foraging habitat would be less than significant.

The commenter suggests that significant impacts to the raptor species discussed above cannot be mitigated "except through increased preservation of grasslands." However, the Adaptive Management Plan will increase the biological productivity of the grasslands. Although increased conservation of grassland is not part of the proposed mitigation under the proposed project (except for restoration of 142 acres of native grassland and scrub/grassland), the other alternatives analyzed by the Draft Program EIR provide for different conservation levels of grasslands, as well as agriculture (Table M-1, Appendix M). These conservation levels range from a high of 4,208 acres (83 percent) of grassland under the B-8 Alternative to a low of 3,021 acres (60 percent) for the B-11 Alternative, or an additional 394 to 1,581 grassland acres

compared to the proposed project. For agriculture, conservation levels range from a high of 1,941 acres (76 percent) for the B-8 to a low of 598 acres (23 percent) for the B-5 Alternative.

Response 104

The commenter is referred to the full Minimization/Avoidance Measure 4.9-66 on page 4.9-225 of the Draft Program EIR. Conservation of 2,922 flowering stalks comprises only a portion of the total conservation achieved by the proposed project. As set forth further below in the referenced Mitigation Measure 4.9-66, additional avoidance is provided in Mitigation Measures 4.9-1, 4.9-8, 4.9-9 (as addressed in the response to Comment 101 above), 4.9-17, and 4.9-20. When all of the Minimization/Avoidance Measures are considered, avoidance provides for 93 percent conservation. Combined with translocation of impacted individuals, there will be no significant impacts to thread-leaved brodiaea. Please also refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 105

With respect to comments on the cactus wren, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 106

Please refer to the full Minimization/Avoidance Measure 4.9-66 on page 4.9-225 of the Draft Program EIR that provides for full avoidance of all vernal pools in the Trampas Sub-Basin. No impacts would occur to the Riverside or San Diego fairy shrimp, the pools they occupy, or the watersheds that contribute to the pools. Please also refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 107

With respect to comments on the tricolored blackbird, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 108

With respect to comments on the grasshopper sparrow, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 109

With respect to comments on the long-eared owl, please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species.

Response 110

Please refer to Topical Response 3.1.11.

Response 111

Please refer to Topical Response 3.1.11.

Response 112

Please refer to Topical Response 3.1.11.

Response 113

Please refer to Topical Response 3.1.11.

Response 114

Please refer to Topical Response 3.1.11.

Response 115

Please refer to Topical Response 3.1.11.

Response 116

Please refer to Topical Response 3.1.11.

Response 117

Please refer to Topical Response 3.1.11.

Response 118

Please refer to Topical Response 3.1.11.

Response 119

The points noted in this summary are responded to in the detailed responses that follow.

Response 120

The land use categories in the project description for the traffic study are provided at a level of detail that enables the socioeconomic data conversion to take place as required for the South County Sub-Area Model (SCSAM). It is misleading to assert that they are “*very specific*” since many of the users of the SCSAM (cities and communities in south Orange County) have over 30 land use categories that are used to define land uses in those communities. This compares with 16 categories for the proposed Ranch Plan project.

At the General Plan level of definition, the Ranch Plan land uses are somewhat generic but do include the major divisions that differentiate trip generation for a project such as this. Therefore, single- and multiple-family dwelling units are separated, as are seniors units. Within the non-residential categories, retail and non-retail based employment (i.e., business park type of development) are differentiated, and several special uses such as schools, hotels, and golf courses are also identified. Requirements in the Development Agreement ensure that the generalized categories are adhered to as development occurs (the Development Agreement vests the Ranch Plan Planned Community District zoning, which establishes use categories). Therefore, it would be speculative for the traffic study to deviate from these defined categories (either by being more specific or less specific).

Response 121

As noted in response to Comment 120, the traffic report does not speculate on land use development, but uses relatively generic land use categories which have been defined for purposes of the General Plan Amendment. Any intensification to depict a hypothetical "worst case" would require speculation on the part of the traffic study. Land use categories that have been used are deemed appropriate for the purposes of the traffic impact analysis. Trip generation is discussed in detail in Topical Response 3.1.7, Transportation and Circulation.

Response 122

Please refer to the response to Comment 121. Changes to the project subsequent to the certification of the Program EIR, including changes to numbering units, square footage, or types of development, would be subject to CEQA review. Please refer to Topical Response 3.1, Project Processing.

Response 123

Please refer to the response to Comment 121. Changes to the project subsequent to the certification of the Program EIR, including changes to numbering units, square footage, or types of development, would be subject to CEQA review. Please refer to Topical Response 3.1, Project Processing.

Response 124

Please refer to the response to Comment 121. Changes to the project subsequent to the certification of the Program EIR, including changes to numbering units, square footage, or types of development, would be subject to CEQA review. Please refer to Topical Response 3.1, Project Processing.

Response 125

As discussed in Topical Response 3.1.7, traffic models such as OCTAM and its SCSAM sub-area derivation do not include certain trips that are linked or which are very short in length and local in nature. Trips generated by a sports park occur either as short local trips or linked trips. These trips will place a small amount of traffic on the local circulation system but will not affect the roadway system being analyzed in the traffic study. Also as noted in the topical response, linked trips are accounted for even though they are not counted twice in the trip generation (as is the case when ITE trip generation is used). More specifically, to include such trips would invalidate the type of relationships used in traffic models such as this. Topical Response 3.1.7 discusses this at length, and shows why the exclusion of such trips does not invalidate the findings with respect to the external impacts of the proposed project. At the time that detailed site planning is carried out, minor uses with short or linked trips (examples of such uses are sports park, daycare, health clubs, etc.) will be analyzed at a driveway level of detail to ensure that driveway access for that use is adequate.

Response 126

The number of students estimated to attend local schools and used in the traffic study has been derived from population data for the proposed project. The comment speculates on the number of students based on the estimated number of schools. However, the actual student enrollment

used in the analysis is based on the future demographic profile of the project and is intended to represent the total student population.

Response 127

The comment suggests that trip generation from the casitas would be higher than average trip rates for single-family detached dwelling units. There is no evidence that such occurs and in fact it is likely that, because of the special use of this type of dwelling unit, trip generation will be lower (although counted as a separate unit in the 14,000 project dwelling units, they are actually guest units and would likely have substantially lower trip rates than assumed in the traffic study). Once again, the Ranch Plan traffic report does not try to speculate, but assumes what can reasonably be anticipated as a maximum trip rate for this use.

Response 128

Topical Response 3.1.7 addresses trip generation rates in some detail. As noted there, ITE rates are not the nationally accepted rates for traffic models such as the SCSAM. The ITE Trip Generation Manual measures driveway counts and the rates are appropriate for traffic studies associated with driveway counts. The rates are not, however, appropriate for traffic models which estimate future trips on the arterial roadway system. The detailed discussion and comparison data presented in the topical response indicate the differences and reasons for such differences. As stated there, the rates used in the SCSAM are nationally accepted rates for state-of-the-practice traffic modeling. It would not be appropriate to deviate from the accepted rates in modeling this project using the SCSAM.

Part of the comment notes *"while it is appropriate to use this local data in the process of forecasting trips, it is unreasonable to directly apply the results from the SCSAM model without detail review in comparison to the averages published by ITE. In addition the traffic report and draft EIR failed to support the use of arbitrary lower than average trip rates from many of the land use categories."* This statement is incorrect in that the OCTAM and SCSAM models have undergone continuous and comprehensive peer review as part of modeling in southern California and nationwide. The rates are not arbitrary, but have evolved from numerous special surveys carried out nationwide over the past 30 years. The federal government continuously supports research to ensure that the models are up-to-date and represent state-of-the-practice for use in transportation planning studies.

Practitioners familiar with traffic modeling fully understand these modeling applications, and their relationship to driveway count data, such as in ITE. Traffic modeling in southern California has a large technical modeling task force that continues to evaluate such issues, including comparisons between the databases used in the traffic model and those published by ITE. As such, the trip rates contained in those models (including SCSAM) are considered appropriate for these types of applications. Direct proof of such validity is in the validation process required of all traffic models, and which is described in the documentation for OCTAM and SCSAM.

The SCSAM documentation was not included in the Draft Program EIR traffic appendix (third paragraph comment) because it was prepared for a number of applications, not just this EIR. For example, the model is used by various cities in south Orange County and was also used for the South Orange County Transportation Infrastructure Improvement Project (SOCTIIP). The model has undergone extensive peer review (both the OCTAM and sub-area portions), as well as certification by OCTA. Such review included the appropriate trip rates to be used in the traffic model. Of primary importance is the model validation which ensures that the modeling relationships (including trip generation rates) are able to replicate volumes on the study area

street system. That verification is contained in the traffic model description, and shows validation that is well within accepted limits.

The comment further speculates that the project will have higher than average trip rates (fifth paragraph). In this respect it should be noted that both OCTAM and SCSAM include variables which address the potential for different trip rates in different areas. Those variables are income, the higher number of working adults per household, and the number of persons per household. The model documentation describes these relationships as does Appendix A to the traffic study which shows the conversion from land use to socioeconomic data categories including employed residents, population, and income. Therefore, while the comment suggests that such factors are not taken into account in the trip generation, they are in fact accounted for in the land use to socioeconomic data conversion.

With respect to the VMT comments (paragraphs 6 and 7), the VMT for the project is derived from the OCTAM model which is part of the SCAG traffic model for south Orange County. The appropriate VMT relationships for this part of Orange County are therefore calculated by OCTAM in a regional context and reflect the location of the project and other geographic/demographic factors. Therefore, the comments regarding VMT, etc. are irrelevant in the context of the derivations derived specifically for this part of Orange County by OCTAM.

Response 129

The issue of trip rates has been discussed previously in the response to Comment 128 and also in Topical Response 3.1.7, Transportation and Circulation.

Response 130

Please refer to the response to Comment 129.

Response 131

While the traffic report separates senior housing units into two subcategories (e.g., dwellings versus apartments), the same trip rate is used for both. The trip generation for senior housing is derived from converting senior housing to the appropriate socioeconomic data categories and then applying the socioeconomic trips rates. Of specific importance is the number of workers per household (lower than for non senior housing), and population per dwelling unit (also lower than for senior housing). This conversion results in equivalent trip rates for senior housing derived from application of the socioeconomic data trip rates as described in detail in Appendix A of the traffic report (see Draft Program EIR). A comparison between the rates derived from the socioeconomic data conversion and trip generation data for senior housing can be found in Appendix B, Traffic Resource Material–Senior Housing Trip Rates, of this Responses to Comments document.

Response 132

The Draft Program EIR traffic report divides non-residential uses within the project into two major categories: retail and non-retail. In both cases, the conversion of the land uses to socioeconomic data and the application of trip rates results in the stated trip generation. For the retail rates, the resulting trip generation represents an average of the various retail activities that occur in a project such as this. For non-retail rates, it is equivalent to the typical business park uses that occur throughout southern California. While “research and development” may be one

of the uses, the category represents generic non-retail uses typified as noted earlier by the business park developments that occur throughout southern California and Orange County.

Response 133

The traffic report does indicate uses that are listed as “office”, these being used to represent a more service oriented type of use (in a town center for example) compared to a more typical business park type of use. As has been noted in Topical Response 3.1.7, the trip rates are based on validated socioeconomic trip rates within the SCSAM. Such trip generation rates reflect the employment characteristics of the various non residential land uses and are considered the most appropriate trip rates for these types of uses.

Response 134

The special land use category for golf courses includes many trips that are local in nature and that are therefore not included within the SCSAM as discussed in Topical Response 3.1.7. It has been noted that this is consistent with national state-of-the-practice traffic modeling whereby very short trips or the individual links of linked trips are not included in the traffic model. The result is that the external trip impacts of golf courses are not underestimated in the SCSAM.

Response 135

Please refer to the response to Comment 134.

Response 136

Please refer to the response to Comment 134.

Response 137

Please refer to the response to Comment 134 and Topical Response 3.1.1. As noted, the trip rates are not “arbitrary,” but have evolved from special surveys carried out nationwide over the past 30 years. The federal government continually sponsors research to ensure that models such as OCTAM (and its SCSAM subarea derivation) used throughout the County are up-to-date and represent state-of-the-practice for use in transportation planning studies.

Response 138

A detailed discussion on internal trip capture can be found in Topical Response 3.1.7, Transportation and Circulation. The comment is incorrect in asserting that there is an “*accepted threshold for internal trips*.” The internal trip capture for any project depends on a number of factors of which the main considerations are the size of the project, the mix of land uses and the location of the project. A small project will have very small internal capture and a large project with a mix of uses may be largely self-sufficient and have a very high internal capture. As noted in the topical response, the internal capture is determined as part of the traffic modeling carried out at a countywide level. The comment is incorrect in asserting that “*the assumed percentages of internal trips between the various land uses are extraordinarily high for a project with multiple land uses and are significantly beyond accepted practice*.” There is no “accepted practice” for internal capture and transportation planning practitioners rely on traffic models to make such a determination for any given project. The internal capture is neither “arbitrary” nor “assumed” and in fact, the traffic study does not determine internal capture, but derives it from OCTAM (the parent model to the SCSAM). The discussion in the topical response (including the table

showing internal capture by land use type) shows how the internal capture derived in this manner is reasonable given the mix of uses in the project, the project size and the project location.

Response 139

Topical Response 3.1.7, Transportation and Circulation, discusses impacts to I-5. As noted there, the performance standard applied for freeway mainlines is set out in detail in the traffic study as part of the disclosure of performance criteria. The criteria are consistent with those used for a number of major studies in Orange County including those required for the Congestion Management Program (CMP). As discussed in the comment, Caltrans has guidelines with respect to freeway analyses and as part of the traffic study preparation, meetings have been held with Caltrans as suggested in those guidelines.

Peak hour traffic shares for mainline segments (as per the Caltrans Guidelines) are noted in the traffic study and these have also been the subject of discussion with Caltrans.

The traffic report shows year 2025 volumes on mainline segments for a number of cumulative conditions including the proposed project. Paragraph four of the comment asserts that the traffic volumes reported for the freeway are in error and that they should be something different as specified in that comment. The volumes in the Draft Program EIR are derived from SCSAM and show cumulative future conditions with the project or without the project. The volumes reflect the associated redistribution of traffic that occurs in south Orange County under those two scenarios. (As discussed in detail in the topical response, because of the mix of uses, traffic patterns in south Orange County will be different with or without the project and the volumes reflect such changes.) For this reason, it is not possible to simply "add" the project volumes to the study area highway network as suggested by the comment.

Response 140

The Draft Program EIR does not include information on costs of the mitigation program. This is not required by CEQA, and the Program EIR shows the mitigation program that is necessary and indicates traffic shares according to the standard traffic share formula used in Orange County. It is noted in the traffic report and in the Draft Program EIR that actual responsibilities of the proposed project will be determined as part of the overall roadway improvement plan and that the traffic shares do not form the only basis for identifying such shares.

That traffic improvement program will be designed to achieve timely implementation of mitigation measures and will address jurisdictional responsibilities in accordance with that implementation. It is recognized that many of the improvements are in other jurisdictions (i.e., other than the County of Orange) and the South County Roadway Improvement Program (SCRIP) being established to implement the improvements will recognize that fact (plus the fact that some improvements are under the jurisdiction of Caltrans).

Response 141

The transportation Impact fee is not a requirement of CEQA and is being developed independent of the CEQA process (as part of the SCRIP as noted in the response to Comment 140). As noted in the comment, the SCRIP is proposed for adoption by the County prior to or concurrent with the County's actions on the proposed Ranch Plan project.

As noted in the comment regarding TDM, the project applicant will submit a TDM program as part of the first Tentative Map for the Urban Activity Center development. No credit has been established in the traffic analysis for any trip reductions associated with a TDM.

Response 142

The following responses address the comments regarding additional topics:

- A. Construction Activity—The specifics of construction activity are unknown at this time. The factors that are of importance include the amount of grading and the time period over which grading will take place. Impacts associated with construction will be identified as part of tract map submittal when such information is known.
- B. Public Transit—As the comment notes, there is no significant transit available in the Ranch Plan area at this time. As is typical with such developments, OCTA will evaluate future extensions of transit service as the community developments.
- C. Pedestrian and Bicycle Facilities—At the general plan level of development, such facilities are not defined in detail with the exception of the implementation of General Plan Circulation Element Bikeways as described in the project description. The project provides for such facilities and they will be developed as the tract maps are prepared.
- D. Emergency Access—At the general plan level of detail, only a “backbone” street system is shown for the proposed project. As individual tract maps are developed, the local roadway system will be defined in detail.

Response 143

Please refer to the response to Comment 142.

Response 144

Please refer to the response to Comment 142.

Response 145

Please refer to the response to Comment 142.

Response 146

The Draft Program EIR clearly shows that the proposed project would exceed SCAQMD thresholds for VOC, NOx, CO, and PM₁₀ during both construction and operation. However, it is not a correct statement to say that the project would exceed SCAQMD thresholds for PM_{2.5} since no significance thresholds for PM_{2.5} have been established by the SCAQMD. There are no thresholds for ozone, only for the precursors (VOC and NOx). These precursor standards have not changed since the 8-hour ozone standard was approved. Since the same type of actions will be required to attain the 8-hour ozone standard as the 1-hour standard, these precursor thresholds are unlikely to change. Although the new 8-hour standard is somewhat more stringent than the 1-hour standard and some source-receptor areas in the air basin record more exceedances of the 8-hour than the 1-hour standard, the new 8-hour standard allows a longer time frame in which to attain and, if new strategies are required, these will be addressed in future revisions to the AQMP.

Although the proposed project would exceed all SCAQMD thresholds except those for SO_x, the regional impacts of this project have been assessed with the Urban Airshed Model, which accounted for the project's population increase and associated transportation and area source impacts on air quality. This modeling was incorporated in the 2003 AQMP, which projected that the national standards would be attained by the required deadlines. Although the impacts from this very large project are significant when compared to the SCAQMD thresholds, the same population could be added in small increments in the same area without appearing to have significant impacts. In actual practice, the operational impacts are virtually the same whether it comes from many small projects or one very large project. Because of amenities that are included in a large project, impacts may actually be less than they would be in many small projects accommodating the same population.

Response 147

Please refer to the response to Comment 146. It is true that the proposed project at buildout (in 25 years) appears to represent a comparatively large increase in emissions when compared to 2003 emissions for Orange County. However, emissions from the project would be within the projected emission inventory for 2025 accounted for in the 2003 AQMP and upon which attainment strategies are based. Strategies will be updated in future revisions to the AQMP that will occur before buildout is completed.

Response 148

As noted in the response to Comment 146, CEQA requires that the EIR on a project be consistent with the applicable air quality plan for the region in which the project is located. Since the 8-hour ozone and PM_{2.5} standard designations were not in effect at the time the plan was approved by the SCAQMD and California Air Resources Board, the plan addressed those standards that were in effect at the time of approval. Future revisions to the AQMP will address the new standards. Only those Transportation Control Measures (TCMs) in the AQMP that are applicable to the project can be used as mitigation measures. TCMs are discussed in the response to Comment 158. The proposed project is consistent with the applicable AQMP, as approved.

Response 149

The statement greatly overestimates the total construction emissions that would occur from this project because it assumes that the daily emissions shown in the Draft Program EIR will occur throughout the construction period. The analysis in the Draft Program EIR was based on a worst-case day to compare against daily thresholds established by the SCAQMD. The period analyzed was selected based on a review of the entire construction operation as presently envisioned in order to show the maximum emissions that could be expected from construction on any day during the entire construction period. The analysis did not total construction emissions and did not estimate an average day because that would not be a worst-case scenario.

Response 150

The emissions from both construction and operation were estimated by the URBEMIS2002 computer model. This model has been approved for use on development projects within the South Coast Air Basin by both CARB and the SCAQMD. The model was provided project-specific information on construction schedules, equipment, and grading and excavation from the project engineers to estimate construction emissions. It used land use classifications, schedules

for completion, and numbers and types of dwelling units to determine operational emissions. Traffic estimates by the traffic consultant for the project were also used as input to the model. Both the emission factors and the efficacy of control measures are contained within the model. All modeling, both URBEMIS and Caline, used traffic data supplied by the traffic consultant to ensure consistency within the Draft Program EIR.

Response 151

The U.S. EPA has not identified any model appropriate to determining localized PM₁₀ concentrations from operational traffic, nor has it issued guidelines for agencies to use in meeting this Clean Air Act requirement. The Federal Highway Administration (FHWA) is participating with Caltrans in the California Statewide Conformity Group and is in the process of developing PM₁₀ project-level guidance. However, this guidance will not be available for many months. Quantitative PM₁₀ analysis is not required for Conformity purposes at this time. Caltrans developed draft interim guidance for performing a qualitative analysis, dated April 7, 2000 and updated January 11, 2002 to reflect national Guidance for performing qualitative PM₁₀ hot spot analysis for conformity purposes issued by the Federal Highway Administration (FHWA) in September 2001.

This qualitative analysis, developed by analysts at UC Davis (UCD), working under contract to Caltrans, found that unless an area exceeds the national standard or is within 80 percent of the standard, no transportation facility in California is likely to cause or experience a localized PM₁₀ problem unless there are unusual circumstances associated with the project or the immediate surroundings. A study conducted in Sacramento by UCD found that all PM₁₀ species measured at an intersection dispersed almost completely to background levels within 100 meters of the intersection.

The proposed project is not a transportation project and does not require a conformity analysis. However, the same criteria apply. The Saddleback Valley area does not exceed the federal PM₁₀ standard. Operation-related PM₁₀ emissions will be low at any intersection and will dissipate quickly and there are no unusual PM₁₀ sources in the area. There will be no local PM₁₀ impacts.

Response 152

The Draft Program EIR acknowledges that diesel exhaust is considered a carcinogen. The Draft Program EIR is a programmatic EIR and the location of housing will be addressed in future specific plans. The proposed SR-241 South extension has not been approved nor built; therefore, the proximity of houses to a proposed road, the location of which has not yet been finalized, is conjectural at this point and can be addressed in the applicable specific plans. There is no basis for the statement that "it is highly possible the particulate matter generated from project operation could cause local violations of the state and federal air quality standard." Traffic from the proposed SR-241 South project and the proposed housing were included in the regional Transportation Improvement Plan and in the Regional Mobility Plan that were analyzed by SCAG and formed the foundation for the 2003 AQMP. The AQMP showed continued progress towards attainment by the federal deadlines Orange County.

The Draft Program EIR is a programmatic EIR. Project-specific impacts for individual phases will be analyzed in future focused supplemental EIRs. The Draft Program EIR finds that air quality many impacts would be significant after mitigation and does not claim that they are fully mitigated. Additional mitigation measures will be considered for the Final EIR to the extent they are feasible and applicable to the project, but it is unlikely that they would be sufficient to fully

mitigate all impacts. Further mitigation will be proposed for project-specific impacts in conjunction with future discretionary actions and CEQA reviews at subsequent planning stages.

Maps developed by CARB and available on the CARB website (www.arb.ca.gov) show that diesel-induced toxic hotspots occur very near the source of these emissions. Adopted rules will greatly reduce diesel emissions over the next ten years. The only projected future diesel hotspot in Orange County is in the vicinity of John Wayne Airport and I-405. No hotspots are projected along SR-241 South. The proposed Ranch Plan project would be built out over 20 to 25 years during which time diesel emissions from traffic will decline sharply. Potential exposure of future residents to diesel particulate emissions will be addressed in subsequent environmental review when the time and amount of exposure is known.

Response 153

The commenter has prepared an excellent compendium of fugitive dust controls in use throughout the nation. Interestingly, she failed to include listings from the South Coast Air Quality Management District's (SCAQMD's) Rule 403 and Rule 403 Implementation Handbook, which apply to this project. The SCAQMD's Rule 403 is one of the most comprehensive fugitive dust control rules in the nation.

The Draft Program EIR contained the following statement: "SCAQMD Rule 403, last amended April 2, 2004, governs fugitive dust emissions from construction projects. This rule sets forth a list of control measures that must be undertaken for any activity or man-made condition capable of generating fugitive dust to prevent, reduce or mitigate fugitive dust emissions. The rule applies to all construction projects with a disturbed area of five or more acres. In addition, large projects, which are defined as active operations on property which contains in excess of 50 acres of disturbed surface area or any operation which exceeds a daily earth-moving or throughput volume of 5,000 cubic yards three times over a 365-day period, must file a fully executed Large Operation Notification Form (Form 403N) to the SCAQMD Executive Officer within 7 days of qualifying as a large operation under the rule. The rule sets forth a number of requirements regarding record keeping, as well as specific mitigation measures that must be contained in an approved dust-control plan. Recommended dust control measures are incorporated in the URBEMIS model.

Because the proposed project would exceed 50 acres and would move at least 5,000 cubic yards of dirt three or more times in a year during construction, the proposed project would be required to file a 403N form." Rule 403 was incorporated by reference in the Draft Program EIR and all the provisions of Rule 403 apply.

The mitigation measures listed in the construction section of the Draft Program EIR are contained in URBEMIS 2002 and represent summary statements of the major provisions of Rule 403. Topical Response 3.1.8 provides the complete requirements of Rule 403.

While Rule 403 is comprehensive and covers the sources of fugitive dust addressed in the references cited, several of the cited measures address areas that are not clear in the Rule. Therefore, mitigation measures have been added to cover these areas. (See response to City of San Juan Capistrano).

Control measures assumed by URBEMIS and which are specifically included as mitigation measures would reduce PM₁₀ emissions by over 90 percent. The County will implement all feasible control measures to control fugitive dust, but concurs with the conclusion of the

commenter that implementation all feasible measures will not be sufficient to reduce fugitive dust emissions below the SCAQMD's PM₁₀ threshold.

Response 154

As noted in the analysis, excavated soil would be balanced on site in each of the phases. Emission estimates were based on the types and number of pieces of equipment that the engineers estimated would be required for each phase. Phase 6 was determined to require the largest amount of equipment and emissions from this equipment are included in the diesel-powered equipment category. No trucks are included because no haul trucks would be used; all soil would be moved by heavy equipment. There would be very little demolition during the entire construction period since almost the entire site is open land. What structures that do exist on the project site are small. Emissions from this source would be minimal. The URBEMIS model approved for use by SCAQMD and CARB does not account for PM_{2.5}. Although emissions of this pollutant would be less than those for PM₁₀, they would still be significant. However, PM₁₀ is the only particulate pollutant of record until the non-attainment designation is made later this year or next.

The commenter overestimates the total average annual fugitive dust emissions that would occur over a 20-year grading period. The number cited is 26,989,250 cubic yards of soil, the average annual amount in Phase 6, which was selected to represent worst-case conditions. The correct number for the project is 288,461,000 cubic yards divided by 20 years for an annual average of 14,423,050 cubic yards.

It is not clear what the commenter means by saying that combustion emissions are shown as "n/a". Diesel equipment emissions are combustion emissions for earth moving activities.

Response 155

Although URBEMIS2002 incorporates the most recent ITE average trip rates, it recognizes that these rates can vary by project, depending on the mix of uses within the project and the proximity of other potential pass-by trip destinations. For that reason, the trip rates in the model are default rates and can be overridden with project-specific data, as was done in this analysis.

Response 156

Intersections were analyzed with the Caline 4 intersection option, not with the CO Protocol. The following responses address specific comments.

- The Caline 4 'worst case' for wind direction was used
- There was no change between the "no project" and "with project" cases for some intersections because the amount of traffic in those intersections changed by no more than 2.4 percent. This will produce a change in emissions less than can be shown by the output of the model. (Model output is limited to 1 decimal place)
- The intersections were analyzed with Caline 4, not URBEMIS2002. There is no provision in Caline 4 to adjust emission factors for time of day as there is in URBEMIS2002.

- It is not clear which model Ms. Fishman is referring to when she says “Worst-case temperature assumption for hot and cold starts and time of day must be used in the model.” The assumed temperature in the Draft Program EIR hot spot analysis is 50F. The CO Protocol calls for the lowest January mean minimum temperature over a representative 3-year period plus 5F. The Caltrans Air Quality Technical Analysis Notes (1988) lists an average January low temperature of 46.5F at the Santa Ana Fire Station for the years 1984 through 1986. Adding 5 degrees, this would be 51.5 F, which was rounded to 50F. If the commenter is referring to URBEMIS, then the default values for variable starts are used.
- In response to the comment, “Moreover, because the modeling for CO hotspot analysis depends upon the estimates for traffic volume from the Draft Program EIR traffic report, and it has been established that the traffic report underestimates the traffic volumes generated from the Project, it follows that the CO hotspot analysis must be revised to more accurately account for traffic impacts:”
 - Cruise speeds are not defined in Caline. The only speed named is “the average roadway speed.”
 - The CO Protocol refers to “an average cruise speed,” but it is not a function of traffic volume (see Tables B-13 and B-14 of the Protocol)
 - The speeds used were the existing posted speeds for each link.

However, the report already shows a potential worst-case scenario because it compares future traffic to present conditions using current background CO concentrations. Since these concentrations are projected by the SCAQMD to decline in the future, the 2003 analysis overestimates the potential impact at each of the intersections as they will be in 2025. Even at that, there are no significant impacts because all CO concentrations are well below state and national CO standards.

Response 157

EPA is scheduled to promulgate final air quality designations for the new PM_{2.5} standard by the spring of 2005.

CARB adopted annual average standards for PM_{2.5}⁵⁵ in 2002. Pursuant to State law⁵⁶, every air district in California will be required to adopt and implement PM_{2.5} control measures by July 31, 2005.

SCAQMD has not yet adopted recommended significance thresholds and analysis techniques for PM_{2.5}.

Neither CALINE 4 nor URBEMIS2002, the two models used for air quality analysis in The Ranch Plan EIR, have been modified to analyze PM_{2.5}. Although other PM_{2.5} analysis tools and methods have been proposed, none has been approved by SCAQMD.

⁵⁵ Approved by the California Office of Administrative Law in June of 2003.

⁵⁶ Assembly Bill 656 (Sher), 2003.

Until such time as SCAQMD adopts significance thresholds and analysis techniques for PM_{2.5}, PM₁₀ emissions are being used as an indicator of potential PM_{2.5} impacts in air quality analyses performed in the South Coast Air Basin.

The proposed project is still in the planning stage. Consequently, focused air quality analysis cannot yet be performed. Before project-level entitlements are submitted to the County of Orange, specific project-level PM_{2.5} analysis shall be performed for each development phase of The Ranch Plan⁵⁷. Appropriate mitigation measures to protect public health shall be identified at the time the analyses are performed.

Response 158

The TCM measures cited above are to a large extent policy directives to agencies rather than project-specific. Measures that are not feasible for a specific project cannot be used as mitigation. For example, auto-restricted zones apply to high-density urban centers, not to a suburban mixed-use development. The other policies relate to locating projects near transit facilities that do not exist in this part of Orange County and would not exist unless and until there is higher density in the surrounding area. Therefore, the cited measures are not applicable to or feasible for the proposed project.

Nevertheless, additional trip reduction incentives are required by CEQA to mitigate the significant air quality impact associated with trips generated by this project. Please also refer to Topical Response 3.1.8, Air Quality.

Response 159

The traffic measures cited were developed to reduce traffic impacts to less than significant. These measures are proposed as traffic mitigation and were not part of the project design analyzed in the Draft Program EIR. Construction of each component will require project-specific CEQA documentation that will address potential air quality impacts and propose mitigation.

Response 160

Additional source mitigation measures will be added to the Final Program EIR. Please refer to Topical Response 3.1.8, Air Quality. These measures would have a beneficial impact on air quality but would not reduce construction or area source emissions to less than significant.

Response 161

For traffic mitigation measures, see response to Comment 158. In addition, the following measure has been included in the Final Program EIR as follows: MM 4.7-2 With the submittal of each Master Area Plan, the project applicant shall identify locations where alternative fueling facilities could be sited.

The commenter has compiled an extensive list of policy options for project design and mitigation. The majority of these would require implementation at the County level and have been referred to the County for further consideration.

⁵⁷ Assuming SCAQMD adopts PM 2.5 significance thresholds and analysis techniques before the entitlements are submitted.

Response 162

The commenter presents extensive information about methodologies, and the commercial costs of these methodologies, to reduce some of the sources of urban heat islands. However, there is no information presented that would support her conclusion that the proposed project would constitute a heat island and that there would be significant ozone-formation impacts. The commenter cites a reference (Taha, 1995) discussing air quality implications of large-scale albedo and vegetation modifications on the Los Angeles Basin. The referenced author's conclusion that large-scale development of the entire Basin has had an impact on regional ozone patterns is well-established.

As noted in the comments, the "heat island effect" is a meteorological phenomenon created in urban areas where there is a concentration of buildings, streets, and parking lots unrelieved by open areas. The buildings and paved areas absorb more solar radiation than vegetated areas and that absorbed radiation is then released as heat.

This project, however, would not create an urban heat island. It would be a suburban development. The plan would include up to 14,000 dwelling units and other uses in a development area of approximately 8,000 acres. More than 13,000 acres of the site would be retained as open space. This open space would surround development areas, which would be separated and not form a contiguous urban area. Proposed development plans include golf courses and a regional park, as well as small neighborhood parks. All development areas would be landscaped.

Further, additional mitigation has been proposed that would serve to reduce energy usage. The following measure is incorporated into the Final Program EIR as follows:

MM 4.7-3 With the submittal of each Master Area Plan, the project applicant shall identify how shade trees can be incorporated into parking lot designs (to reduce evaporative emissions from parked vehicles); where shade trees can be sited (to reduce summer cooling needs); and how shade trees would be incorporated into bicycle and pedestrian path design. Prior to issuance of building permits, the applicant shall identify how the use of light-colored roof materials and paint to reflect heat to the extent feasible has been incorporated into the design plans.

The above measures will reduce summer solar heating and resultant energy needs. The project would not create an urban heat island.

Response 163

The project would not create significant adverse impacts on air quality that were not disclosed in the Draft Program EIR. Mitigation measures have been added, expanded, and clarified to address the impacts that were already identified as significant.

The project's population and location were included in the Urban Airshed modeling conducted for the 2003 AQMP that showed that the Basin would attain the federal ozone 1-hour and PM₁₀ standards by the required deadlines. Although the attainment requirements for the 8-hour and PM_{2.5} had not been promulgated by the EPA at that time, both pollutants were addressed in the Plan. Attainment of the two new standards will be addressed in the next AQMP revision. Since the strategies for attainment of both new standards are the same as the pollutants that were addressed, progress is continuing towards attainment of these two standards in the interim. In

addition, compliance with the 8-hour ozone and PM_{2.5} attainment schedule will be addressed in future specific plans on project components.

Inclusion of the TCM measures in the AQMP is only necessary if they are applicable to the project and they are not. However, new TCM measures have been proposed. The project would not create an urban heat island.

All analyses were conducted using established SCAQMD and ARB procedures and were based on the information provided by the project engineers and consultants. If the information changes, the air quality analysis will be adjusted.

Response 164

In formulating of the project's Conceptual WQMP, infiltration BMPs were only selected for those areas that have suitable well-drained soils, based on the available geologic and soils information and the terrains analysis (see Figure 1-6 in EIR Appendix B.2). Infiltration BMPs were sited in areas with loamy sand and in some cases areas with loamy sands. Soils with a saturated hydraulic conductivity less than about 2 inches/hr were considered to have unsuitable soils. In general, suitable soils are found in the canyon floors containing alluvial deposits. In the San Juan Watershed, alluvial deposits are fairly common, including area with wide terraces of alluvial deposits in the Gobernadora and Chiquita subbasins. Such deposits are less common in portions of the project area within the San Mateo Watershed, but are found in the valley floor areas of the Lower Gabino subbasin. For a detailed discussion of the data used and assumptions regarding the infiltration analysis, please refer to the Draft Program EIR Appendix B.2 which contains the Conceptual WQMP and specifically Appendix A, Section A-2.5 titled "Soil Properties and Infiltration Parameters."

Response 165

Dry weather flows from the proposed development are likely to be minimal given the hydrologic source controls including efficient irrigation systems, use of natural drainage systems where feasible, and incorporation of bioretention areas. Excess dry weather flows also would be subject to incidental infiltration in the WQ/FD basins located upstream of the infiltration basins. If, for some unforeseen reason, dry weather flows were sufficient to enter the infiltration basins, they could be diverted around the infiltration basins to the treatment swales or even possibly diverted to a non-domestic water supply reservoir.

Response 166

Chapter 6 of the Conceptual WQMP (EIR Appendix C-2) describes the proposed scope of the maintenance and monitoring program, and states that the responsibility for the program will be the Homeowners Association (HOA). It is possible that, as is the case with the Ladera Development, that the County would assume responsibility for the flood control facilities, and the HOA would assume responsibility for the Conceptual WQMP facilities. While it is recognized that the HOA would not have the expertise to inspect and maintain the facilities, but the assumption is that the HOA will contract with qualified private or public entities to conduct this work.

Response 167

Please refer to Topical Response 3.1.6, Water Resources.

COMMENTS 58 Krag and Linda Ross
Undated

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

3.7 PLANNING COMMISSION PUBLIC HEARING

Oral testimony was taken at the Planning Commission hearing on June 23, 2004. A transcript of the hearing was made. The following are responses to the comments made at the hearing. The numbering of the comments is provided in the copy of the transcript provided in the Volume I. The comments made by the speakers are numbered sequentially since all the comments are combined in the one document.

COMMENTER 59 BILL GARWIN

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 60 MABEL HILL-GARCIA

Response 2

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 61 JOHN NICHOLS, FISH FLYERS CLUB OF ORANGE COUNTY

Response 3

Please refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species, regarding steelhead trout.

COMMENTER 62 CAROL FINAZZA

Response 4

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 63 TONY MAZEIKA

Response 5

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 64 REED ROYALTY, ORANGE COUNTY TAX PAYERS ASSOCIATION

Response 6

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 65 TONY FORSTER

Response 7

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 66 PETER ROCK

Response 8

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 67 RON STROTHER

Response 9

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 68 DENISE ASHTON

Response 10

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 69 HUGH HELM

Response 11

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 70 PAUL CARLTON

Response 12

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal. Please see Topical Responses 3.1.5 pertaining to affordable housing, 3.1.1.1 pertaining to the NCCP/HCP and SAMP/MSAA processes, and 3.1.13 pertaining to Alternatives.

Response 13

Please see Topical Response 3.1.2 pertaining to open space.

Response 14

The environmental impacts associated with the project are discussed in the Draft Program EIR. The issues you identify: traffic, biological resources, air quality, water quality, and fire danger are discussed in Sections 4.6, 4.9, 4.7, 4.5 and 4.14, respectively. With regards to the loss of

recreational space, the project site does not currently provide recreational opportunities. The property is currently a private land holding. The project proposes the dedication of a new regional park, golf courses, and other park opportunities.

COMMENTER 71 MICHAEL HAZZARD

Response 15

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Please see Topical Response 3.1.9 pertaining to biological resources and Topical Response 3.1.6 pertaining to water quality.

COMMENTER 72 JOHN HOGAN

Response 16

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 73 DEBRA PORTUGNEZ

Response 17

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 74 PHILLIP FRAZER

Response 18

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal. Please see Topical Response 3.1.2 pertaining to Open Space preservation.

COMMENTER 75 MIKE BALSAMO

Response 19

Your comments is noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 76 GARY MEREDITH

Response 20

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal. Please see Topical Response 3.1.6 pertaining to water quality.

COMMENTS 77 BRITTANY MCKEE

Response 21

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Please see Topical Responses 3.1.1.1 pertaining to the NCCP/HCP and SAMP/MSAA processes and 3.1.2 for a discussion of Open Space preservation.

Response 22

The public review period for the Draft Program EIR was extended 15 days to allow for a 61-day public review period.

COMMENTS 78 MICHAEL RUPPARD

Response 23

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 79 CELIA KUTCHER, CALIFORNIA NATIVE PLANT SOCIETY

Response 24

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Please see Topical Response 3.1.1.1 pertaining to the NCCP/HCP and SAMP/MSAA processes.

Response 25

Please see Topical Response 3.1.6 pertaining to water quality.

COMMENTS 80 BRENDA STOUFFER

Response 26

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Please see Topical Response 3.1.1.1 pertaining to the NCCP/HCP and SAMP/MSAA processes.

COMMENTS 81 DAN SILVER, ENDANGERED HABITATS LEAGUE

Response 27

The public review period for the Draft Program EIR was extended 15 days to allow for a 61-day public review period.

Response 28

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Please see Topical Response 3.1.1.1 pertaining to the NCCP/HCP and SAMP/MSAA processes.

COMMENTER 82 JOHN BURNS

Response 29

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 83 SHANNON HEZMALHALCH

Response 30

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 84 LYN HARRIS HICKS

Response 31

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 32

Balanced land use pertains to a balance of uses within the project limits. It is intended that the project would provide a balance in the number of jobs and the number of residents and it provides a mix of commercial and business uses to service the future residents. It does not imply that the project would have no significant impacts. CEQA requires that potential significant impacts be identified and mitigation measures developed to reduce the impact. It does not require a project to reduce all impacts to a level of less than significant. Your concerns regarding the impacts associated with the project have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 85 ROBERT FRASER

Response 33

Wildlife movement corridors, including Paul Beier's study, are discussed in the Draft Program EIR in Section 4.9, Biological Resources. Discussion of wildlife movement corridors is also provided in Topical Response 3.1.9.

COMMENTER 86 MARNI MAGNA

Response 34

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 35

Please see Topical Response 3.1.2 pertaining to preservation of open space.

Response 36

The project will be required to comply with all applicable laws. The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. Water supply is further discussed in Topical Response 3.1.12. Please refer to Topical Response 3.1.3 for a discussion of the applicability of SB 1468.

Response 37

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal. Please refer to Topical Response 3.1.7 pertaining to the toll road.

COMMENTS 87 BLAKE STEPHENS

Response 38

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 88 JERRY COLLAMER

Response 39

The July Open House was conducted as a self-guided tour with staff available for questions. Opportunities for additional oral public comment will occur with the Planning Commission and Board of Supervisors hearings.

Response 40

Your comment is noted. The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Draft Program EIR in Sections 2, Introduction, and 4.9, Biological Resources. The process has not sped up. In fact, the processing of the project has been delayed. The project applicant filed the Ranch Plan with the County in November 2001. The SCORE process, which sought public input; no timeframe was established for completion of the SCORE process. The CEQA Guidelines (Section 15100) states, "The requirement for the preparation of an EIR should not cause undue delays in the processing of applications for permits or other entitlements to use." CEQA Guidelines §15108 provides further direction on the processing time for an EIR. It states, "With a private project, the Lead Agency shall complete and certify the final EIR as provided in Section 15090 within one year after the date when the Lead Agency accepted the application as complete. Lead Agency procedures may provide that the one-year time limit may be extended once for a period of not more than 90 days upon consent of the Lead Agency and the applicant." Clearly, the applicant and the County have delayed the processing of the project to allow for greater public input. Further information on the processing with the NCCP/HCP and the SAMP/MSAA is provided in Topical Response 3.1.1.1.

Response 41

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal. Please refer to Topical Response 3.1.6 pertaining to water quality.

Response 42

Please see Topical Response 3.1.2 pertaining to open space.

COMMENTS 89 JACK EIDT

Response 43

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 44

The loss of trees and other vegetation in the Arroyo Trabuco after storms is a natural occurrence.

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal. The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Draft Program EIR in Sections 2, Introduction, and 4.9, Biological Resources. Further information is provided in Topical Response 3.1.1.1.

COMMENTS 90 MARY JANE GOODRICH

Response 45

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 91 CAROL HOROWITZ, NATURAL RESOURCES DEFENSE COUNCIL

Response 46

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Please see Topical Response 3.1.1.1 pertaining to the NCCP/HCP and SAMP/MSAA processes.

Response 47

The public review period for the Draft Program EIR was extended 15 days to allow for a 61-day public review period.

3.8 COMMENT CARDS FROM THE JULY 15, 2004 OPEN HOUSE

The following comment cards were received at the July 15, 2004 open house sponsored by the County of Orange. The commenter's name is listed and if an affiliation was identified, this is listed after the person's name.

COMMENTS 92 MARINETTE MIKESELL, FOOTHILL ASSOCIATION

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 93 JAN FRASER (FIRST OF TWO COMMENT CARDS)

Response 1

Please see Topical Response 3.1.2 pertaining to open space.

Response 2

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 94 JAN FRASER (SECOND OF TWO COMMENT CARDS)

Response 1

The golf courses are assumed as part of the development area, not part of the open space.

COMMENTS 95 JANET BIERNEY, CONCERNED RESIDENT OF SAN CLEMENTE

Response 1

The project would be required to comply with all applicable laws and regulations including, but limited to, the Federal Endangered Species Act, the California Endangered Species Act, and the Clean Water Act. The requirements of these laws and regulations are fully discussed in Section 4.9 of the Draft Program EIR.

Response 2

Your concern regarding ocean water quality at San Mateo is noted. This issue is discussed in Section 4.5 of the Draft Program EIR. Additional information is provided in Topical Response 3.1.6.

COMMENTS 96 ADAM R. COLLINAS

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Please refer to Topical Response 3.1.10 pertaining to potential recreational uses. The desire to preserve the site as a state or national park to protect resources and provide for public access to the area is noted. However, this is not part of the

applicant's proposal, nor is it something that County would be in the position to pursue at this time. While the comment has been made scoping meetings, the County is not aware of any legislation that would propose formation of such a facility or action by any organization pursuing such legislation. Consideration of project site as a state or national park would be purely speculative at this time and would not be considered a reasonable alternative. Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 97 KAREN PHELPS

Response 1

The property is currently a private land holding. It does not currently provide any recreational opportunities for families. The project proposes the dedication of a new regional park, golf courses, and other park opportunities. Additionally, the majority of the project site would be retained as open space.

Response 2

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 98 JERRY COLLAMER

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. The project proposes to retain 66 percent or 15,121 acres in open space. Please see Topical Response 3.1.2 pertaining to open space and 3.1.6 regarding watersheds.

COMMENTER 99 ANDREW MIKESELL

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 100 PATRICIA BLANCO

Response 1

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 2

Ranching would be allowed within much of the open space areas. A Grazing Management Plan has been developed as part of the project's Adaptive Management Plan to provide protection of biotic resources in the open space areas. This is discussed in Sections 4.2 and 4.9 of the Draft Program EIR. Also refer to Topical Response 3.1.4 pertaining to agricultural operations. Please also refer to Topical Response 3.1.5, Population and Housing, with respect to affordable housing.

COMMENTS 101 MARION NANCY KNIPE

Response 1

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 102 PAULINE FAYE

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 103 JON BERGES

Response 1

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal. Please refer to Topical Response 3.1.10 pertaining to potential recreational uses. The desire to preserve the site as a state or national park to protect resources and provide for public access to the area is noted. However, this is not part of the applicant's proposal, nor is it something that County would be in the position to pursue at this time. While the comment has been made scoping meetings, the County is not aware of any legislation that would propose formation of such a facility or action by any organization pursuing such legislation. Consideration of project site as a state or national park would be purely speculative at this time and would not be considered a reasonable alternative. Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 104 MICHAEL METCALF

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. The County of Orange does not have jurisdiction over the toll road. Please see Topical Response 3.1.7 regarding the toll road.

COMMENTS 105 JERRY BUCKLEY

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 106 DONNA GOULD (FIRST OF TWO COMMENT CARDS)

Response 1

As described in the Draft Program EIR at pages 4.15-23 through -27, and as more fully discussed in the Water Supply Assessment (WSA) prepared in connection with the Ranch Plan project (see Appendix K), total projected water supplies available to the public water system (i.e., Santa Margarita Water District [SMWD]) over the next 20 years, based on normal, single

dry, and multiple dry year conditions, would meet the domestic and non-domestic water demands of the proposed project plus the demands associated with existing and planned future uses in SMWD's service area. The analysis is based, in relevant part, upon regional supply studies/projections prepared by Metropolitan Water District of Southern California (MWD) – a wholesale water supplier to SMWD and the holder of a basic apportionment of 550,000 acre-feet per year of Colorado River water.

As reflected in the Draft Program EIR on page 4.15-24, MWD's long-term regional supply projections have considered the possibility of reduced deliveries of Colorado River water in the future. By virtue of proactive, long-term, and integrated planning (which includes water conservation, recycling, increased water storage capacity and other supply programs), MWD has increased its mix of available water resources and has incrementally reduced its dependence upon Colorado River water. Accordingly, a reduction in Colorado River water deliveries would not imperil MWD's ability to provide sufficient water supplies to meet the demands of its member agencies, including SMWD. Furthermore, and as discussed on page 4.15-26 of the Draft Program EIR, SMWD has entered into supplemental water supply agreements with Cucamonga Valley Water District (formerly, Cucamonga County Water District) and Southern California Water Company (SCWC) to provide supplemental water for the benefit of the Ranch Plan project in the event of reduced water supplies from MWD.

For further discussion concerning the long-term reliability of MWD water supplies, please see Topical Response Number 3.1.12.

COMMENTER 107 DONNA GOULD (SECOND OF TWO COMMENT CARDS)

Response 1

The open space area does not include any residential yards, roads, median strips, golf courses or parking lots. It does not include the parks that would be developed in compliance with the Local Parks Code within development areas. Of the 15,121 acres (66 percent of the project site) that is assumed to be open space, 1,034 acres would be within the proposed Rancho Mission Viejo Regional Park, which would be a combination of active and passive uses. The remainder of the open space area is designed to provide for habitat preservation and act as a buffer between development and sensitive areas. This is further discussed in Topical Response 3.1.2.

Response 2

As identified in Section 3, Project Description and 4.1, Land Use and Related Planning Programs of the Draft Program EIR, substantial portions of the project site have been used for ranching and agricultural uses, commercial nursery operations, research and development uses, and natural resources extraction for many years. Leases for these uses extend back many decades and have not been associated in any way with the Ranch Plan.

Response 3

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 4

The issues you have identified, pollution, traffic congestion and watershed impacts, have been addressed in the Draft Program EIR, which will be considered by the decision makers prior to taking action on the Ranch Plan.

Response 5

The water supply assessment prepared by the Santa Margarita Water District is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. The water supply assessment prepared by the Santa Margarita Water District is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. This is further discussed in Topical Response 3.1.12. For purposes of the Ranch Plan WSA, the validity/integrity of SMWD's Year 2000 Urban Water Management Plan (UWMP) is not affected by a potential reduction in Colorado River deliveries. The WSA represents a composite document that relies upon information derived from many sources beyond the UWMP, including, but not limited to, MWD's 2003 *Report on Metropolitan's Water Supplies* and Tetra Tech's November, 2003 *Plan of Works for Improvement Districts 4C, 4E, 5 and 6*. These additional items contain the most current information available concerning regional water supplies, local/regional water demand, and utility system capacity to serve the proposed project. The UWMP represents but one part of the WSA, and the analysis and conclusions appearing in the WSA are not compromised or negatively affected by the UWMP's publication date. Note: In accordance with the five-year update schedule prescribed by Water Code Section 10621(a), SMWD's Year 2000 UWMP will be revised beginning in 2005.

Response 6

Your comment is noted. The design of the Ranch Plan is to provide increased densities in development areas and retain larger expanses of open space. The project provides for 15,121 acres of open space, approximately 66 percent of the project site.

Response 7

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Please refer to Topical Response 3.1.4 pertaining to loss of agricultural uses.

COMMENTS 108 MARNI MAGDA (FIRST OF TWO COMMENT CARDS)

Response 1

The water supply assessment prepared by the Santa Margarita Water District is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. This is further discussed in Topical Response 3.1.12.

COMMENTS 109 MARNI MAGDA (SECOND OF TWO COMMENT CARDS)

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 2

Pertaining to water sources, please see response 1 to the comment on your first comment card. Pertaining to grazing and agriculture, ranching would be allowed within much of the open space areas. A Grazing Management Plan has been developed as part of the project's Adaptive Management Plan to provide protection of biotic resources in the open space areas. This is discussed in Sections 4.2 and 4.9 of the Draft Program EIR.

Response 3

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 110 SHIRLEY OLSON

Response 1

Please see Topical Response 3.1.2 pertaining to open space.

Response 2

Water quality impacts are evaluated in Section 4.5, Water Resources, of the Draft Program EIR. Water supply is evaluated in Section 4.15, Public Services and Facilities. The Draft Program EIR identified a cumulative water quality impact associated with pathogens. Based on the water supply assessment prepared by the Santa Margarita Water District, sufficient water supplies are available for the project. Also refer to Topical Responses 3.1.6 pertaining to water quality and 3.1.12 pertaining to water supply.

Response 3

Your comment is noted. The potential financial implications of designating the ranch as a wilderness area are beyond the scope of the Program EIR.

COMMENTER 111 ROD RODARTE

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 2

Your opinion on the need for the toll road is noted. However, the County of Orange does not have jurisdiction over the toll road and is not considering the merits of the roadway as part of this project. Please see Topical Response 3.1.7 regarding the toll road.

COMMENTER 112 MATTHEW O'MALLEY

Response 1

The County General Plan identifies an off-road, paved bikeway (Class I Bikeway) along San Juan Creek and an on-road (Class II) bikeway along Antonio Parkway. Additionally, the County Master Plan of Riding and Hiking Trails depicts portions of the San Juan Creek Trail, Prima

Deshecha Trail, Cristianitos Trail, and Wagon Wheel Trail within the project limits. The project would facilitate the implementation of these planned facilities. At this level of approval (General Plan and zoning) the project does not reflect community trails and bikeways. A mitigation measure in the Program EIR (MM 4.12-1) requires the applicant to develop a Master Trail and Bikeways Implementation Plan for the Ranch Plan in conjunction with the first Master Area Plan. The plan would establish viable routes for trails and bikeways to provide connectivity to community trails and bikeways in adjacent developments and with existing and proposed recreational facilities.

COMMENTS 113 RICHARD KAUPP

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 114 MICHAEL SAPPINGFIELD

Response 1

Please refer to Topical Response 3.1.6 pertaining to water quality and Topical Response 3.1.9, Biological Resources.

Response 2

Requirements for the developer to implement bikeways and trails are generally done in conjunction with tentative tract maps. As outlined in Section 4.12, Recreation, Standard Condition 4.12-5, which would be applicable at the subdivision level of approval, not only requires the easement for the trail, but the design and implementation of the improvements.

Response 3

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Please refer to Topical Response 3.1.7 pertaining to toll roads.

COMMENTS 115 MARK JIMENU

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 116 TORI HAIDINGER

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Please refer to Topical Response 3.1.1.1 pertaining to project processing related to the NCCP/HCP and the SAMP/MSAA.

COMMENTER 117 JUDY HAIDINGER

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Please refer to Topical Response 3.1.7 pertaining to transportation and circulation.

COMMENTER 118 DIANE MCCUE

Response 1

Only the General Plan Amendment/Zone Change is being processed at this time. The product type and pricing has not been determined. Based on the phasing plan set forth in the Draft Program EIR, the first phase of construction is projected between 2005 and 2007.

COMMENTER 119 RANDY SINK

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTER 120 STEVE BEHMERWOHL

Response 1

The Draft Program EIR examines the potential effects of the proposed project on water quality in Section 4.5 and the applicant has prepared a Conceptual Water Quality Management Plan (Appendix C-2 of the Draft Program EIR) in accordance with County requirements set forth in the Drainage Area Management Plan (DAMP). Section 4.5 (page 4.5-95) notes the following regarding level of significance of impacts after mitigation:

"Hydrology Runoff Peak Discharges

The proposed detention facilities, in conjunction with the infiltration approach, will reduce post-project flow peaks to the pre-project level. There is adequate area within the development areas to refine the size of the detention facilities to comply with County criteria. As such, the project with mitigation will have a less than significant impact on both on- and off-site flood hazards.

Stream Stability and Sediment Transport

The project is being designed to avoid direct alteration of the major stream channels. During the project design phases, any required alteration to smaller drainages will be done in a way to maintain channel stability. This will include drainage system design attributes, as well as routing flows within the development areas through the infiltration/sedimentation and detention basin facilities. The project will have a less than significant effect on channel erosion/siltation due to alteration of the channel system.

Hydrology Runoff Volume and Duration

The combined infiltration/detention system is designed to provide flow management for a full range of future hydrologic events, ranging from the frequent winter rainstorms, to the moderate (1.5- to 5-year) events, and including the major flood events (10-year to 100-year). The goal is to maintain the existing flow regime, especially for the more frequent and channel forming (approximately 2-yr events). For larger events, flow peaks will not increase. Based on this, the impact is considered to be less than significant. By maintaining similar hydrologic balance and volumes within the project area, the proposed flow duration control basins will reproduce or otherwise preserve recharge and infiltration runoff volumes for groundwater.

Flooding Risks

The project detention facilities will be designed to comply with all applicable County and other agency design/safety criteria. In general, the basins are typically located at the lower end of the development areas, relatively near the major watercourses. The facilities will be designed with adequate spillway systems to safely convey water in excess of the pond capacity, or in the event of outlet structure blockage. Implementation of these features/improvements will reduce potential safety impacts to a less than significant level.

Runoff Water Quality

The proposed project Conceptual WQMP (*Draft WQMP*, GeoSyntec, 2004) outlines the site design, source control and treatment systems that would provide an effective treatment for most pollutants associated with urbanization. In addition, the proposed features address both dry-weather and wet-weather water quality concerns. With the exception of certain pathogen indicators, potential runoff water quality impacts are considered less than significant with the proposed mitigation features outlined in the *Draft WQMP*.

Compliance With Regional Watershed Planning Principles

Development and compliance with the Planning Principles has been an integral part of the planning of the Ranch Plan project. The overall project layout, including location of the individual planning areas, has included maintenance of the hydrologic regime as an integral component. This will allow coarse (sandy) sediment supply to the stream systems. In addition, the infiltration facilities will insure that the changes to the hydrologic regime are minimized. Finally, provision of the detention/sediment facilities will insure that flood flows are not increased, and prevent the excessive discharge of fine (silt/clay) particles from the development areas. Implementation of these measures/facilities represents compliance with the SAMP/MSAA planning principles and will reduce impacts to a less than significant level."

Response 2

The commenter provides no specific details regarding what type of "pollutants" from Solag, Olsen Paving, and other concrete facilities they are concerned may get washed into the stream during development. However, the commenter should note that the County of Orange requires all construction projects to develop a storm water pollution prevention plan (SWPPP) that include temporary Best Management Practices (BMPs) to control erosion and sedimentation

during storm events. To verify compliance with these plans, the County conducts regular inspections to ensure that all BMPs are in place and operating as specified. For the post-construction (i.e., development phase), the County requires a Water Quality Management Plan that details the permanent BMPs, including site design BMPs and source control BMPs that will address the pollutants and conditions of concern identified in the Conceptual WQMP. As noted above, the applicant has prepared a Water Quality Management Plan to address both pollutants of concern and conditions of concern for the post development scenario. Please refer to Appendix C-2 of the Draft Program EIR.

Your concern pertaining to traffic is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Traffic issues are discussed in Section 4.6, Transportation and Circulation of the Draft Program EIR. Also refer to Topical Response 3.1.7.

Response 3

Your opinion on the need for the toll road is noted. However, the County of Orange does not have jurisdiction over the proposed extension of the SR-241, and as such does not play a role in the financing of the SR-241, except to the extent required by the establishment of fee programs which may require the County to collect fees on behalf of the TCA at the time of building permit issuance. Therefore, the County is not considering the merits of the roadway as part of this project. As indicated in Section 3, Project Description, the Ranch Plan reflects the alignment for SR-241 depicted on the General Plan. The analysis in the EIR evaluates the Ranch Plan both with and without the construction of the extension of SR-241. It should be noted that the SR-241 is a regional facility and is designed to serve regional traffic demand, not just trips generated by the Ranch Plan. The Ranch Plan project would be required to pay developer fees but this would not offset the need for additional funding sources.

COMMENTER 121 PAUL CARLTON, SCORE

Response 1

Please see Topical Response 3.1.2 pertaining to open space.

Response 2

Your comment is noted. The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Draft Program EIR in Sections 2, Introduction, and 4.9, Biological Resources. Further information is provided in Topical Response 3.1.1.

Response 3

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 4

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Fire protection was addressed in Section 4.15, Public Services and Facilities, of the Draft Program EIR. The inability of OCFA to meet adopted performance objectives because of the remoteness of Planning Area 9 was identified as an unavoidable, significant impact.

Response 5

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 6

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. An extensive planning and coordination process has been provided as part of the Coordinated Planning Process. Planning for the programs identified by the commenter has been ongoing for many years.

Response 7

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. The potential impact on wildlife movement corridors has been addressed in Section 4.9, Biological Resources. See Topical Response 3.1.7 regarding the toll road.

Response 8

Please refer to Topical Response 3.1.13, Alternatives. Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 9

As indicated in Response 7, the potential impact on wildlife movement corridors has been addressed in Section 4.9, Biological Resources and is further discussed in Topical Response 3.1.9.

Response 10

An understanding of the topography by Planning Area 3 and Caspers Wilderness Park is necessary to fully understand the interface between development and the park. The ridgeline in this area is predominately within Caspers Wilderness Park. As discussed in the Draft Program EIR in Sections 4.10 Aesthetics, and 4.12, Recreation, the Westridge Trail extends along the top of the ridge and would have views of development. However, there is a minimum 500-foot set back for development along the boundary of Planning Area 3 and Caspers Wilderness Park (page 4.12-14 of the Draft Program EIR). The setback is graphically depicted in the exhibits that show the development areas. Since the ridgeline is located within the park, there would be no ridgeline development possible and the ridge would serve to shield the vast majority of the park from views of development. Similarly, the ridgeline along Planning Area 5 is also outside the Ranch Plan boundary. Development would be setback a minimum of 200 feet along the southern edge of the Planning Area boundary. The grading shown on the Exhibit 4.4-11 in proximity of the Donna O'Neill Land Conservancy at Rancho Mission Viejo is for the connection of a collector road to Avenida Talega, which is aligned outside the Ranch Plan boundary along the northern edge of the Conservancy.

Response 11

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR submittal. Water Quality issues were discussed in Section 4.5, Water Resources, of the Draft Program EIR and is further discussed in Topical Response 3.1.6.

Response 12

The County of Orange does not have jurisdiction over the extension of State Route 241. The alignment for the southern extension of Foothill Transportation Corridor has been on the Master Plan of Arterial Highways since 1981. Rancho Mission Viejo has coordinated extensively with the County, United States Fish and Wildlife Service, California Department of Fish and Game, and U.S. Army Corps of Engineers throughout the Coordinated Planning Process. Similarly, there has been ongoing discussion with the Transportation Corridor Agency. The public coordination on the Ranch Plan project has far exceeded what is required by CEQA or County requirements. The opportunities for public input have gone beyond what has been done for any other land use proposal in Orange County. As indicated in your comment letter, you have been involved in the evolution of the Ranch Plan for about ten years. Additionally, the Revised NOP and the EIR process provide an opportunity for the public to provide input to the decision makers on the project and the process.

COMMENTS 122 ILSE M. BYRNES, CALIFORNIA TRAILS AND GREOWAYS FOUNDATION

Response 1

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 123 BETTY PAPPAS

Response 1

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal. Water supply, traffic, and fire hazards were discussed in Sections 4.15, 4.6, and 4.14, respectively, of the Program EIR.

COMMENTS 124 EVA-MARIE SWEDLOW

Response 1

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal. The issues you have raised are addressed in the Draft Program EIR. Section 4.1, Land Use and Related Planning Programs and 4.10, Aesthetics, discuss the compatibility of the project with adjacent land uses. Section 4.9, Biological Resources discusses the potential impacts on biological resources including wildlife movement corridors. Air quality and water resources are discussed in Sections 4.7 and 4.5, respectively. Fire hazards and fire protection is discussed in Sections 4.14, Hazards, and 4.15, Public Services and Facilities. The project would be exposed to no greater hazards associated due to proximity to San Onofre Nuclear Generating Station than other development in the area. The regulations associated with the operations of SONGS reduce the risk of upset to a level considered to be less than significant. In addition to the discussion in the Draft Program EIR, biological and water

resources issues are also discussed in the topical responses in Section 3.1, of this document. It should also be noted that the project is proposing only 68 percent of the development assumed in the regional growth projections for the area.

COMMENTS 125 MICHAEL J. GRAINGER

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

COMMENTS 126 MARY GRAINGER

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

COMMENTS 127 JOSEPH LEZAY

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Response 2

Please see Section 4.15, Public Services and Facilities, and Appendix K, Water Supply Assessment, for a discussion of the water supply assessment conducted by the Santa Margarita Water District. Additional discussion on water supply is provided in Topical Response 3.1.12.

COMMENTS 128 ROBYN OSBORNE

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Response 2

Please see Section 4.15, Public Services and Facilities and Appendix K, Water Supply Assessment for a discussion of the water supply assessment conducted by the Santa Margarita Water District. Additional discussion on water supply is provided in Topical Response 3.1.12.

COMMENTS 129 FRANK WHITEHEAD, SR. AND JENNIE WHITEHEAD

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

COMMENTER 130 DIANA RODGERS

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

COMMENTER 131 NEIL AND DEBBIE MCNALLY

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. The Draft Program EIR discusses potential impacts in the areas where you have expressed a concern. Please see Section 4.6, Transportation and Circulation, Section 4.9, Biological Resources, and Section 4.15, Public Services and Facilities.

COMMENTER 132 JAMES CUMMINGS

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. As a means of providing an update on the projects identified, the City of San Juan Capistrano and Caltrans are currently evaluating the Ortega Highway interchange. This is outside of the purview of the County of Orange. The City, County, and Caltrans are currently coordinating on improvements to Ortega Highway west of Antonio Parkway. The County is currently conducting an alignment study for the extension of La Pata Avenue from Ortega Highway to Avenida Saluda.

COMMENTER 133 AUDREA B. WILLIAMS

Response 1

Please refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species, regarding steelhead trout.

COMMENTER 134 DEBRA REED

Response 1

Please refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species, regarding steelhead trout.

COMMENTER 135 JIM CARPENTER

Response 1

Please refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species, regarding steelhead trout.

COMMENTS 136 BARBARA ANDERSON

Response 1

The comment does not provide specific data on the inadequacies of the analysis in the Draft Program EIR. Traffic is addressed in Section 4.6, Transportation and Circulation. Fires safety impacts are evaluated in Section 4.14, Hazards, and provision of fire services is addressed in Section 4.15, Public Services and Facilities. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. Biological resource impacts are addressed in Section 4.9, Biological Resources, and impacts to watersheds are discussed in Section 4.5, Water Resources.

Response 2

The interface of development with Marine Corps Base (MCB) Camp Pendleton is addressed as part of the land use compatibility evaluation in Section 4.1, Land Use and Related Planning Programs. It should be noted that the MCB Camp Pendleton found the evaluation of the interface adequate (see Comment 15 of United States Marine Corps, Camp Pendleton comment letter).

3.9 E-MAILED COMMENTS RECEIVED

COMMENTER 137 JACK EIDT
Dated: July 7, 2004

Response 1

The Ranch Plan Draft Program EIR No. 589 is composed of two volumes and the technical appendices. Volume I contains the text of the Draft Program EIR, while Volume II provides the graphics. The Technical Appendices are designated as Volumes A through M. Volumes A-1 and A-2 contain the Notice of Preparation and Comments, and the Revised Notice of Preparation and Comments, respectively. Volumes B through M represent the various Technical Appendices, which support the Draft Program EIR sections. A Summary Document was distributed along with the Notice of Availability (NOA) of the Program EIR and at the Open House on July 15, 2004. As indicated in the Summary Document and in the NOA, the full document is available for review at six libraries in south Orange County (addresses provided in the NOA and Summary Document). Additionally, the document is available for purchase at OCB Reprographics as either a three CD set or paper copies.

COMMENTER 138 DAVID MCNICHOLAS
Dated: July 30, 2004

Response 1

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species, regarding steelhead trout.

COMMENTER 139 ARTHUR STRAUSS
Dated: July 30, 2004

Response 1

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species, regarding steelhead trout.

COMMENTER 140 CARA AND BRAD TODD
Dated: July 30, 2004

Response 1

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species, regarding steelhead trout.

COMMENTER 141 LEO CONNOLLY
Dated: July 30, 2004

Response 1

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species, regarding steelhead trout.

COMMENTS 142 JOHN OBERTO
Dated: July 30, 2004

Response 1

Please refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species, regarding steelhead trout.

COMMENTS 143 BRITTANY MCKEE, SIERRA CLUB/FRIENDS OF THE FOOTHILLS
Dated: August 3, 2004

Response 1

Please see Topical Response 3.1.7 regarding the traffic modeling.

Response 2

The project is requesting a General Plan amendment and zone change. The development areas and type of development have been identified at the General Plan/Zone Change level of specificity. Please see Topical Response 3.1.1, pertaining to the use of a Program EIR and Topical Response 3.1.2 pertaining to open space.

Response 3

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Program EIR in Sections 2, Introduction. Further information is provided in Topical Responses 3.1.1.1.

Response 4

Air quality is evaluated in Section 4.7, Air Quality and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation. The comment does not identify any specific deficiencies or errors in the analysis; therefore, a specific response addressing the concern is not possible.

Response 5

The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. The project does not propose the use of desalinization to provide sufficient water for the project. Water supply is further discussed in Topical Response 3.1.12.

Response 6

The comment does not provide specific data on the inadequacies of the analysis in the Program EIR. Wildland fires and hazardous materials are evaluated in Section 4.14, Hazards and impacts to watersheds are discussed in Section 4.5, Water Resources. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. Wildland fires are also discussed in Topical Response 3.1.11. Appendix I contains the Phase I reports prepared for the Ranch Plan. Appendices C (contained in nine volumes) and G-8 and G-9 address water resource issues.

Response 7

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. Topical Response 3.1.1.4 discusses when recirculation a Draft Program EIR is required.

COMMENTS 144 APRIL SALEM

Dated: August 3, 2004

Response 1

Your comment is noted; however, the comment is pertaining to the South Orange County Transportation Infrastructure Improvement Program (SOCTIIP) being conducted by the Transportation Corridor Agencies (TCA) and the Federal Highway Administration (FHWA). Please refer to Topical Response 3.1.7-Transportation and Circulation, regarding the toll road.

COMMENTS 145 KEITH HUNTER

Dated: August 3, 2004

Response 1

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

Response 2

The comment does not provide specific data on the inadequacies of the analysis in the Program EIR. The Program EIR does address the potential impacts on San Mateo Creek in Section 4.5, Water Resources. The analysis includes an evaluation of water quality, sediment transport, and hydrology. Further discussion of water quality impacts is provided in Topical Response 3.1.6. It should be noted that the project does not propose the Foothill Transportation Corridor-South (SR-241). Please see Topical Response 3.1.7 regarding the toll road.

Response 3

The proposed Ranch Plan project would not result in the destruction of the Donna O'Neill Land Conservancy at Rancho Mission Viejo. No development would be located within the Conservancy boundary. Open space areas are provided to serve as wildlife movement corridors from the Conservancy to the open space within the Ranch Plan and the Cleveland National Forest. The other issues raised in this comment all pertain to the extension of the toll road. As previously indicated, this is not a component of the Ranch Plan project.

Response 4

The extension of the SR-241 is not a component of the proposed project. The Ranch Plan identifies that the Transportation Corridor Agencies and Federal Highway Administration are currently evaluating various circulation improvements, including the extension of SR-241 as part of the South Orange County Transportation Infrastructure Improvement Program (SOCTIIP). A separate EIS/EIR has been prepared to address the impacts of that project. SOCTIIP is evaluated as a cumulative project in the Ranch Plan EIR. Please see Topical Response 3.1.7 regarding the toll road.

Response 5

Though extension of the SR-241 is not a component of the proposed project, it should be noted that the planning, design and construction of the toll roads have been done with out taxpayer's funds. It has been done with developer fees and toll revenue.

Response 6

As indicated above, the extension of the SR-241 is not a component of the proposed project. The Transportation Corridor Agencies and Federal Highway Administration prepared a separate EIS/EIR to address the impacts of that project.

Response 7

The comment does not provide specifics on how the water and infrastructure requirements for the Ranch Plan are inadequate. There has been ongoing coordination with the service providers during the preparation of the Program EIR. Water supply assessment, which evaluates the water supply demands and how they would be met, was done by the Santa Margarita Water District and is discussed in Section 4.15, Public Services and Facilities and is contained in Appendix K. Further discussion on the methodology is provided in Topical Response 3.1.12. Similarly, the demand forecasting for the other infrastructure was conducted using methodologies accepted by the service providers. The project is requesting a General Plan Amendment and Zone Change. Continued coordination with all the service providers will be done in conjunction with subsequent project approvals. Please see Topical Response 3.1.1.2 pertaining to the process for subsequent approvals.

Response 8

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 146 STEVE NETHERBY
Dated: August 3, 2004

Response 1

The comment does not provide specifics on inadequacies of the Draft Program EIR in addressing impacts associated with traffic, biotic, air quality, water quality, or utilities. Each of these issues is discussed in the Draft Program EIR. Separate from the EIR, a Fiscal Impact Report has been prepared, which the County of Orange is reviewing through a process separate from the EIR. The project provides sufficient revenues to offset the cost of services. In addition mitigation measures outlined in the Program EIR require the project to enter into

agreements with service providers regarding the provision of services and facilities. However, your concerns have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 147 JERRY ANDES

Dated: August 3, 2004

Response 1

Please refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species, regarding steelhead trout.

COMMENTS 148 NANCY A. JIMENO

Dated: August 3, 2004

Response 1

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal.

COMMENTS 149 RANDLE C. SINK

Dated: August 3, 2004

Response 1

Your comment is noted; however, the comment is pertaining to the South Orange County Transportation Infrastructure Improvement Program (SOCTIIP) being conducted by the Transportation Corridor Agencies (TCA) and the Federal Highway Administration (FHWA). Please see Topical Response 3.1.7 regarding the toll road.

Response 2

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Draft Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

Response 3

Your comment is noted. The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Draft Program EIR in Sections 2, Introduction and 4.9, Biological Resources. Further information is provided in Topical Responses 3.1.1 and 3.1.9.

Response 4

Your comments are noted and have been forwarded to the decision makers as part of the Final Draft Program EIR submittal.

COMMENTS 150 GINGER DUNN
Dated: August 3, 2004

Response 1

Your comment is noted; however, the comment is pertaining to the South Orange County Transportation Infrastructure Improvement Program (SOCTIIP) being conducted by the Transportation Corridor Agencies (TCA) and the Federal Highway Administration (FHWA). Please see Topical Response 3.1.7 regarding the toll road.

COMMENTS 151 MIKE KRONK
Dated: August 3, 2004

Response 1

Your comment is noted; however, the comment is pertaining to the South Orange County Transportation Infrastructure Improvement Program (SOCTIIP) being conducted by the Transportation Corridor Agencies (TCA) and the Federal Highway Administration (FHWA). Please see Topical Response 3.1.7 regarding the toll road.

COMMENTS 152 MIKE AND SHEILA ARD
Dated: August 4, 2004

Response 1

Your comment is noted; however, the comment is pertaining to the South Orange County Transportation Infrastructure Improvement Program (SOCTIIP) being conducted by the Transportation Corridor Agencies (TCA) and the Federal Highway Administration (FHWA). Please see Topical Response 3.1.7 regarding the toll road.

COMMENTS 153 BARBARA JANESICK, SIERRA CLUB-SIERRA SAGE
Dated: August 4, 2004

Response 1

Please see Topical Response 3.1.7 regarding the traffic modeling.

Response 2

The project is requesting a General Plan Amendment/Zone Change. The development areas and type of development have been identified at the General Plan/Zone Change level of specificity. Please see Topical Response 3.1.1, pertaining to the use of a Draft Program EIR and Topical Response 3.1.2 pertaining to open space.

Response 3

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Draft Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Draft Program EIR in Sections 2, Introduction. Further information is provided in Topical Responses 3.1.1.

Response 4

Air quality is evaluated in Section 4.7, Air Quality and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation.

Response 5

The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. The project does not propose the use of desalinization to provide sufficient water for the project. Water supply is further discussed in Topical Response 3.1.12.

Response 6

The comment does not provide specific data on the inadequacies of the analysis in the Draft Program EIR. Wildland fires and hazardous materials are evaluated in Section 4.14, Hazards and impacts to watersheds are discussed in Section 4.5, Water Resources. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. Wildland fires are also discussed in Topical Response 3.1.11. Appendix I contains the Phase I reports prepared for the Ranch Plan. Appendices C (contained in nine volumes) and G-8 and G-9 address water resource issues.

Response 7

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. Topical Response 3.1.1.4 discusses the requirements for recirculation a Draft Program EIR.

COMMENTS 154 NORMAN FREESTONE

Dated: August 4, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

COMMENTS 155 PETE VAN NUYS

Dated: August 4, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Response 2

Your comment is noted. However, the comment incorrectly cites the population generated by the project. Section 4.3, Population and Housing, of the Draft Program EIR the estimated population of the Ranch Plan is 32,823. Population projects were based on the number of proposed housing units, using a generation factor of 3.13 persons per single-family unit, 2.5 persons per multi-family unit, and 1.4 persons per senior unit. These generation factors are from the Center for Demographic Research at the California University at Fullerton.

Response 3

Approximately 66 percent of the project is proposed to be retained in open space. For more information pertaining to open space, please see Topical Response 3.1.2 pertaining to open space.

Response 4

The treatment of urban runoff is discussed in Section 4.5, Water Resources, of the Draft Program EIR. Appendix C-2 provides the Conceptual Water Quality Management Plan for the project. For additional discussion on water quality, please refer to Topical Response 3.1.6.

Response 5

Traffic, both with and without the proposed extension of SR-241, is discussed in Section 4.6, Transportation and Circulation, of the Draft Program EIR.

Response 6

Your comment is noted. Section 4.9, Biological Resources, of the Draft Program EIR discusses the impacts associated with the loss of habitat and interface with other permanent open space such as Caspers Wilderness Park and the Cleveland National Forest. The impacts on various species are also discussed in Topical Response 3.1.9.

Response 7

The Ranch Plan has far exceeded the requirements for public involvement. As discussed in Sections 2.2.3, Public Coordination as Part of the Coordinated Process and 3.3, Project History, the County has conducted extensive public outreach on the Ranch Plan since 2001. Mitigation measures outlined in the Draft Program EIR require that County and applicant continue to coordinate on issues, most notably traffic. It should also be noted there are many subsequent approvals which would allow an opportunity for public comment. Please see Topical Responses 3.1.1.2 regarding the project processing requirements and subsequent project approvals.

COMMENTS 156 GABRIELE RAU
Dated: August 4, 2004

Response 1

Your comment is noted. It should be noted that the County of Orange does not have jurisdiction over the toll road. However, it should be noted that the toll roads have been planned, designed and built using developer fees and toll revenue, not taxpayer money.

Please see Topical Response 3.1.7 regarding the traffic modeling. The comment does not provide specific enough detail on the inadequacies of the analysis on housing and the environment to provide a detailed response. The reader is directed to Section 4.3, Population and Housing of the Draft Program EIR pertaining to the analysis on housing. Other topical issues discussed in the Draft Program EIR include land use, agricultural resources, geology and soils, water resources, transportation and circulation, air quality, noise, biological resources, aesthetics, cultural resources, recreation, mineral resources, hazards, public services and facilities, growth inducing, and cumulative impacts.

COMMENTS 157 ED AMADOR
Dated: August 4, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. With regards to the evaluation of impacts on plants and wildlife, the Draft Program EIR has an extensive evaluation of the impacts on these resources (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Draft Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

COMMENTS 158 LYNN HILLMAN
Dated: August 4, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Response 2

Please refer to the Topical Response 3.1.3 regarding project interface with the Marine Corps Base (MCB) Camp Pendleton. The comment letter from MCB Camp Pendleton indicates that they are satisfied with the evaluation of impacts and proposed mitigation measure on their mission and security (see comment 15).

COMMENTS 159 PEGGY EDWARDS
Dated: August 4, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

COMMENTS 160 STUART KERR
Dated: August 4, 2004

Response 1

Please see Topical Response 3.1.7 regarding the traffic modeling.

Response 2

The project is requesting a General Plan amendment and zone change. The development areas and type of development have been identified at the General Plan/Zone Change level of specificity. Please see Topical Response 3.1.1.2, pertaining to the use of a Program EIR and Topical Response 3.1.2 pertaining to open space.

Response 3

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Program EIR in Sections 2, Introduction. Further information is provided in Topical Responses 3.1.1.1.

Response 4

Air quality is evaluated in Section 4.7, Air Quality and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation. The comment does not identify any specific deficiencies or errors in the analysis; therefore, a specific response addressing the concern is not possible.

Response 5

The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. The project does not propose the use of desalinization to provide sufficient water for the project. Water supply is further discussed in Topical Response 3.1.12.

Response 6

The comment does not provide specific data on the inadequacies of the analysis in the Program EIR. Wildland fires and hazardous materials are evaluated in Section 4.14, Hazards and impacts to watersheds are discussed in Section 4.5, Water Resources. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. Wildland fires are also discussed in Topical Response 3.1.11. Appendix I contains the Phase I reports prepared for the proposed Ranch Plan project. Appendices C (contained in nine volumes) and G-8 and G-9 address water resource issues.

Response 7

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. Topical Response 3.1.1.2 discusses when recirculation a Draft Program EIR is required.

COMMENTS 161 **LYNDA A. HERNANDEZ**
Dated: August 5, 2004

Response 1

Section 4.9 of the Draft Program EIR addressed the potential impact on biological resources, including plants and animals. Please refer to Topical Response 3.1.1.2 regarding the processing of the project prior to the approval of the NCCP/HCP. This does not violate any federal laws.

Response 2

Please see Topical Response 3.1.7 regarding the traffic modeling.

Response 3

Air quality is evaluated in Section 4.7, Air Quality and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation.

Response 4

The comment does not provide specific data on the inadequacies of the analysis in the Draft Program EIR. Impacts associated with wildland fires are evaluated in Section 4.14, Hazards. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. In addition, please see Topical Response 3.1.11.

Response 5

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

COMMENTS 162 **JOEY RACANO**
Dated: August 5, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

COMMENTS 163 **LEN GARDNER**
Dated: August 5, 2004

Response 1

The proposed Ranch Plan project would not result in the destruction of the Donna O'Neill Land Conservancy at Rancho Mission Viejo. No development would be located within the

Conservancy boundary. Open space areas are provide to serve as wildlife movement corridors from the Conservancy to the open space within the Ranch Plan and the Cleveland National Forest. The other issues raised in this comment all pertain to the extension of the toll road. As previously indicated, this is not a component of the Ranch Plan project. Please see Topical Response 3.1.7 regarding the toll road.

Response 2

Your comment is noted. It should noted, that the employment designations proposed by the Ranch Plan would not only be retail. The project would provide for a mix of employment, retail, and office uses. The Ranch Plan Draft Program EIR No. 589 has been prepared to address the impacts associated with the development of the Ranch Plan. It addresses potential impacts to land use, agricultural resources, population and housing, geology and soils, water resources, transportation and circulation, air quality, noise, biological resources, aesthetics, cultural resources, recreation, mineral resources, hazards, public services and facilities, growth inducing, and cumulative impacts.

Response 3

Please see Topical Response 3.1.7 regarding the traffic modeling.

Response 4

The project is requesting a General Plan Amendment/Zone Change. The development areas and type of development have been identified at the General Plan/Zone Change level of specificity. Please see Topical Response 3.1.1.2, pertaining to the use of a Program EIR and Topical Response 3.1.2 pertaining to open space.

Response 5

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Draft Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Program EIR in Sections 2, Introduction and 4.9, Biological Resources. Further information is provided in Topical Response 3.1.1.

Response 6

Air quality is evaluated in Section 4.7, Air Quality and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation.

Response 7

The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment

required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. The project does not propose the use of desalinization to provide sufficient water for the project. Water supply is further discussed in Topical Response 3.1.12.

Response 8

The comment does not provide specific data on the inadequacies of the analysis in the Draft Program EIR. Wildland fires and hazardous materials are evaluated in Section 4.14, Hazards and impacts to watersheds are discussed in Section 4.5, Water Resources. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. Wildland fires are also discussed in Topical Response 3.1.11. Appendix I contains the Phase I reports prepared for the Ranch Plan. Appendices C (contained in nine volumes) and G-8 and G-9 address water resource issues.

Response 9

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. Topical Response 3.1.1.4 discusses when recirculation of a Draft Program EIR is required.

COMMENTS 164 SHARON WRIGHT
Dated: August 5, 2004

Response 1

The comment indicates that the subject is the Foothill-South Toll Road (SR-241); however, the comments appear to pertain to the Ranch Plan. It should be noted that the County of Orange does not have jurisdiction over SR-241. Please see Topical Response 3.1.7 regarding the toll road.

Response 2

Please see Topical Response 3.1.7 regarding the traffic modeling.

Response 3

The project is requesting a General Plan Amendment/Zone Change. The development areas and type of development have been identified at the General Plan/Zone Change level of specificity. Please see Topical Response 3.1.1.2 pertaining to the use of a Program EIR and Topical Response 3.1.2 pertaining to open space.

Response 4

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Draft Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Draft Program EIR in Sections 2, Introduction and 4.9, Biological Resources. Further information is provided in Topical Response 3.1.1.

Response 5

Air quality is evaluated in Section 4.7, Air Quality and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation.

Response 6

The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. The project does not propose the use of desalinization to provide sufficient water for the project. Water supply is further discussed in Topical Response 3.1.12.

Response 7

The comment does not provide specific data on the inadequacies of the analysis in the Draft Program EIR. Wildland fires and hazardous materials are evaluated in Section 4.14, Hazards and impacts to watersheds are discussed in Section 4.5, Water Resources. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. Wildland fires are also discussed in Topical Response 3.1.11. Appendix I contains the Phase I reports prepared for the Ranch Plan. Appendices C (contained in nine volumes) and G-8 and G-9 address water resource issues.

Response 8

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. Topical Response 3.1.1.4 discusses when recirculation of a Draft Program EIR.

COMMENTER 165 BRITNEY BALL AND LUKE NICHOLS
Dated: August 5, 2004

Response 1

The County of Orange does not have jurisdiction over the toll road. Please see Topical Response 3.1.7 regarding the toll road.

COMMENTER 166 MARGARET MCCLURE
Dated: August 5, 2004

Response 1

The County of Orange does not have jurisdiction over the toll road. Please see Topical Response 3.1.7 regarding the toll road.

COMMENTER 167 LESLEY AND AUSTIN SHEPPARD
Dated: August 6, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Response 2

The County of Orange does not have jurisdiction over the toll road. Please see Topical Response 3.1.4 regarding the toll road.

COMMENTER 168 ROSEMARY HIEBER
Dated: August 6, 2004

Response 1

The County of Orange does not have jurisdiction over the toll road. Please see Topical Response 3.1.7 regarding the toll road.

Response 2

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

Response 3

The comment is not specific enough regarding which state laws are not complied with that would require recirculation of the Draft Program EIR. Topical Response 3.1.1.4 provides a discussion on when a Draft Program EIR requires recirculation. With regards to the project complying with the County General Plan, the project is requesting a General Plan Amendment. The project has been found to comply with policies of the General Plan.

Response 4

The project would not have any direct impacts on the Donna O'Neill Land Conservancy at Rancho Mission Viejo, the San Mateo campground, or San Onofre State Beach. Additionally, the project would not have any impacts on the Pacific pocket mouse. Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species, regarding steelhead trout.

COMMENTS 169 BARBARA ANDERSON
Dated: August 6, 2004

Response 1

The comment does not provide specific data on the inadequacies of the analysis in the Draft Program EIR. Traffic is addressed in the Draft Program EIR in Section 4.6, Transportation and Circulation. Additional detail on traffic modeling is provided in Topical Response 3.1.7.

Fires safety impacts are evaluated in the Draft Program EIR in Section 4.14, Hazards, and provision of fire services is addressed in Section 4.15, Public Services and Facilities. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. These issues are also discussed in Topical Response 3.1.11.

Biological resource impacts are addressed in the Draft Program EIR in Section 4.9, Biological Resources and impacts to watersheds are discussed in Section 4.5, Water Resources. The interface of development with Marine Corps Base (MCB) Camp Pendleton is addressed as part of the land use compatibility evaluation in Section 4.1, Land Use and Related Planning Programs. It should be noted that MCB Camp Pendleton found the evaluation of the interface adequate (see Comment 15 of United States Marine Corps, Camp Pendleton comment letter). The interface with MCB Camp Pendleton is further discussed in Topical Response 3.1.3.

COMMENTS 170 CHUCK MEECE
Dated: August 6, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

COMMENTS 171 TOMI THAYER
Dated: August 6, 2004

Response 1

Please refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species, regarding steelhead trout.

COMMENTS 172 RICK KEMENESI
Dated: August 7, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Response 2

Please see Topical Response 3.1.7 regarding the traffic modeling.

Response 3

The project is requesting a General Plan amendment and zone change. The development areas and type of development have been identified at the General Plan/Zone Change level of specificity. Please see Topical Response 3.1.1.2, pertaining to the use of a Program EIR and Topical Response 3.1.2 pertaining to open space.

Response 4

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Program EIR in Sections 2, Introduction, and 4.9, Biological Resources. Further information is provided in Topical Response 3.1.1.1.

Response 5

Air quality is evaluated in Section 4.7, Air Quality and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation.

The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. The project does not propose the use of desalinization to provide sufficient water for the project. Water supply is further discussed in Topical Response 3.1.12.

The comment does not provide specific data on the inadequacies of the analysis in the Program EIR. Wildland fires and hazardous materials are evaluated in Section 4.14, Hazards. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. This issue is further discussed in Topical Response 3.1.11.

Response 6

Impacts to watersheds are discussed in Section 4.5, Water Resources of the Draft Program EIR. Appendix I contains the Phase I reports prepared for the Ranch Plan. Appendices C (contained in nine volumes) and G-8 and G-9 address water resource issues.

Response 7

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. Topical Response 3.1.1.4 discusses when there is a need to recirculate a Draft Program EIR.

COMMENTS 173 ERIK PARRY
Dated: August 7, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Response 2

Please see Topical Response 3.1.7 regarding the traffic modeling.

Response 3

The project is requesting a General Plan amendment and zone change. The development areas and type of development have been identified at the General Plan/Zone Change level of specificity. Please see Topical Response 3.1.1.2, pertaining to the use of a Program EIR and Topical Response 3.1.2 pertaining to open space.

Response 4

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Program EIR in Sections 2, Introduction, and 4.9, Biological Resources. Further information is provided in Topical Response 3.1.1.1.

Response 5

Air quality is evaluated in Section 4.7, Air Quality, and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation.

Response 6

The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. The project does not propose the use of desalinization to provide sufficient water for the project. Water supply is further discussed in Topical Response 3.1.12.

Response 7

The comment does not provide specific data on the inadequacies of the analysis in the Program EIR. Wildland fires and hazardous materials are evaluated in Section 4.14, Hazards, and impacts to watersheds are discussed in Section 4.5, Water Resources. Appendix J-5 contains

the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. Appendix I contains the Phase I reports prepared for the Ranch Plan. Appendices C (contained in nine volumes) and G-8 and G-9 address water resource issues. Further discussion on wildland fires is provided in Topical Response 3.1.11.

Response 8

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. Topical Response 3.1.1.4 discusses when there is a need to recirculate a Draft Program EIR.

COMMENTER 174 MICHAEL HAZZARD
Dated: August 9, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Please refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species, regarding steelhead trout. Additionally, Topical Response 3.1.1.1 pertains to the processing of the NCCP/HCP, SAMP/ MSAA, and the Ranch Plan.

COMMENTER 175 JEANNE O'GRADY
Dated: August 9, 2004

Response 1

The project has evaluated water supply and has demonstrated sources of water to serve the build out of the project. The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities. Water supply is also discussed in Topical Response 3.1.6.

COMMENTER 176 STEPHEN AND PATRICIA BURGESS
Dated: August 9, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Response 2

Traffic and air quality were discussed in the Program EIR in Sections 4.6, Transportation and Circulation, and 4.7, Air Quality. Additionally, please see Topical Response 3.1.7 regarding the traffic modeling.

Response 3

Please refer to Topical Response 3.1.6 regarding water quality and sensitive species.

Response 4

Please see Topical Response 3.1.2 pertaining to Open Space.

Response 5

The potential impact of the Ranch Plan on the Donna O'Neill Land Conservancy and Caspers Wilderness Park are discussed in the Program EIR in Sections 4.1, Land Use, 4.10 Aesthetics and Visual Resources, and 4.12, Recreation.

COMMENTS 177 JOHN KAISER

Dated: August 9, 2004

Response 1

The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Program EIR in Sections 2, Introduction, and 4.9, Biological Resources. Further information is provided in Topical Responses 3.1.1.1 and 3.1.9.

Response 2

The comment does not provide sufficient detail on how the air quality analysis is inadequate; therefore, a specific response cannot be provided. The Program EIR did find construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation.

Please see Topical Response 3.1.7 regarding the traffic modeling.

Response 3

The comment does not provide specific data on the inadequacies of the analysis in the Program EIR; therefore, a specific response cannot be provided. Wildland fires and hazardous materials are evaluated in Section 4.14, Hazards, and impacts to watersheds are discussed in Section 4.5, Water Resources. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. Wildland fires are also discussed in Topical Response 3.1.11. Appendix I contains the Phase I reports prepared for the Ranch Plan. Appendices C (contained in nine volumes), G-8 and G-9 address water resource issues.

The project has evaluated water supply and has demonstrated sources of water to serve the build out of the project. The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities.

Response 4

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. Topical Response 3.1.1.4 discusses when there is a need to recirculate a Draft Program EIR.

COMMENTS 178 YARIV AND KATHY DONDE

Dated: August 9, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Response 2

Please see Topical Response 3.1.7 regarding the traffic modeling.

Response 3

The project is requesting a General Plan amendment and zone change. The development areas and type of development have been identified at the General Plan/Zone Change level of specificity. Please see Topical Response 3.1.1.2, pertaining to the use of a Program EIR and Topical Response 3.1.2 pertaining to open space.

Response 4

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Program EIR in Sections 2, Introduction and 4.9, Biological Resources. Further information is provided in Topical Responses 3.1.1.1 and 3.1.9.

Response 5

The comment does not provide sufficient detail on how the air quality analysis is inadequate; therefore, a specific response cannot be provided. Air quality is evaluated in Section 4.7, Air Quality, and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation.

Response 6

The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public

Services and Facilities. The project does not propose the use of desalinization to provide sufficient water for the project. Water supply is further discussed in Topical Response 3.1.12.

Response 7

The comment does not provide specific data on the inadequacies of the analysis in the Program EIR. Wildland fires and hazardous materials are evaluated in Section 4.14, Hazards, and impacts to watersheds are discussed in Section 4.5, Water Resources. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. Wildland fires are also discussed in Topical Response 3.1.11. Appendix I contains the Phase I reports prepared for the Ranch Plan. Appendices C (contained in nine volumes), G-8 and G-9 address water resource issues.

Response 8

The comment does not provide sufficient detail on how the air quality analysis is inadequate; therefore, a specific response cannot be provided. Further discussion of water resources is discussed in Topical Response 3.1.6.

Response 9

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. Topical Response 3.1.1.4 discusses when there is a need to recirculate a Draft Program EIR.

COMMENTER 179 PETER BUNGE
Dated: August 9, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

COMMENTER 180 MARION NANCY KNIPE
Dated: August 9, 2004

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. The comment does not provide specific data on the inadequacies of the analysis in the Draft Program EIR; therefore, a specific response cannot be provided. Impacts to watersheds are discussed in Section 4.5, Water Resources, of the Program EIR. Further discussion is also provided in Topical Response 3.1.6.

COMMENTER 181 JUDITH M. AND THOMAS A. GIELOW
St. Mark Presbyterian Church Ecophilians Environmental Group
Dated: August 9, 2004

Response 1

The County of Orange does not have jurisdiction over the toll road. Please see Topical Response 3.1.7 regarding the toll road.

3.10 COMMENTS RECEIVED AFTER THE CLOSE OF THE PUBLIC REVIEW PERIOD

COMMENTS 182 GRANT HAHN
Dated: August 6, 2004

Response 1

Your comment is noted; however, the comment pertaining to the South Orange County Transportation Infrastructure Improvement Program (SOCTIIP) being conducted by the Transportation Corridor Agencies (TCA) and the Federal Highway Administration (FHWA). The County of Orange does not have jurisdiction over the toll road. The TCA and FHWA have prepared an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) evaluating impacts associated with extension of State Route 241 as part of the SOCTIIP, including the effects on the O'Neill Conservancy. The impacts associated with the SOCTIIP have been considered in Section 7, Cumulative Impacts, of the Draft Program EIR. The extension of the SR-241 is discussed further in Topical Response 3.1.7.

COMMENTS 183 CANDACE PROPST
Dated: August 9, 2004

Response 1

Your comments are noted and have been forwarded to the decision makers as part of the Final EIR submittal. The project would maintain 66 percent or 15,121 acres in open space. This would allow for large expanses of natural open space. The concerns you have expressed are addressed in the Draft Program EIR. Specifically, biological resources are addressed in Section 4.9, water supply is addressed in Section 4.15, and energy resources are discussed in Section 4.15. Additionally, biological resources and water supply issues are addressed in Topical Responses 3.1.9 and 3.1.12, respectively.

COMMENTS 184 CALIFORNIA NATIVE PLANT SOCIETY
Dated: August 10, 2004

Response 1

The comment is noted. No further response is necessary.

Response 2

The comment is noted. Refer to Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts.

Response 3

The comment is noted. Section 5 of the Draft Program EIR analyzes several alternatives to the proposed project that have different open space/development configurations. As noted in this section, these alternatives were developed through the ongoing NCCP/HCP and SAMP/MSAA processes to respond to the biological resources on the site. Alternatives B-8, B-9, and B-10 provide for varying open space/development configurations for the areas mentioned by the commenter–Chiquita sub-basin and the Cristianitos/Gabino/La Paz sub-basins.

Response 4

Refer to Topical Response 3.1.1.1, Project Processing–Separation of the Ranch Plan from the Processing of the NCCP/HCP and the SAMP/MSAA and Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts.

Response 5

Refer to Topical Response 3.1.1.1, Project Processing–Separation of the Ranch Plan from the Processing of the NCCP/HCP and the SAMP/MSAA and Topical Response 3.1.2, Project Description–Development Agreement. Certification of the Program EIR and approval of the Ranch Plan project will not “lock in” the development configuration.

Response 6

Your comment is noted. The Summary Table identifies the significant environmental impacts and mitigation measures. Many of the mitigation measures address more than one impact. Therefore, to avoid redundancy, the impacts and mitigation measures are provided by topical area.

The project impact section (page 4.9-95) provides an outline and approach for analyzing impact associated with the project. A summary of the impacts associated with each species is provided on pages 4.9-129 through 4.9-153. Following analysis of the impacts, and as set forth in the Impacts Section, Minimization/Avoidance Measures associated with the NCCP/HCP and SAMP/MSAA Sub-Basin Guidelines and Principles are then applied to the appropriate habitat or special-status species. Tables 4.9-32 and 4.9-33 summarize the impact and minimization/avoidance measure side-by-side as suggested by the commenter. Tables 4.9-41 through 4.9-43 provide a quantification of all minimization/avoidance as well as providing a summary of other mitigation measures (e.g., Translocation of special-status plants).

Mitigation for impacts to CNPS List 1B and List 2 plant species, beyond the minimization/avoidance measures noted above, are provided in the rare Plant Species Translocation, Propagation, and Management Plan provided as Appendix J-1. Also, for thread-leaved brodiaea, see Topical Response 3.1.9.8, Biological Resources–Impacts to Species, specifically, thread-leaved brodiaea.

Regarding *Calochortus weedii* var. *intermedius*, please refer to Commenter 33, the California Native Plant Society, authored by Fred Roberts addressing this taxon.

Response 7

Refer to Topical Response 3.1.2 Project Description–Development Agreement.

Response 8

The commenter is correct that surveys for SR-241 resulted in detailed surveys for the western portion of Planning Area 7. In order to ensure that all impacts to special-status plants were addressed in the Draft Program EIR, Glenn Lukos Associates (GLA) conducted focused surveys for all of Planning Area 7 in 2004. During the 2004 surveys, GLA identified previously undocumented populations of thread-leaved brodiaea, many-stemmed dudleya, small-flowered microseris, vernal barley, and California juniper. All of the new occurrences were mapped using GIS and included in the database used for the Draft Program EIR.

Response 9

The commenter is not correct in assuming that surveys have not been completed for the proposed citrus expansion in Cristianitos Canyon. Refer to the above response for further detail on this concern.

Regarding the citrus orchards in Chiquita Canyon, lemons have been grown in this canyon since 1998; recent expansions of citrus have totaled 17 acres in areas formerly used for barley production, nursery operations (Sea Tree Nursery) and small areas of ruderal grassland. Any potential indirect impacts to existing native habitats adjacent to areas of citrus production are minimized by the project applicant's implementation of Best Management Practices for citrus production areas. Best Management Practices (BMPs) are those techniques that when employed in an agricultural setting will minimize the impact of the agricultural activities have on the surrounding environment. These BMPs are discussed in detail below.

i) Contour Planting

Planting with the contour of the land (as opposed to against it) helps to reduce overland flow of stormwater and hence erosion. Most existing Rancho Mission Viejo orchards are planted with the contour of the land. Future plantings will be planted on contour. To further reduce potential erosion, site preparation will involve minimal grading.

ii) Maintenance of Buffer Zones

Perimeter and internal buffers are used to further control stormwater runoff. Perimeter buffers surround the orchard, and separate the agricultural use from adjacent uses. Adjacent uses may include grazing and wildlife habitat. Perimeter buffers are typically 15 to 30 feet wide and consist of a compacted dirt road, which is banked sufficiently towards the orchard to contain irrigation flows and small rain events on the site.

Internal buffers, known as strips, are those areas between trees, which may be five feet to ten feet wide and are vegetated with either native cover or a cover crop such as brome, zorro fescue, or clover. These cover strips act to slow stormwater flows, trap any mobile sediment and reduce erosion. No tillage will be conducted once the strips are established.

All Rancho Mission Viejo orchards employ both perimeter and internal buffers.

iii) Use of Detention and Retention Ponds

Orchards located on hilly areas will employ the use, wherever feasible, of detention and/or retention ponds to capture storm water runoff. Irrigation runoff is not typical on Rancho Mission Viejo orchards due to the use of micro irrigation systems and by following evapotranspiration-based irrigation schedules. To capture storm water runoff, the detention/retention ponds will be optimally located down slope of the planted area.

iv) Eto-based Irrigation Water Application

The rate and amount of irrigation water to be applied to any planted area is based on the evapotranspiration rate of the crop in question and information on the predicted weather for the week. Precise application of irrigation water via micro irrigation systems minimizes runoff and maximizes crop health. All systems are designed so as not to

exceed to soils infiltration capacity. Weekly inspections of all irrigation lines, pumps and other associated equipment are carried out by RMV personnel to ensure the proper functioning of the system.

v) Fertilizer Application based on Agronomic Need

The decision to apply fertilizer to Rancho Mission Viejo crops is based on agronomic need. Agronomic need is determined via leaf sampling and analysis for nitrogen needs. Nitrogen needs vary according to tree size and time of year. Fertilizer applications through the irrigation system are split over the growing season in order to closely match the trees' needs, and minimize nitrogen losses due to leaching. Micronutrients are applied foliarly, which reduces the total amounts necessary for optimal crop production. Dry fertilizers and amendments are used only to address problem areas.

vi) Integrated Pest Management

Integrated pest management (IPM) is an eco-system based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural and mechanical practices, and use of resistant varieties (Blankinship, 2001). Pesticides and fungicides are used only after non-chemical solutions have not addressed the problem and a pre-established damage threshold is exceeded. Pesticides are then selected based on their effectiveness on the target pest, and to minimize their impact on the beneficial populations. Rates of material applied are kept to the minimum considered effective.

The steps RMV follows for IPM include:

- Damage thresholds are established by an independent Pest Control Advisor (PCA) on a yearly basis for all crops. Fields are monitored on a bi-weekly basis, and a report is given to the RMV Manager at the conclusion of the visit. Common pests for RMV crops include, but are not limited to citrus bud mite, citrus red mite, citrus silver mite, citrus red scale, ants, and snails.
- RMV personnel and the PCA as necessary carry out pest identification.
- Pest monitoring is carried out by the PCA and RMV personnel and uses the following tools, scouting, traps, indicator trees, and weather monitoring. Scouting to determine the presence, location, and severity of pests is done weekly using indicator trees. Indicator trees are located throughout RMV orchards and are used as indicators of the overall health of that particular orchard. The health of indicator trees in conjunction with other pertinent information such as weather conditions can assist in determining the level of response to a particular pest threat.

vii) Areas of Restricted Fertilizer/Pesticide/Fungicide Use

Areas with restrictions on the application of fertilizer/pesticide or fungicide use are as follows:

- No application within 10 feet on an area of native vegetation, including but not limited to coastal sage scrub, oak woodland, grassland and riparian vegetation.
- The use of rotary spreaders within 25 feet of any creek is prohibited.

- No application of chemicals with very high (LC50<100 ug/L) or high (LC50<1000 ug/L) fish toxicity within 25 feet of the edge of water.
- No application if rain is forecast within 12 hours.
- No application shall occur when there is a likelihood of wind drift. Wind drift is the unintentional escape or release of a material away from its target and can occur at wind speeds as low as 5 mph. Application can occur when the use of a wind foil or similar device demonstrates that wind drift is not occurring.

viii) Herbicide Use

Whenever possible, RMV endeavors to use the safest, post emergent herbicides within its orchards.

The use of preemergent herbicides is seen as a winter tool, because mechanized herbicide applications are not possible on a regular basis in the wet period. Any use of these materials is at the lowest possible rates, and they are rotated from season to season to avoid buildup in the soil.

ix) Storage, Loading, and Handling Requirements

Fertilizers are stored in a secure dry location at the Cow Camp maintenance shop. Pesticides and fungicides are stored separately at Cow Camp. Materials are purchased on an as needed basis to reduce the need for storage. Materials are handled, mixed, and loaded at designated loading areas in the fields, thus minimizing the exposure to non-farmed areas. All materials including tank rinsates are applied back in the fields. All application equipment is checked prior to use and after use to prevent leaks and/or spills.

x) Spill Clean-up and Response

RMV personnel are trained on minor spill cleanup annually, as part of their chemical safety training. Spill containment equipment and supplies are located at the RMV maintenance shop, and in the pesticide storage areas. Major spills are to be reported immediately to the OCFA and to Chemtrec (1-800-424-9300).

Exhibit 4.2-1 in the Draft Program EIR shows the location of proposed expansion of citrus production in Planning Area 7. As noted on page 4.2-4 of the Draft Program EIR, this 200-acre area is a candidate site within which 100 acres would be planted depending on soil type, water availability, and exposure. Existing habitat types would also be considered in an effort to avoid potential environmental impacts including those to listed and rare plant species. As noted above, surveys have been conducted within the entirety of Planning Area 7. Therefore, data regarding the presence/absence of these species are available for determining the appropriate location for the citrus expansion. All infrastructure necessary to support the expansion of citrus within Planning Area 7 exists on the site.

Response 10

Wetlands and riparian areas were mapped according to criteria defined by the U.S. Army Corps of Engineers (USACE) and the California Department of Fish and Game (CDFG) regulatory programs, and as set forth on pages 4.9-8 and 4.9-9 of the Draft Program EIR. The

jurisdictional delineation was exhaustively reviewed in the field by both USACE and CDFG regulatory staff between March and August 2003. Areas not meeting a "three parameter" test as required by the USACE, or that were considered to be isolated pursuant to the SWANCC decision, were included within the jurisdiction of CDFG as "riparian habitat," including areas of willow forest or scrub, mulefat scrub, wet or alkali meadow, and seasonal ponds or marshes. All of the vernal pools and slope wetlands identified during surveys conducted in support of the SAMP are addressed in the NCCP/HCP Planning Guidelines and/or SAMP/MSAA Watershed Principles. As such, all isolated or one-parameter "wetlands" have been captured within the impact analysis and/or avoidance and minimization measures. The impacts as set forth for USACE and CDFG jurisdiction encompass all types of wetlands.

Regarding the commenter's assertion that the classification scheme proposed by Ferren et al. should be used to classify wetlands, two points should be noted. First, the proposed classification system, developed by Ferren et al., has not been adopted by the USACE, CDFG, or the County of Orange for purposes of defining wetlands. The Draft Program EIR evaluated impacts to wetlands in accordance with CEQA, which specifically cites the USACE and CDFG regulatory programs (i.e., Section 404 and Section 1600 respectively).

Second, the approach developed by Ferren et al. has not been adopted for use by the USACE for defining wetland boundaries because it does not specifically follow the USACE' three-parameter approach for defining wetland boundaries. While other approaches have been developed, the three parameter approach is still the most reliable method for determining wetland boundaries. Through the promulgation of Regulatory Guidance letters, the USACE continues to incorporate changes to the 1987 Manual that provide for more accurate and/or dependable methods that have been shown to be both reliable and defensible. In the early 1990s, the National Research Council conducted a two-year study of wetland delineation methods.⁵⁸ The findings of the report were summarized in the Executive Summary:

(t)he federal regulatory system for protection of wetlands is scientifically sound and effective in most respects, but it can be more efficient, more uniform, more credible with regulated entities and more accurate in a technical or scientific reforms of the type suggested in this report.

While the report recognized that in some instances, wetlands could be present in the absence of a field indicator for one of the three parameters (i.e., hydrophytic vegetation, hydric soils, or wetland hydrology), determination of wetland presence in the absence of one parameter requires "definitive" or "unequivocal" evidence from the other two indicators. As noted above, on the project site, areas with a single parameter (i.e., vegetation) was used to determine the limits for CDFG jurisdiction ensuring the broadest definition in defining wetlands in accordance with both federal and state policies.

Response 11

A brief discussion of soils, including clays such as "Alo" and "Bosanko" is provided on page 4.9-11. Furthermore, various species accounts include brief discussion of soil types (e.g., thread-leaved brodiaea on page 4.9-50, Coulter's saltbush on page 4.74 many-stemmed dudleya on page 4.9-76, salt spring checkerbloom on page 4.9-79, Palmer's grapplinghook on page 4.9-82, and vernal barley on page 4.9-83 all include soil descriptions that address clay and/or alkaline soils).

⁵⁸ National Research Council. 1995. *Wetland Characteristics and Boundaries*. National Academy of Sciences, National Academy Press, Washington D.C. 306 pp.

Response 12

Grasslands are discussed beginning on page 4.9-12 of the Draft Program EIR which includes a discussion of annual grassland, wild rye grassland, needlegrass grassland, deergrass grassland and ruderal grassland. Regarding the procedures to determine the total acreage of native grasslands in the study area, as described on page 4.9-14 of the Draft Program EIR, initial mapping of grasslands was accomplished by St. John in 1989 and subsequently refined in 1996 by MBA and in 1997 and 2001 by Dudek. In 2001, Dudek undertook a specific re-survey of areas likely to contain native grasslands based on the earlier survey efforts, detailed review of aerial photographs and discussions with persons familiar with the biology of Rancho Mission Viejo. Based on this preparatory work, qualified individuals initiated field surveys of all areas likely to support significant stands of native grassland. The reported 1,100 acres of native grassland is the result of this effort.

Response 13

The Draft Program EIR recognizes grasslands as a special-status community, regardless of the soil type with which a particular stand of grassland is associated (e.g., clay, clay loam, sandy clay loam, etc.). The extent and location of sands, silts and clays on the Ranch Plan project site are addressed in Appendix G-1 (see for example Table 10 which provides a breakdown of these soil types by drainage basin). However, the CNDDDB/CDFG does not make a distinction between or among soil types relative to the special-status of native (needlegrass) grasslands, as such the Draft Program EIR used the more comprehensive approach of identifying all native grasslands as having special status regardless of the underlying soils. Similarly, surveys for rare plants covered all soil types including various clay soils (e.g., Alo, Bosanko), as well as Cieneba sandy loam and Cieneba rock outcrops, etc. Botanists experienced in conducting surveys for special-status plants depended on a number of indicators or cues for rare plant habitat that included specific soil types as well as other factors such as associated plant species (e.g., *Bothriochloa barbinodis* is very often associated with many-stemmed dudleya and its presence typically was a reliable indicator for the presence of the dudleya). Identification of "clay soil" grasslands as a particular category in the Draft Program EIR would not have added any information not already fully addressed in the document.

Response 14

Seeps/Slope Wetlands

A detailed account of the hydrology, water chemistry, and floristic composition of the slope wetlands is provided on page 4.9-20 of the Draft Program EIR. The slope wetlands are also discussed in detail in PCR Services Corporation, May 2003, a reference document to the Draft Program EIR. The slope wetlands are areas of groundwater discharge that vary from nearly year-round discharge to seasonal discharge the last for a few weeks to a few months that varies based on wet and dry climactic cycles. Water chemistry varies from freshwater to mildly alkaline. Dominant plants include Olney's bulrush, creeping spikerush, Mexican rush, iris-leaved rush, saltgrass, yerba mansa, beaked spikerush, salt-spring checkerbloom, and southern tarplant.

Freshwater Swale

This community designation is not used in the Draft Program EIR. Please refer to Herbaceous Riparian on page 4.9-17 in combination with Freshwater Marsh on page 4.9-19.

Vernal Marsh

This community designation is not used in the Draft Program EIR. Please refer to Herbaceous Riparian on page 4.9-17 in combination with Freshwater Marsh on page 4.9-19.

Brackish and Alkali Marshes

There are no Brackish Marshes on the Ranch Plan project site because this denotes mixing of seawater as in estuarine settings. Alkali Marshes occur in portions of Cristianitos Canyon, Chiquita Canyon and Cañada Gobernadora where they intergrade with freshwater marsh. The distinguishing character that separates these types on the project site is water chemistry where freshwater marsh has salinities of less than 0.8 ppt and "alkali" marshes with salinities of greater than 0.8 ppt. In general, the salinities in areas that meet the water chemistry threshold are still very low (1-3 ppt) which is generally not sufficient to affect species composition. Furthermore, these areas shift in response to rainfall and changes in groundwater discharge, changing back and forth through the seasons. The species composition for freshwater marsh on page 4.9-19 of the EIR accurately describes both types as they occur on the Ranch Plan project site.

Response 15

The Orange County habitat classification system (Gray and Bramlet, 1992) includes 12 sub-associations of chaparral. Of these, ten occur in the study area and four are the best represented, including southern mixed chaparral, chamise chaparral, scrub oak chaparral, and toyon-sumac chaparral. In some instances, there is substantial overlap between of among these sub-associations. The description provided on page 4.9-24 of the Draft Program EIR addresses the dominant species typically associated with the 10 sub-associations without distinguishing among them specifically. However, dominant species for each sub-association are included on page 4.9-24.

The characterization that manzanita and hoary-leaved ceanothus are mentioned prominently is not accurate. Manzanita is noted as mid-elevation species and is mentioned only once in the discussion of chaparral. Similarly, hoary leaved ceanothus is specifically noted as a "sub-dominant" association, accounting for approximately 163 acres in the study area, making it more than a "very minor constituent" of chaparral on the Ranch Plan project site. The characterization of this subassociation as "sub-dominant" in the Draft Program EIR is accurate.

Response 16

The comment is noted.

Response 17

Refer to Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts.

Response 18

In considering the special-status plant species to be addressed as potentially occurring in the study area, a broad approach was implemented to ensure that all potential species were appropriately addressed. The last column of Table 4.9-4 in the Draft Program EIR is very clear in describing the plants under consideration as "Occurrence in Study Area/or General Distribution Locations within the Southern Orange County Area." It is important to remember

that portions of the study area border or are in close proximity to Riverside County and other portions border San Diego County or are in close proximity. As such, inclusion of species known from these counties is appropriate, particularly because the study area exhibits a wide variety of habitats with at least minimal potential for the species discussed.

The County concurs that many of the species listed in the table are not known from Orange County, and such cases are clearly noted in the table (e.g., for *Navarretia fossalis*, it is clearly stated: "No Records for Orange County"). The importance in using a broad approach is clear when it is recognized that special-status plant species, previously not documented as occurring in Orange County have recently been detected in the County. For example, mud nama was thought to be extirpated from Orange County until it was discovered at Fairview Park in Costa Mesa and in the Chiquita Ridge vernal pool on the Ranch Plan project site in the late 1990s with additional locations detected on the project site in 2003. The conservative approach taken by the County ensures the greatest potential for addressing the maximum number of special-status plants. Furthermore, in the last column, noted above, locations within or outside of the study area were recorded to provide the reader with the most up-to-date information on each of the species addressed. Additional discussion for specific plant taxa is provided below in the responses to Comments 22 through 67.

Regarding *Caulanthus similans*, the County agrees that it is not known from Orange County. As such, the Draft Program EIR states in Table 4.9-4 (page 4.9-37) relative to this species "(n)o records for Orange County." *Caulanthus heterophyllus pseudosimilans* referenced by the commenter has no special status, (i.e., rejected by CNPS for List 4 because of unresolved taxonomic questions). This taxon was recently recorded as occurring in the Donna O'Neill Conservancy by Roberts and Bramlet (2004) and its unresolved taxonomic status is reported as follows:

*Although specimens have been annotated as this variety in various local herbaria it has been recognized by CDFG (2003) and other agencies working on plant conservation (Reiser 2001), the nomenclature for this variety has not been formally published and is technically not valid.*⁵⁹ [emphasis added]

In any case, all documented occurrences of this species are in dedicated opens space; any potential impacts to this species within other portions of the study area would not be significant due to the lack of special status resulting from the unresolved taxonomic issues. For these reasons, this "taxon" was not included in the Draft Program EIR analysis.

Response 19

Glenn Lukos Associates (GLA) conducted detailed surveys and population assessments of intergrades between *Calochortus weedii* var. *weedii* x *C.w.* var. *intermedius*. The assertion that "...many localities are actually hybrids has not been accepted by peer review of local botanists familiar with the species" is in direct contradiction with the July 14, 2004 letter submitted by Mr. Fred Roberts on behalf of the Orange County Chapter of CNPS that addressed in detail the issue of intergradation of these varieties on the Ranch Plan project site. Specifically, the July 14, 2004 letter states:

"It has long been known, and the report correctly points out that there is an intergradation zone between the rare intermediate mariposa lily and the more common

⁵⁹ Roberts, Frem M, and David E. Bramlet. 2004. A Botanical Assessment of the Donna O'Neill Land Conservancy, Rancho Mission Viejo, California: Sensitive, Rare, and Endangered Plants. Prepared for Glenn Lukos Associates and the Mission Viejo Land Conservancy. April 2004.

Weed's mariposa lily within the Ranch. Generally, the plants toward the northwest are more "pure" than plants toward the southeastern and eastern borders of the range."

The question of intergradation does not seem to be in question. In addition to the statement by Mr. Roberts, GLA consulted with botanists at Rancho Santa Ana Botanic Garden, taking fresh specimens, representative of the variety of the intergrades observed on the Ranch Plan project site to be examined by head curator, Mr. Steve Boyd. Mr. Boyd also agreed that based on the specimens he observed, that the project site represented an intergrade zone with a strong *C. w. var. weedii* influence in the southeast quadrant of the site.

For a more detailed discussion of the conservation implication and status of the *C. w. var. weedii* x *C.w. var. intermedius* see Response CNPS/Roberts.

Response 20

Impacts for each plant species are provided in detail in the impact analysis provided for each species as well as in Tables 4.9-32, 4.9-36, 4.9-42, 4.9-43, 4.9-44, and 4.9-45. Impacts and avoidance are broken down in the tables according to each Sub-Basin, providing very detailed and "usable" analysis for the public to consider.

Response 21

Please refer to Topical Response 3.1.9.8, Biological Resources—Impacts to Species.

Response 22

Table 4.9-18 on page 4.9-74 provides detailed number of Coulter's saltbush in the Chiquita sub-basin according to the location within the canyon, accounting for over 2,900 individuals. The population in Chiquita sub-basin is recognized as a major population in a key location in Table 4.9-32 (page 4.9-165) and Measure 4.9-3 provides for substantial avoidance of impacts to this species. The County concurs with the commenter that it is potentially the largest remaining population of this species in southern California and with the proposed avoidance potential impacts are reduced to less than significant. The smaller populations within the Cristianitos and Gabino sub-basins will be subject to substantial avoidance as set forth in Measures 4.9-12 and 4.9-15 on page 4.9-167.

Response 23

Please refer to the response to Commenter 33, the California Native Plant Society, dated July 14, 2004, and authored by Mr. Fred Roberts.

Response 24

Populations of southern tarplant vary significantly from year to year based on rainfall and farming activities, as disking associated with dry-land farming tends to stimulate germination of this disturbance-adapted species. The population counts represent the maximum numbers observed for the various sub-populations during different years. Typically, approximately 90 percent of the individuals that germinate will remain small three to ten inches in height, with a single stalk, producing only a few flowers. The remaining ten percent of the plants that germinate with reach heights of two feet or more, exhibit numerous branches with scores or hundreds of flowers. While 90 percent of the plants are small, they are viable and most produce seed (albeit very limited quantities).

Because of the variability of this species, the counts for this species provide for a very conservative analysis (i.e., in favor of the tarplant). The Draft Program EIR identified the loss of the tarplant to be a significant impact, even though 77 percent of the individuals would be preserved including 78 percent of the locations (see Table 4.9-36, page 4.9-186 where impacts are clearly set forth).

The entry in the right-hand column of row one of Table 4.9-20 is clear in referring to "30,000 in the largest population" which is directly tied to the preceding column that cites 35 populations associated with "Middle Chiquita by Narrows" (column 2). The commenter is correct that an additional 74,660 plants are distributed over the remaining 34 populations in Middle Chiquita by Narrows.

The Ranch Plan project site population is one of two large populations in Orange County with the other occurring in the Newport Back Bay Ecological Reserve estimated at approximately 160,000.⁶⁰ Other populations in southern California range from a few hundred to 8,000.⁶¹

Response 25

The Ranch Plan project site contains four populations of mud nama as indicted in Table 4.9-36 (page 4.9-186), which also includes a discussion of impacts as requested by the commenter. To summarize, these include Chiquita Ridge vernal pool (500 individuals), stock pond along Radio Tower Road (described as west of a ranch residence in Table 4.9-22) (350 individuals), and two populations in Trampas Canyon. One Trampas Canyon population, accounting for approximately 7,500 individuals occurs within a degraded settling basin, constructed as part of the ONIS sand mining operation and the other is associated with a degraded stock pond with approximately 2,000 individuals. The Chiquita Ridge and Radio Tower Road populations would not be affected by the project with the Trampas populations both subject to impacts.

The Chiquita Ridge population is the only population associated with high quality vernal pool habitat (i.e., also contains Riverside and San Diego fairy shrimp) while the other three features are low quality habitats degraded by grazing and other land uses. The Draft Program EIR identifies the loss of two populations of mud nama as significant even though the impacts are to disturbed artificial ponds. Relocation of the impacted individuals would provide for more-than-adequate mitigation. As described in Appendix J-1 (Plant Species Translocation, Propagation, and Management Plan), a number of high quality vernal pool sites on the Ranch Plan project site and other proposed open space are available as introduction sites, ensuring an increase in both locations and total numbers within the region. This species has been a component of successful restoration activities of vernal pool habitat at Fairview Park in Costa Mesa, indicating a high likelihood of successful translocation. Please also refer to Topical Response 3.1.9.8, Biological Resources-Impacts to Species.

Response 26

The assertion that "there are no records of this species in the database and this species was not observed during the surveys" was intended to mean that the species was not detected in previous years (i.e., is not in the database) nor during the most recent surveys (i.e., GLA in 2003).

⁶⁰ Du Bois Barry. 2002. Personal Communication to Tony Bomkamp regarding population of tarplant in 2002 at study site used for Master's degree research conducted under Dr. Eugene Jones of California State University Fullerton.

⁶¹ Roberts, Fred. 2000. *Southern Tarplant (Hemizonia parryi ssp. australis) on the Bolsa Chica Mesa, Orange County, California.*

The County concurs that the study area is large and that small obscure plants are often difficult to detect. Nevertheless, most portions of the site, including each of the development areas, has been subject to focused botanical surveys that in most instances have occurred over a series of years, providing more than adequate data for determining impacts to special-status plants.

Response 27

The County concurs that there is no suitable habitat on the Ranch Plan project site.

Response 28

This species is typically associated with vernal wet areas with heavy clay soils. The wetlands associated with Cañada Chiquita and Cañada Gobernadora are generally associated with Cienega sandy loams and in some areas with clay loams and do not have the heavy clay soils (e.g., soils from the Willows series) typically associated with this species. Furthermore, while the wetlands typically exhibit alkali water chemistry, the range is typically very close to freshwater (i.e., 2-3 ppt with 0.8 ppt as the threshold for freshwater). As such, neither the soils nor levels of alkalinity suggest that Cañada Chiquita and Cañada Gobernadora represent suitable habitat. Furthermore the alkali wetlands associated with Cañada Chiquita and Cañada Gobernadora are outside of the development areas and the alkali wetlands associated with Cristianitos will be preserved as set forth in Measure 4.9-6.

Response 29

Please see Response 28.

Response 30

The County agrees that this species does not occur in Orange County and that this species should be eliminated from consideration in the Program EIR. References to the golden-spined cereus in Table 4.9-4 (page 4.9-36) and on page 4.9-80, are hereby removed from the Final Program EIR. As indicated in the comment, it is highly unlikely for the *Ferocactus viridescens* to occur onsite. This species was not included in Table 4.9-4 because lack of detection over many years of surveys of this highly detectable plant is strong evidence that it does not occur in the study area

Response 31

The two populations of mesa brodiaea consist of two individuals in Cristianitos Canyon and 35 individuals on the south bank of Gabino Creek. The population of 2 individuals would be removed by project grading. The population of 35 individuals will remain in open space. Mesa brodiaea is not state or federally listed and is not designated by CNPS and therefore not designated as a special-status species by the state in the CNDDDB. The loss of 2 individuals of a species of local interest would not be considered a significant impact.

Response 32

The County agrees that this species is outside the range of this species and it should be eliminated from consideration in the Program EIR.

Response 33

The County agrees that this species is outside the range of this species and it should be eliminated from consideration in the Program EIR.

Response 34

The County agrees that this species does not co-occur with southern tarplant and should be eliminated from consideration in the Program EIR.

Response 35

This species is a distinctive annual that is associated with sandy sites. The County agrees that there are limited areas of suitable habitat for this species to occur on the Ranch Plan project site. However, such areas have been subject to detailed surveys for other special-status plants that favor sandy soils. The lack of detection of this species provides strong evidence that this species is absent from the project site. Furthermore, presence of this non-listed species that also does not have CNPS or CNDDB status would not trigger impacts that would be considered significant under CEQA.

Response 36

Page 4.9-81 specifies that *Chorizanthe parryi* var. *parryi* does not occur in Orange County and the County concurs that it can be eliminated from further consideration in the EIR. *Chorizanthe parryi* var. *Fernandina* as noted by the commenter has not been seen in Orange County in nearly 100 years. Glenn Lukos Associates (GLA) botanist Tony Bomkamp was one of the co-discoverers of the populations in Ventura County and has extensive experience with this species, as does GLA botanist David Moskovitz who conducted many of the surveys on the Ranch Plan project site in 1998, 2001, and 2003. This distinctive spineflower has not been seen on the Ranch Plan project site and botanists Bomkamp and Moskovitz have no reason to expect that this species occurs on the site.

Response 37

The County does concur with the assertion "there is no reason not to expect this species to occur in the study area". Thousands of hours of survey time by numerous highly qualified botanists have never detected a single individual of this large, easily detected shrub and it is appropriate to conclude that this species is not present on the Ranch Plan project site.

Response 38

The County concurs that in Orange County this species occurs on coastal bluffs and does not co-occur with *Dudleya multicaulis*, which is widespread on the Ranch Plan project site. As such there is no potential for this species to occur on the Ranch Plan project site and should not be further considered in the Program EIR.

Response 39

This species is typically found on steep granitic cliffs or outcrops. No suitable habitat for this species is associated with any of the proposed development areas. Limited potential habitat may occur in portions of La Paz Canyon which will be preserved in open space.

Response 40

The County concurs that in Orange County this species occurs on coastal bluffs, there is no potential for this species to occur on the Ranch Plan project site, and this species should not be further considered in the Program EIR.

Response 41

This species was the subject of focused surveys by GLA in 2003. The more common *Holocarpha virgata* ssp. *virgata* was detected and found to be fairly common in grasslands and areas of sparse coastal sage scrub throughout the Ranch Plan project site. However, the more distinctive and rare *Holocarpha virgata* ssp. *elongata* was not detected.

Response 42

The County concurs that *Hordeum intercedens* is often associated with native grasslands. The extent of native grasslands in the Cristianitos and Gabino watersheds is specifically addressed in the Draft Program EIR on page 4.9-14 where Cristianitos Canyon is noted as supporting 405 acres of native grassland and upper Gabino is noted as supporting 276 acres. As discussed in the Draft Program EIR, these areas were subject to surveys in 1989 that were updated and refined in 2001.

Response 43

The County concurs that in Orange County this species occurs on the immediate coast and that it is not on the Ranch Plan project site and should not be further considered in the Program EIR.

Response 44

The commenter is correct. The wetlands have been subject to intensive surveys and this distinctive species would be impossible to miss and does not occur on the Ranch Plan project site.

Response 45

The County concurs that suitable habitat occurs in Cañada Chiquita and Cañada Gobernadora within and along the margins of the wetlands. Detailed surveys have never detected this species and we concur that if it was historically present, it has been extirpated.

Response 46

The County concurs that this species is a species of higher elevations and specialized soils not found on the Ranch Plan project site and does not occur.

Response 47

The County does not concur that this species has a high potential for occurrence on the Ranch Plan project site. While suitable habitat occurs within the boundaries of the project site, this species has never been recorded. We concur that this species flowers early (January to April). However, surveys for other early-season annuals, which have the same flowering period as the *Lepidium*, including the Catalina mariposa lily, Palmer's grapplinghook, and small-flowered microseris would have provided ample opportunity to detect this species as the habitats also overlap. This includes very intensive early-season surveys conducted in 1995 and 1996 for the

Foothill Transportation Corridor, as well as surveys conducted during 1998, 2001, 2002, and 2003 which included early season surveys to capture the "early" species.

Response 48

The County concurs that this species is unlikely to occur on the Ranch Plan project site. Furthermore, this distinctive species is typically associated with drainage courses. All drainage courses within potential development areas were reviewed during the jurisdictional delineation(s) (many of the drainages have been walked on numerous occasions) and this species has not been detected and is very unlikely to occur within any of the proposed development areas.

Response 49

The County concurs that the Ranch Plan project site is not within the range of this species and that this species should not be further considered in the Program EIR.

Response 50

The County concurs that the Ranch Plan project site is not within the elevational range of this species and that this species should not be further considered in the Program EIR.

Response 51

The County concurs that the elevational limits this species are not correct in the Draft Program EIR. Nevertheless, the project site is not within the elevational range of this species and that this species exhibits no potential for occurring within any of the proposed development areas.

Response 52

The correction that there are no records of this species for Orange County is acknowledged. Furthermore, while there may be limited potential at higher elevations on the eastern margins of the Ranch Plan project site; there is no suitable habitat within any of the proposed development areas.

Response 53

The County concurs that the Ranch Plan project site is not within the elevational range of this species and that this species should not be further considered in the Program EIR.

Response 54

The commenter is correct. This diminutive vernal pool plant was discovered in Orange County at Fairview Park in 1997 by Glenn Lukos Associates (GLA) botanist Tony Bomkamp during the third year of surveys of the Fairview Park vernal pools (i.e., 1995 to 1997). Some of the Ranch Plan project site vernal pools (i.e., the Chiquita Ridge pools) were also surveyed by Mr. Bomkamp during these same years and this species was not detected. The remaining vernal pools on the project site have been subject to detailed surveys since that time by Mr. Bomkamp and Mr. Fred Roberts and this species has not been detected. Based on lack of detection, the potential for occurrence of this species on the project site is very low. Furthermore, pursuant to the minimization/avoidance measure 4.9-63 set forth on page 4.9-218, 100 percent of vernal pools will be preserved and this species would not be affected by the project in any way.

Response 55

The County concurs that this species is unlikely to occur in the study area. Furthermore, Glenn Lukos Associates (GLA) botanist T. Bomkamp is familiar with this species from the San Diego area where it occurs along the margins of vernal pools and in understory to scrub in areas adjacent to vernal pools. This species is most often detected during wet-season fairy shrimp surveys conducted between January and March (as noted by the commenter) in and around vernal pools before many other plant species are detectable. GLA botanist Tony Bomkamp has conducted fairy shrimp surveys throughout the Ranch Plan project site and has not detected this species confirming the low potential for occurrence. Furthermore, pursuant to the minimization/avoidance measure 4.9-63 set forth on page 4.9-218, 100 percent of vernal pools will be preserved and this species would not be affected by the project in any way.

Response 56

The County does not concur that this species has a high probability of occurring on the Ranch Plan project site. While suitable habitat occurs within the boundaries of the project site, this species has never been recorded. This includes very intensive surveys conducted in 1995 and 1996 for the Foothill Transportation Corridor, as well as surveys conducted during 1998, 2001, 2002, and 2003. While it is acknowledged that this species was only recently added to List 4 by CNPS and was not a target of focused surveys, it was not recorded during general floristic surveys, which given the level of survey activity is a very strong indicator that this species does not occur. In addition, Glenn Lukos Associates (GLA) botanists who are familiar with this taxon from two occurrences in Orange County (and the closely related Lyon's pentachaeta that is a narrow endemic limited primarily to Conejo volcanics in Ventura and Los Angeles counties) have never detected this species during general botanical surveys, jurisdictional delineations, fairy shrimp surveys, or wildlife surveys that have provided for additional opportunities for detecting and recording floristic elements on the project site. Similarly, focused botanical surveys of the Donna O'Neill Conservancy conducted by Mr. Fred Roberts and Mr. Dave Bramlet in 2003 did not record this species.⁶²

Response 57

The County concurs that the Ranch Plan project site is not within the elevational range of this species and that this species should not be further considered in the Program EIR.

Response 58

The County concurs that this species has potential for additional occurrences on the Ranch Plan project site. However, the County also believes that the occurrences would be very rare. This is because while suitable habitat occurs within the boundaries of the project site, this species has only been mapped on one occasion. This includes very intensive surveys conducted in 1995 and 1996 for the Foothill Transportation Corridor, as well as surveys conducted during 1998, 2001, 2002, and 2003. While it is acknowledged that this species was only recently added to List 4 by CNPS and was not a target of focused surveys, it was only recorded one other occasion (not mapped) during general floristic surveys, which given the level

⁶² Roberts, Fred M. and David E. Bramlet. 2004. *A Botanical Assessment of the Donna O'Neill Land Conservancy, Rancho Mission Viejo, California: Sensitive, Rare, and Endangered Plants*. Prepared for Glenn Lukos Associates and Mission Viejo Land Conservancy. April 2004.

of survey activity is a very strong indicator that this species is very uncommon.⁶³ In addition, Glenn Lukos Associates (GLA) botanists who mapped the occurrence noted in the Draft Program EIR have never detected this species during other focused botanical surveys jurisdictional delineations, fairy shrimp surveys, or wildlife surveys that have provided for additional opportunities for detecting and recording floristic elements on the project site. Similarly, focused botanical surveys of the Donna O'Neill Conservancy conducted by Mr. Fred Roberts and Mr. Dave Bramlet in 2003 did not record this species.⁶⁴ Impacts to the six individuals noted in the EIR plus one additional individual noted in 1995 is not significant for the reasons set forth in the Draft Program EIR.

Response 59

The County concurs with the comment. One additional occurrence was identified during recent jurisdictional delineation work conducted in a tributary to Verdugo Canyon where approximately 200 individuals were detected. These individuals are outside of the development area.

Response 60

The County concurs with the comment; however, this distinctive shrub is easy to detect and was not observed within any development areas. Potential areas for this species on the Ranch Plan project site would be La Paz Canyon which is in open space.

Response 61

The error in the EIR is noted; there is an historic occurrence at the Dana Point Headlands. The County concurs that there is potentially suitable habitat for this species on the Ranch Plan project site. However, all areas of potential habitat (vernal pools, alkali grasslands, and other wetland margins associated with clay soils) have been subject to the most intense surveys efforts on the project site and this species has never been recorded. As noted for *Pentachaeta aurea*, focused botanical surveys of the Donna O'Neill Conservancy conducted by Mr. Fred Roberts and Mr. Dave Bramlet in 2003 did not record this species. Given these factors, we believe that the potential for occurrence is extremely low.

Response 62

The County concurs that the Ranch Plan project site does not contain suitable habitat for this species and that this species should not be further considered in the Program EIR.

Response 63

The County concurs that the Ranch Plan project site does not contain suitable soils for this species and that this species should not be further considered in the Program EIR.

⁶³ Bomkamp, Tony. 2004. Personal Observation. Mr. Bomkamp observed a single individual of this species during focused botanical surveys conducted for FTC-South in 1995 on a ridgeline in Planning Area 3. The occurrence was not mapped.

⁶⁴ Roberts, Fred M. and David E. Bramlet. 2004. *A Botanical Assessment of the Donna O'Neill Land Conservancy, Rancho Mission Viejo, California: Sensitive, Rare, and Endangered Plants*. Prepared for Glenn Lukos Associates and Mission Viejo Land Conservancy. April 2004.

Response 64

The County concurs that there are no "native" populations recorded in Orange County. Furthermore, this distinctive shrub has not been detected in any of the proposed development areas and would not be affected by the proposed project.

Response 65

Regarding the species: *deinandra paniculata*, *convolvulus simulans*, *navarretia prostrata*, and *quercus engelmannii*, the *navarretia prostrata* is endemic to vernal pools and has never been detected on the Ranch Plan project site. The vernal pools on the site have been subject to multiple surveys during years with adequate rainfall. This species is very distinctive and easily detected, even during summer and fall months. Furthermore, pursuant to the minimization/avoidance measure 4.9-63 set forth on page 4.9-218, 100 percent of vernal pools will be preserved. *Quercus engelmannii* is only known from the Donna O'Neill conservancy and would not be affected by the project. *Convolvulus simulans* is a CNPS list 4 taxon known from two locations on the Ranch Plan project site, the Donna O'Neill Conservancy, and Cristianitos Canyon. The population in the conservancy, numbering about 200 would be preserved. The population in Cristianitos Canyon, which numbers a few hundred individuals, would be impacted. However, in implementation of minimization/avoidance measure 4.9-12, substantial avoidance of this population would be provided as the *convolvulus simulans* and the coulter's saltbush addressed in the measure are in close proximity resulting in substantial avoidance. *Convolvulus simulans* is widespread and still relatively common and the loss of a portion of this population would not be considered significant. Preservation of the population associated with the Donna O'Neill conservancy and a portion of the Cristianitos population would ensure persistence of this species on the Ranch Plan project site. *Deinandra paniculata* is a CNPS list 4 taxon that occurs in a variety of habitats and disturbed or ruderal areas in Riverside, Orange, and San Diego counties, extending into northern Baja California, Mexico. Where it occurs, this species often is very common in open coastal sage scrub, native grassland, non-native grassland, agricultural lands/disc'd fields and disturbed areas and. On the Ranch Plan project site, this species is widespread over the ranch with concentrations in Chiquita Canyon, Gobernadora Canyon, the Donna O'Neill Conservancy, Cristianitos Canyon, and Gabino Canyon. Implementation of the project would result in the loss of grassland areas and agricultural fields occupied by this species; however due to its prevalence over the ranch impacts to this species would not be considered significant.

Response 66

Glenn Lukos Associates (GLA) conducted focused surveys of this species within areas of coastal sage scrub associated with the Planning Areas 7, 8, and 9 based on reports of this species on Marine Corps Base (MCB) Camp Pendleton. However, because this species had no special status at the time of document preparation, it was not included in the Draft Program EIR. This species was not detected during focused surveys in 2003.

Response 67

First, it is important to note that neither of these species are listed or proposed for listing, candidates for listing, sensitive, rare or otherwise special status plants in local or regional plans, policies, or regulations, or by CDFG or USFWS. Therefore, impacts to these species would not be considered significant under CEQA.

The potential occurrence of *Fritillaria biflora*, is very imprecise, described by the commenter as "(k)nown to occur on a ridge between Gabino and Cristianitos Canyon." There are actually a series of ridges between these canyons, depending upon the specific location in question. Based on this description, there is a high probability that this population is within open space and would not be affected by the project. As noted in other responses, Glenn Lukos Associates (GLA) conducted surveys in 2003 throughout the development areas including Cristianitos (Planning Area 7) and Gabino (Planning Area 9) and this distinctive species was not detected. Therefore, based on survey evidence, this species would not be impacted by the project. Nevertheless, as noted above, impacts to this species would not be considered significant.

The occurrences of California juniper are included on Exhibit 4.9-10a-c. The commenter is correct that the area in the vicinity of the Riverside Cement Lease (near the southern boundary of Planning Area 7) supports a number of individuals of this species. However, this species is also known from open space associated with Chiquita Ridge, upper Cristianitos Canyon, and open space on both sides of Gabino Creek between Planning Areas 7 and 8. Furthermore, implementation of Minimization/Avoidance of *Brodiaea filifolia* and *Dudleya multicaulis* for lower Cristianitos will result in additional avoidance of California junipers such that there would be substantial avoidance of California junipers associated with the proposed Ranch Plan project.

Response 68

The commenter asserts that the Draft Program EIR has underestimated the acreage of native grasslands. The commenter is incorrect. As addressed in the Draft Program EIR page 4.9-14 and described above in the response to Comment 12, there are 1,100 acres of native grassland in the study area. The commenter asserts that there is 4 times this acreage or 4,400 acres in the study area, based on the total grassland in the study area including the non-native grassland of 5,090 acres, a figure of 4,400 acres would result in approximately 88 percent of the grasslands in the study area being native. This is incorrect. The vast majority of grasslands on the project site are not native as evidenced by the results of repeated surveys. The commenter also does not identify any specific areas of unreported native grasslands.

Response 69

Based on review of historic aerial photographs, stock pond creation has been part of ranching operations since at least the 1930s. Two such ponds were created by placing berms across Chiquita Creek prior to regulation of such activities under Sections 404 or 1600. Wetlands expanded substantially in these areas due to these practices. Storms in the early- and mid-1990s (i.e., 1991, 1993, and 1995) breached the berms, which were not repaired by RMV ranching operations. As a result, over the last decade plus, much of the area behind the berms previously covered by wetland vegetation has converted back to upland as these artificially expanded wetlands slowly constricted.⁶⁵

Various types of hydrological monitoring have been ongoing since late 1995 in Chiquita Canyon, including establishment of shallow ground water monitoring wells within wetlands associated with Chiquita Creek and the slope wetlands that occur in the canyon. The monitoring data show that the shallow ground water that supports the slope wetlands and that also feeds the creek are not connected to the aquifer that provides well water for the ranch. The shallow ground water has not shown significant changes during this period that has included portions of wet and dry climactic cycles. Second, the construction of Tesoro High School and the associated subdrains

⁶⁵ Bomkamp, Tony. 2004. Personal observations of Chiquita wetlands between early 1995 and 2004.

installed beneath the campus has resulted in a slight increase in surface flows in Chiquita Creek that has been provided for increased vigor in some portions of the creek.

A tricolored blackbird colony was associated with one of the bermed (and then storm-breeched) stock pond areas above the Narrows. However, the colony has not been observed since sometime in the mid- or late-1990s as the wetland contracted and the habitat was no longer suitable to support nesting. It should also be noted that tricolored black bird colonies are known to move from site to site, oftentimes for no apparent reason.

The commenter notes the potential for restoration in Chiquita Canyon but fails to note that approximately ten acres of highly functional emergent marsh, wet meadow and riparian scrub was created in the late 1990s and has achieved all performance standards and been fully accepted by the USACE and CDFG. Tri-colored blackbirds were detected using areas of the created marsh in early 2004 during biological monitoring of the site, although successful breeding was not documented.

Response 70

A detailed description of vernal pools is provided on page 4.9-19 of the Draft Program EIR. More importantly, pursuant to the minimization/avoidance measure 4.9-63 set forth on page 4.9-218, 100 percent of vernal pools will be preserved on the project site.

Response 71

Refer to Topical Response 3.1.9.1, Biological Resources—Methodology for Determining Biological Resource Impacts.

Response 72

As stated on page 4.9-135, 21 locations of thread-leaved brodiaea totaling 6,792 flowering stalks will be impacted by the proposed project and associated infrastructure. Table 4.9-42 will be corrected (6,790 to 6,792). The conserved total of 8,632 shown in Tables 4.9-28 and 4.9-36 is the results of the consistency analysis for the proposed project assuming avoidance of the lower Cristianitos/Gabino Canyon major population/key location. Infrastructure impacts were not included in the Consistency Analysis because conceptual infrastructure facilities were not designed for all alternatives and thus could not be used in the comparison of the proposed project and the alternatives considered in Appendix M.

Response 73

The commenter is not correct in stating that infrastructure impacts were not considered in the Draft Program EIR. As stated on page 4.9-129 of the Draft Program EIR and illustrated on Exhibits 4.9-11 through 4.9-21 of Section 4.9, infrastructure facilities including roads, trails/bikeways, sewer and water facilities and drainage facilities are sited and analyzed in the biological resource impact analysis. Impacts to habitats and species are presented in terms of impacts resulting from development uses and infrastructure facilities; see for example Impact 4.9-84 which discusses impacts to Coulter's saltbush resulting from both the proposed project and construction and maintenance of infrastructure. The SOCTIIP, in addition to other projects with the potential to impact the RMV Conservation Strategy, are analyzed in Section 7, Cumulative Impacts, in the Draft Program EIR.

Response 74

Refer to Topical Response 3.1.1.1, Project Processing–Separation of the Ranch Plan from the processing of the NCCP/HCP and the SAMP/MSAA and 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts.

Response 75

Table 4.9-24 is intended to give the reader an overall idea of the consistency of the proposed project with the NCCP/HCP Planning Guidelines. A detailed analysis of the proposed project consistency with both these guidelines and the Watershed Planning Principles is presented in Appendices G-5 and G-6. As described in the Draft Program EIR (page 4.9-96) and in Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts, both the guidelines, principles, and the traditional CEQA significance criteria were used to determine impacts to biological resources.

Several alternatives have been developed and are considered in the Draft Program EIR; see Section 5 and Appendix M. These alternatives have been developed with different open space/development configurations to respond to on-site biological resources as described in Section 5. These alternatives have different impacts from the proposed project and have varying degrees of consistency with the SRP Tenets, SAMP Tenets, Planning Guidelines, and Planning Principles.

Response 76

Please refer to Topical Response 3.1.9.1, Biological Resources–Methodology for Determining Biological Resource Impacts.

Response 77

Refer to Exhibits 4.9-20a through 21c for impacts to threatened/endangered and CNPS List 1-4 plants.

Response 78

There is no contradiction between Table 4.9-36 and project impacts discussed on page 4.9-135 of the Draft Program EIR. The values provided in Table 4.9-36 follow from application of the NCCP Guidelines and Watershed Planning Principles to achieve consistency between the proposed project (considered as “development bubbles” where the entire bubble is considered as an impact) and the project once avoidance and minimization measures are incorporated into the program (see pages 4.9-95-117). For thread-leaved brodiaea, the project would affect 6,392 flowering stalks. With application of the avoidance measures, this would be reduced to 682 flowering stalks or approximately 93 percent conserved.

Similarly, approximately 478 individuals of Coulter’s saltbush would be affected by the project. With application of the avoidance measures, this would be reduced to 310 individuals or approximately 87 percent conserved. Potential indirect impacts from the proposed golf course uses would be addressed (i.e., avoided or minimized) through incorporation of appropriate set backs and BMPs.

Regarding many-stemmed dudleya, the commenter’s number (30,000) for conservation is not correct. Table 4.9-28 (page 4.9-117) clearly states that 33,000 individuals (70 percent) would

be conserved on the Ranch Plan project site. The number of impacted individuals (26,799) provided on page 4.9-144 is the number that would be lost prior to application of avoidance/minimization measures, which results in the conservation noted above.

Impacts to approximately 40,000 individuals of southern Tarplant are addressed on page 4.9-233 in Table 4.9-43 and would occur through a variety of means including translocation as set forth on pages 19-22 of Appendix J-2.

Impacts to mud nama are high when just the numbers of individuals are considered. However, the two ponds to be impacted are artificial ponds with one created as a stock pond for cattle and the other a settling basin in the sand mining facility. Translocation of these plants to higher quality habitat such as the vernal pools on Chiquita Ridge, Radio Tower Road, and/or Tijeras will result in expanded numbers plus more locations for this species, resulting in a net benefit to this species.

Response 79

Refer to Topical Response 3.1.9, Biological Resources–Indirect Effects and Topical Response 3.1.6, Water Resources.

Responses 80 and 82

The following special-status plant species would be affected by the proposed project.

thread-leaved brodiaea, SE, FT, List 1B

southern tarplant, List 1B

many-stemmed dudleya, List 1B

Coulter's saltbush, List 1B

mud nama, List 2

beaked spikerush, Local Interest

Palmer's grapplinghook, List 4

mesa brodiaea, Local Interest

Catalina mariposa lily, List 4

western dichondra, List 4

upright burhead, Local Interest

vernal barley, List 3

small-flowered microseris, List 4

chaparral rein orchid, List 4

Fish's milkwort, List 4

Please refer to Topical Response 3.1.9.8, Biological Resources–Impacts to Species. The assertion that significant impact will remain does not appear to account for the Minimization/Avoidance Measures that provide for substantial avoidance of each of the sensitive plant species, or mitigation that is more than adequate to address the impacts after avoidance, mitigation, and/or compensatory mitigation, as summarized below:

Thread-Leaved Brodiaea. Impacts to 6,792 out of 9,314 flowering stalks of thread-leave brodiaea were determined to be significant prior to application of the NCCP Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures reduces impacts such that 8,632 (93 percent) of the individuals would be avoided within the study area and the remaining impacts would be fully mitigated through translocation. Thread-leaved brodiaea as such is fully conserved with no significant impacts.

Southern Tarplant. Permanent impacts to 41,055 out of approximately 146,067 southern tarplant were determined to be significant prior to application of the NCCP Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures reduces impacts such that 105,021 (72 percent) of the individuals would be avoided within the study area and the remaining impacts would be fully mitigated through translocation. Translocation has been successfully implemented for this plant on the Ranch Plan project site in association with construction of Tesoro High School with establishment of approximately 11,000 southern tarplant individuals in areas of restored alkali meadow habitat in Chiquita Canyon that exhibits optimal hydrology. Similarly, habitat restoration (alkali meadow) in Cañada Gobernadora has provided for expansion of a population that consisted of a few individuals to approximately 13,000. In both cases, southern tarplant populations that were associated with agricultural fields were successfully incorporated into highly functioning areas of restored alkali meadow that have been monitored for five years and fully accepted by the USACE and CDFG. Numerous opportunities exist in Chiquita Canyon and Cañada Gobernadora (as identified in Appendix J-2. the Aquatic Resources Restoration Program).

Many-Stemmed Dudleya. Permanent impacts to 26,799 out of approximately 47,192 many-stemmed dudleya were determined to be significant prior to application of the NCCP Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures reduces impacts such that approximately 33,000 (70 percent) of the individuals would be avoided within the study area and the remaining impacts would be fully mitigated through translocation.

Coulter's Saltbush. Permanent impacts to 478 out of approximately 3,089 Coulter's saltbush were determined to be significant prior to application of the NCCP Guidelines and associated Minimization/Avoidance Measures. Implementation of the Minimization/Avoidance Measures reduces impacts such that 2,611 (84 percent) of the individuals would be avoided within the study area and the remaining impacts would be fully mitigated through translocation.

Mud Nama. Permanent impacts to 9,500 out of approximately 10,350 individuals of mud nama were determined to be significant prior to application of the NCCP Guidelines and associated Minimization/Avoidance Measures. In the case of mud nama, implementation of the Minimization/Avoidance Measures does not further reduce impacts with preservation of two populations totaling 850 individuals (8 percent), and the remaining impacts to be fully mitigated through translocation.

Based on its colonization and persistence in a variety of artificial aquatic features, it is fully expected that translocation of this species to higher quality aquatic features such as the vernal pools on Chiquita Ridge, Radio Tower Road and Tijeras would be highly successful.

Restoration/expansion of vernal pool habitat at Fairview Park in Costa Mesa resulted in colonization of the restored area by this species. Glenn Lukos Associates (GLA) botanists have implemented a number of vernal pool restoration programs, including federally listed plants as well as special-status plants and have found that translocation of vernal pool/seasonal pond plants is highly successful given appropriate hydrological conditions. All of the potential translocation sites on the Ranch Plan project site have been subject to sufficient monitoring to establish the presence of suitable hydrology (e.g., many of the receptor pools support the Riverside and/or San Diego fairy shrimp). With implementation of such a translocation program there would be an increase in sites supporting mud nama as well as an overall increase in individuals.

Beaked Spikerush. Beaked spikerush is not listed or proposed for listing, a candidate for listing, sensitive, rare or otherwise designated as special status in local or regional plans, policies, or regulations, or by CDFG or USFWS. Therefore, impacts to this species would not be considered significant under CEQA. This species is associated with slope wetlands and as such, would be subject to substantial preservation.

Palmer's Grapplinghook. Mitigation Measures for this species are set forth on page 4.9-236. This species is also to be included as a component of the many-stemmed dudleya translocation program (e.g., see page 14 of Appendix J-1), ensuring translocation of sufficient numbers necessary for maintaining net habitat values.

Mesa Brodiaea. Please refer to the response to Comment 31, above.

Catalina Mariposa Lily. Mitigation Measures for this species are set forth on page 4.9-236 ensuring translocation of sufficient numbers necessary for maintaining net habitat values.

Western Dichondra. No significant impact to this species.

Upright Burhead. Upright burhead is not listed or proposed for listing, a candidate for listing, sensitive, rare or otherwise designated as special status in local or regional plans, policies, or regulations, or by CDFG or USFWS. Therefore, impacts to this species would not be considered significant under CEQA. This species is associated with a stock pond that supports pond turtle preserved in accordance with Minimization and Avoidance Measures set forth on page 4.9-230.

Vernal Barley. Mitigation Measures for this species are set forth on page 4.9-236 and 4.9-237 ensuring translocation of sufficient numbers necessary for maintaining net habitat values.

Small-flowered Microseris. Mitigation Measures for this species are set forth on page 4.9-237 ensuring translocation of sufficient numbers necessary for maintaining net habitat values.

Chaparral Rein Orchid. Please refer to the response to Comment 58 above.

Fish's milkwort, List 4. Please refer to the response to Comment 59 above.

Response 81

Specific Performance Standards are set forth in Appendix J-1.

Response 83

A mitigation monitoring program will be prepared and considered for adoption in conjunction with certification of the Draft Program EIR.

Response 84

Refer to Topical Response 3.1.1.2, Project Processing, regarding the entitlement process and requirements following a GPA/ZC.

Response 85

Table 4.9-28 sets forth the conservation of Planning Species within the RMV Open Space. This information is repeated in Table 4.9-36 to give the reader an understanding of the proposed project's contribution towards the conservation of Planning Species within the overall Southern Subregion study area that is also reviewed in Table 4.9-36. This information is consistent with statements at the beginning of the Biological Resources section which emphasize that "a fundamental premise of the proposed project is that land use planning within the study area for both open space and development should build upon the significant open space planning, protection, and management efforts on the part of local government, state, and federal agencies, and private and quasi-public landowners that have already taken place within the Southern Subregion" (Page 4.9-1, Draft Program EIR). For the proposed project, the SRP Tenets consistency analysis is based on both the protection of habitats and species within the RMV Open Space set forth in Section 4.9 including but not limited to Table 4.9-28, Table 4.9-3, Table 4.9-32, Table 4.9-33, Table 4.9-34, Table 4.9-35, Table 4.9-36, Table 4.9-41, Table 4.9-42, Table 4.9-43, Table 4.9-44, and Table 4.9-45. All alternatives examined in Section 5 and Appendix M are similarly examined.

Response 86

Please refer to the response to Comment 79, above for details on impacts for each species. Relative to the proposal by CNPS to petition for State and Federal Listing the following considerations should be taken into account. Thread-leaved brodiaea is already listed by the state and USFWS.

Southern tarplant is subject to 72 percent avoidance with translocation resulting in no loss of individuals plus enhanced habitat for the translocated individuals.

Coulter's saltbush is subject to 84 percent preservation with translocation resulting in no loss of individuals plus enhanced habitat for the translocated individuals.

Many-stemmed dudleya is subject to 70 percent preservation with translocation resulting in no loss of individuals plus enhanced habitat for the translocated individuals. It is also important to note that in recent years, surveys throughout Orange County have identified numerous large populations, many of which are in preserved open space. CNPS has considered downgrading this species to List 4. Large-scale preservation in Orange County open space ensures the long-term viability of this species.

Mud nama will experience temporary loss of approximately 9,500 individuals from two ponds that exhibit very low conservation value. Translocation will provide for much higher probability of long-term conservation of this species in southern Orange County with increased locations and no decrease in total individuals.

Intermediate Mariposa lily on the Ranch Plan project site is subject to substantial intergradation with the more common Weed's mariposa lily and does not meet the USFWS proposed threshold for "hybrids" under the federal Endangered Species Act (ESA) (see Responses to the July 14, 2004 CNPS letter)

All of the other species are either List 3 or List 4 taxa and would not be considered under sufficient threat for listing at this time as summarized in the table below.

SUMMARY OF CNPS LISTS 1, 2, 3, & 4

CNPS List	Comments
List 1A—Presumed Extinct in California	Thought to be extinct in California based on a lack of observation or detection for many years.
List 1B—Rare or Endangered in California and Elsewhere	Species that are generally rare throughout their range that are also judged to be vulnerable to other threats such as declining habitat.
List 2—Rare or Endangered in California, More Common Elsewhere	Species that are rare in California but more common outside of California
List 3—Need More Information	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate list. In most instances, the extent of surveys for these species is not sufficient to allow CNPS to accurately assess whether these species should be assigned to a specific list. In addition, many of the List 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
List 4—Plants of Limited Distribution	Species that are currently thought to be limited in distribution or range whose vulnerability or susceptibility to threat is currently low. In some cases, as noted above for List 3 species above, CNPS lacks survey data to accurately determine status in California. Many species have been placed on List 4 in previous editions of the "Inventory" and have been removed as survey data has indicated that the species are more common than previously thought. CNPS recommends that species currently included on this list should be monitored to ensure that future substantial declines are minimized.
Source: GLA, 2004	

Response 87

Please refer to the response to Comment 3.

Response 88

Please refer to Topical Response 3.1.1.1, Project Processing—Separation of the Ranch Plan from the Processing of the NCCP/HCP and the SAMP/MSAA

Response 89

Please refer to Topical Response 3.1.1.4, Project Processing—When to Recirculate a Draft EIR.

COMMENTS 185 RICHARD GARDNER, SR.
Undated

Response 1

The commenter is not correct regarding the relationship of the San Mateo Watershed to the study area. As described on page 4.5-6 and 4.5-7, the total watershed is approximately 139 sq. miles, of which the study area represents approximately 17 percent. Of the 17 percent of the San Mateo Watershed within the study area, 2,365 acres are proposed for development. As described in Section 4.5 of Draft Program EIR and Technical Appendix C-2, Rancho Mission Viejo Conceptual Water Quality Management Plan (WQMP), a long-term adaptive management program that includes maintaining of: 1) BMP inspection and performance; 2) hydrologic monitoring; 3) WQMP review and evaluation; 4) corrective measures; and 5) documentation and reporting.

Table 6-1 of the Conceptual WQMP identifies a) evaluation topics and triggers and b) potential actions and corrective measures.

Response 2

The comment is noted. The County is aware that in the context of the San Juan Watershed Study that the U.S. Army Corps of Engineers (USACE) has not used to the Orange County Hydrology Manual methods to determine the 100- year Q value. The USACE has used its own methods to determine the 100- year Q value and thus determine whether or not a federal interest exists in any flood control solution for San Juan Creek. Any "on the ground" project developed to address flooding on San Juan Creek will need to use the Orange County Hydrology Manual methodology.

Response 3

Refer to Topical Response 3.1.6, Water Resources, in particular please see the discussion regarding Impacts of Pathogens and Impacts to Groundwater.

COMMENTS 186 PATTY SAPPINGFIELD
Undated

Response 1

The Program EIR is intended as a disclosure document. Pursuant to the California Environmental Quality Act, the document is intended to: a) inform agency decision makers and the general public of the direct and indirect environmental effects of a proposed action, b) provide mitigation measures to reduce or eliminate potential significant adverse impacts, and c) identify and evaluate reasonable alternatives to the proposed project. The decision makers will determine the merits of the project. Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

Current residents would not be responsible for provision of infrastructure to development in the Ranch Plan. The project provides sufficient revenues to offset the cost of services. In addition mitigation measures outlined in the Program EIR require the project to enter into agreements with the Orange County Fire Authority and the Orange County Sheriff-Coroner regarding the provision of services and facilities. The water supply assessment details the provision of water for the project. The water supply assessment is summarized in Section 4.15, Public Services

and Facilities, and Appendix K. The fiscal implications of the project have been addressed in a Fiscal Impact Report, which the County of Orange is reviewing through a process separate from the EIR. The project provides sufficient revenues to offset the cost of services. In addition mitigation measures outlined in the Program EIR require the project to enter into agreements with service providers regarding the provision of services and facilities.

COMMENTS 187 ANDREW MIKESELL

Undated

Response 1

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR.

COMMENTS 188 MARINETTE MIKESELL

Undated

Response 1

Your comments are noted and have been forwarded to the decision makers as part of the Final Program EIR submittal. Though specific issues have not been raised by the commenter, Topical Response 3.1.1 provides a discussion of the NCCP/HCP process and Topical Response 3.1.2 provides a discussion of open space. The project would retain over 15,000 acres in permanent open space.

COMMENTS 189 TRACI THIELE

Dated: August 11, 2004

Response 1

Your comments are noted and have been forwarded to the decision makers as part of the Final EIR submittal. It should be noted that the project proposes to maintain 66 percent or 15,121 acres in open space. For additional discussion of open space please see Topical Response 3.1.2. The steelhead trout are further discussed in Topical Response 3.1.9.8.

COMMENTS 190 CALIFORNIA DEPARTMENT OF TRANSPORTATION

Dated: August 11, 2004

Response 1

The comment is noted. Responses to specific issues noted here are as follows:

- The extension of SR-241 and/or the preferred alignment is undetermined at this time. The County and the project applicant will continue to monitor the SOCTIIP process and coordinate with the TCA and Caltrans as that process evolves.
- Please refer to Topical Response 3.1.7, Transportation and Circulation, related to Crown Valley Parkway. The County and the project applicant will continue to work with Caltrans to implement acceptable connections of the County's circulation element to Ortega Highway.
- Please refer to Topical Response 3.1.7, regarding toll road non-compete issues.

- The County and project applicant will continue to work with Caltrans on issues related to the proposed NCCP/HCP and SAMP/MSA.

Response 2

The performance criteria used in the traffic analysis are set out in some detail in both the Draft Program EIR and the traffic study. In the traffic study, the discussion on mainline performance notes that under congested conditions, the freeway mainline capacity becomes lower and hence the congested conditions will worsen. Not only will they worsen in the section under consideration but there will be an upstream queue forming such that additional sections of the freeway will be congested. Please also refer to Topical Response 3.1.7, Transportation and Circulation.

To fully evaluate this effect requires dynamic simulation models of the type that are currently not available for Orange County freeways. For this reason, the performance criteria discussion recognizes this effect in situations where the V/C ratio is greater than 1.0.

Response 3

As noted, the Caltrans guide for impact studies has certain suggestions with respect to analysis methodology. These have been addressed in the traffic share tabulation for the mainline freeway and in the application of an alternative intersection level of service methodology for Caltrans intersections (i.e., at freeway interchanges). These and other issues are the subject of ongoing discussions with Caltrans as suggested in the guidelines. Please also refer to Topical Response 3.1.7, Transportation and Circulation, with respect to I-5.

Response 4

In deference to Caltrans' concerns and due to time constraints to achieve a mutual resolution, the County is not pursuing the proposal to add this facility to the State highway system at this time and is only proposing that the 'New Ortega Highway' be added to the MPAH as an arterial highway.

Response 5

It is recognized that the proposal for an interchange at "C" Street with SR-241 is not a full substitute for an interchange at Crown Valley Parkway. The intent is that the "C" Street interchange serve traffic for the proposed development rather than project traffic having to travel to Oso Parkway and use that interchange with SR-241. Also please refer to Topical Response 3.1.7 for additional discussion related to the extension of Crown Valley Parkway and a future interchange with SR 241.

Comparisons between an interchange with "C" Street and SR-241 and with the Crown Valley Parkway extension as per the current MPAH are provided in the Draft Program EIR traffic report.

Response 6

It is recognized that the project does not have proposals with respect to other modes of transportation other than a commitment to incorporating design features to enhance transportation systems management and transit use. The specifics of these will be developed

as part of the area plans. With respect to public transportation, this will be developed with the County in concert with Orange County Transportation Authority (OCTA).

Response 7

The South County Roadway Improvement Program (SCRIP) is the same as the SCRIPTS originally forwarded to Caltrans. The acronym has been simplified to better reflect that it is a comprehensive program of transportation improvements which would naturally include traffic signals.

Response 8

It is agreed that the fair share participation by the project (and others) in the SCRIP will rely on a number of factors and not solely on the traffic shares shown in the Draft Program EIR. Such factors will be the subject of discussions with various cities and other agencies and will lead to an equitable participation basis in the overall program.

Response 9

The County is currently carrying out an independent review of project costs and will include the noted administration costs associated with the program. Costs will be included in the SCRIP.

Response 10

The noted points A, B, C, and D, initially addressed in the Draft Program EIR will be further addressed through implementation of the mitigation measures and through the County's SCRIP. These will fully define the obligations of the project with respect to future traffic studies, participation, and costs, etc. The project's obligations for identified traffic improvements, including, the method and timing of payments, will also be identified in the proposed Development Agreement. It is now proposed that subsequent traffic analyses be carried out with the Master Area Plan for each planning area. No further agreements or conditions would be imposed at a tentative map or final map stage.

Response 11

The traffic analyses prepared for the project indicated that the proposed project neither adds traffic to nor impacts SR-74 east of the project. Substantial reductions in traffic along SR-74 contiguous to the proposed project are predicted because of the parallel roadway north of San Juan Creek. The described improvements are determined to be continuing operations and maintenance requirements of Caltrans and not a nexus to Ranch Plan impacts and/or mitigation measures. Notwithstanding, the County and the project applicant will continue to work with Caltrans on issues of regional significance.

Response 12

The comment is noted. Such coordination will occur.

Response 13

Your comment is noted. The issues raised in your NOP comments are addressed in the Draft Program EIR and these responses to comments.

Response 14

The comment is noted. Please refer to Topical Response 3.1.9, Biological Resources.

Response 15

The comment is noted.

Response 16

The comment is noted. Please refer to the mitigation program set forth in Section 4.11, Cultural Resources, of the Draft Program EIR.

Response 17

The comment is noted. Please refer to Section 4.6, Transportation and Circulation, and Section 4.7, Air Quality, of the Program EIR.

Response 18

The comment is noted. The Draft Program EIR includes a program to comply with NPDES requirements. Please refer to Section 4.5 of the Draft Program EIR, as well as Topical Response 3.1.6, Water Resources.

Response 19

The comment is noted.

COMMENTS 191 LOCAL AGENCY FORMATION COMMISSION, ORANGE COUNTY
Dated: August 12, 2004

Response 1

Your comment is noted. Please refer to Topical Response 3.1.2 regarding Governance. The intent for the area to ultimately annex to an existing city or incorporate is stated within the Project Description (page 3-36) of the Draft Program EIR.

Response 2

Your comment is noted. Please refer to the Draft Program EIR, Section 3.4.9, Governance, which acknowledges the role of LAFCO in annexation and incorporations. The section reads as follows:

“Since 1979, the County’s policy has been that new planned communities must be self-supporting with no subsidy by the County in terms of revenue or services. In general, all new planned communities must provide for all critical public facilities and services with no General Fund revenue from the County. In addition, it is the County’s adopted policy that public services to urban or urbanizing area are best provided by cities. Therefore, it is the County’s policy that the Project will be incorporated and/or annexed to a City. At this time, however, the Project is not within the Sphere of Influence of a city. Incorporation and/or annexation of the Project is within the jurisdiction of the Local Agency Formation Commission (LAFCO) which will determine the approach and timing of incorporation and/or annexation.”

Response 3

Please refer to Topical Response 3.1.2, as well as the responses to Comments 1 and 2, above. The project site is already within service areas for services and utilities. Since the project site is not within any city's sphere of influence, it would be speculative to evaluate annexation of part or the entire project to other jurisdictions. If the project were to be split between multiple jurisdictions without established spheres of influence or policy direction from LAFCO there would be numerous potential combinations of annexations possibilities, all of which are speculative.

Response 4

The Draft Program EIR does address the development impacts under the existing conditions, which does not identify annexation or incorporation. Therefore, the Draft Program EIR addresses the "No Annexation/No Incorporation Alternative" requested. At the time incorporation, annexation, or sphere of influence change is proposed, there would need to be an evaluation to determine if the physical impacts associated with the project would change. However, impacts such as cumulative impacts, growth inducing, and provision of public services would not be expected to change with annexation or incorporation and are fully addressed in the Draft Program EIR.

The fiscal impacts of providing public services are not a topical area addressed under CEQA, but is addressed in the Fiscal Impact Report currently being processed by the County. Similarly, local representation and accountability need not be addressed pursuant to CEQA.

Response 5

Please refer to Topical Response 3.1.2 regarding Governance. The acknowledgement that the project site will ultimately be incorporated and/or annexed to a City is clearly stated in the project description (Section 3.4.9 and excerpted above).

COMMENTS 192 LORI WHALEN

Dated: August 12, 2004

Response 1

The project is requesting a General Plan amendment and zone change. The development areas and type of development have been identified at the General Plan/Zone Change level of specificity. Please see Topical Response 3.1.1.2, pertaining to the use of a Program EIR and Topical Response 3.1.2 pertaining to open space.

Response 2

The Draft Program EIR has an extensive evaluation of the impacts on plants and wildlife (Section 4.9, Biological Resources). The biological resources mitigation program includes the Project Design Features of maintaining 15,121 acres in open space and the formulation and funding of an Adaptive Management Plan for the open space area. In addition, 40 specific mitigation measures are proposed. In light of the documentation, it is not clear from the comment how the Program EIR fails to assess the effects of the Ranch Plan project or formulate feasible mitigation measures.

The processing relationship of the NCCP/HCP and the SAMP/MSAA were discussed in the Program EIR in Sections 2, Introduction. Further information is provided in Topical Responses 3.1.1.1.

Response 3

Please see Topical Response 3.1.7, Transportation and Circulation, regarding the traffic modeling.

Response 4

Air quality is evaluated in Section 4.7, Air Quality and the technical report is contained in Appendix E of the Draft Program EIR. Construction air quality impacts and operation emissions, with the exception of sulfur oxides, are identified as significant after mitigation. The commenter has not identified any specific deficiencies or errors in the analysis; therefore, a specific response addressing the concern is not possible. Please also refer to Topical Response 3.1.8, Air Quality.

Response 5

The project has complied with the SB 610 (and SB 221 with respect to Development Agreement requirements), pertaining to the evaluation of water supply. The water supply assessment required pursuant to these bills was prepared by the Santa Margarita Water District and is provided as Technical Appendix K. Additionally, it is summarized in Section 4.15, Public Services and Facilities of the Draft Program EIR. The project does not propose the use of desalinization to provide sufficient water for the project. Water supply is further discussed in Topical Response 3.1.12, Public Services and Facilities.

Response 6

The commenter has not provided specific data on the inadequacies of the analysis in the Draft Program EIR. Wildland fires and hazardous materials are both evaluated in Section 4.14, Hazards. Appendix J-5 contains the Wildland Fire Management Plan proposed as part of the Adaptive Management Plan for the project. Wildland fires are also discussed in Topical Response 3.1.11. Appendix I contains the Phase I (hazardous material assessment) reports prepared for the Ranch Plan. As addressed on page 4.14-1 of the Draft Program EIR, a Phase I report typically includes:

- A review of available maps, aerial photographs and other documents to estimate historical site usage and development.
- A review of previous investigations
- A review of federal, state, county, and city documents concerning hazardous material storage, generation and disposal, active and inactive landfills, nearby environmental concerns, and associated permits.
- Interviews with individuals having knowledge of a site.
- A site reconnaissance to ascertain the current condition of a site.

Response 7

Impacts to watersheds are discussed in Section 4.5, Water Resources. Appendices C (contained in nine volumes) and G-8 and G-9 address water resource issues.

Your comment is noted and has been forwarded to the decision makers as part of the Final Program EIR. Topical Response 3.1.14 discusses when recirculation a Draft Program EIR is required.

COMMENTS 193 CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES
Dated: August 20, 2004

Response 1

Your comment is noted; however, specific information regarding which comments were not addressed has not been provided. The purpose of the NOP is to provide guidance to the lead agency on the issues to address in the Draft EIR. It appears after reviewing of the Department's NOP comment the Draft Program EIR does address all relevant comments provided in the NOP comment. It is important to remember that the document is being prepared as a Program EIR to support a General Plan Amendment and zone change. It is not addressing development proposals or grading plans. Please refer to Topical Response 3.1.1.2 regarding the use of a Program EIR. Additionally, it should be noted CEQA does not require the document to provide responses to the NOP.

Response 2

The Draft Program EIR addressed Hazards and Hazardous Materials (Section 4.14). Development at all phases of implementation would be required to comply with applicable rules and regulations pertaining to the handling, transporting, and disposal of hazardous materials. However, the County and project applicant did not identify an objective of the project associated with hazard materials. This in no way diminishes the County's and project applicant's commitment to comply with applicable requirements.

Response 3

The use of site-specific health risk assessment (HRA) will be considered on a case-by-case basis, if indicated after review of site specific data, proposed land use, and consultation with the appropriate regulatory oversight agency.

Response 4

URS based their recommendation on the results of sample data indicating that the low levels of arsenic detected were naturally occurring.

Response 5

Based on the results of Environmental Site Assessments conducted at the former mining operations in the project area, mining operations consisted of sand and gravel mining. Activities at these locations were limited to excavation, grading, crushing, sorting, and in one case, limited blasting. These operations did not involve the kind of activities associated with ore mining, milling, and smelting. Contamination issues related to sand and gravel mining operations in the project area have been addressed during the environmental site assessment process.

Response 6

The Draft Program EIR identifies that the Prima Deshecha Landfill is adjacent to the project site. It is not within the project limits. Page 4.14-17 identifies that the project has been designed to address impacts from the Prima Deshecha landfill by incorporating setbacks from fill activities to avoid any potential exposure to potential hazardous materials impacts that may be associated with landfill activities. Specifically, the open space that is provided along the western edge of proposed development in Planning Area 5, including the ridgeline, would serve as a buffer between the proposed development and the landfill. The maps shown on several exhibits (e.g., Exhibit 3-20) clearly show the relationship between the proposed project site and the Prima Deshecha Landfill. However, it should be clarified that the Prima Deshecha Landfill is not permitted for, and does not receive, hazardous materials. Project Design Feature 4.14-1 (page 4.14-18) formalizes the commitment to setbacks as a protective measure and would thereby be subject to enforcement as part of the mitigation monitoring program to be adopted as part of the project.

It should also be noted that there is no current landfill activity near the Ranch Plan project site property line; proposed landfill activities in this area are anticipated to occur several years in the future. Notwithstanding, the County has recorded a Covenant and Declaration of Restrictions (Document No. 20020931492, recorded October 25, 2002) that makes specific commitments toward protection of the adjacent property. These commitments include, for example, (1) maintaining a buffer zone and natural barrier on the County's landfill property in order to minimize visual, noise, dust, and other affects of landfill operations on the Ranch Plan project site; (2) implementation of a gas control and monitoring program on the County's property to prevent gas migration onto the Ranch Plan project site; and (3) installation of surface drainage and subdrainage systems on the County's property to ensure that surface and ground water from the landfill does not adversely impact the project site.

Response 7

Please refer to the response to Comment 3.

Response 8

Your comment is noted. At this time specific uses in the non-residential areas have not been identified. All applicable regulations would be complied with as a part of project implementation and operation.

Response 9

Your comment is noted. At this time specific uses in the non-residential areas have not been identified. All applicable regulations would be complied with as a part of project implementation and operation.

Response 10

Your comment is noted. At this time specific uses in the non-residential areas have not been identified. All applicable regulations would be complied with as a part of project implementation and operation.

Response 11

Your comment is noted. If there are any questions regarding clean up or treatment processes the Department will be contract prior to initiation of the process.

Response 12

Your comment is noted.

SECTION 4 CLARIFICATIONS AND REVISIONS

Revisions and clarifications have been made to the Draft Program EIR based on input received during the public review period and the preparation of responses to comments on the Draft Program EIR. This section of the Responses to Comments document also reflects changes that were identified in the Errata Sheet distributed on June 23, 2004, the latter that occurred within the public review period for the Draft Program EIR.

This Clarifications and Revisions section of the Responses to Comments document follows the organization of the Draft Program EIR.

This section does not identify modifications to the Program EIR associated with the Orange County Planning Commission's recommendation for approval of the B-10 Modified Alternative. Section 5 of the Responses to Comments document provides an analysis of the B-10 Modified Alternative. This alternative would not result in any new significant environmental impacts beyond those addressed in the Program EIR.

GENERAL NOTES

New Ortega Highway has been renamed Cow Camp Road. This Clarifications and Revisions section of the Responses to Comments document does not identify each location where there has been a name change because of the frequency of use in the Program EIR. The alignment for Cow Camp Road is the same as that shown for New Ortega Highway.

TABLE OF CONTENTS

The listing of tables in the Table of Contents inadvertently did not include Tables 4.9-24 through 4.9-45. The revised Table of Contents for Volume 1 is provided on the following pages. The underlined text represents the new text.

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1.0 EXECUTIVE SUMMARY

Text Changes

References to the early cancellation of portions of the Williamson Act contract have been deleted from the project description to reflect the applicant's withdrawal of this request. Modifications to the Final Program EIR are reflected with strikeout and underline text.

Page 1-2

The project involves multiple components, including: a General Plan amendment (GPA), zone change, ~~Williamson Act cancellation~~, and a Development Agreement. Related actions include a subsequent action to be taken by the Orange County Transportation Authority (OCTA) Master Plan of Arterial Highways (MPAH). Certain elements of the County of Orange General Plan would need to be amended in order to allow for implementation of the project, including the Land Use, Transportation, Resources, and Recreation elements. The Land Use Element Amendment would amend the land use designations for the project site from Open Space (5) to 1A-Rural Residential, 1B-Suburban Residential, Employment (3), Open Space (5), and Urban Activity Center (6). These amendments are further described in Section 3 of the Program EIR. A zone change is being requested to change the zoning for the project site from A-1 General Agricultural and S&G-Sand and Gravel Extraction (for portions of San Juan Creek and Trampas Canyon) to PC-Planned Community zoning district for the entire project site. A Development Agreement between Rancho Mission Viejo and the County of Orange is also intended to be processed concurrent with this project. ~~In addition, the Williamson Act contract covering certain lands within the project site would be partially cancelled as part of the project.~~

Page 1-7

- ~~The project proposes the partial cancellation of the Agricultural Preserve contract established pursuant to the Williamson Act, which would remove 1,856 acres from the contract. Currently, 9,840 acres will be removed from the preserve between December 31, 2005 and December 31, 2008, through the non-renewal process regardless of this project. The cancellation of the contract would hasten the removal of a portion of the land from agricultural use.~~

Page 1-7

Page 1-7, second bullet point, has been revised as follows:

- The project site supports eight important habitat for seven endangered and/or threatened species; provides habitat for a rare migrant species; and portions of the site has have been designated as critical habitat for these resources... (June 23, 2004 Errata Sheet)

Page 1-8

The fourth bullet point has been revised to reflect the withdrawal of the request abandonment of a segment of Ortega Highway as a State Route:

Ortega Highway is a state route; therefore, the County and OCTA do not have the authority to restrict or modify access to the Highway. The traffic analysis assumes Ortega Highway

would remain in place. However, substantially fewer trips would occur on the existing roadway because of the improved design speeds on the proposed ~~New Ortega Highway~~ Cow Camp Road. There is a concern that the configuration of the existing Ortega Highway and the addition of ~~New Ortega Highway~~ Cow Camp Road may result in operational issues due to high left-turn volumes onto Antonio Parkway from eastbound Ortega Highway and from westbound ~~New Ortega Highway~~ Cow Camp Road. Additionally, the applicant is requesting that existing Ortega Highway from Antonio Parkway, east to where New Ortega Highway would rejoin the existing Ortega Highway, be abandoned as a state route, and New Ortega Highway and the connecting segment of Antonio Parkway be designated as SR-74. This would require action by Caltrans and it is not known if this request would be granted. Should the abandonment be granted, that segment of Ortega Highway would serve strictly as a local/recreational access road. This issue is addressed in Section 4.6, Transportation and Circulation.

Table 1.7-1

Modifications to the Summary Table have been made to reflect changes to the project and changes from the responses to comments. Most of these changes were provided in the June 23, 2004 Errata Sheet and are restated in this Summary Table to provide these changes in one location.

**TABLE 1.7-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM**

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>Land Use and Planning (Section 4.1)</p> <p>There is the potential for residential uses in Planning Area 8 to experience disturbance from helicopter flights and artillery training exercises, especially those occurring during night hours, potentially resulting in incompatible land uses. (Impact 4.1-1)</p> <p>The Ranch Plan would provide 14,000 dwelling units, or approximately 68 percent of the development assumed for the area in local and regional planning documents. This shortfall in the amount of housing provided may contribute to a long-term regional housing deficit. Although the project would not meet fully the housing goal, it would substantially advance the attainment of this goal. (Impact 4.1-2)</p> <p><u>No significant cumulative land use impacts were identified.</u> (June 23, 2004 Errata Sheet)</p>	<p>A buyer notification program is required for all residential structures within Planning Area 8 to inform the prospective purchaser, lessee or tenant that the property within Planning Area 8 may be subject to overflight and sound of military operations of MCB-Camp Pendleton. (MM 4.1-1)</p> <p>At the time of Master Area Plan approval for Planning Area 8, the Planning Director shall evaluate the most current RCUZ for MCB Camp Pendleton to ensure that noise sensitive land uses are not constructed in areas that exceed state noise standards. (MM 4.1-2)</p> <p>The proposed project includes approximately 15,121 acres of open space. The landowner will enter into a two-part agreement with the County regarding the open space. The first part of the agreement shall address the approximately 11,455 acres of open space not located within a Development Sensitive Area (DSA) and the second part will address 3,666 acres of open space DSAs. (PDF 4.1-1)</p> <p>Master Area Plans and Subarea Plans shall be processed for all Planning Areas demonstrating the project's compliance with the zoning regulations, as well as other applicable codes and requirements. (PDF 4.1-2)</p> <p>The project proposes a mix of uses and housing densities, including estates, single-family conventional housing, multi-family units, senior housing, and apartments that would provide housing opportunities for a range of income levels. Approximately 6,000 senior housing dwelling units will be provided. (PDF 4.1-3)</p> <p>In conjunction with the processing of the site development permit for any golf course, the applicant shall submit an Integrated Golf Course Management Plan (IGCMP) including turf grass management. (PDF 4.1-4)</p> <p>A buyer notification program is required for all uses within Planning Area 5 to inform the prospective purchaser, lessee, or tenant that the property within Planning Area 5 is located immediately adjacent to Prima Deshecha Landfill. (MM 4.1-3)</p>	<p>Less than Significant (Impact 4.1-1)</p> <p>Significant Unavoidable Adverse Impact (Impact 4.1-2)</p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>Agricultural Resources (Section 4.2)</p> <p>The project would result in the development of urban uses on lands designated as Important Farmland. The project would result in the removal of 266 acres of Prime Farmland, 32.9 acres of Farmland of Statewide Importance, and 528.3 acres of Unique Farmland. In the aggregate, development of the project would result in the loss of 827.2 acres of Important Farmland. (Impact 4.2-1)</p> <p><u>The proposed Ranch Plan project, as well as the following projects in the cumulative study area—Alton Parkway, SOCTIP, Ladera Ranch, Great Park, Northern Sphere, Spectrum 8, and Robinson Ranch—would contribute to the regional loss of Important Farmland.</u> (June 23, 2004 Errata Sheet)</p> <p>The project would result in the early removal of 1,856 acres from the existing Williamson Act contract and the associated Agricultural Preserve. (Impact 4.2-2)</p>	<p>Ongoing grazing will be conducted in compliance with the Grazing Management Plan. (PDF 4.2-1)</p> <p>The location and amounts of the agricultural resources shall be identified as part of the Master Area Plan for Planning Areas 2, 7, and 10. (PDF 4.2-2)</p> <p>The project provides for the continuation of agricultural and ranching uses as an interim use until the time of project implementation. (PDF 4.2-3)</p> <p>The project applicant will be required to comply with the conditions/requirements set forth in the Government Code Sections 51282 to 51287 and County EMA Policy No. 2.3.104 associated with Agricultural Preserve cancellation. (SC 4.2-1)</p> <p>Prior to planting of the planned orchards in Planning Area 7 a qualified biologist shall survey the site for listed habitat and species to avoid potential environmental impacts. Should any listed species be identified, the location of the planned orchards will be modified to avoid the resources or a mitigation plan consistent with the applicable requirements outlined in Section 4.9, Biological Resources shall be developed and implemented. (MM 4.2-1)</p>	<p>Significant, unavoidable impact (Impact 4.2-1)</p> <p><u>Significant unavoidable cumulative impact.</u> (June 23, 2004 Errata Sheet)</p> <p>Significant, unavoidable impact (Impact 4.2-2)</p>
<p>Population and Housing (Section 4.3)</p> <p>No significant impacts were identified associated with population and housing.</p> <p><u>The project would not contribute to significant cumulative population, employment, or housing impacts.</u> (June 23, 2004 Errata Sheet)</p>	<p>The Ranch Plan would increase the overall jobs/housing balance for southern Orange County. (PDF 4.3-1)</p> <p>Rancho Mission Viejo would relocate displaced residents prior to approval of demolition permits. (PDF 4.3-2)</p> <p>In conjunction with approval of an Area Plan for those portions of Planning Areas 1 and 3 where existing residential units would be displaced, the applicant shall provide evidence of relocation of any remaining residents. (MM 4.3-1)</p>	<p>Less than significant.</p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>Geology and Soils (Section 4.4)</p> <p>Development on the project site would be subject to ground shaking associated with seismic activity. (Impact 4.4-1)</p> <p>The project has the potential to expose persons and structures to on-site landslides. (Impact 4.4-2)</p> <p>Planning areas contain compressible and expansive soils. (Impact 4.4-3)</p> <p>Grading activities would expose soils to erosion. (Impact 4.4-4)</p> <p>Several of the planning areas proposed for development contain areas of shallow groundwater and development would be susceptible to liquefaction. (Impact 4.4-5)</p> <p><u>No significant cumulative geotechnical and soils impacts were identified.</u> (June 23, 2004 Errata Sheet)</p>	<p>The earth-fill dams located within the boundaries of the development areas that impound the existing on-site reservoirs shall be removed concurrent with grading. (PDF 4.4-1)</p> <p>Prior to the issuance of a grading permit, the applicant shall submit a geotechnical report to the Manager of Subdivision and Grading, for approval. (SC 4.4-1)</p> <p>Prior to the issuance of any grading permits, the Manager of Subdivision and Grading shall review the grading plan for conformance with the grading shown on the approved tentative map. (SC 4.4-2)</p> <p>Prior to the recordation of a subdivision map or prior to the issuance of any grading permit, whichever comes first, , the applicant shall record a letter of consent from the affected property owners permitting off-site grading, cross lot drainage, drainage diversions and/or unnatural concentrations. (SC 4.4-3)</p> <p>Prior to issuance of grading permits, the Manager of Subdivision and Grading shall determine that the proposed grading is consistent with the grading depicted within the approved planning application. (County of Orange Standard Condition of Approval, G09) (SC 4.4-4)</p> <p>The proposed development shall be designed in compliance with the Uniform Building Code (UBC), accepted industry standards, and the County's earthquake safety Municipal Code requirements. (SC 4.4-5)</p> <p>Prior to the approval of the first tentative tract map in each Planning Area, the applicant shall submit a geotechnical report to the Deputy Director, Planning and Development Services, for approval. The report shall meet the requirements outlined in the County of Orange Grading Code and Manual. (MM 4.4-1)</p> <p>Prior to the approval of the first tentative tract map <u>grading</u> for Planning Area 9, the applicant shall demonstrate that residential development shall be sited to avoid mapped landslides. (MM 4.4-2)</p>	<p>All geotechnical impacts can be mitigated to a level of less than significant.</p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>Water Resources (Section 4.5)</p> <p>Development of the project will result in increases in the rate and amount of surface flow runoff within certain portions of the developed watershed(s). However, these increases are relatively small and will be fully mitigated through the use of flood control detention basins. (Impact 4.5-1)</p> <p>Development of the project may result in reduced coarse sediment yields within certain sub-basins, especially during construction periods. However, these decreases are relatively minor when comparing existing and post-construction conditions. (Impact 4.5-2)</p> <p>In the absence of mitigation, development of the project would alter certain in-channel sediment transport processes, potentially affecting streambed/stream bank stability. (Impact 4.5-3)</p> <p>In the absence of mitigation, development of the project would have significant adverse impacts on storm water quality vis-à-vis increases in certain pollutants of concern, impacts to groundwater quality and increases in stream temperature. (Impact 4.5-4)</p> <p>Implementation of the project will result in significant and unavoidable impacts in the amount of pathogens entering into stormwater runoff. (Impact 4.5-5)</p>	<p>The <i>Watershed Planning Principles</i>, developed as part of the NCCP/HCP and SAMP/MSAA, were utilized as a framework to minimize project impacts. (PDF 4.5-1)</p> <p>Sufficient storage area is provided for runoff volumes to mitigate increases in peak discharges and to offset impacts of existing development. (PDF 4.5-2)</p> <p>A conceptual Water Quality Management Plan (the <i>Draft WQMP</i>) has been developed for the proposed project in compliance with the County of Orange DAMP. (PDF 4.5-3)</p> <p>Water captured in the water quality control system and in detention facilities, will be used, where possible, as a supplemental source of irrigation water. (PDF 4.5-4)</p> <p>The following drainage studies shall be submitted to and approved by the Manager, Subdivision and Grading: a drainage study of the project, a study evidencing that drainage patterns will not overload existing storm drains, and studies indicating how grading and drainage systems will allow building pads to be safe from inundation from rainfall runoff which may be expected from all storms up to and including the theoretical 100-year flood. (SC 4.5-1)</p> <p>The project applicant shall design provisions for surface drainage; design all necessary storm drain facilities extending to a satisfactory point of disposal for the proper control and disposal of storm runoff; and dedicate the associated easements to the County of Orange, if determined necessary. These improvements shall be constructed in a manner meeting the approval of the Manager, Construction. (SC 4.5-2)</p> <p>The applicant shall design provisions for surface drainage, design all necessary storm drain facilities, and dedicate the associated easements to the County of Orange. These improvements shall be constructed in a manner meeting the approval of the Manager, Construction. (SC 4.5-3)</p> <p>The subdivider shall participate in the applicable Master Plan of Drainage including payment of fees and the construction of the necessary facilities. (SC 4.5-4)</p>	<p>All impacts are reduced to a level of less than significant, except for pathogens.</p> <p><u>With implementation of flow control programs (i.e., control of peak flows and runoff volumes), cumulative hydrology impacts to watersheds would be less than significant.</u></p> <p><u>Cumulative increases in pathogen levels (i.e., bacteria counts) associated with cumulative development could significantly impact receiving creeks or the ocean.</u></p> <p><u>Cumulative development could increase the temperature of runoff and dry-weather flows in downstream waters, as well as increase trace metal loads. All projects within the watersheds are expected to be required to implement treatment and mitigation programs</u></p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>In the absence of mitigation, implementation of the project would adversely impact water balance (i.e., inflows –versus- outflows) within the affected watershed(s) and sub-basins. (Impact 4.5-6)</p>	<p>The subdivider shall not grant any easements over any property subject to a requirement of dedication or irrevocable offer to the County of Orange or the Orange County Flood Control District, unless such easements are expressly made subordinate to the easements to be offered for dedication to the County. Prior to granting any of said easements, a copy of the proposed easement shall be submitted for review and approval. (SC 4.5-5)</p> <p>The applicant shall improve Regional Facilities as deemed necessary and appropriate by the Orange County Flood Control District. (SC 4.5-6)</p> <p>The applicant shall submit a Runoff Management Plan for review and approval. (SC 4.5-7)</p> <p>A WQMP identifying BMPs to control pollutant runoff shall be submitted for review and approval. The WQMP shall identify structural and non-structural measures specified in the current DAMP. (SC 4.5-8)</p> <p>Compliance with the WQMP requirements shall be demonstrated, including implementation, construction, and installation of all structural BMPs, compliance with all non-structural BMPs, submission of an (O&M) Plan for all structural BMPs for review and approval, availability of copies of the project's approved WQMP for incoming occupants; agreement to pay for a Special Investigation from the County of Orange 12 months after the issuance of a Certificate of Use and Occupancy for the project to verify compliance with the approved WQMP and O&M Plan; and agreement to and recordation of one of the following: CC&R's; a water quality implementation agreement; or the final approved WQMP and O&M Plan. (SC 4.5-9)</p> <p>Prior to the issuance of any grading or building permits, the applicant shall demonstrate compliance under California's General Permit for Stormwater Discharges Associated with Construction Activity by providing a copy of the NOI and a copy of the subsequent notification of the issuance of a WDID Number or other proof of filing. Projects subject to this requirement shall prepare and implement a SWPPP. (SC 4.5-10)</p> <p>Prior to the issuance of any grading or building permit, the applicant shall submit an ESCP to demonstrate compliance with local and state water quality regulations for grading and construction activities. The ESCP shall identify proper coverage, storage, and security of construction and grading materials and waste to prevent transport into local waters. (SC 4.5-11)</p> <p><u>Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only) or the issuance of any grading or building permits, whichever occurs first, within the FP-2 Zoning District, the applicant shall submit all of the necessary documents to</u></p>	<p><u>that would reduce pollutants of concern (except pathogens) to less than significant levels in downstream discharge. (June 23, 2004 Errata Sheet)</u></p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
	<p><u>the Federal Emergency Management Agency (FEMA) to receive a Conditional Letter of Map Revision (CLOMR) of the Flood Insurance Rate Map (FIRM). Concurrently, the applicant shall submit to the Manager, Subdivision and Grading, three (3) sets of the calculations and plans showing the method of satisfying FEMA and FP-2 Zoning District Regulations, all in a manner meeting the approval of the Manager, Subdivision and Grading. (SC 4.5-12)</u></p> <p>A detailed Runoff Management Plan ("ROMP") shall be prepared that covers the entire Ranch within the regional watersheds and sub-watersheds and is consistent with applicable Orange County criteria and OCHM and FCDM criteria. The ROMP shall separately cover the San Juan Creek watershed to the downstream boundary of the Ranch or the San Mateo Creek watershed to the County border and be independent from the preliminary analyses submitted as part of the GPA/ZC submittals. The ROMP shall verify that development of the Ranch Plan will not produce adverse hydraulic impacts during flood events, provide analysis of sufficient detail to evaluate and establish the size and alignment of flood control and storm drain facilities, and site selection choices for the retarding basins, water quality detention basins, & other mitigation measures. (MM 4.5-1)</p> <p>A Master Plan of Drainage ("MPD") shall be prepared showing all flood control, storm drain, and water quality features within the affected watershed(s). (MM 4.5-2)</p> <p>A Master Area Plan WQMP shall be prepared consistent with the terms & content of the Draft WQMP & provides detail for application within the individual Master Area Plans, including BMPs, facility sizing & location, and BMP operation and maintenance. (MM 4.5-3)</p> <p>A Sub-Area Plan WQMP shall be prepared consistent with the terms and content of the Draft WQMP and that provides detail for application within the individual Sub-Area Plans, including BMPs, facility sizing and location, and BMP operation and maintenance. (MM 4.5-4)</p> <p>Flood control detention facilities shall be constructed to provide hydrologic mitigation for increases in peak discharges. The detention basins will be designed as "off-line" from most of the major stream channels. Maintenance standards will be established for maximum depth of accumulated sediment in the forebay basins prior to removal. The outlet structure will be configured to control a wide range of flows, providing flow management from the 2- to 100-year flow event. It will also include an overflow spillway and a subdrain to ensure complete drainage within several days following a flow event. (MM 4.5-5)</p> <p>All developments will be designed in order to achieve flow duration matching, address the water balance, and provide for water quality treatment through a combined flow and water</p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
	<p>quality control system (termed combined control system). (MM 4.5-6) A stream stabilization program shall be prepared that will be implemented by the HOA or other responsible entity to mitigate effects of local erosion associated with drainage system outlets from the development or downstream of detention basins. (MM 4.5-7)</p> <p>A stream monitoring program shall be developed prior to the construction within the watershed which will include reporting requirements in order to observe changes in the natural alluvial stream system. The minimum program will include and address Stream Walks, Major Stream Cross Sections Monitoring, periodic aerial photography, evaluation of changes downstream of ponds and basins, and supplemental assessments. (MM 4.5-8)</p>	
<p>Transportation and Circulation (Section 4.6)</p> <p>Buildout of the Ranch Plan project under the Existing Conditions + Project Buildout traffic scenario would result in significant project-related impacts to study area intersections and freeway ramps. (Impact 4.6-1)</p> <p>Buildout of the Ranch Plan project under the Year 2025 + Project Buildout traffic scenario would result in significant cumulative impacts to study area intersections, freeway ramps, and freeway mainline segments. (Impact 4.6-2)</p> <p>The Short-Range (Year 2010) + Project traffic scenario would result in significant project-related impacts to study area intersections and freeway ramps. (Impact 4.6-3)</p> <p><u>Under the Year 2025 + Project Buildout analysis, all intersections with the exception of three (Marguerite Parkway at Crown Valley Parkway, Camino Capistrano at Del Obispo Street, and I-5 southbound ramp at Avenida Pico) would operate at acceptable</u></p>	<p>Antonio Parkway at New-Ortega-Highway <u>Cow Camp Road</u> is a new intersection that shall be designed to have adequate capacity with and without the proposed SR-241 extension. (PDF 4.6-1)</p> <p>A Transportation Demand Management (TDM) program shall be prepared. (SC 4.6-1)</p> <p>The final map shall note the release and relinquish vehicular access rights to all arterial highways to the County of Orange. (SC 4.6-2)</p> <p>The subdivision map shall note that private streets shall be owned, operated and maintained by the developer, successors, or assigns. (SC 4.6-3)</p> <p>The subdivider shall design and construct improvements as noted in the condition. (SC 4.6-4)</p> <p>The applicant shall pay fees for the Major Thoroughfare and Bridge Fee Program for the Foothill/Eastern Transportation Corridor. (SC 4.6-5)</p> <p>Adequate sight distance shall be provided at street intersections. (SC 4.6-6)</p> <p>The subdivider shall install all underground traffic signal conduits and appurtenances for traffic signal construction and interconnection with adjacent intersections. (SC 4.6-7)</p> <p>The subdivider shall provide plans and specifications for and construct internal streets common private drive system and site entrances. (SC 4.6-8)</p>	<p>Project mitigation is based on the Year 2025 + Project Buildout traffic scenario.</p> <p>Impacts 4.6-2 and 4.6-3 would remain significant after mitigation.</p> <p><u>Where improvements are located outside the County's jurisdiction, the County will endeavor to enter into agreements with the affected jurisdiction regarding the</u></p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<u>levels of service.</u> (June 23, 2004 Errata Sheet)	<p>The subdivider shall dedicate a signal maintenance easement to the County at the project site access. (SC 4.6-9)</p> <p>The subdivider shall design, construct, and/or provide a cash deposit for traffic signals. (SC 4.6-10)</p> <p>The subdivision map shall identify a two way reciprocal access and parking easement to all parcels. SC 4.6-11)</p> <p>The applicant shall submit a traffic study of the development. (SC 4.6-12)</p> <p><u>Prior to the approval of any subdivision map (except for financing purposes) for the Ranch Plan development within 1,000 feet of the center line of the conceptual Crown Valley Parkway alignment as shown on the current (as of the date of the Ranch Plan GPA/ZC approval) Master Plan of Arterial Highway (MPAH), between Antonio Parkway and the Foothill Transportation Corridor (FTC), the Director, Resource & Development Management Development (RDMD), County of Orange in consultation with the Manager Programming/Planning of Orange County Transportation Authority (OCTA) shall make a finding that said subdivision map does not preclude implementation of CVP as an MPAH facility. (SC 4.6-13)</u></p> <p><u>Prior to recordation of the first tract map (except for financing purposes) for Planning Areas 2, 3, or 5 in the Ranch Plan development, the applicant shall enter into an agreement with the Foothill/Eastern Transportation Corridor Agencies to address right-of-way, cost, phasing, implementation, and roles and responsibilities relating to all roadway connections to and/or crossings of the SR-241 extension within the Ranch Plan and/or funding/phasing/construction of other roadways (i.e., F Street) that are needed in the event the extension of SR-241 does not occur. The agreement between the applicant and the TCA shall also be reviewed and approved by the Director/RDMD, County of Orange, for consistency with SCRIP/Development Agreement phasing/milestone objectives. (SC 4.6-14)</u></p> <p>Table 4.6-26 and Table 4.6-27 identify the transportation improvement program proposed as mitigation for the Ranch Plan project for year 2025 and year 2010, respectively. (MM 4.6-1)</p> <p>Prior to the approval of each Master Area Plan, a traffic analysis which verifies ongoing compliance with <u>supplements</u> The Ranch Plan EIR Traffic Report shall be prepared, including:</p>	<p><u>construction and funding of improvements. However, if such agreements cannot be met, the impacts are considered significant and unavoidable.</u> (June 23, 2004 Errata Sheet)</p>



TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>The project's contribution to impacts on freeway mainline segments is significant.</u> (June 23, 2004 Errata Sheet)</p>	<p>a) An evaluation of how any proposed refinements to circulation system and/or milestones remain in <u>substantial</u> compliance with appropriate Development Agreement obligations and Program EIR mitigation measures.</p> <p>b) Average Daily Trips generated by uses proposed within the planning area, as distributed onto the surrounding circulation system (both within the Ranch Plan PC Area, and in the surrounding vicinity) including the peak hour characteristics of those trips. (MM 4.6-2)</p> <p>If the responsible agencies establish a cumulative mitigation program for I-5 mainline improvements, the project applicant shall participate on a fair share basis. (MM 4.6-3)</p>	<p><u>The project's contribution to impacts on freeway mainline segments that are forecast to operate deficiently is a significant unavoidable impact.</u> (June 23, 2004 Errata Sheet)</p>
<p>Air Quality (4.7)</p> <p>Construction-related air quality emissions would result in significant impacts on a daily and quarterly basis. (Impact 4.7-1)</p> <p>On a regional basis, operational air quality emissions would result in significant impacts, with the exception of sulfur oxides. (Impact 4.7-2)</p> <p>Local operational impacts would be less than significant. (Impact 4.7-3)</p> <p>Project operations are not expected to expose a substantial number of people to objectionable odors. (Impact 4.7-4)</p> <p>The Ranch Plan project would not conflict with or obstruct implementation of the Air Quality Management Plan. (Impact 4.7-5)</p>	<p>The project has been designed to minimize the need for external vehicular trips through the provision of residential, commercial, office, and institutional uses within the boundaries of the project site, thereby reducing vehicular air emissions. (PDF 4.7-1)</p> <p>All construction contractors shall comply with South Coast Air Quality Management District regulations, including Rule 403 and Rule 402. (SC 4.7-1)</p> <p>The applicant shall comply with measures to reduce NO_x and ROC from heavy equipment. (SC 4.7-2)</p> <p>All construction bid packages include a separate "Diesel Fuel Reduction Plan" identifying actions to reduce diesel fuel emissions during construction activities. (MM 4.7-1)</p> <p><u>With the submittal of each Master Area Plan, the project applicant shall identify locations where alternative fueling facilities could be sited.</u> (MM 4.7-2)</p> <p><u>With the submittal of each Master Area Plan, the project applicant shall identify how shade trees can be incorporated into parking lot designs (to reduce evaporative emissions from parked vehicles); where shade trees can be sited (to reduce summer cooling needs); and how shade trees would be incorporated into bicycle and pedestrian path design. Prior to the</u></p>	<p>Impacts 4.7-1 and 4.7-2 would remain significant after mitigation. Impacts 4.7-3 and 4.7-4 would be reduced to a level of less than significant with mitigation.</p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<u>The project's contribution to short-term construction-related emissions of No_x, CO, VOC, and PM₁₀ is significant. The project's contribution to long-term operational emissions of CO, VOC, No_x, and PM₁₀ is significant. (June 23, 2004 Errata Sheet)</u>	<u>issuance of building permits, the applicant shall identify how the use of light-colored roof materials and paint to reflect heat to the extent feasible has been incorporated into the design plans. (MM 4.7-3)</u>	<u>Cumulatively significant, unavoidable impacts. (June 23, 2004 Errata Sheet)</u>
<p>Noise (Section 4.8)</p> <p>Construction noise represents a short-term effect on ambient noise levels. Construction conducted consistent with the County of Orange Noise Ordinance would not result in any significant short-term noise impacts. (Impact 4.8-1)</p> <p>Project implementation would not result in any significant project-specific traffic noise impacts on surrounding land uses (Impact 4.8-2)</p> <p>The project's contribution to cumulative noise would result in significant traffic noise impacts. (Impact 4.8-3)</p> <p>Prior to mitigation, on-site activities could result in significant noise impacts thereby impacting sensitive receptors. (Impact 4.8-4)</p>	<p>During construction, the project shall comply with the County of Orange Noise Ordinance. (SC 4.8-1)</p> <p>Construction vehicles shall be equipped with mufflers; all operations shall comply with Orange County Codified Ordinance Division 6; stockpiling and/or vehicle staging areas shall be located away from dwellings. (SC 4.8-2)</p> <p>All residential lots and dwellings shall be sound attenuated against present and projected noise. (SC 4.8-3)</p> <p>Field testing shall be performed in accordance with Title 24 Regulations. (SC 4.8-4)</p> <p>Non-residential structures shall be sound attenuated against present and projected noise. (SC 4.8-5)</p> <p>An acoustical analysis report and plans shall be prepared demonstrating compliance with Orange County Codified Ordinance, Division 6 (Noise Control). (SC 4.8-6)</p> <p>The developer shall produce evidence that the Department of Real Estate has been notified that the project area is adjacent to a regional transportation corridor. (SC 4.8-7)</p> <p>For Camino Capistrano, north of Junipero Serra, a detailed acoustical study shall be performed. Noise barriers shall be required meeting County's noise standards. (MM 4.8-1)</p>	<p>All impacts are mitigated to a level of less than significant, <u>with the exception of the following: cumulative noise impacts require the construction of a sound wall on private residential property on Camino Capistrano north of Junipero Serra. Because implementation of this mitigation may not be feasible, the impact is considered significant and unavoidable. (June 23, 2004 Errata Sheet)</u></p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>Biological Resources (Section 4.9)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Formulate and fund a Comprehensive Long-Term AMP. (PDF 4.9-2)</p> <p><u>The project applicant shall obtain Section 404, 1600, and federal and state Endangered Species Act permits, as applicable. (MM 4.9-42)</u></p>	<p>All impacts are mitigated to a level of less than significant with the exception of impacts to two slope wetlands located in the Chiquita sub-basin, impacts to habitat linkage/wildlife movement corridor K, and fecal coliform pathogen impacts.</p>
<p><u>Thread-leaved Brodiaea</u></p> <p>Implementation of the proposed project may result in impacts to thread-leaved brodiaea (Impacts 4.9-1, -9, -10, -18, -21, and -66)</p>	<p>Prior to issuance of a grading permit for PA 2, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that two of the four small thread-leaved brodiaea locations are protected. (MM 4.9-1)</p> <p>Prior to issuance of a grading permit for Planning Area 7, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all three locations of thread-leaved brodiaea that contribute to protection of a major population in the Cristianitos sub-basin are protected. (MM 4.9-8)</p> <p>Prior to issuance of a grading permit for Planning Area 7, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all three locations of thread-leaved brodiaea that contribute to protection of an important population in key locations in the Cristianitos sub-basin are protected. (MM 4.9-9)</p> <p>Prior to issuance of a grading permit for Planning Area 7, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all three locations of thread-leaved brodiaea that are the major population in a key location in the Lower Gabino subunit and Cristianitos sub-basin are protected. (MM 4.9-17)</p> <p>Prior to issuance of a grading permit for Planning Area 8, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the four known locations of thread-leaved brodiaea that constitute an important population in the Talega sub-basin are protected. (MM 4.9-20)</p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>Southern Tarplant</u></p> <p>Implementation of the proposed project may result in impacts to southern tarplant (Impacts 4.9-2 and -85)</p>	<p>Prior to issuance of a grading permit for Planning Area 2, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the key location and major population of southern tarplant in the Chiquita sub-basin have been substantially avoided. (MM 4.9-2)</p>	
<p><u>Coulter's Saltbush</u></p> <p>Implementation of the proposed project may result in impacts to Coulter's saltbush (Impacts 4.9-3, -12, 15, -57, and -84)</p>	<p>Prior to issuance of a grading permit for Planning Area 2, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the key location and major population of Coulter's saltbush in the Chiquita sub-basin have been substantially avoided. (MM 4.9-3)</p> <p>Prior to issuance of a grading permit for Planning Area 7, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the important population of Coulter's saltbush in the Cristianitos sub-basin is protected. (MM 4.9-11)</p> <p>Prior to issuance of a grading permit for PA 9, the project applicant shall demonstrate to the satisfaction of the Dir. of Planning Services Department or designee that the important population of Coulter's saltbush in the Upper Gabino subunit is protected. (MM 4.9-14)</p> <p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p>	
<p><u>Habitat Linkages and Wildlife Movement Corridors</u></p> <p>Construction of Cristianitos Road in the Gobernadora sub-basin may result in impacts to wildlife movement and/or habitat linkage. (Impacts 4.9-4, -8, -24, -28, -58, -59, -60, and -95)</p>	<p>Prior to issuance of a grading permit for Planning Area 7, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that a minimum of a 200-foot setback (average 500 feet) from Cristianitos Creek has been incorporated into the project design. (MM 4.9-7)</p> <p>Prior to issuance of a grading permit for construction of Cristianitos Road and New Ortega Highway <u>Cow Camp Road</u>, the applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department/designee that the design for Cristianitos Road and New Ortega Highway <u>Cow Camp Road</u> includes features to facilitate wildlife movement. If required for public health and safety, all lighting on the bridge shall be shielded to prevent spill-over effects. (MM 4.9-22)</p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>Southwestern Pond Turtle</u></p> <p>Implementation of the proposed project may result in impacts to the southwestern pond turtle. (Impacts 4.9-5, -13, -49, and -74)</p>	<p>Prior to issuance of a grading permit for construction of Cristianitos Road, the applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department/designee that the design for Cristianitos Road includes features to facilitate wildlife movement. If required for public health and safety, all lighting on the road above the culvert shall be shielded to prevent spill-over effects. (MM 4.9-23)</p> <p>Prior to design of the proposed ground tanks, project applicant shall coordinate with SMWD to review potential alternative locations for these tanks that would avoid impacts to linkages G and K while still meeting SMWD siting criteria for ground tanks. (MM 4.9-24)</p> <p>In conjunction with construction of these tanks, SMWD shall employ measures to reduce construction impacts, including fencing sensitive habitats and implementing of erosion control. Post construction all temporary disturbance areas shall be restored with native species. All manufactured slopes associated with the ground tanks shall be restored with native species. Lighting shall be restricted to necessary safety lighting and shall be shielded to reduce spill-over into native habitats. (MM 4.9-25)</p> <p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Prior to issuance of a grading permit for Planning Area 7 6, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the southwestern pond turtle breeding and estivation habitat associated with the stockpond in the Cristianitos sub-basin have been substantially avoided. (MM 4.9-4)</p> <p>Prior to issuance of a grading permit for PA 9, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the southwestern pond turtle breeding and estivation habitat associated with Jerome's Lake in the Gabino sub-basin have been substantially avoided. (MM 4.9-12)</p> <p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>Western Spadefoot Toad</u></p> <p>Implementation of the proposed project may result in impacts the western spadefoot toad. (Impacts 4.9-6 and -73)</p> <p><u>Alkali Wetlands</u></p> <p>Implementation of the proposed project may result in impacts to alkali wetlands. (Impacts 4.9-7, -41, and -42)</p> <p><u>Many-stemmed Dudleya</u></p> <p>Implementation of the proposed project may result in impacts to many-stemmed dudleya. (Impacts 4.9-11, -14, -19, -37, and -86)</p> <p>Implementation of the proposed project may result in impacts to three out of eight known locations of many-stemmed dudleya in the Talega sub-basin. (Impact 4.9-22)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Prior to issuance of a grading permit for Planning Area 76, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the western spadefoot toad breeding and estivation habitat associated with the stockpond in the Cristianitos sub-basin have been substantially avoided. (MM 4.9-5)</p> <p>Prior to issuance of a grading permit for Planning Area 76, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the alkali wetlands in the Cristianitos sub-basin have been substantially avoided. (MM 4.9-6)</p> <p>Prior to issuance of a grading permit for Planning Area 7, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the major population of many-stemmed dudleya in the Cristianitos sub-basin is protected. (MM 4.9-10)</p> <p>Prior to issuance of a grading permit for Planning Area 9, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the six known discrete locations of many-stemmed dudleya that are part of the major population in a key location in the Upper Gabino subunit are protected. (MM 4.9-13)</p> <p>Prior to issuance of a grading permit for Planning Area 7, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the two known locations of many-stemmed dudleya in the La Paz sub-basin are protected. (MM 4.9-18)</p> <p>Prior to issuance of a grading permit for Planning Area 8, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that eight known locations of many-stemmed dudleya in the Talega sub-basin are protected. (MM 4.9-21)</p> <p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>Coastal California Gnatcatcher</u></p> <p>Implementation of the proposed project may result in impacts to the California gnatcatcher. (Impacts 4.9-16, -26, and -70)</p>	<p><u>Prior to the issuance of a grading permit for Planning Area 6, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the 12 gnatcatcher locations and adequate habitat are protected. (MM 4.9-41)</u></p> <p>Prior to issuance of a grading permit for Planning Area 7, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all five locations of California gnatcatcher locations in the Lower Gabino subunit are protected. (MM 4.9-15)</p> <p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p>	
<p><u>Native Grasslands</u></p> <p>Implementation of the proposed project may result in impacts to native grasslands. (Impacts 4.9-17 and -25)</p>	<p>Prior to issuance of a grading permit for Planning Area 7, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to native grasslands in the Lower Gabino subunit are substantially avoided. Additionally, applicant shall further demonstrate to the County's Director of Planning Services Department compliance with the Habitat Restoration Program for native grasslands. (MM 4.9-16)</p> <p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p>	
<p><u>Arroyo Toad</u></p> <p>Implementation of the proposed project may result in impacts to arroyo toad populations in Lower Gabino Creek. (Impact 4.9-20)</p> <p>Implementation of the proposed project may result in impacts to the arroyo toad. (Impacts 4.9-43 and -69)</p>	<p>Prior to issuance of a grading permit for Planning Area 8, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the facilities specified in the Water Quality Management Plan to address pollutants of concern and conditions of concern are shown on the project plans. (MM 4.9-19)</p> <p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p>	

SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>Slope Wetlands</u></p> <p>The proposed project would result in impacts to two slope wetlands located in the Chiquita Sub-basin. (Impact 4.9-23)</p> <p>The proposed project would result in impacts to two slope wetlands and steeper slopes. (Impacts 4.9-44 and -48)</p> <p>The proposed project would result in impacts to alluvial side canyons, and steep slopes. (Impact 4.9-45)</p>	<p>No mitigation proposed.</p> <p>No mitigation is proposed.</p>	<p>Significant, unavoidable impact.</p> <p>Less than significant.</p>
<p><u>Cactus Wren</u></p> <p>The proposed project would impact cactus wrens. (Impacts 4.9-35, -54, and -80)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p>	
<p><u>Orange-throated whiptail and San Diego Horned Lizard</u></p> <p>The proposed project has the potential to result in impacts on suitable habitat types for the orange-throated whiptail and San Diego horned lizard. (Impacts 4.9-50, -51, -75, and -76)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p>	
<p><u>Raptors</u></p> <p>The proposed project would impact habitat for raptors, including the Cooper's hawk, white-tailed kite, Swainson's hawk, and merlin. (Impacts 4.9-27, -31, -36, -40, -52, -55, -72, -77, -81, -82, -89, and -90)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Prior to issuance of grading permits for the proposed golf course in Cristianitos sub-basin, the County's Director of Planning Services/designee shall verify that the landscape plans for the golf course include native habitats which could contribute to the restoration of grasslands in the sub-basin. <u>A minimum of 60 acres of native habitats shall be included in the landscape plans.</u> (MM 4.9-32)</p>	

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TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>Tricolored Blackbird</u></p> <p>The proposed project has the potential to result in a significant impact on suitable habitat types for the tricolored blackbird. (Impact 4.9-53)</p> <p><u>Yellow-breasted Chat</u></p> <p>The proposed project has the potential to significantly impact the yellow-breasted chat. (Impact 4.9-56)</p> <p>The proposed project has the potential to significantly impact the yellow-breasted chat. (Impact 4.9-83)</p> <p><u>Grasslands</u></p> <p>The proposed project would impact grasslands habitat. (Impacts 4.9-29, -30, -39, and -61)</p> <p>The proposed project would impact grasslands habitat in the Cristianitos sub-basin. (Impact 4.9-30)</p> <p><u>Coastal Sage Scrub</u></p> <p>The proposed project would impact coastal sage scrub, woodlands, and forests. (Impacts 4.9-62, -64, and -65)</p>	<p>Prior to issuance of grading permits for the proposed golf course in Blind subunit, the County's Director of Planning Services or his/her designee shall verify that the landscape plans for the golf course include native habitats including native grassland which could contribute to the restoration of grasslands in the sub-basin. (MM 4.9-33)</p> <p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Wetland/riparian habitat for tri-colored blackbirds at the mouth of Verdugo Canyon would be avoided. (MM 4.9-31)</p> <p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Formulate and fund a Comprehensive Long-Term AMP. (PDF 4.9-2)</p> <p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Formulate and fund a Comprehensive Long-Term AMP. (PDF 4.9-2)</p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>Jurisdictional Wetlands</u></p> <p>The proposed project would significantly impact 89.51 acres of USACE jurisdiction and 195.55 acres of CDFG jurisdiction (riparian habitat). The proposed project would impact a total of 62.23 acres of USACE jurisdiction, including 21.33 acres of "wetlands" and 40.9 acres of "waters." Construction and maintenance of infrastructure (excluding reservoirs) would permanently impact a further 8.44 acres of "wetlands" and 8.41 of "waters." In addition, construction and maintenance of infrastructure facilities would temporarily impact 10.43 acres under the USACE jurisdiction. The proposed project would impact a total of 138.85 acres under the jurisdiction of the CDFG, including 120.16 acres of riparian and 18.69 acres of un-vegetated areas. Construction of infrastructure (excluding reservoirs) would permanently impact a further 32.61 acres of riparian and 2.56 of un-vegetated areas. In addition, temporary construction of infrastructure facilities within the RMV Open Space would impact 21.53 acres under the jurisdiction of the CDFG. (Impact 4.9-63)</p> <p><u>Fairy Shrimp</u></p> <p>The proposed project would result in impacts on a vernal pool supporting the San Diego and Riverside fairy shrimp. (Impacts 4.9-67 and -68)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Formulate and fund a Comprehensive Long-Term AMP. (PDF 4.9-2)</p> <p><u>The project applicant shall obtain Section 404, 1600, and federal and state Endangered Species Act permits, as applicable. (MM 4.9-42)</u></p> <p>Prior to issuance of a grading permit for Planning Area 5, the project applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all vernal pools in the Trampas Sub-basin have been avoided. (MM 4.9-35)</p>	



TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>Least Bell's Vireo</u></p> <p>The proposed project has the potential to significantly impact the least Bell's vireo. (Impact 4.9-71)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Formulate and fund a Comprehensive Long-Term AMP. (PDF 4.9-2)</p>	
<p><u>Tricolored Blackbird</u></p> <p>The proposed project would result in potentially significant impacts on suitable habitat types for the tricolored blackbird. (Impact 4.9-78)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p>	
<p><u>Grasshopper Sparrow</u></p> <p>The proposed project would result in significant impacts on the grasshopper sparrow through habitat loss. (Impact 4.9-79)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p>	
<p><u>Mud Nama</u></p> <p>The proposed project would result in significant impacts on mud nama. (Impact 4.9-87)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Mud nama inoculum (topsoil and dried pants to obtain seed) shall be collected prior to project impacts for use in the relocation of this species. The receiver sites shall support appropriate soils and other conditions suitable for mud nama. Implementation details of the salvage and relocation program shall be identified in the Final Plant Species Translocation, Propagation and Management Plan. (MM 4.9-40)</p>	
<p><u>Armored Threespine Stickleback and Arroyo Chub</u></p> <p>The proposed project would result in potentially significant impacts on the partially armored threespine stickleback and arroyo chub. (Impact 4.9-88)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>Palmer's Grappling Hook</u></p> <p>The proposed project would result in significant impacts on Palmer's grappling hook. (Impact 4.9-91)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Palmer's grappling hook seed will be collected prior to project impacts for use in the seed mix for coastal sage scrub/native grassland restoration areas. Receiver sites will support clay soils and other conditions suitable for Palmer's grapplinghook. In addition, where feasible, clay soils will be salvaged from development areas and appropriately transported to restoration areas to provide a seed bank. (MM 4.9-36)</p>	
<p><u>Mariposa Lily</u></p> <p>The proposed project would result in significant impacts to Catalina mariposa lily. (Impact 4.9-92)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Catalina mariposa lily shall be salvaged and relocated to the coastal sage scrub/native grassland restoration and enhancement areas by the project applicant; or seed can be collected prior to project impacts for use in the seed mix for coastal sage scrub/native grassland restoration areas. The receiver sites shall support conditions suitable for Catalina mariposa lily. In addition, where feasible, clay soils shall be salvaged from development areas and appropriately transported to restoration areas to provide a seed bank. Implementation details of the salvage and relocation program shall be identified in the Final Plant Species Translocation, Propagation and Management Plan. (MM 4.9-37)</p>	
<p><u>Vernal Barley</u></p> <p>The proposed project would result in potentially significant impacts on vernal barley. (Impact 4.9-93)</p>	<p>Vernal barley seed can be collected prior to project impacts for use in the seed mix for coastal sage scrub/native grassland restoration areas. The receiver sites shall support clay soils and other conditions suitable for vernal barley. In addition, where feasible, clay soils shall be salvaged from development areas and appropriately transported to restoration areas to provide a seed bank. Implementation details of the salvage and relocation program shall be identified in the Final Plant Species Translocation, Propagation and Management Plan. (MM 4.9-38)</p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>Small-flowered Microseris</u></p> <p>The proposed project would result in potentially significant impacts on small-flowered microseris. (Impact 4.9-94)</p> <p><u>Restoration</u></p> <p>The development pattern proposed under the proposed project would conflict with some areas targeted for restoration. (Impacts 4.9-32, -33, -34, -38, -46, and -47)</p> <p><u>Short-Term and Long-Term Indirect Impacts</u></p> <p>The proposed project would result in potentially indirect impacts including noise, construction related affects, exotic species, water quality, lighting, and human activity. (Impacts 4.9-96, -97, -98, -99, -100, and -101)</p>	<p>Create a Comprehensive Open Space Protection System. (PDF 4.9-1)</p> <p>Small-flowered microseris seed can be collected prior to project impacts for use in the seed mix for coastal sage scrub/native grassland restoration areas. The receiver sites shall support clay soils and other conditions suitable for small-flowered microseris. In addition, where feasible, clay soils shall be salvaged from development areas and appropriately transported to restoration areas to provide a seed bank. Implementation details of the salvage and relocation program shall be identified in the Final Plant Species Translocation, Propagation and Management Plan. (MM 4.9-39)</p> <p>Implementation of coastal sage scrub/native grassland restoration identified in PDF 4.9-1 and 4.9-2.</p> <p>Prior to issuance of grading permits for the proposed golf course in the Gabino sub-basin, the County's Director of Planning Services or his/her designee shall verify that the landscape plans for the golf course include native habitats including native grassland which could contribute to the restoration of grasslands in the sub-basin. (MM 4.9-34)</p> <p>During construction, a construction monitoring program shall be implemented to mitigate for short-term noise impacts to nesting raptors, to the satisfaction of the County of Orange, Manager, Subdivision and Grading. Indirect impacts shall be mitigated by limiting heavy construction within 300 feet of occupied raptor nests. Occupied raptors nests shall be marked as "Environmentally Sensitive Areas" on grading/construction plans and shall be protected with fencing consisting of T-bar posts and yellow rope. (MM 4.9-26)</p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
	<p>All plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California shall be prohibited from development and fuel management zones adjacent to the RMV Open Space. Prior to issuance of fuel modification plan approvals, the County of Orange shall verify that plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California are not included in plans for fuel modification adjacent to the RMV Open Space. Prior to the recordation of a map for a tract adjacent to the RMV Open Space, the County of Orange shall verify that the CC&Rs contain language prohibiting the planting of plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California in private landscaped areas. (MM 4.9-27)</p> <p>Lighting shall be shielded or directed away from RMV Open Space habitat areas through the use of low-sodium or similar intensity lights, light shields, native shrubs, berms or other shielding methods. Prior to the issuance of building permits for a tract with public street lighting adjacent to RMV Open Space habitat areas, the County of Orange shall verify that measures to shield such lighting have been incorporated in the building plans. (MM 4.9-28)</p> <p>All plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California shall be prohibited from development and fuel management zones adjacent to the RMV Open Space. Prior to issuance of fuel modification plan approvals, the County of Orange shall verify that plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California are not included in plans for fuel modification adjacent to the RMV Open Space. Prior to the recordation of a map for a tract adjacent to the RMV Open Space, the County of Orange shall verify that the CC&Rs contain language prohibiting the planting of plants identified by the California Exotic Pest Plant Council as an invasive risk in southern California in private landscaped areas. (MM 4.9-29)</p> <p><u>Access to the RMV Open Space shall be managed and directed as specified in the Open Space Agreement between the County of Orange and RMV. Where potential conflicts between development and open space are identified per the agreement the following shall occur:</u></p> <p><u>Prior to the issuance of building permits for a tract adjacent to the RMV Open Space, the County of Orange shall verify that measures, such as fencing, signs etc., to direct the public to public access points within the RMV Open Space have been incorporated into the building plans. To the extent that public access points are not identified, the County of Orange shall verify that measures, such as fencing, signs etc., to prohibit public access have been incorporated into the building plans. (MM 4.2-29)</u></p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p><u>The project, with current and probable future projects, could result in the following cumulative impacts: 1) reduced connectivity between proposed habitat blocks; 2) more pronounced internal fragmentation of habitat blocks; 3) greater impacts to key locations of planning species; and 4) reduced ability to fully implement the recommendations of the Adaptive Management Plan regarding restoration of coastal sage scrub/valley grassland. (June 23, 2004 Errata Sheet)</u></p>	<p>The project applicant shall prepare and implement a Biological Resources Construction Plan (BRCP) that provides for the protection of the resource and established the monitoring requirements. Provisions for biological monitoring during construction activities to ensure compliance and success of each protective measure. The monitoring procedures will (1) identify specific locations of wildlife habitat and sensitive species to be monitored; (2) identify the frequency of monitoring, monitoring methodology (for each habitat and sensitive species to be monitored); (3) list required qualifications of biological monitor(s); and (4) identify reporting requirements. (MM 4.9-30)</p> <p><u>Please also refer to the Section 4.5, Water Resources, mitigation program for water quality.</u></p> <p><u>The Biological Resources Mitigation Program is applicable.</u></p>	<p><u>Significant, unavoidable cumulative impacts could occur. (June 23, 2004 Errata Sheet)</u></p>
<p>Aesthetics (Section 4.10)</p> <p>Grading activities would significantly alter the existing visual characteristics and topography of the site. (Impact 4.10-1)</p> <p>The visual character of the project site visible from several viewpoints will be significantly altered through implementation of the project. (Impact 4.10-2)</p>	<p>Approximately two-thirds of the project site shall be retained in open space. (PDF 4.10-1)</p> <p>A 1,000-foot-wide buffer shall be provided between Coto de Caza and the project site. (PDF 4.10-2)</p> <p>Within Planning Area 4 and along the easterly development edge of Planning Area 3 adjacent to Caspers Wilderness Park, the exterior lighting shall be designed and located to confine direct rays to the premises. (PDF 4.10-3)</p>	<p>Significant, unavoidable impact (Impact 4.10-1)</p> <p>Significant, unavoidable impact (Impact 4.10-2)</p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>Foreground, middleground, and background ridgelines located in landscape zones would be significantly impacted by project grading to allow for the implementation of proposed land uses. (Impact 4.10-3)</p> <p>Views from some recreational area vantage points within wilderness parks would be significantly impacted by project grading and associated development activities. Changes in the character would be significant. (Impact 4.10-4)</p> <p>Some views from Ortega Highway would be significantly impacted by project grading and development activities. (Impact 4.10-5)</p> <p>The project would introduce new sources of nighttime lighting and the potential for glare. The change in character of the project site through the introduction of land uses requiring night lighting and the potential for the use of building materials resulting in glare is considered significant. (Impact 4.10-6)</p> <p><u>There would be a cumulative impact associated with the change in character of the study area and its surroundings. The project would contribute to a cumulative significant impact associated with changes to the visual character of the area, landform alterations, and creation of light or glare. (June 23, 2004 Errata Sheet)</u></p>	<p>Within Planning Area 4 and along the easterly development edge of Planning Area 3 adjacent to Caspers Wilderness Park, exterior walls, and particularly the roofing materials shall be compatible with the natural surroundings. (PDF 4.10-4)</p> <p>The applicant shall install landscaping, equip for irrigation, and improvements for lots and common areas in accordance with detailed irrigation and landscaping design submitted to the Manager, Subdivision and Grading for approval, in consultation with the Manager HBP/Program Management (SC 4.10-1 and SC 4.10-2)</p> <p>Prior to issuance of any building permit, the applicant shall demonstrate that all exterior lighting has been designed and located so that all direct rays are confined to the property in a manner meeting the approval of the Manager, Building Permit. (SC 4.10-3)</p> <p>All lighting along the perimeter of natural areas, particularly street lights, shall be downcast luminaries and shall be shielded and oriented in a manner that will prevent spillage or glare into the remaining natural and open space areas. Final lighting orientation and design shall be to the satisfaction of the County of Orange, Manager, Building Permit. Prior to final inspection or issuance of a certificate of occupancy, where applicable, the Manager, Building Permit, shall cause to be performed a photometric field inspection of the approved lighting system for the project. The inspection shall verify the proper construction and installation of materials within the approved plan, determine the actual light patterns and values through light meter testing and observation, and determine the extent of any errant lighting. Deviations and/or violations shall be corrected prior to the final clearance for the project. (MM 4.10-1)</p> <p><u>See above-stated mitigation.</u></p>	<p>Significant, unavoidable impact (Impact 4.10-3)</p> <p>Significant, unavoidable impact (Impact 4.10-4)</p> <p>Less than significant impact (Impact 4.10-5)</p> <p>Significant, unavoidable impact (Impact 4.10-6)</p> <p><u>Significant, unavoidable impact. (June 23, 2004 Errata Sheet)</u></p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>Cultural and Paleontological Resources (Section 4.11)</p> <p>Grading and construction activities would have a significant impact on the following NRHP- and CRHR-eligible/potentially eligible archaeological sites: CA-ORA-535, -656, -753, -754, -882, -997, -1043, -1048, -1121, -1222, -1134, -1136, -1137, -1138, -1449, -1551, -1552, -1555, -1556, -1559, -1560, and -1565. (Impact 4.11-1)</p> <p>Implementation of the project would have a significant impact on historic sites CA-ORA-29, 30-176631, 30-176633, 30-176634, and 30-176635, which have been determined to be eligible or potentially eligible for the NRHP or CRHR. (Impact 4.11-2)</p> <p>The proposed project would result in the disturbance and destruction of certain rock units identified as having a high likelihood of containing fossils. This disturbance would potentially result in the destruction of unique or important paleontological resources and is considered a significant impact. (Impact 4.11-3)</p> <p><u>No cumulative cultural or paleontological impacts were identified.</u> (June 23, 2004 Errata Sheet)</p>	<p>The Ranch Plan project has been designed to avoid/minimize significant impacts to known archaeological and historic resources. (PDF 4.11-1)</p> <p>Prior to the issuance of any grading permit, the applicant shall retain a County-certified archaeologist to observe grading activities and salvage and catalogue archaeological resources as necessary. If the archaeological resources are found to be significant, the archaeological observer shall determine appropriate actions. (SC 4.11-1)</p> <p>Prior to the issuance of any grading permit, the project contractor shall retain a County certified paleontologist to observe grading activities and salvage and catalogue fossils as necessary. If the paleontological resources are found to be significant, the paleontologist shall determine appropriate actions. (SC 4.11-2)</p> <p>Prior to the approval of final plans and specifications for the development of Area Plans, the project applicant shall prepare a Cultural Resources Management (CRM) Plan to address the presence of cultural resources and provide recommendations. (MM 4.11-1)</p> <p>Based on the mitigation standards set forth in the California Environmental Act (CEQA) Guidelines §15126.4(b) and Public Resources Code §21083.2, prior to the approval of any Area Plan for <u>Planning Areas 7 and 9</u> the applicable planning areas, the applicant shall provide the County of Orange with evidence regarding the determination of eligibility of prehistoric sites. (MM 4.11-2)</p> <p>As applicable, the following archaeological sites shall be mitigated to a less than significant level: CA-ORA-535, -656, -753, -754, -882, -997, -1043, -1048, -1121, -1222, -1134, -1136, -1137, -1138, -1449, -1551, -1552, -1555, -1556, -1559, -1560, and -1565, and historic sites CA-ORA-29, 30-176631, 30-176633, 30-176634, and 30-176635. Mitigation shall be accomplished through implementation of mitigation options consistent with the Cultural Resources Management Plan. In accordance with California Health and Safety Code Section 7050.5, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains. If the County Coroner determines that the remains are or believed to be Native American, the County Coroner shall notify the Native American Heritage Commission. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains. (MM 4.11-3)</p>	<p>All the impacts on cultural resources would be reduced to a level of less than significant.</p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>Recreation (Section 4.12)</p> <p>No significant impacts to recreational resources were identified.</p> <p><u>The project would not contribute to or accelerate the substantial physical deterioration of San Onofre State Beach, the Donna O'Neill Land Conservancy, or proposed San Juan Creek Regional Park.</u> (June 23, 2004 Errata Sheet)</p>	<p>The design has incorporated the development of Rancho Mission Viejo Regional Park, a 1,034-acre regional facility located north and south of San Juan Creek. (PDF 4.12-1)</p> <p>The project incorporates a 20- to 25- acres of sports parks. (PDF 4.12-2)</p> <p>The project provides for 15,121 acres of open space within the Ranch Plan boundaries. (PDF 4.12-3)</p> <p>The project provides for trail linkages between the Ladera Ranch and the Ranch Plan community trails, which provides connection to the regional trail system. (PDF 4.12-4)</p> <p>The project would construct portions of the San Juan Creek, the Cristianitos, and the Prima Deshecha trails. (PDF 4.12-5)</p> <p>The project would construct portions of the San Juan Creek Bikeway. (PDF 4.12-6)</p> <p>The project proposes the construction of up to five golf courses. (PDF 4.12-7)</p> <p>Local park sites will be provided as part of the project as contained in a Park Implementation Plan. (PDF 4.12-8)</p> <p>An irrevocable offer of fee dedication will be made for local parks. (SC 4.12-1)</p> <p>An irrevocable offer to dedicate an easement for private local park purposes will be made and preliminary concept plans shall be submitted to the Manager, Current Planning Services, for review and approval. (SC 4.12-2)</p> <p>An irrevocable offer of dedication in fee for regional park purposes will be made. (SC 4.12-3)</p> <p>The subdivider shall reserve open space for granting in fee to a homeowner's association who shall be responsible for their maintenance and upkeep. (SC 4.12-4)</p> <p>The subdivider shall provide an easement for a recreational trail for riding and hiking trail purposes. (SC 4.12-5)</p> <p>A Master Trail and Bikeways Implementation Plan shall be developed for the Ranch Plan. (MM 4.12-1)</p>	<p>There would be no significant impacts either prior to or after mitigation.</p> <p><u>Cumulative impacts related to increased demand for recreational facilities can be mitigated to a less than significant level.</u> (June 23, 2004 Errata Sheet)</p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>Mineral Resources (Section 4.13)</p> <p>The inability to extract the mineral resources at the ONIS site beyond 2013, with the resultant loss of a resource of local value. (Impact 4.13-1)</p> <p>Implementation of the Ranch Plan would result in the inability to extract the sand and gravel within San Juan Creek. The Orange County General Plan, as well as by the California DMG, have identified this resource as a locally important mineral resource recovery site. (Impact 4.13-2)</p> <p><u>The project would significantly contribute to cumulative impacts on mineral resources in the region.</u> (June 23, 2004 Errata Sheet)</p>	<p>The project would provide for the ONIS surface mining to continue within Planning Area 5 as an interim use until such time as development is proposed. (PDF 4.13-1)</p> <p>Temporary excavation/extraction of construction aggregate or construction-related materials extraction shall be allowed during construction grading and on-site earthmoving activities to promote project construction efficiencies and limit long distance transportation of construction aggregate and construction related material. (PDF 4.13-2)</p> <p><u>See above mitigation program.</u> (June 23, 2004 Errata Sheet)</p>	<p>Both impacts remain as significant unavoidable adverse impacts</p> <p><u>Significant and unavoidable.</u> (June 23, 2004 Errata Sheet)</p>
<p>Hazards and Hazardous Materials (Section 4.14)</p> <p>Because of present and past agricultural use, there is the potential of exposing future uses to health risks if residual pesticides exceed levels established by state and federal standards for health-sensitive uses (e.g., schools, child care facilities, etc.) (Planning Area 1, 2, 3, 4, and 7). Additionally, where agriculture is proposed as an interim or future use, impacts would occur if runoff containing fertilizer or pesticide was allowed to enter downstream waters untreated. (Impact 4.14-1)</p> <p>Buildings and other improvements built pre-1980 have the potential of containing asbestos-containing materials and lead-based paint. Demolition of these buildings</p>	<p>The project has been designed to address potential impacts from the Prima Deshecha landfill by incorporating setbacks from fill activities to avoid any potential exposure to potential hazardous materials impacts that may be associated with landfill activities. (PDF 4.14-1)</p> <p>The subdivider shall submit a "Hazardous Materials Assessment" and a "Disclosure Statement" covering the property which will be offered for dedication or dedicated to the County of Orange or the Orange County Flood Control District. (SC 4.14-1)</p> <p>The contractor shall submit to the Fire Chief a list of all hazardous, flammable and combustible liquids, solids or gases to be stored, used or handled on site. These materials shall be classified according to the Uniform Fire Code. (SC 4.14-2)</p> <p>Prior to the issuance of a grading permit, the contractor shall develop an approved Health and Safety Contingency Plan (HSCP) in the event that unanticipated/unknown environmental contaminants are encountered during construction. The plan shall be developed to protect workers, safeguard the environment, and meet the requirements of the</p>	<p>All impacts would be reduced to a level of less than significant.</p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>has the potential of introducing contaminants into the air, soil, or water if residue is not properly handled (Planning Area 1, 3, 7, and 8). (Impact 4.14-2)</p> <p>There is the potential of contamination in the vicinity of AGT and UGT within Planning Areas 1, 3, 4, 5, and 8. Testing, and remediation if necessary, in conjunction with removal of the tanks prior to implementation of the Ranch Plan, would reduce these impacts to less than significant. This would also apply to tanks previously removed where there are not records of prior soil testing (Planning Area 3). (Impact 4.14-3)</p> <p>Evidence of minor surface soil staining was identified in Planning Areas 1, 3, and 5. The possibility of contamination does exist, though given the limited nature of the stains, this is considered an insignificant adverse impact. (Impact 4.14-4)</p> <p>There is the possibility of chemical contamination in the truck washout recycling pond and site operations area within the Catalina Pacific Concrete (CPC) lease vicinity (Planning Area 3). (Impact 4.14-5)</p> <p>East of the Cow Camp maintenance shop area (Planning Area 3) old equipment and discarded scraps were buried. Dependent on the materials buried, soil contamination may have occurred. (Impact 4.14-6)</p>	<p>California Code of Regulations (CCR), Title 8, General Industry Safety Orders – Control of Hazardous Substances. (MM 4.14-1)</p> <p>During construction, if environmentally affected soil, groundwater, or other materials are encountered on-site, the project engineer shall evaluate, assess the extent of, and mitigate the affected materials. Applicable sampling and monitoring activities are expected to include air monitoring, collecting soil and groundwater samples for analysis, and documenting mitigation activities. (MM 4.14-2)</p> <p>Prior to approval of Area Plan for areas within Planning Areas 1, 2, 3, 4, and 7, that have been used for agricultural activities where pesticides or herbicides have been used, the applicant shall conduct an investigation to assess the possible presence of residual pesticides and herbicides in accordance with applicable Department of Toxic Substance Control (DTSC) Guidance for Sampling Agricultural Soils. If necessary, a remediation program shall be developed and implemented for those areas where the soils testing program has identified that residual pesticides and herbicides exceed DTSC Guidance. (MM 4.14-3)</p> <p>Prior to issuance of a grading permit or a demolition permit for any on-site building constructed prior to 1973, the building shall be screened for lead-based paint prior to demolition. If lead-based paint is identified, it shall be mitigated in accordance with all applicable federal, state and local regulatory requirements. (MM 4.14-4)</p> <p>Prior to issuance of a demolition permit for any structure constructed before 1980, the applicant shall test for asbestos containing materials. Should the building being demolished contain asbestos, the applicant shall comply with notification and asbestos removal procedures outlined in SCAQMD Rule 1403 to reduce asbestos related health risks. (MM 4.14-5)</p> <p>Prior to issuance of grading permits for Planning Areas 1, 3, 4, 5, and 8, respectively, the applicant shall have removed all storage tanks, fuel dispensers, clarifiers and crushing equipment in compliance with OCHCA regulations. This shall include soil and groundwater sampling with analysis for petroleum hydrocarbons, heavy metals, and PAHs to determine if any contaminants exist in the tank pit area or in surrounding areas. If contaminants exist, the level of impact shall be assessed and a remediation plan shall be developed, if required pursuant to applicable laws and regulations. (MM 4.14-6)</p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>Contamination was reported and only partially removed when USTs were removed in 1990, 1991, and 1997. In one case, the contamination was relocated to the overburden storage area of the property. The project proposes future residential development in these areas. Given the uncertainty of the actual level of contamination in this area, this would be considered a potential adverse impact. (Planning Area 5) (Impact 4.14-7)</p> <p>The chemical composition of the tailings within Trampas Dam has not been conclusively determined. Given the uncertainty of the actual level of contamination, this would be considered a potential significant impact because the proposed project could locate future sensitive uses in the area. (Impact 4.14-8)</p> <p>Two pistol ranges are present within Planning Area 8. These sites represent a potential lead and/or copper hazard in that the proposed project could propose sensitive uses in these areas. (Impact 4.14-9)</p> <p>Grading may result in the damage or disturbance to abandoned oil wells. This could result in the release of methane gas. (Impact 4.14-10)</p> <p>Grading activities will require the relocation of a portion of the Santa Fe Pipeline, which traverses Planning Areas 1, 5, 6, 7, and 8. Relocation would be required in Planning Areas 1 and 8. During relocation there is an increased potential for soil contamination. (Impact 4.14-11)</p>	<p>Prior to approval of Area Plan for areas within Planning Areas 1, 3, and 5, respectively, where soil staining has been identified, the applicant or leaseholder shall test the contaminated soils to assess their level of impact and a remediation plan shall be developed, if required pursuant to applicable laws and regulations. (MM 4.14-7)</p> <p>Prior to issuance of grading permits for the portion of Planning Area 3 currently occupied by Catalina Pacific Concrete (CPC), the applicant shall provide verification to OCHCA that the truck washout recycling pond and related chemicals within the CPC lease area have been dismantled/removed and the pond contents removed/disposed in compliance with applicable regulations. (MM 4.14-8)</p> <p>Prior to approval of an Area Plan for those locations within Planning Area 5 where the UST's were removed, and the overburden storage area where previously contaminated soil was relocated, the applicant shall conduct further investigation regarding the level of contamination. If contamination exists at a level that requires action pursuant to applicable laws and regulations, a remediation plan shall be prepared. (MM 4.14-9)</p> <p>Prior to approval of Area Plan for the Trampas Dam area of Planning Area 5, a Phase II testing program shall be developed and implemented to more precisely determine the chemical composition associated with the tailings within Trampas Dam. Once the nature of the tailings is known, a removal program shall be developed to ensure the proper handling and disposal of the material. If the testing program identifies a violation of applicable standards, a remediation program shall be developed and verification of remediation to adopted standards will be submitted to OCHCA prior to issuance of grading permits. (MM 4.14-10)</p> <p>Soil sampling shall be conducted for the two areas within Planning Area 8 previously used for pistol ranges. If significant contamination is encountered, soil with residual lead or copper concentrations exceeding US EPA's PRGs shall be removed from the property and disposed of at an appropriate facility. (MM 4.14-11)</p> <p>Prior to approval of Area Plans for the Northrop Grumman Space Technology Test Site (TRW) lease portion of Planning Area 8 a comprehensive closure plan will be developed to assess, monitor, and mitigate any residual threats to human health or the environment which may remain as a result of site operations and closure. The comprehensive closure plan shall comply with regulations put forth by DTSC and the San Diego Regional Water Quality Control Board. If the comprehensive closure plan identifies the need for remediation, verification of completion of the remediation program shall be submitted to OCHCA, or other appropriate agency prior to issuance of grading permits for those areas subject to remediation. (MM 4.14-12)</p>	

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>The above-ground tank installed by O'Connell Landscaping without permits and the housekeeping violations may result in contamination of surrounding soil. (Impact 4.14-12)</p> <p><u>No cumulative hazardous materials impacts were identified.</u> (June 23, 2004 Errata Sheet)</p>	<p>Prior to issuance of grading permits within each Planning Area, the Environmental Site Assessments (ESAs) will be updated for that grading permit area. If the Phase I Update identifies new actual or potential impacts, a Phase II ESA will be completed. If hazardous materials are identified during the site assessments, the appropriate response/remedial measures will be implemented including directives of the OCHCA and/or Regional Water Quality Control Board (RWQCB), as appropriate. If soil is encountered during site development that is suspected of being impacted by hazardous materials, work will be halted and site conditions will be evaluated by a qualified environmental professional. (MM 4.14-13)</p> <p>For those Planning Areas containing oil wells (Planning Areas 3 and 9) the applicant shall submit verification that final building plans have undergone review by the Department of Conservation, Division of Oil, Gas, and Geothermal Resources. (MM 4.14-14)</p> <p>The project provides for a minimum 110-foot fuel modification zone surrounding all development areas. (PDF 4.14-2)</p> <p>A Fire Management Plan is contained in the Adaptive Management Program provided in Appendix J. (PDF 4.14-3)</p> <p>Prior to approval of tentative subdivision maps and site-specific development projects with the project area, the landowner or subsequent project applicant shall submit evidence demonstrating compliance with all applicable OCFA conditions for development projects within a Special Fire Protection Area. (MM 4.14-15)</p>	
<p>Public Services and Facilities (Section 4.15)</p> <p>Due to the remoteness of the low density development in the eastern portion of Planning Area 7 and the estates in Planning Area 9, OCFA would not be able to provide adequate fire protection to these areas and meet adopted performance objectives. (Impact 4.15-1)</p> <p>Not implementing the extension of The removal of Crown Valley Parkway from the MPAH would reduce the effectiveness of Fire Station 58 and result in service levels</p>	<p>Construction of water storage and conveyance improvements consistent with the <i>Plan of Works for Improvement Districts 4C, 4E and 5 and 6</i>. (PDF 4.15-1, -6, and -7)</p> <p>Roadways, with the exception of Verdugo Road and other local access roads in Planning Area 9, will be designed in conformance with the Orange County Standard Plans. <u>Applicants may request alternative roadway designs as an Alternate Means and Methods, including roadways within Planning Area 9.</u> (PDF 4.15-2)</p> <p>Prior to the recordation of a subdivision map, the subdivider shall design and construct water distribution system per OCFA requirements. (County of Orange Standard Condition of Approval T04) (SC 4.15-1)</p>	<p>The Secured Fire Protection Agreement requires that provisions for meeting OCFA performance objectives be met; however, until the Agreement is fully negotiated, it is uncertain if the impacts can be reduced to a level of less than significant. Therefore, as a measure</p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
<p>below adopted performance objectives for the northern portion of Planning Area 2. (Impact 4.15-2)</p> <p>The distance to the nearest hospital would cause delays in transport and greater use of OCFA staff. As a result, staff would not be available at the stations for other emergency calls. This may have an adverse effect on meeting adopted performance objectives. (Impact 4.15-3)</p> <p>Use of the existing ranch roads for access in Planning Area 9 may not meet OCFA standards for emergency access. (Impact 4.15-4)</p> <p>No significant impacts identified for other public services and facilities.</p> <p><u>No cumulative impacts associated with public services or facilities were identified.</u> (June 23, 2004 Errata Sheet)</p>	<p>Prior to approval of the first Subarea Plan, except for Planning Area 1, the developer shall enter into a Secured Fire Protection Agreement with OCFA. (MM 4.15-1)</p> <p>As part of the Area Plan and tentative tract map process, the developer shall coordinate with OCFA on street design to ensure arterial highways and local streets meet OCFA requirements. (MM4.15-2)</p> <p>Low density development in Planning Areas 2 and 7 and development in Planning Area 9 shall be equipped with residential sprinkler systems unless alternative methods of fire protection have been incorporated through the Secured Fire Protection Agreement. (MM 4.15-3)</p> <p><u>Prior to the approval of the first Master Area Plan, the applicant shall have approved by the Orange County Fire Authority a Ranch Plan Fire Protection Program, including a Planned Community-wide Fuel Modification Plan. (MM 4.15-3)</u></p> <p>An OCSD substation site would be provided within the project limits to reduce response times and better serve the Ranch Plan area. (PDF 4.15-3)</p> <p>The Orange County Sheriff's Department and the project applicant shall enter into an agreement specifying the level of service and supporting facilities needed to adequately serve the project area, and the amount of funding to be provided by the project applicant. (MM 4.15-4)</p> <p>The project design has incorporated provisions for the construction of up to two electrical substations and a transmission line to serve the substations. Additionally, the project would extend the 12-inch high power gas line along Ortega Highway from the west of I-5 to Antonio Parkway, and the construction of a gas regulating station. (PDF 4.15-4)</p> <p>Permanent electric transmission lines less than 66 kV shall be subsurface within those portions of the Ranch Plan approved for development. (PDF 4.15-5)</p> <p>The project applicant shall coordinate with SDG&E in the design and implementation of future electrical service and facilities. (SC 4.15-2 and SC 4.15-3)</p> <p>The project applicant shall coordinate with SoCalGas in the design and implementation of future natural gas service and facilities. (SC 4.15-4)</p>	<p>of caution, Impacts 4.15-1 through 4.15-3 would remain significant after mitigation.</p> <p>Impact 4.15-4 would be reduced to a level of less than significant; however, it is possible that the impacts associated with necessary roadway improvements in Planning Area 9 would exceed the level of impact assumed in this Program EIR. Should that occur, supplemental CEQA documentation would be required.</p>

TABLE 1.7-1 (Continued)
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION PROGRAM

Impact	Mitigation Program Summary	Level Of Significance After Mitigation
	<p>The project applicant shall coordinate with SMWD and MWD to ensure that no notable disruptions to the existing facilities and to determine specific sizing and placement of water facilities. (SC 4.15-5, -6, -7, and -8)</p> <p>The project design assumes five elementary school sites, one middle school site, and a potential high school site, if deemed necessary by CUSD. (PDF 4.15-8)</p> <p>The project applicant shall provide for the payment of fees pursuant to California Government Code Section 65995, unless other provisions are required of the applicant through the agreement with CUSD (see Mitigation Measure 4.15-5). (SC 4.15-9)</p> <p>The applicant shall enter into an agreement with CUSD regarding the development of future facilities and payment of costs. (MM 4.15-5)</p> <p>A Solid Waste Management Plan meeting requirements established by the California Integrated Waste Management Act of 1989 shall be prepared. (SC 4.15-10)</p> <p>The project applicant shall coordinate with the pipeline owner, Kinder-Morgan, to ensure that no notable disruptions to the fuel pipeline that extends through the project site. (MM 4.15-6)</p> <p>The project proponent shall pay appropriate developer fees for needed library facilities. (SC 4.15-11)</p>	



2.0 INTRODUCTION

Text Changes

Page 2-6

A portion of Section 2.3 has been updated and incorporated into the Final EIR as follows:

2.3 RANCH PLAN PROGRAM EIR: FOCUS AND EFFECTS FOUND NOT TO BE SIGNIFICANT

In accordance with CEQA Guidelines §15063, the County of Orange prepared an Initial Study/Environmental Checklist for the Ranch Plan and distributed it along with the NOP to responsible and interested agencies and key interest groups. The NOP/Initial Study for the Ranch Plan Program EIR was distributed on February 24, 2003. The review period ended on March 26, 2003. A total of 52 ⁵³¹ comment letters were received from the following agencies and individuals:

Federal Agencies

1. USFWS (joint with the CDFG)
2. Marine Corps Base Camp Pendleton

State Agencies

3. CDFG (joint with USFWS, letter 1 above)
4. Department of Conservation
5. California Highway Patrol
6. Department of Toxic Substances Control
7. California Department of Parks and Recreation
8. California Department of Transportation, District 12

Local Agencies (County, City, Special Agencies)

9. Orange County Sheriff-Coroner Department²
10. Orange County Sheriff-Coroner Department
11. City of Mission Viejo
12. City of San Juan Capistrano
13. City of Rancho Santa Margarita
14. Orange County Fire Authority
15. OCTA
16. Transportation Corridor Agencies
17. County of Orange, Grading, Plan Check
18. County of Orange, Acoustics, Building Permits
19. County of Orange, Subdivision & Grading
20. County of Orange, Integrated Waste Management Division
21. County of Orange, Historic Resources
22. County of Orange, County Executive Office, Strategic Affairs

¹ A joint letter was received from USFWS together with CDFG; therefore, there are 54 ~~52~~ letters from 52 ~~53~~ commenting parties.

² The Orange County Sheriff-Coroner Department submitted two comment letters on the NOP.

- 23. County of Orange, Public Facilities and Resources Division/Harbors, Beaches and Parks
- 24. Capistrano Unified School District
- 25. South Coast Air Quality Management³
- 26. Riverside County, Planning Department³
- 27. Southern California Association of Governments

Individuals and Businesses

Residing City/Group Represented

~~27-28.~~ Terri Trammell
~~28-29.~~ Calvin Hecht
~~29-30.~~ David Bendall
~~30-31.~~ Terrell Watt, AICP
~~31-32.~~ Diana Rodgers
~~32-33.~~ Dave Huber
~~33-34.~~ Barbara Rosenbaum
~~34-35.~~ Brenda Stouffer
~~35-36.~~ Dan Songster, President
Plants

Irvine
San Clemente
Aliso Viejo
Endangered Habit League
Mission Viejo
San Clemente
Trabuco Canyon
Dana Point, Heart & Soul Coalition
O.C. Chapter, California Native

~~36-37.~~ Ilse M. Byrnes
~~37-38.~~ Paul Carlton
~~38-39.~~ Nossaman, Guthner, Knox & Elliott
~~39-40.~~ Thomas and Judith Gielow
~~40-41.~~ Bill Corcoran
~~41-42.~~ Marni Magda
~~42-43.~~ Mike and Valerie Dencker
~~43-44.~~ Steve Netherby
~~44-45.~~ Pauline Hollinger Faye
~~45-46.~~ Jeff and Shelley Mott
~~46-47.~~ Lynda A. Hernandez
~~47-48.~~ Michael J. Bosse
~~48-49.~~ Jeff Petersen
~~49-50.~~ Rich Kemenesi
~~50-51.~~ Lyn Harris Hicks
~~51-52.~~ Jim Parkhurst
~~52-53.~~ Dawn Kukla

Society
California Trails & Greenways
Sierra Club, SCORE member
Talega Associates
Costa Mesa
Sierra Club, Los Angeles
Laguna Beach
Lake Forest
Netherby Associates, San Clemente
San Clemente
Trabuco Canyon
Huntington Beach
San Clemente
Monarch Beach
West Covina
CREED, San Clemente
San Clemente
Aliso Viejo

3.0 PROJECT DESCRIPTION

Text Changes

General Note: For the B-4 Alternative, references to open space not in Development Sensitive Areas (DSA) should be 10,950 acres. References to DSA open space should be 4,171 acres. (June 23, 2004 Errata Sheet)

³ The comment letters for the South Coast Air Quality Management District and the County of Riverside Planning Department were received after the close of the NOP review period and based on supplemental contact.

Page 3-2

The following statement on page 3-2 of the Final Program EIR is hereby modified to read as follows:

In addition, there are several large overhead electric distribution transmission lines owned by San Diego Gas and Electric (SDG&E) and Southern California Edison (SCE) that extend from the San Onofre Nuclear Generating Station (SONGS) located south of the site.

Page 3-5

The first paragraph of page 3-5 has been revised as follows:

The project applicant is requesting (in Planning Application number PA01-114) a General Plan Amendment (GPA) and zone change. Several elements of the County of Orange General Plan would need to be amended in order to allow for implementation of the project, including the Land Use, Transportation, Resources, and Recreation elements. These GPA are further described in Section 3.4.2 of the Program EIR. The zone change would change the current A-1 General Agricultural and SG-Sand and Gravel Extraction zoning to PC-Planned Community zoning district for the entire project site. The zone change is discussed in Section 3.4.5. Other components of the project include an amendment to the MPAH (see Section 3.4.3); ~~cancellation of a portion of the Williamson Act contract covering lands within the project site (see Section 3.4.7)~~ and a Development Agreement between Rancho Mission Viejo and the County (see Section 3.4.8).

Page 3-7

Table 3.4-1, Ranch Plan General Plan Summary, footnote d. has been revised as follows:

- d. Water quality features may be located in either development use areas or ~~open-space areas~~ DSA open space areas. (June 23, 2004 Errata Sheet)

Page 3-8

The last paragraph has been revised to reflect that abandonment of a portion of Ortega Highway is no longer being requested from Caltrans.

~~New Ortega Highway Cow Camp Road~~ would be added to the Circulation Plan and MPAH as an east-west arterial highway on the north side of San Juan Creek. The road would provide an east-west link through Rancho Mission Viejo. The alignment would extend from Antonio Parkway to the existing Ortega Highway near the common boundary of Rancho Mission Viejo and Caspers Wilderness Park. ~~New Ortega Highway Cow Camp Road~~ would be constructed as a four-lane primary arterial highway with 100 feet of right-of-way. In addition, a right-of-way reserve would be provided for a six-lane major arterial (120 feet of right-of-way) between Antonio Parkway and the future SR-241. It is assumed that the interchange formerly proposed for Ortega Highway and SR-241 would be constructed at ~~New Ortega Highway Cow Camp Road~~ and SR-241.⁴ ~~The County is also requesting the abandonment of the parallel section of existing Ortega Highway and the designation of New~~

⁴ ~~Later in the Project Description (Section 3.4.4), a request to Caltrans for the abandonment of the segment of Ortega Highway that parallels New Ortega Highway is identified. With the provision of a new arterial highway with higher design speeds, traffic volumes on the existing Ortega Highway, should it be retained, would be substantially reduced and primarily serve the Rancho Mission Viejo Regional Park and ranching activities.~~

~~Ortega Highway as the state route. Therefore, New Ortega Highway would be constructed to Caltrans specifications (see Section 3.4.4 below).~~

Page 3-9

~~Crown Valley Parkway would be deleted from the Circulation Plan and the MPAH east of Antonio Parkway. This action would also involve the deletion of the proposed Crown Valley Parkway interchange with the proposed extension of SR-241. Relocation of the interchange from Crown Valley Parkway to Cristianitos Road would also require the concurrence of the TCA, Caltrans, and FHWA.~~

Page 3-10

The third paragraph of page 3-10 has been revised as follows:

Figure VI-2 in the Natural Resources Component of the Resources Element depicts Agricultural Preserves in Orange County. The project applicant is requesting the removal of 1,856 acres from the Agricultural Preserve. Notices of non-renewal have previously been filed for all these areas. These lands will be removed from the Preserve between December 31, 2005 and December 31, 2008, regardless of this project. ~~The current proposal would cancel remaining Williamson Act contract for those lands within development areas, with the exception of land in Planning Area 7 and 9. Exhibit 3-12 depicts the existing, and proposed updates to, Figure VI-2 in the General Plan.~~

Page 3-11

~~3.4.4 ORTEGA HIGHWAY ABANDONMENT~~

~~With the designation of New Ortega Highway on the County of Orange Circulation Plan and the MPAH, a component of the project is for the County to request Caltrans for an abandonment of the segment of Ortega Highway parallel to New Ortega Highway. The segment of New Ortega Highway would have a higher design speed and capacity; therefore, the new facility would attract most of the trips on Ortega Highway. The existing Ortega Highway would then become access to the proposed Rancho Mission Viejo Regional Park and serve as local access for ranch operations. In the interim, while the Ranch Plan project is under construction, the existing Ortega Highway would also continue to provide access to the leaseholds.~~

~~Recognizing that there are no assurances that the parallel segment of Ortega Highway would be abandoned and that the process for such an action may be prolonged, the exhibits for this project reflect both the existing Ortega Highway and proposed New Ortega Highway. A traffic sensitivity analysis has been conducted as part of the traffic study for the Ranch Plan (see Appendix D) to evaluate traffic conditions with and without Ortega Highway as a through facility. The California Transportation Commission would be the decision making body that would take action on the proposed abandonment.~~

Page 3-14

Page 3-14, item 12, has been modified and incorporated into the Final Program EIR as follows:

"At a minimum, the Master Area Plan shall consist of text, a map, and statistical table identifying and/or providing the following:...

- 12) ~~Demonstrate compliance with OCFA Wildland Fire Management Plan, including a preliminary Fuel Modification Plan~~ The Ranch Plan Fire Protection Program shall be approved prior to the approval of the first planning area Master Area Plan."

Page 3-20

The first paragraph has been revised as follows:

Open Space

For those non-development, non-DSA Overlay areas planned for open space, Section III.I of the Ranch Plan Planned Community Program Text identifies permitted uses, prohibited uses, and design standards. The regulations provide for the protection of valuable environmental resources, while concurrently allowing the implementation/management of certain uses. The authorized uses are limited to those that are of a natural, recreational, educational, or agricultural nature ~~character, as well as with the exception of~~ necessary urban infrastructure (including, but not limited to, designated arterial highways, transportation corridors, utilities, and flood control structures). Additionally, all uses within the open space planning areas must (i) comply with the species and habitat avoidance mitigation measures specified and required by this Program EIR and (ii) comply with the relevant guidelines and requirements set forth in any applicable NCCP/HCP and/or SAMP/MSAA (if adopted). (June 23, 2004 Errata Sheet)

Page 3-24

Page 3-24 has been clarified and included in the Final Program EIR as follows:

Urban activity center uses would be located north and south of San Juan Creek. One area would be in the general vicinity of the intersection of Antonio Parkway with both the existing Ortega Highway and proposed ~~New Ortega Highway~~ Cow Camp Road. A second urban activity center location would be south of San Juan Creek in the vicinity of the intersection of Antonio Parkway. Together these uses would consist of approximately 1,190,000 square feet of Urban Activity Center development, consisting of potential residential, office space, and 180,000 square feet of retail development.

Page 3-26

Page 3-26 has been clarified and included in the Final Program EIR as follows:

Of the 2,353-acre planning area, approximately 132 acres would represent a core urban activity area to the Ranch Plan where a number of services and amenities would be provided. Within the non-residential development area, a variety of urban activity uses are proposed. The proposed project would allow for approximately 1,680,000 square feet of urban activity center uses, consisting of potential residential uses, office space, 100,000 square feet of neighborhood commercial, and a Town Center. These uses would be clustered around ~~New Ortega Highway~~ Cow Camp Road, Gobernadora Road (an internal roadway),⁵ and SR-241 (if constructed). An additional 100,000 sq. ft. of neighborhood retail is proposed in Planning Area 3.

⁵ Key components of the internal road network are discussed later in the Project Description.

Page 3-30

The fourth paragraph of page 3-30 has been modified as follows:

Elementary school sites are anticipated to be located in Planning Areas 2, 3, 7, and 8. Planning Area 3 would likely require two elementary schools. Each elementary school would be built on approximately 12 acres and would provide for approximately ~~600 to 800~~ 750 children. These schools would serve the proposed development and would be phased with construction. The middle school would likely be located in Planning Area 3. The middle school would be built on approximately 25 acres and would serve approximately 1,500 students. The school district may elect to construct joint elementary and middle (K-8) schools, which would require 20 acres for school use and serve 1,050 students. The precise location and combination of elementary and joint elementary and middle of the school would be determined in consultation with the Capistrano Unified School District (CUSD). The conceptual locations for these facilities are shown on Exhibit 3-20, though the precise site of the facilities would be determined at subsequent phases of development in conjunction with CUSD.

Page 3-30

The fifth paragraph of page 3-30 has been corrected and incorporated into the Final Program EIR to read as follows:

The additional students generated by the project, combined with existing area demand, may necessitate the construction of a high school within the project limits. The high school, if required, would be built on approximately 55 acres and serve approximately ~~900~~ 2,200 students. If needed, a high school site would be made available for acquisition by the school district in Planning Area 3.

Page 3-35

A statement about the distribution lines is hereby included in the Final Program EIR, Section 3, Project Description, as follows:

San Diego Gas and Electric (SDG&E) provides electrical service to the project site. Development of the Ranch Plan would require at least one, and potentially two new electrical substations. These facilities would each be located on a two- to three-acre site. These substations would be 138/12 kV and have associated 138 kV transmission lines. The transmission lines would be double circuit 138 kV lines. An electrical substation would be located within Planning Area 3. The facility would be within the development area; therefore, the grading and associated impacts would be provided for in the evaluation of the development plan. A second facility may be located in the development area of Planning Area 5.⁶ The timing for construction of these facilities, as well as the precise locations, would be coordinated with SDG&E. In addition, distribution lines would be required to provide service to the proposed development.

⁶ SDG&E, in a letter dated January 19, 2004, has identified two potential substations for the project. One would be in Planning Area 3, as proposed by the Ranch Plan. However, SDG&E has identified Planning Area 1 as the potential site for the second substation. Given the proximity of the Planning Area 1 site to the substation in Ladera Ranch, RMV is proposing to locate the second substation in Planning Area 5 to ensure appropriate overlap of service for the Ranch Plan. The precise location would be coordinated with SDG&E. Regardless of the final location, the substations would be located within the development area and would not result in new grading and associated impacts.

Southern California Gas Company would provide natural gas service to the site. To serve the project, the Southern California Gas Company would be required to extend a 12-inch, high-pressure gas line from the vicinity of the Atchison Topeka and the Santa Fe Railroad line, west of I-5, to Antonio Parkway. The line would be placed within the Ortega Highway right-of-way and connect to a new regulating station at the northwest corner of the Antonio Parkway/Ortega Highway intersection. The regulating station would be on a parcel approximately 30 feet by 10 feet.

Page 3-35

The third paragraph of page 3-35 has been modified as follows:

3.4-7 WILLIAMSON ACT CANCELLATION

The California Land Conservation Act of 1965, also known as the Williamson Act, was adopted as a means of encouraging the preservation of the State's agricultural lands. As a means to implement the Act, a land contract is established, whereby the County Board of Supervisors stabilizes the taxes on qualifying lands in return for an owner's guarantee to keep the land in Agricultural Preserve status for a 10-year length of time. Each year, on its anniversary date, the contract is automatically renewed unless a notice of non-renewal is filed. RMV currently has 9,840 acres under a Williamson Act contract. Notices of non-renewal have been filed for all the areas within the Agricultural Preserve. The acreage will be removed from the preserve between December 31, 2005 and December 31, 2008, as a result of the non-renewal process. ~~However, the Ranch Plan is requesting partial cancellation of the Williamson Act contract (i.e., removal of the land from the Williamson Act earlier than what is provided for through the non-renewal process). Specifically, this project is requesting to terminate the contract immediately for 1,856 acres within development areas upon approval of the project, with the exception of areas within Planning Areas 7 and 9. As a result, lands would come out of Agricultural Preserve between one and three years before the non-renewal process could remove these same lands. Precise mapping of the lands within the Agricultural Preserve is provided in Section 4.2.~~

Page 3-40 to 3-41

3.8 INTENDED USES OF THE EIR

As a Program EIR, the document to be prepared would address the overall program for the project. Implementation of the project would require approvals from multiple agencies. It is intended that the County of Orange discretionary actions that could be approved based on this Program EIR would include the following:...

- Adoption of a Zone Change to zone the 22,815-acre site as Planned Community
- ~~Partial Williamson Act Cancellation~~
- Approval of a Development Agreement...

Page 3-42

California Department of Transportation

- Encroachment permits for any work or hauling along SR-74 (Ortega Highway)

- Approval of new interchange with SR-241 at Cristianitos Road
- Approval of ramp configuration at ~~New Ortega Highway~~ Cow Camp Road and SR-241 interchange
- ~~Approval of abandonment of the segment of existing Ortega Highway that would be parallel to New Ortega Highway.~~
- Compliance with Section 106 of the National Historic Preservation Act of 1966 for those areas requiring Caltrans involvement.

Orange County Transportation Authority

- MPAH Amendment for addition of ~~New Ortega Highway~~ Cow Camp Road and Cristianitos Road to MPAH, ~~the deletion of the extension of Crown Valley Parkway east of Antonio Parkway,~~ and the downgrading of Avenida Talega in unincorporated Orange County.

Exhibit Revisions

Exhibit 3-24 has been revised to reflect the correct proposed circulation network for the proposed project. The following clarifies the conceptual road names: "A" Street" is also named "Chiquita Canyon Road." "C Street" is also named "Cristianitos Road." "F Street" is named "Gobernadora Road" within Planning Area 3, and is named "Cristianitos Road" outside and north of Planning Area 3. The revised exhibit is provided in Section 4 of the Responses to Comments document.

Exhibit 3-11 has been updated to reflect an area within the project site that is no longer designated by the State Soils Conservation Service as Prime Farmland.

4.1 LAND USE AND RELATED PLANNING PROGRAMS

Text Changes

Page 4.1-1

The last paragraph of page 4.1-1 has been modified to clarify the location of the base in relationship to the project site.

Surrounding Land Uses

The Ranch Plan project site is located within the unincorporated portion of southeastern Orange County. In general, located to the north are the City of Rancho Santa Margarita and the unincorporated planned communities of Las Flores and Coto de Caza, Thomas F. Riley Wilderness Park, and permanent open space located within unincorporated Orange County. MCB Camp Pendleton in the County of San Diego bounds portions of the site on the east and south...

Page 4.1-9

The last sentence of the last paragraph has been revised as follows:

There is not the OSR designation within the Ranch Plan boundary. Pursuant to the County of Orange's General Plan update process conducted by the County, the GERA mitigation site located within the Ranch Plan boundaries was redesignated OSR. (June 23, 2004 Errata Sheet)

Page 4.1-20

The following information is hereby added after the first paragraph discussing Marine Corps Base Camp Pendleton regarding restricted airspace:

MCB Camp Pendleton has three types of Special Use Airspace (SUA) that have been authorized and approved by the Federal Aviation Administration (FAA) for purposes of supporting the military training operations at the Base. The three types consist of (1) Restricted Areas, (2) Military Operations Areas, and (3) Controlled Firing Areas. Each has been established and is used for different purposes, but are individually authorized by the FAA and all are charted on aviation maps used by military and civilian aviators so that there is an awareness of their existence, their dimensions, and their hours of operation by both military and civilian pilots who fly within this area of southern California. The SUAs provide a safety buffer to civilian aircraft by alerting them of the presence of hazardous military training operations that are occurring on the ground (or water) areas below this airspace. The most restrictive of these three different kinds of SUA at MCB Camp Pendleton is the Restricted Area. Restricted Airspace is used to support hazardous training activities in which "live-fire" training activities are occurring (artillery, mortars, air-to-ground delivery of live bombs, rockets, lasers, etc. all activities that would be hazardous to non-participating civil aircraft). Thus, when activated, Restricted Airspace prevents civil aircraft from entering these airspace areas and over flying these hazardous training activities when such live-fire training operations are ongoing (pers. comm., L. Rannals, August 6, 2004).

Restricted Airspace area R-2503B overlies a portion of Planning Area 8 and extends from the ground surface to an altitude of 15,000 feet above mean sea level. While the area is designated as a Restricted Airspace to support hazardous military training operations, no hazardous training operations occur over Planning Area 8. The designation provides sufficient clearance for aircraft maneuverability and safety buffer for aircraft not involved in the training exercises.

Since the Ranch Plan does not propose any aviation related activity, the project would not interfere with or impact the viability of R-2503B in anyway. The designation of the Restricted Airspace over Planning Area 8 would indicate that portions of the planning area would be subjected to overflight activities. As identified in Impact 4.1-1, there would be the potential for residential uses in Planning Area 8 to experience disturbance from helicopter flights and artillery exercises, especially during night hours. Mitigation Measures 4.1-1 and 4.1-2 were identified that would reduce this impact to less than significant.

Page 4.1-46

The reference in the text of the Final Program EIR to "Capistrano Unified School District" on page 4.1-46 is hereby revised and incorporated into the Final Program EIR to read as follows:

"Capistrano Unified School District."

Mitigation Program Changes

Pages 4.1-64 through 4.1-67

Project Design Features

- PDF 4.1-2 A component of the *Ranch Plan Planned Community Program Text* is the provision for the processing of Master Area Plans, which would cover an entire Planning Area, as well as Subarea Plans for smaller areas within each Planning Area. These plans would address the project's compliance with the zoning regulations, as well as other applicable codes and requirements. The Master Area Plan shall cover the entire Planning Area and address the provisions for a Master Area Plan as defined in Section II.B.3a of the *Ranch Plan Planned Community Program Text*. In addition to a Master Area Plan, ~~Seba~~ Subarea Plans addressing the provisions outlined in Section II.B.3b of the *Ranch Plan Planned Community Program Text* shall be required for all development areas. Multiple ~~Seba~~ Subarea Plans addressing portions of a Planning Area may be prepared, provided a Master area Plan for all development areas has been prepared. (The requirements for the Master Area Plan and the Subarea Plan are provided in Section 3.4.5.)
- MM 4.1-2 At the time of Master Area Plan approval for Planning Area 8, the Planning Director shall evaluate the most current RCUZ for MCB Camp Pendleton to ensure that noise sensitive land uses are not constructed in areas that would exceed state noise standards.

4.2 AGRICULTURE

Pages 4.2-11 through 4.2-14

Impact

~~4.2-2 The project would result in the early removal of 1,856 acres from the existing Williamson Act contract and associated Agricultural Preserve.~~

~~The project is requesting cancellation of the contract covering 1,856 acres within the Agricultural Preserve. This covers the land within the Williamson Act contract proposed for development. Notices of non-renewal have been filed for all the areas on the RMV property. The lands will be removed from the preserve between December 31, 2005 and December 31, 2008, regardless of this project as a result of the non-renewal process. The current proposal would cancel the Williamson Act contract within development areas upon approval of the project, with the exception of areas within Planning Areas 7 and 9, resulting in the early removal of a portion of the acres from the Agricultural Preserve. Ranch wide, without cancellation, 289 acres would be removed from the Williamson Act contract in 2005 as a result of the non-renewal process. In 2006, the Williamson Act contract will expire on 1,733 acres and, in 2008, the Williamson Act contract will expire on the remaining 7,818 acres. The project would result in the early removal of certain acreage from the Agricultural Preserve. Table 4.1-1 identifies the amount of acreage proposed for early withdrawal from the Williamson Act contract. These locations are depicted in Exhibit 4.2-7.~~

**TABLE 4.1-1
ACREAGE PROPOSED FOR EARLY WITHDRAWAL
FROM WILLIAMSON ACT CONTRACT**

Planning Area	Scheduled To Expire In 2005	Scheduled To Expire In 2006	Scheduled To Expire In 2008	Total Acres Proposed
2	250		45	295
3		477	534	1,011
4		144	28	172
5			180	180
6		198		198
Total Acres	250	819	787	1,856
Source: Huitt-Zollars, 2004.				

The project would remove these acres from the Agricultural Preserve one to four years earlier than if the contract were allowed to expire in accordance with the provisions of the Williamson Act. Given the proposed phasing plan, it is likely that most of the areas within the Agricultural Preserve would not be developed until after the expiration of the Agricultural Preserve contract. Therefore, the project would not conflict with the existing contract because if project is phased as planned, there would not be an early loss of agricultural uses, except for 45 acres that are anticipated to be graded up to one year prior to the time of expiration of the Williamson Act contract. However, given that the project is requesting cancellation, the continued use of the lands in compliance with the Williamson Act contract cannot be assumed. This would be a significant, adverse impact.

As set forth in Government Code Section 51282, the Board of Supervisors may grant tentative approval for cancellation of a contract only if it makes one of the following findings: (1) that the cancellation is consistent with the purposes of the Williamson Act; or (2) that cancellation is in the public interest.

In making the first finding that the cancellation is consistent with the purposes and intent of the Williamson Act, the Government Code requires that the Board of Supervisors be able to make all of the following findings:

- (1) That the cancellation is for land on which a notice of non-renewal has been served pursuant to Section 51245.
- (2) That cancellation is not likely to result in the removal of adjacent lands from agricultural use.
- (3) That cancellation is for an alternative use, which is consistent with the applicable provisions of the city or county general plan.
- (4) That cancellation will not result in discontinuous patterns of urban development.
- (5) That there is no proximate non-contracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, that development of the contracted land would provide more contiguous patterns of urban development than development of proximate non-contracted land.

~~In evaluating the five required findings outlined above, the following information is applicable:~~

~~A notice of non-renewal was prepared and served for each portion of the project area that remains encumbered by the contract.~~

~~The project area is surrounded by a collection of urban, parkland and other non-agricultural uses/areas. Accordingly, cancellation of the contract and development of the Ranch Plan would not result in the removal of adjacent lands from agricultural use.~~

~~The Ranch Plan application filed with the County of Orange identifies the applicant's request to amend certain portions of the Orange County General Plan to allow for development of the mixed-use project. Specifically, the application proposes to (i) modify the General Plan land use map to reclassify certain portions of the project area from 5 (Open Space) to 1A (Rural Residential), 1B (Suburban Residential), 3 (Employment) and 6 (Urban Activity Center) and (ii) amend portions of the Land Use, Transportation, Resources and Recreation elements of the General Plan. Upon the Board of Supervisors' adoption of the requested amendments/modifications, development of the Ranch Plan (i.e., a use which is alternative to the stated purpose of the contract) would be consistent with the express provisions of the General Plan.~~

~~The project area is an integrated landholding that is neither bisected nor isolated by other properties. The Ranch Plan represents a comprehensive plan for development and conservation that would be implemented in accordance with a planned phasing schedule. Accordingly, development of the Ranch Plan would not result in discontinuous patterns of urban development or compromise the use/development of surrounding areas.~~

~~The Ranch Plan area, comprised of approximately 22,815 acres, is the last remaining large-scale, integrated landholding in southern Orange County. There are no other integrated landholdings in the subregion that would permit development of a comprehensive project similar in size, scope, and purpose to the Ranch Plan. Any attempt to create an assemblage of parcels in the subregion to fulfill the intent and purpose of the Ranch Plan would result in a set of geographically disparate properties and promote a discontinuous pattern of urban development.~~

~~In making the second finding that the cancellation of the contract shall be in the public interest, the Board of Supervisors must make the following findings:~~

~~(1) That other public concerns substantially outweigh the objectives of this chapter; and~~

~~(2) That there is no proximate non-contracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, that development of the contracted land would provide more contiguous patterns of urban development than development of proximate non-contracted land.~~

~~In providing support for these two findings, the following information is applicable:~~

~~The construction of the Ranch Plan would provide a portion of the needed housing as identified by the regional growth forecasts. Development of the Ranch Plan would assist in meeting housing needs by providing up to 14,000 new dwelling units for the~~

~~benefit of the County's/State's current and future generations. In addition to addressing the present jobs-housing imbalance, implementation of the Ranch Plan would contribute to the conservation and environmental protection goals held by both the County and the state.~~

~~As described above, no proximate, non-contracted land is, or will be, available and suitable for the implementation of a development and conservation program that is of similar size and scope of the Ranch Plan. The Ranch Plan represents the last large, undeveloped landholding in south Orange County. Other land in proximity to the Ranch Plan is either developed or in public ownership.~~

Pages 4.2-14 through 4.2-15

4.2.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION...

~~The cancellation of the Williamson Act contract would potentially result in the early loss of agricultural lands. Through the non-renewal process the lands would be removed from the Agricultural Preserve between December 31, 2005 and December 31, 2008. Application of the mitigation program would minimize the potential early loss of farmland for all areas within the Agricultural Preserve, except a 45-acre area in Planning Area 2 in the vicinity of the Chiquita Water Reclamation Plant. This area is scheduled for removal from the Agricultural Preserve on December 31, 2008, though the phasing plan shows this area as being graded between 2007 and 2008. This would potentially result in the early removal of this 45-acre parcel prior to expiration of the Agricultural Preserve contract. This would be an unavoidable significant impact.~~

Mitigation Program Changes

Page 4.2-14

Project Design Features

PDF 4.2-3 ~~The project provides for the continuation of agricultural and ranching uses as an interim use within portions of the project area proposed for development until the time of project implementation. The project phasing plan (see Exhibits 3-25 and 3-26) identifies grading operations occurring generally after the non-renewal dates for the Williamson Act contract. This would minimize the early loss of agricultural land associated with cancellation of the Agricultural Preserve contract. Mitigation Measure 4.2-1 further supports this project design feature.~~

Standard Conditions and Requirements

SC 4.2-1 ~~With the cancellation of the Agricultural Preserve on 1,856 acres, the project applicant will be required to comply with the conditions/requirements set forth in the Government Code Sections 51282 to 51287 and County EMA Policy No. 2.3.101 prior to the execution and recordation of a final certificate of cancellation.~~

4.3 POPULATION AND HOUSING

Text Changes

Page 4.3-4

The typographical error is noted and has been modified on page 4.3-4 of the Final Program EIR as follows:

“...CAA ~~700~~ 70.”

Page 4.3-8

Page 4.3-8 has been corrected and incorporated into the Final Program EIR as follows:

Existing and projected employment data for the project area and Orange County are listed in Table 4.3-5. As identified in Table 4.3-5, the CDR states that there were ~~87,892~~ 88,223 employed persons within the project study area in 2000; this accounts for almost 16 percent of Orange County's entire work force. The majority of those employed persons were engaged in jobs not related to retail or service positions.

Page 4.3-11

The typographical error is noted and has been modified on page 4.3-11 of the Final Program EIR as follows:

“Population ~~projects~~ projections...”

4.4 GEOLOGY AND SOILS

Text Changes

Page 4.4-14

Page 4.4-14 incorrectly states that there are four landslides mapped within Planning Area 8. There are three landslides mapped within Planning Area 8, as stated correctly within Table 4.4-3. The text has been revised and incorporated into the Final Program EIR as follows:

Planning Area 8. Planning Area 8 contains sandstone of the Santiago and Williams formations; these bedrock units generally dip to the west. ~~Four~~ Three landslides have been mapped within the proposed limits of development for the planning area. These landslides vary in size from less than one acre to approximately six acres. Based on the size and morphology of these landslides, failures appear to be relatively shallow involving native soil, colluvium, and weathered bedrock. A drill-hole excavation in one of the landslides in the southeastern portion of the planning area indicates that the landslide was approximately 18 feet deep.

4.5 WATER RESOURCES

Text Changes

Page 4.5-8

Page 4.15-8 has been revised and incorporated into the Final Program EIR as follows (changes are shown in cross-out and underline):

~~Non-domestic~~ recycled water storage facilities would also provide for seasonal storage based on the fluctuating demand related to summer and winter demands. Non-domestic storage facilities would be required to provide the planning areas with the following storage components:

Mitigation Program Changes

Pages 4.5-81 through 4.5-95

Standard Conditions and Regulations

SC 4.5-5 **Subordination of Easements.** Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only), the subdivider shall not grant any easements over any property subject to a requirement of dedication or irrevocable offer to the County of Orange or the Orange County Flood Control District, unless such easements are expressly made subordinate to the easements to be offered for dedication to the County. Prior to granting any of said easements, the subdivider shall furnish a copy of the proposed easement to the Manager, Subdivision and Grading, for review and approval. The Santa Margarita Water District would restore other improvements or facilities located within the easement, if it has consented to the location of such improvements or facilities to the extent that the exercise of its rights in connecting with the easement impacts other improvements of facilities located within the easement; however, in no event shall Santa Margarita Water District be responsible for the cost of relocating its facilities in event of conflicts with such improvements or facilities.

SC 4.5-12 **Development Within Floodplain.** Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only) or the issuance of any grading or building permits, whichever occurs first, within the FP-2 Zoning District, the applicant shall submit all of the necessary documents to the Federal Emergency Management Agency (FEMA) to receive a Conditional Letter of Map Revision (CLOMR) of the Flood Insurance Rate Map (FIRM). Concurrently, the applicant shall submit to the Manager, Subdivision and Grading, three (3) sets of the calculations and plans showing the method of satisfying FEMA and FP-2 Zoning District Regulations, all in a manner meeting the approval of the Manager, Subdivision and Grading.

MM 4.5-6 **Combined Flow and Water Quality Control System.** All developments will be designed in order to achieve flow duration matching, address the water balance, and provide for water quality treatment through a combined flow and water quality control system (termed combined control system).

Combined Control System Components

The proposed combined control system will include one or more of the following components (see Exhibits 4.5-14, 15 and 16), each of which provides an important function to the system:

- Flow Duration Control and Water Quality Treatment (FD/WQ) Basin
- Infiltration Basin
- Bioinfiltration Swale
- Storage Facility for Recycling Water for Non-Domestic Supply
- Diversion Conduit to Export Excess Flows out of the Sub-basin.

The flow duration control and water quality treatment basin provides the initial flow and water quality treatment control functions to the system. The remaining components address the excess flows, alone or in combination with each other, generated during wet weather. Additional water quality treatment control is also provided in the infiltration basin and bioinfiltration swale. The following sub-sections describe each combined control system component in more detail.

1. Flow Duration Control and Water Quality Treatment (FD/WQ) Basin

The flow duration control and water quality treatment (FD/WQ) basin will provide both flow control and water quality treatment in the same basin. Detention basins are the most common means of meeting flow control requirements. The concept of detention is to collect runoff from a developed area and release it at a slower rate than it enters the collection system. The reduced release rate requires temporary storage of the excess amounts in a basin with release occurring over a few hours or days. The volume of storage needed is dependent on 1) the size of the drainage area; 2) the extent of disturbance of the natural vegetation, topography and soils, and creation of impervious surfaces that drain to the stormwater collection system; 3) the desired detention capacity/time for water quality treatment purposes; and 4) how rapidly the water is allowed to leave the FD/WQ basin, i.e., the target release rates.

The FD/WQ basin shall incorporate extended detention to provide water quality treatment for storm flows. The FD/WQ basin shall also incorporate wetland vegetation in a low flow channel along the bottom of the basin for the treatment of dry weather flows and small storm events.

To the extent feasible depending on the topography and grade, the FD/WQ basin will be located in areas where there is a larger depth to groundwater and more infiltrative soils. The FD/WQ basin shall be designed to have two active volumes, a low flow volume and a high flow volume. The low flow volume is designed to capture small to moderate size storms, the initial portions of larger storms, and dry weather flows. The high flow volume is

designed to store and release higher flows to maintain, to the extent possible, the pre-development runoff conditions.

2. Infiltration Basin

The second element in the combined control system shall consist of a separate downstream, shallow basin designed to infiltrate stormwater where soils have a high infiltration capacity. The infiltration basin is sized to infiltrate all the flows released from the lower volume in the FD/WQ basin; nonetheless, an overflow system would convey excess flows that may occur during very wet years to the bioinfiltration swale discussed below. Features of the proposed combined control system that shall guard against groundwater contamination include: (1) pretreatment of all runoff in a FD/WQ basin before it enters the infiltration basin, and (2) locating infiltration basins where there is at least 10 feet of separation to the groundwater.

3. Bio-infiltration Swale

The third element of the combined control system shall be a bio-infiltration swale that leads from the FD/WQ basin to the stream channel. A bio-infiltration swale is a relatively flat, shallow vegetated conveyance channel that removes pollutants through infiltration, soil adsorption, and uptake by the vegetation. In areas characterized by terrains with good infiltration capabilities, flows released from the FD/WQ basin and carried in the bio-infiltration swale will mimic pre-development conditions, in which low flows infiltrate in the soils and only high flows reach the main stem of the stream channel. In catchments where development is located on less pervious soils and therefore pre-development runoff is higher, the swale may be lined to better mimic pre-development hydrology or flows may be piped to the stream.

4. Storage Facility for Recycling Water for Non-Domestic Supply

The fourth possible element of the combined control system shall be storage of surface water flows for recycling where there is opportunity for reuse of water for irrigation, such as a golf course, residential common area, or local park. All elements of the combined flow and water quality control system shall be reviewed with the SMWD for determination of feasibility of reuse and connection to non-domestic irrigation facilities. Diversion of outflows from the FD/WQ basin to non-domestic water supply reservoirs will be conducted if feasible and cost effective.

3. Diversion Conduit to Export Flows out of the Sub-basin

The fifth possible element of the combined control system shall be the provision to export flows out of the sub-basin. This element provides an additional option that may be employed to better preserve the pre-development water balance within the sub-basin. Such diversions may be desirable where excess runoff could result in increased stormwater flows or increased base flows in sensitive streams. However, all diversions of drainage area are subject to approval by the County of Orange. The diversions would be for excess runoff only and would only be feasible for development bubbles that adjoin other sub-basins having less sensitive

stream channels, or are close to San Juan Creek or Lower Cristianitos Creek, which have characteristics that allow them to handle additional flows without causing damage to the stream channel. In some locations, such as Cañada Chiquita, it may also be feasible to divert flows to the wastewater treatment plant for reclamation.

4.6 TRANSPORTATION AND CIRCULATION

Text Changes

Page 4.6-62

Page 4.6-62 has been corrected and incorporated into the Final Program EIR as follows:

The proposed long-range transportation improvements for 2025 are depicted in Exhibits 4.6-24 and 4.6-25. The first diagram pertains to the committed circulation system and the second diagram to the committed circulation system plus the addition of the SR-241 extension. Table 4.6-26 lists the transportation improvement program proposed as mitigation for Year 2025. As the exhibits and summary table indicate, the La Pata Avenue extension is a component of the improvement program and the improvements differ depending on whether or not the SR-241 extension is assumed. Exhibits ~~3.6-26~~ 4.6-26 and ~~3.6-27~~ 4.6-27 depict the *Year 2025 + Project Buildout* ADT volumes with the proposed improvements under conditions without and with the SR-241 extension, respectively. The mitigation measures needed for the year 2010 level of project development are summarized in Table 4.6-27.

Mitigation Program Changes

Page 4.6-59 through 4.6-72

Standard Conditions and Requirements

SC 4.6-13 Prior to the approval of any subdivision map (except for financing purposes) for the Ranch Plan development within 1,000 feet of the center line of the conceptual Crown Valley Parkway alignment as shown on the current (as of the date of the Ranch Plan GPA/ZC approval) Master Plan of Arterial Highway (MPAH), between Antonio Parkway and the Foothill Transportation Corridor (FTC), the Director, Resource & Development Management Development (RDMD), County of Orange in consultation with the Manager Programming/Planning of Orange County Transportation Authority (OCTA) shall make a finding that said subdivision map does not preclude implementation of CVP as an MPAH facility.

SC 4.6-14 Prior to recordation of the first tract map (except for financing purposes) for Planning Areas 2, 3, or 5 in the Ranch Plan development, the applicant shall enter into an agreement with the Foothill/Eastern Transportation Corridor Agencies to address right-of-way, cost, phasing, implementation, and roles and responsibilities relating to all roadway connections to and/or crossings of the SR-241 extension within the Ranch Plan and/or funding/phasing/construction of other roadways (i.e., F Street) that are

needed in the event the extension of SR-241 does not occur. The agreement between the applicant and the TCA shall also be reviewed and approved by the Director/RDMD, County of Orange, for consistency with SCRIP/Development Agreement phasing/milestone objectives.

Mitigation Measures

Page 4.6-72

MM 4.6-2 The mitigation program is based on the buildout of land uses in the surrounding area and may change based on the effects of the future land development and future changes to regional transportation patterns. The intersection and freeway ramp improvements shall be implemented and/or pro-rata payment shall be made ~~in advance of the time when traffic volumes increase to the point where the improvements are merited~~ in accordance with the transportation improvement phasing plan of the SCRIP. Prior to the approval of each Master Area Plan, a traffic analysis which ~~verifies ongoing compliance with supplements~~ The Ranch Plan EIR Traffic Report (Austin-Foust Associates, Inc., May 2004) shall be submitted for review and approval to the County, Director of Planning and Development Services. The traffic study shall include:

- a. An evaluation of how any proposed refinements to the circulation system and/or milestones remain in substantial compliance with appropriate Development Agreement obligations and Program EIR mitigation measures.
- b. Average Daily Trips generated by uses proposed within the planning area, as distributed onto the surrounding circulation system (both within the Ranch Plan PC Area, and in the surrounding vicinity) including the peak hour characteristics of those trips.

Exhibit Revisions

Exhibit 4.6-2 has been corrected and is provided in this section of the Responses to Comments document.

4.7 AIR QUALITY

Mitigation Program Changes

Standard Conditions and Regulations

Page 4.7-19

SC 4.7-1 ...

- d. Water exposed surfaces at least twice a day under calm conditions. Water as often as needed on windy days when winds are less than 25 miles per day

hour or during very dry weather in order to maintain a surface crust and prevent the release of visible emissions from the construction site.

Mitigation Measures

MM 4.7-2 With the submittal of each Master Area Plan, the project applicant shall identify locations where alternative fueling facilities could be sited.

MM 4.7-3 With the submittal of each Master Area Plan, the project applicant shall identify how shade trees can be incorporated into parking lot designs (to reduce evaporative emissions from parked vehicles); where shade trees can be sited (to reduce summer cooling needs); and how shade trees would be incorporated into bicycle and pedestrian path design. Prior to the issuance of building permits, the applicant shall identify how the use of light-colored roof materials and paint to reflect heat to the extent feasible has been incorporated into the design plans.

MM 4.7-4 All construction staging areas and stockpile sites will be located as far as feasible from residential areas. This provision will apply to currently existing residential areas and to future residential developments that are completed prior to later development stages.

A vegetative buffer zone, including trees and shrubs, will be placed between grading sites and residential areas or other locations where sensitive receptors can be reasonably expected.

4.8 NOISE

Text Changes

Page 4.8-3

The fourth paragraph of page 4.8-3 has been corrected and incorporated into the Final Program EIR as follows:

The *Noise Ordinance* is part of the *County of ~~County~~ Orange Municipal Code* (Division 6, Section 4.6.1) and is enforceable throughout all unincorporated portions of the County. A project that proposes a zone change to residential uses must provide measures to ensure that existing noise sources do not violate the *Noise Ordinance* standards. The *Noise Ordinance* requirements cannot be applied to noise generated by vehicles traveling on public roadways, railroads, or aircraft. Federal and state laws preempt control of mobile noise sources on public roads. However, the County's *Noise Ordinance* can be applied to vehicles traveling on private property (e.g., parking lots or loading docks).

4.9 BIOLOGICAL RESOURCES

Text Changes

Page 4.9-9

The last sentence of the last paragraph has been revised as follows:

The reader is directed to the Baseline Geomorphic and Hydrologic Conditions report for the detailed descriptions of these studies (PCR/BALANCE/PWA 2002) (Appendix ~~G-4~~ G-8). (June 23, 2004 Errata Sheet)

Page 4.9-26

The sixth paragraph, first sentence has been revised as follows:

Sensitive species detected or with potential to occur in the study area are provided in Tables 4.9-3 and 4.9-4. (June 23, 2004 Errata Sheet)

Page 4.9-28

The third paragraph, first sentence has been revised as follows:

All Group 2 and 3 species have been included in the sensitive wildlife and plant tables (Tables 4.9-3 and 4.9-4). (June 23, 2004 Errata Sheet)

Page 4.9-28

The fourth paragraph, last sentence has been revised as follows:

These "Planning Species" are noted and discussed in Table 4.9-3 and Table 4.9-4. (June 23, 2004 Errata Sheet)

Page 4.9-36

The row in Table 4.9-4 referencing the golden-spined cereus is hereby deleted.

**TABLE 4.9-4
SENSITIVE PLANT SPECIES**

Scientific Name	Common Name	Status ¹ Federal/ State/CNPS	NCCP/HCP Planning Species	NCCP/HCP Advisors Group	Habitat Associations/Life Form/Blooming Period	Occurrence in Study Area/or General Distribution Locations Within the Southern Orange County Area
<i>Abronia villosa</i> var. <i>aurita</i>	Chaparral sand- verbena	None/None/ List 1B, 2-3-3	—	—	Chaparral, coastal sage scrub, sandy soils/annual herb/January-August.	No records in database. Known from Corona South quadrangle, but may be extirpated from Orange County.
<i>Artemisia palmeri</i>	San Diego sagewort	None/None/ List 4, 1-2-1	—	—	Chaparral, coastal sage scrub, riparian, sandy soils/shrub/May-September.	No records for Orange County.
<i>Astragalus brauntonii</i>	Braunton's milk- vetch	FE/None/ List 1B, 3-3-3	—	—	Closed-cone conifer forest, chaparral, coastal sage scrub, valley and foothill grassland, recent burns or disturbed areas/perennial herb/March-July.	No records in database. Known from Black Star Canyon and Corona South quadrangles.
<i>Atriplex coulteri</i>	Coulter's saltbush	None/None/ List 1B, 2-2-2	*	3	Coastal bluff scrub, coastal sage scrub, valley and foothill needlegrass grasslands, alkaline or clay soils/perennial herb/March-October.	Coulter's saltbush is known from three general locations in the study area totaling 3,086 individuals: Chiquita Canyon, upper Cristianitos Canyon and upper Gabino Canyon. Coulter's saltbush occurs in alkaline soils and is associated with southern tarplant in Chiquita Canyon.
<i>Atriplex pacifica</i>	South Coast saltscale	None/None/ List 1B, 3-2-2	—	3	Coastal bluff scrub, coastal sage scrub, alkali playas/annual herb/ March-October.	No records in database. Known from San Clemente, Newport Beach and Laguna Beach quadrangles.
<i>Atriplex parishii</i>	Parish's brittlescale	None/None/ List 1B, 3-3-2	—	3	Alkali swales, sinks, depressions, and grasslands with heavy clay-alkali components/annual herb/June-October.	No records in database. Known from Newport Beach and Laguna Beach quadrangles.
<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's saltscale	None/None/ List 1B, 3-2-2	—	—	Coastal bluff scrub, coastal sage scrub, alkaline soils/annual herb/April-October.	No records in database. Known from Laguna Beach, Newport Beach, Tustin, and Yorba Linda quadrangles.
<i>Berberis nevadensis</i>	Nevin's barberry	FE/SE/List 1B, 3-3-3	—	—	Chaparral, cismontane woodland, coastal sage scrub, riparian scrub, sandy or gravelly soils/shrub/March-April.	No records for Orange County.
<i>Bergerocactus emeryi</i>	Golden-spined cactus	None/None/ List 2, 2-2-4	—	—	Closed-cone conifer forest, chaparral, coastal sage scrub, sandy soils/shrub (stem succulent)/May-June.	No records for Orange County.
<i>Brodiaea filifolia</i>	Thread-leaved brodiaea	FT/SE/List 1B, 3-3-3	*	3	Coastal sage scrub, chaparral, grassland, vernal pools; heavy clay soils/perennial herb (bulbiferous)/ March-June.	Found in six general locations in the study area, excluding the translocated population at Forster Ranch: Chiquadora Ridge; Cristianitos Canyon; lower Gabino Canyon; Trampas Canyon; Talega ridgeline east of Northrup-Grumman; and just east of Trabuco Creek in the Arroyo Trabuco Golf Course project area. About 9,314 flowering stalks counted in about 30 discrete locations in the study area.

Page 4.9-75

Information regarding the Donna O'Neill Conservancy and Tijeras has been incorporated into the Final Program EIR as follows:

**TABLE 4.9-29
PERCENT OF EACH C. WEEDII SUBSPECIES WITHIN THE STUDY AREA**

Population Name	Species in Percent (%)		
	Individuals with Floral Characteristics consistent with <i>C. w. weedii</i>	Individuals with Intermediate Floral Characteristics between <i>C. w. weedii</i> and <i>C. w. intermedius</i>	Individuals with Floral Characteristics consistent with <i>C. w. intermedius</i>
Gabino	51	42	7
Upper Gabino	40	51	9
Cristianitos (north of Northrup-Grumman)	30	45	25
Cristianitos Meadows	27	30	43
<u>Donna O'Neill Conservancy</u>	<u>5</u>	<u>33</u>	<u>62</u>
Trampas	20	50	30
Color Spot Nursery	6	84	10
Verdugo	4	71	25
Chiquadora Ridge	4	75	21
Upper Gobernadora	2	75	23
<u>Tijeras</u>	<u>0</u>	<u>3</u>	<u>97</u>
Source: GLA 2004			

Page 4.9-80

Golden-spined Cereus (*Bergerocactus emoryi*)

~~Golden-spined cereus is a CNPS List 2 species. This succulent shrub occurs in San Diego County, the Channel Islands, and Baja California, Mexico. It occurs in sandy soils in coniferous forests, chaparral, and coastal scrub from 10 to 1,300 feet above msl. There are no records of this species in Orange County and this species was not observed during surveys. Therefore, golden-spined cereus is not expected to occur in the study area.~~

Page 4.9-117

The first paragraph, last sentence has been revised as follows:

For the portions of the circulation systems located *within* the planning areas, these impacts are within the developed footprint and the potential impacts are analyzed for consistency in Appendices G-2 and G-3 G-5 and G-6 as part of the Proposed Project consistency analysis. (June 23, 2004 Errata Sheet)

Page 4.9-131

Page 4.9-131 has been revised to reflect these acreages and incorporated into the Final Program EIR as follows:

“Discussion of Riparian and Wetland (Jurisdictional Areas)

State and federal jurisdictional delineations of the study area have been conducted by Glenn Lukos and Associates (GLA, 2004) (Appendix G-1). It should be noted that the delineation did not include the entire study area, but was focused on the development planning areas and their potential impacts associated with major arterials that connect the development areas. The delineation determined that the development planning areas contain 184.87 192.44 acres that are within the jurisdiction of the USACE, of which 77.87 81.98 acres are considered jurisdictional wetland...”

Page 4.9-147

The burrowing owl text has been revised and incorporated into the Final Program EIR as follows:

Discussion of Other Raptors that Nest or Potentially Nest within the Study Area—Long-Eared Owl, Burrowing Owl, Red-Shouldered Hawk, Northern Harrier, and Barn Owl

Suitable foraging and potentially suitable nesting habitat for the long-eared owl, burrowing owl, red-shouldered hawk, northern harrier, and barn owl occurs in the study area. Suitable foraging habitat and wintering habitat for the burrowing owl occurs in the study area.

Project Impacts

Impact 4.9-90: *The Proposed Project would result in significant impacts on the long-eared owl, burrowing owl, red-shouldered hawk, northern harrier, and barn owl.*

The loss of 4,572 acres (45 percent) of foraging habitat for all five species, wintering habitat for the burrowing owl, and suitable nesting habitat and three historic nest locations (12 percent) of the red-shouldered hawk, 21 nest locations (25 percent) of the long-eared owl, and 12 historic nest locations (48 percent) of the barn owl would contribute to the ongoing regional and local loss of habitat for these species. Because of the substantial amount of habitat impacted, the loss of habitat for the long-eared owl, burrowing owl, red-shouldered hawk, northern harrier, and barn owl is considered significant.

Page 4.9-165

Table 4.9-32, page 4.9-165 has been modified to correctly refer to Planning Area 6 and the correct number of thread-leaved brodiaea locations.

Impact 4.9-5: Implementation of the proposed project may result in impacts to a stock pond supporting southwestern pond turtle in the Cristianitos sub-basin (Planning Guideline 82).	Measure 4.9-4: Prior to issuance of a grading permit for Planning Area 7 <u>6</u> the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the southwestern pond turtle breeding and estivation habitat associated with the stock pond in the Cristianitos sub-basin have been substantially avoided.	Less than Significant
Impact 4.9-10: Implementation of the proposed project may result in impacts to thread-leaved brodiaea locations that contribute to protection of <i>important populations in key locations</i> in the Cristianitos sub-basin (Planning Guideline 91).	Measure 4.9-9: Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that <u>all three 10 of 13</u> locations of thread-leaved brodiaea that contribute to protection of an important population in <i>key locations</i> in the Cristianitos sub-basin are protected.	Less than Significant

Page 4.9-166

Table 4.9-32, page 4.9-166 will be modified to correctly refer to Planning Area 6 and incorporated into the Final Program EIR as follows:

Impact 4.9-6: Implementation of the proposed project may result in impacts to a stock pond supporting western spadefoot toad in the Cristianitos sub-basin (Planning Guideline 83).	Measure 4.9-5: Prior to issuance of a grading permit for Planning Area 7 <u>6</u> , the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the western spadefoot toad breeding and estivation habitat associated with the stock pond in the Cristianitos sub-basin have been substantially avoided.	Less than Significant
Impact 4.9-7: Implementation of the proposed project may result in impacts to alkali wetlands in the Cristianitos sub-basin (Planning Guideline 84).	Measure 4.9-6: Prior to issuance of a grading permit for Planning Area 7 <u>6</u> , the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the alkali wetlands in the Cristianitos sub-basin have been substantially avoided.	Less than Significant

Page 4.9-195

The following expanded explanation of the consistency of the proposed project with the SAMP Tenets is hereby incorporated into the Final Program EIR.

SAMP Tenet 1: No net loss of acreage and functions of waters of the U.S./State

The Proposed Project has been designed to protect the major terrains/hydrology functions of each sub-basin, as well as the major riparian/wetlands systems. Specifically, land uses associated with the Proposed Project (i.e., residential, commercial) avoid Chiquita, Gobernadora, San Juan, La Paz, and Talega Creeks. Impacts would occur to alkali wetlands associated with Cristianitos Creek as a result of development uses. Implementation of a golf course in the Gabino sub-basin would impact Gabino Creek. On a limited basis infrastructure such as bridge piers would result in impacts to mainstem creeks. Project Design Features 9-1, 9-2, and mitigation measure 4.9-6 are proposed to reduce these impacts to a level of less than significance. As set forth in Table 4.9-91 through implementation of PDF 9-1 - RMV Open Space the Proposed Project would conserve 1,507.4 acres of riparian communities, 63.1 acres of open water, 16.3 acres of freshwater marsh, and 19.9 acres of vernal pools. Implementation of PDF 9-2, the Adaptive Management Program would provide no net loss of function of these protected communities through management actions such as invasive species control. With regard to net acreage of waters of the U.S./State, the Proposed Project would need to provide mitigation in the form of new restoration/creation of wetlands acreage equal to the loss of wetlands and non-wetlands waters due to development, and permanent and temporary impacts associated with infrastructure. Impacts to USACE and CDFG jurisdiction are identified previously as 89.51 acres of USACE jurisdiction and 195.55 acres of CDFG jurisdiction (riparian habitat). Mitigation for these impacts is discussed conceptually in the Habitat Restoration Plan, an appendix to the AMP (Appendix J). The Habitat Restoration Plan (Appendix J-2) identifies several potential habitat creation/restoration areas including GERA, Gobernadora Canyon,

Gobernadora Canyon/Fertile Crescent, Sulphur Canyon, Chiquita Creek between the "Narrows" and the SMWD Treatment Facility, Chiquita Canyon between SMWD Treatment Facility and New Ortega Highway Cow Camp Road in addition to stream restoration opportunities within Gobernadora at the knick point, Chiquita Creek between the "narrows" and the SMWD Treatment Facility and upper Gabino Creek and invasive species control in San Juan Creek for giant reed (*Arundo donax*). Implementation of invasive species control in San Juan Creek is expected to increase functions of San Juan Creek.

SAMP Tenet 2: Maintain/restore riparian ecosystem integrity

Given its focus on protecting (as noted above) and, where feasible and beneficial, restoring each of the major canyon systems as well as mainstem creeks, the proposed project addresses this tenet. For example, as noted above, implementation of invasive species control including giant reed (*Arundo donax*) removal and bullfrog control (see Appendix J-3 of the Draft Program EIR) in San Juan Creek is expected to increase riparian ecosystem integrity by removing/controlling two invasive species of particular concern in San Juan Creek. *Arundo donax* removal is anticipated to have the following benefits: 1) a decrease in non-native biomass; 2) an increase in native species biomass through natural recovery; 3) increase in available water (e.g., *Arundo donax*) (source: http://wric.ucdavis.edu/exotic/techtran/impacts_aquatic_weeds.pdf); 4) an increase in species numbers and diversity as a result of the increase in native species biomass.

SAMP Tenet 3: Protect headwaters

Each of the headwaters areas not already urbanized is protected and/or restored. The headwaters of Chiquita Canyon are located in the Upper Chiquita Conservation area; the headwaters of San Juan Creek are located in the Cleveland National Forest, as are Verdugo, Talega and portions of La Paz Creeks. Significant enhancement/restoration is proposed for Upper Cristianitos Creek and Upper Gabino Canyon. The headwaters area of Trampas Creek is proposed for development but this area is currently significantly altered due to existing mining operations.

SAMP Tenet 4: Maintain/protect/restore riparian corridors

All major riparian corridors are protected as discussed above for tenet 1. The Proposed Project provides for riparian restoration discussed in the Habitat Restoration Plan, an appendix to the AMP (Appendix J). The Habitat Restoration Plan (Appendix J-2) identifies several potential habitat creation/restoration areas including GERA, Gobernadora Canyon, Gobernadora Canyon/Fertile Crescent, Sulphur Canyon, Chiquita Creek between the "Narrows" and the SMWD Treatment Facility, Chiquita Canyon between SMWD Treatment Facility and New Ortega Highway Cow Camp Road in addition to stream restoration opportunities within Gobernadora at the knick point, Chiquita Creek between the "narrows" and the SMWD Treatment Facility and upper Gabino Creek and invasive species control in San Juan Creek for giant reed (*Arundo donax*). In addition to identifying locations of potential restoration, the Habitat Restoration Plan also sets forth target functions, annual performance standards for 1) emergent marsh, wet meadow, and/or riparian scrub/forest creation; 2) southern coast live oak riparian forest; and 3) *Arundo donax* control in San Juan and/or Trabuco Creeks. An implementation plan is included in the Habitat Restoration Plan that identifies the necessary steps of habitat restoration including an assessment of site hydrology, assessment of restoration approach, planting techniques and conceptual plant palettes, irrigation schedule, weed control, and maintenance and monitoring.

SAMP Tenet 5: Maintain/and or/restore floodplain connection

The Proposed Project maintains all existing areas of floodplain connection. The Proposed Project is consistent with the concepts in the Habitat Restoration Plan in the AMP to restore the meander in Gobernadora Creek, thereby helping restore historic floodplain connection. Where longer-term terrains/hydrology processes are responsible for areas with existing loss of floodplain connection (e.g., Chiquita Canyon at the "Narrows" and lower Gobernadora Creek below the knick point), the Proposed Project does not propose any actions that would be contrary to such processes.

SAMP Tenet 6: Maintain and/or restore sediment sources and transport equilibrium

Consistent with the Watershed Planning Principles, the Proposed Project protects all of the significant sources of coarse sediment in order assure the continued generation of such sediments important for riparian/wetlands habitat systems and focuses development on areas generating fine sediments in order to reduce the runoff of fine sediments that can cause deleterious impacts on riparian/wetlands habitats and associated species. The Proposed Project is consistent with all or most of the vegetation restoration proposals for areas with clay soils, including Sulphur Canyon, Upper Cristianitos Canyon, and Upper Gabino Canyon. In some areas of Cristianitos Canyon and Upper Gabino Canyon, the Proposed Project would conflict with restoration recommendation contained in the Draft NCCP/HCP Planning Guidelines (e.g., the golf course in Planning Area 6 Cristianitos Meadows and the golf course/estate lots in Upper Gabino Planning Area 9); however, proposed development in these areas would result in the stabilization and/or elimination of existing sources of fine sediments. In addition, it is likely that native species can be introduced to the landscape plant palette for the proposed Planning Area 6 and Planning Area 9 golf courses, thus potentially decreasing the conflict.

SAMP Tenet 7: Maintain adequate buffer for the protection of riparian corridors

Under the Proposed Project all major riparian corridors are adequately buffered from development bubbles. Major riparian corridors within the study area can be defined as Chiquita Creek, Gobernadora Creek, San Juan Creek, Verdugo Creek, Cristianitos Creek, Gabino Creek, La Paz Creek and Talega Creek. Development in Planning Area (PA) 2 is setback a range of 50 feet minimum to over 500 feet from Chiquita Creek and above the treatment plant is focused on ridge tops away from the creek. The golf course proposed for PA 2 has a setback range of 50 feet minimum to over 200 feet from the Creek.

Development in PA 3 has a setback range of 125 to 1,000 feet from Gobernadora Creek which is confined to the western edge of the sub-basin. The Gobernadora Ecological Restoration Area (GERA) will act as a buffer between future development in PA 3 and Gobernadora Creek. A 300-foot setback from the 100-year floodplain of San Juan Creek will buffer PA 3 on the South and PA 4 on the North/west from San Juan Creek.

Verdugo Canyon, itself, would not be directly impacted by the proposed estate lots thereby protecting the Verdugo Creek riparian corridor and its associated coarse sediments.

Cristianitos Creek will be buffered through the implementation of minimization measures which call for a minimum setback of 200 feet from the creek and an average setback of 500 feet.

Middle Gabino Creek is protected. Development in Southern PA-7 has a setback range from Lower Gabino Creek of 450 to 1,000 feet, the elevation difference is 35 to 170 feet. The golf course starts in middle Gabino sub-basin, but is predominantly located in Upper Gabino sub-basin adjacent to Gabino Creek which has a less developed riparian corridor in this location.

Four estate lots are proposed for the La Paz sub-basin and at the minimum are 40 feet in elevation above the creek and have a 850-foot setback from the creek; these lot setbacks would protect the La Paz Creek riparian corridor.

Development in the Talega sub-basin is centered on the current Northrop Grumman test site above the Talega Creek riparian corridor. On the southwestern edge of PA-8 to the southern middle of PA-8, the setback range for development is 750 to 1,150 feet to the creek and up to 220 feet above the creek. From the southern middle of PA-8 to the southeastern edge of PA-8, the setback range for development is 750 to 3,150 feet from the creek with an elevation range of 220 to 500 feet above the creek.

SAMP Tenet 8: Protect riparian areas and associated habitats of listed and sensitive species

As reviewed above for Reserve Design Tenet 1, riparian areas associated with listed species and Planning Species would be protected. Specifically, the Proposed Project would conserve 1,507.4 acres of riparian communities, 63.1 acres of open water, 16.3 acres of freshwater marsh and 19.9 acres of vernal pools (Table 4.9-91, Draft Program EIR 589). Regarding listed species and Planning Species associated with aquatic/riparian habitats, namely, arroyo toad, least Bell's vireo, southwestern willow flycatcher, Cooper's hawk, tricolored blackbird, white-tailed kite, yellow warbler, yellow-breasted chat, western spadefoot toad and southwestern pond turtle, the Proposed Project would protect these species (as set forth in the following table) within the RMV Open Space (Table 4.9-36, Draft Program EIR 589).

<u>Arroyo Toad</u>	<u>100 percent of breeding locations comprising <i>major and important populations</i> in key locations in San Juan Creek, Bell Canyon, lower Gabino Creek, lower Cristianitos Creek and Talega Creek would be conserved, as well as the majority of adjacent upland habitats. In the San Mateo Creek Watershed the minimum elevation differential between development and breeding locations would be 80 feet. Along San Juan Creek, development would be offset by at least 300 feet south of the floodplain and an average of about 300 feet north of the floodplain.</u>
<u>Least Bell's Vireo</u>	<u>Twenty-nine of 30 breeding locations (97 percent) and approximately 466 acres (88 percent) of southern willow scrub/arroyo willow riparian forest would be conserved on RMV. The single <i>important population</i> on RMV in GERA would be conserved.</u>
<u>Southwestern Willow Flycatcher</u>	<u>Six of six breeding locations and approximately 466 acres (88 percent) of southern willow scrub/arroyo willow riparian forest would be conserved on RMV. The single identified <i>important population</i> on RMV in GERA would be conserved.</u>
<u>Cooper's Hawk</u>	<u>Nineteen historic nest locations (83 percent) and 1,958 acres (78 percent) of suitable habitat (riparian, woodlands, and forest) would be conserved on RMV. No major/important populations identified, but breeding and foraging habitat within the major drainages on RMV would be conserved, including Talega, Cristianitos, Gabino, La Paz, San Juan, Chiquita, Gobernadora, and Verdugo.</u>

<u>Tricolored Blackbird</u>	<u>Approximately 50 percent of the historic nesting colony areas would be conserved. In particular, grassland habitat in the valley bottom of Lower Gobernadora on RMV property would be conserved to support a breeding population. In combination with the existing breeding ponds in south Coto de Caza, this area supports an important population/key location. Potential breeding/ foraging areas also would be conserved south of a ranch residence south of Ortega Highway. Potential breeding/foraging areas that would be affected by development include the Narrows area of Chiquita Canyon, the "Riverside Cement" colony in Lower Cristianitos and Lower Gabino canyons, and at the mouth of Verdugo Canyon.</u>
<u>White-tailed Kite</u>	<u>Thirteen historic nest locations (93 percent) and 1,958 acres (78 percent) of riparian and woodland habitats would be conserved on RMV. In particular, nesting and foraging habitat would be conserved in GERA, Central San Juan Creek, Lower Cristianitos Creek, middle and lower Gabino Canyon, La Paz Canyon, and Talega Canyon.</u>
<u>Yellow Warbler</u>	<u>Seventeen locations (100 percent) and 1,581 acres (84 percent) of riparian habitat would be conserved on RMV. All three of the important populations on RMV would be conserved. Scattered locations in Lower Gobernadora and Chiquita canyons also would be conserved.</u>
<u>Yellow-breasted Chat</u>	<u>Sixty-six locations (88 percent) and 1,581 acres (84 percent) of riparian habitat would be conserved on RMV. All four of the important populations on RMV would be conserved. Scattered locations in Middle Chiquita, Verdugo, Lower Gabino, and La Paz canyons also would be conserved.</u>
<u>Western Spadefoot Toad</u>	<u>Thirteen locations (87 percent) and all of three important populations on RMV (Radio Tower Road, Upper Cristianitos, and Lower Gabino Creek) would be conserved, assuming that golf course design in Upper Cristianitos would avoid the stock pond and adjacent upland habitat. A portion of the fourth important population along San Juan Creek would be conserved. All conserved breeding locations would have at least a 650-ft upland buffer zone from proposed development to support all life stages.</u>
<u>Southwestern Pond Turtle</u>	<u>Six of eight locations would be conserved, including important populations/key locations in riparian and aquatic habitats along San Juan Creek, the stock pond and other wetlands in Upper Cristianitos, and Jerome's Lake in Upper Gabino in Upper Cristianitos and potentially in Upper Gabino at Jerome's Lake. Proposed golf courses in these two areas would preserve or create water features that would provide suitable habitat. Locations in San Juan Creek and the adjacent floodplain providing nesting/estivation habitat would also be conserved. Setbacks of at least 328 feet from breeding ponds containing suitable upland habitat with southern exposures would provide for nesting and overwintering sites. Habitat connectivity between the San Juan Creek and San Mateo Creek watersheds would be maintained to allow dispersal.</u>
<u>Source: Dudek, 2004.</u>	

Page 4.9-229

Table 4.9-43 shall be revised and incorporated into the Final Program EIR as follows:

TABLE 4.9-43

Impact 4.9-90: The Proposed Project would result in significant impacts on the long-eared owl, burrowing owl, red-shouldered hawk, northern harrier, and barn owl through habitat loss.	<p>A total of 5,531 acres (55%) of <u>wintering, nesting, and foraging habitat</u> (grassland, agricultural, riparian, woodlands and forest), three historic nest locations (78%) of the long eared owl, 22 historic nest locations (88%) of the red-shouldered hawk, and 13 historic nest locations (52%) of the barn owl would be conserved <u>collectively for these species</u> through implementation of PDF 9-1.</p> <p><u>To minimize indirect impacts to these species during construction of the proposed project, Mitigation Measure 4.9-30 shall be implemented which will include the preparation and implementation of a Biological Resources Construction Plan (BRCP) that provides for the protection of these resource and establishment of monitoring requirements.</u></p>	Refer to the prior summary discussion and Appendix G-7 for a detailed discussion of how the Conservation Strategy (PDFS 9-1 and 9-2) contributes to the mitigation of significant impacts and helps maintain and enhance net habitat value of resources protected through the creation and adaptive management of the RMV Open Space. In particular refer to Annual and Native Grasslands Vegetation Community—Goals, Objectives, Potential Stressors and Management, Enhancement and Restoration Actions.	Less than Significant
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Page 4.9-253

The second paragraph has been revised as follows:

The following species have has a critical habitat designations that are is in effect over portions of RMV lands. These This in-effect designation are is illustrated on Exhibit 4.9-23:

- California gnatcatcher
- San-Diego fairy shrimp (June 23, 2004 Errata Sheet)

Mitigation Program Changes

Project Design Features

Page 4.9-160

PDF 4.9-2: ~~PDF-2 Formulation and Funding of a Comprehensive Long-Term AMP~~

~~Appendix J contains the proposed RMV Open Space AMP applicable to the RMV Open Space to be dedicated for habitat protection purposes subject to certain ongoing ranching activities. The AMP establishes three broad land management goals as the foundation for the AMP for the RMV Open Space:~~

- ~~1. Ensure the persistence of a native dominated vegetation mosaic in the RMV Open Space.~~

~~2. Restore or enhance the quality of degraded vegetation communities and other habitat types.~~

~~3. Maintain and restore biotic and abiotic natural processes, at all identified scales for the RMV Open Space.~~

Formulation and Funding of a Comprehensive Long-Term AMP

Upon dedication of land to the RMV Open Space in accordance with the terms of the open space agreement described in PDF 9-1, the project applicant shall implement the Adaptive Management Plan contained in Appendix J on the RMV Open Space, including the following sub-plans:

- Plant Species, Translocation, Propagation and Management Plan,
- Habitat Restoration Plan,
- Invasive Species Control Plan,
- Grazing Management Plan, and
- Wildland Fire Management Plan.

Appendix J identified three broad goals for the AMP, each of which is related to the objective of maintaining, and where feasible, increasing net habitat value of the RMV Open Space over the long-term:

Mitigation Measures

Page 4.9-166

MM 4.9-9: Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that 10 of 13 locations of thread-leaved brodiaea that contribute to protection of an *important population in key locations* in the Cristianitos sub-basin are protected.

Page 4.9-173

MM 4.9-22 Prior to issuance of a grading permit for construction of Cristianitos Road from Planning Area 5 to Planning Area 2 and New Ortega Highway Cow Camp Road, the applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the design for Cristianitos Road and New Ortega Highway Cow Camp Road includes the following features to facilitate wildlife movement:

- The bridge shall have minimum height dimensions of 20 feet.
- Chain link fencing of 10 feet in height shall be installed on the north and south approaches to the bridge culvert for a distance of 100 feet to deter wildlife from accessing the roadway.
- ~~If required for public health and safety, a~~ All lighting on the bridge, ~~if required for public health and safety,~~ shall be shielded to prevent spill-over effects.

Page 4.9-173

MM 4.9-23: Prior to issuance of a grading permit for widening of Cristianitos Road, the applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the design for Cristianitos Road includes the following features to facilitate wildlife movement:

- Culverts shall be constructed at the crossing of Gabino Creek and Cristianitos Creek.
- Culverts shall have minimum dimensions of 15 x 15 feet.
- The bottom of the culverts shall be natural substrate.
- Light shall be visible from one end of the culverts to the other.
- Vegetation installed at either end of the culverts shall be native-low growing species to prevent predator-prey stalking.
- Chain link fencing of 10 feet in height shall be installed on the north and south approaches to the culverts for a distance of 100 feet to deter wildlife from accessing the roadway.
- All lighting on the road above the culverts, if required for public health and safety, shall be shielded to prevent spillover effects.

Page 4.9-241

MM 4.9-32 Prior to the issuance of grading permits for the proposed golf course in Cristianitos sub-basin, the County's Director of Planning Services or his/her designee shall verify that the landscape plans for the golf course include native habitats ~~including native grassland~~ which could contribute to the restoration of grasslands in the sub-basin. A minimum of 60 acres of native habitats shall be included in the landscape plans.

Page 4.9-251

MM 4.9-27 All plants identified by the California Exotic Pest Plant Council as an invasive risk in southern California shall be prohibited from development and fuel management zones adjacent to the RMV Open Space. The plant palette for fuel management zones adjacent to the RMV Open Space shall be limited to those species listed on the Orange County Fire Authority Fuel Modification Plant List. Plants native to Rancho Mission Viejo shall be given preference in the plant palette.

Prior to issuance of fuel modification plan approvals, the County of Orange shall verify that: 1) plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California are not included in plans for fuel management zones adjacent to the RMV Open Space and, 2) the plant palette for fuel management zones adjacent to RMV Open Space is limited to

those species listed on the Orange County Fire Authority Fuel Modification Plant List.

Prior to the recordation of a map for a tract adjacent to the RMV Open Space, the County of Orange shall verify that the CC&Rs contain language prohibiting the planting of plants identified by the California Exotic Pest Plant Council as an invasive risk in southern California in private landscaped areas.

MM 4.9-41 Prior to the issuance of a grading permit for Planning Area 6, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the 12 gnatcatcher locations and adequate habitat are protected.

MM 4.9-42 The project applicant shall obtain Section 404, 1600, and federal and state Endangered Species Act permits, as applicable.

4.10 AESTHETICS AND VISUAL RESOURCES

Text Changes

Pages 4.10-6

Information related to the direction of the view cone for View 3, Intersection of Ortega Highway at Antonio Parkway has been corrected and incorporated into the Final Program EIR as follows:

Exhibit 4.10-5 shows the proposed development area in Planning Area 1, looking ~~west east~~ and ~~northwest southeast~~, at the ~~southeast northwest~~ corner of the existing intersection of Ortega Highway at Antonio Parkway. The Planned Community of Ladera Ranch is in the background....

Pages 4.10-7 and 4.10-8

Starting at the bottom of page 4.10-7 and continuing to the next page as been revised as follows:

Effect: A portion of the proposed residential development area located ~~on~~ in the ~~ridgeline valley~~ directly south of the viewpoint and Tesoro High School would be visible from this vantage point. The exhibit conceptually depicts the type of ~~large lot, low-density~~ multi-family residential development that would be permitted in Planning Area 2....

View 6: Tesoro High School, Southeast Corner...

Effect: Proposed Planning Area 2 ~~low-density~~ multi-family residential and golf course development would be implemented directly south of the viewpoint and would be visible from this vantage point, including a portion of Planning Area 2's ~~low-density~~ development to be located on the ridgeline... Chiquita Canyon Road would not be visible from this vantage point because it would be obscured by ~~large lot, low-density~~ multi-family residential development in the foreground. Although implementation of development would result in a land use change from open space to residential and golf course development, its proximity to existing urban land uses

and the low density of development would not result in significant aesthetic impacts that are considered to substantially degrade the visual quality of the area. (June 23, 2004 Errata Sheet)

Exhibit Revisions

Exhibit 4.10-5 has been revised and incorporated into this section of the Responses to Comments document.

4.11 CULTURAL AND PALEONTOLOGICAL RESOURCES

Text Changes

Page 4.11-23

Paleontological Resources

According to the records and literature search, there is no record of any vertebrate localities within the project area; however, many significant vertebrate localities have been discovered within the same formations just outside the survey area.

The project site is underlain by 12 different sedimentary rock units which range in age from Late Cretaceous to Holocene. These units include the Trabuco, Ladd, Williams, Silverado, Santiago, Sespe, Topanga, San Onofre Breccia, Monterey, Capistrano, and Quaternary alluvium and colluvium. ~~Exhibit 4.11-1~~ 4.11-2 depicts the relative sensitivity of these formations within the Ranch Plan project site. A summary of each rock unit specific to the project site follows:

Mitigation Program Changes

Mitigation Measures

Page 4.11-33

MM 4.11-2 Based on the mitigation standards set forth in the California Environmental Act (CEQA) Guidelines §15126.4(b) and Public Resources Code §21083.2, prior to the approval of any Area Plan for ~~Planning Areas 7 and 9~~, as the applicable planning areas, the applicant shall provide the County of Orange with evidence regarding the determination of eligibility of prehistoric sites CA-ORA-535, -753, -754, -1134, -1136, -1137, -1138, and -1552, and historic sites 30-176631, -176633, -176634, and -176635. Should a site(s) be deemed ineligible for listing on the National Register of Historic Places (NRHP) or California Register of Historic Places (CRHR), no further mitigation is required. Should a site(s) be deemed eligible, the County of Orange standard conditions and requirements and subsequent Mitigation Measure 4.11-3 shall apply.

3.12 RECREATION

None

4.13 MINERAL RESOURCES

None

4.14 HAZARDS AND HAZARDOUS MATERIALS

Text Changes

Page 4.14-24

Paragraph three under Impacts on page 4.14-24 has been revised and incorporated into the Final Program EIR as follows:

"Natural vegetation would be reduced in the planning areas where development is proposed. Development areas with natural brush that could fuel a wildland fire would be removed as part of the grading for the project. Additionally, ~~within the development area, a 110-foot fuel modification zone would be provided, subject to OCFA review and approval a~~ fuel modification zone will be provided on wildland interface areas. This would reduce the impact of wildland fires on developed areas and provide a defensible space for urban interface areas.

Mitigation Program Changes

Mitigation Measures

Page 4.14-21

MM 4.14-11 ~~Prior to issuance of a grading permit for~~ In conjunction with the Master Area Plan for Planning Area 8 the applicant shall contact the Army Corps of Engineers Formerly Used Defense Sites coordinator to determine if areas within the development area were used by the military as firing ranges. For any sites identified, plus the two areas within Planning Area 8 previously used for pistol ranges, the applicant or leaseholder shall provide verification of soil sampling and testing prior to issuance of a grading permit for those locations. If significant contamination is encountered, the results of the testing/investigation, etc. will be provided to OCHCA, or other appropriate agency, for direction and oversight (this may be the water board) that spent ammunition have been removed and soils tested to assess residual lead and copper concentrations. Soil with residual lead or copper concentrations exceeding US EPA's PRGs shall be removed from the property and disposed of at an appropriate facility.

4.15 PUBLIC SERVICES AND FACILITIES

Fire Protection

Text Changes

Page 4.15-1

The fourth paragraph, second sentence has been revised as follow:

Exhibit ~~4.5-4~~ 3-20 depicts the locations of the proposed, fire stations. (June 23, 2004 Errata Sheet)

Page 4.15-5

"In accordance with the NFPA Fire Protection Handbook, the OCFA requires that residences 5,500 square feet and larger be constructed with residential fire sprinkler systems. This requirement is based upon the demonstrated historical effectiveness of fire sprinkler systems within residences. Because low-density and estate development within Planning Areas 7 and 9, respectively, would be anticipated to be at least 5,500 square feet, ~~residential fire sprinklers systems would be required~~ such development will be built to Special Fire Protection Area standards."

Page 4.15-9

"Through the implementation of the Secured Fire Protection Agreement ~~or Ranch Plan Fire Protection Program and the Special Fire Protection Area standards, and use of residential fire sprinklers the impacts associated with compliance with adopted performance standards~~ (Impacts 4.15-1 through 4.15-3) ~~would~~ may be reduced. The Secured Fire Protection Agreement requires that provisions for meeting OCFA performance objectives be met; however, until the Agreement is fully negotiated, it is uncertain if the impacts can be reduced to a level of less than significant. Therefore, as a measure of caution, impacts associated with provision of service to low density development in the northern portion of Planning Area 2, the eastern portion of Planning Area 7 and the estates in Planning Area 9, performance objectives may not be achievable. This would be considered a significant, unavoidable impact.

Mitigation Program Changes

Project Design Features

Page 4.15-8

PDF 4.15-2 Roadways, with the exception of Verdugo Road and other local access roads in Planning Area 9, will be designed in conformance with the Orange County Standard Plans. This is supplemented with Mitigation Measure 4.15-2. Applicants may request alternative roadway designs as an Alternate Means and Methods, including roadways within Planning Area 9.

Mitigation Measures

Page 4.15-9

MM 4.15-1 The Ranch Plan Fire Protection Program shall be approved prior to the approval of the first Master Area Plan. The Ranch Plan project shall conform to the Orange County Fire Authority (OCFA) Special Fire Protection Area (SFPA) Guidelines and exclusions shall be applied to the project by application on a subarea basis in conformance with the Ranch Plan Fire Protection Program. The project applicant shall participate in, and maintain, an approved OCFA Wildland Management Plan for all wildland interface areas and designed open spaces. Prior to approval of the first subdivision Subarea Plan, except for Planning Area 1, the developer shall enter into a Secured Fire Protection Agreement with OCFA for the provision of necessary facilities, apparatus, and fire and rescue supplies and equipment for the Ranch Plan. This comprehensive plan will address fire and emergency medical service delivery within the project site, and will specify the timeframes and trigger points for initiation of services within the project by geographic area. The Secured Fire Protection Agreement shall ensure that OCFA fire protection and emergency medical performance objectives can be achieved for the Ranch Plan area. The applicant will ensure that development is phased in a matter that allows the maximum use of existing fire protection resources before new resources are required to be established.

~~**MM 4.15-3** Prior to approval of the first Master Area Plan, applicant shall gain Orange County Fire Authority (OCFA) approval of a Ranch Plan Fire Protection Program, per the requirements of Section II.D, including a Planned Community-wide Fuel Modification Plan. If adaptive management tools (grazing, prescribed fires, etc.) for controlling the growth of vegetation surrounding Ranch Plan development are not successful and vegetation transitions from Fuel Model 2 (FM2) to Fuel Model 4 (FM4), as classified by the BEHAVE Fire Behavior Fuel Modeling System, the OCFA may choose a total Fuel Modification zone width based on the BEHAVE model anticipated flame lengths plus 20 feet for defensible space.~~

MM 4.15-3 Prior to approval of the first Master Area Plan, applicant shall gain Orange County Fire Authority (OCFA) approval of a Ranch Plan Fire Protection Program, per the requirements of Section II.D, including a Planned Community-wide Fuel Modification Plan. If adaptive management tools (grazing, prescribed fires, etc.) for controlling the growth of vegetation surrounding Ranch Plan development are not successful and vegetation transitions from Fuel Model 2 (FM2) to Fuel Model 4 (FM4), as classified by the BEHAVE Fire Behavior Fuel Modeling System, the OCFA may choose a total Fuel Modification zone width based on the BEHAVE model anticipated flame lengths plus 20-feet for defensible space.

Energy Resources

Text Changes

Page 4.15-14

The page 4.15-14 of the Final Program EIR is hereby modified to read as follows:

Because the Ranch Plan project site is mostly undeveloped, there is only one on-site SDG&E electrical transmission facility: a single-circuit 138 kilovolt (kV) transmission line that runs generally north-northwest to south-southeast across the project site.

Page 4.15-15

The last sentence in the second to the last paragraph on page 4.15-15 is hereby modified to read as follows (modification is underlined):

This typical coordination ensures that the nature, design, and timing of electrical system improvements are adequate to serve the project and remain in compliance with among other regulations. California energy conservation requirements as specified in California Administrative Code Title 24/25.

Page 4.15-16

The final sentence of first paragraph under the heading "Impacts to Natural Gas Service" is modified to read as follows:

"The project site is within the service area of an existing provider."

Mitigation Program Changes

Project Design Features

Page 4.15-18

PDF 4.15-5 Unless otherwise waived by the Director, PDS, or determined not to be feasible by SDG&E, all permanent electric transmission lines less than 66 kV shall be subsurface within those portions of the Ranch Plan approved for development.

Water Resources

Text Changes

Page 4.15-21

Table 4.15-5 on page 4.15-21 was incorrectly titled. The correct title for the table is *SMWD Bonding Capacity*.

Page 4.15-26

The first bullet point on page 4.15-26 has been modified as follows:

- **Cucamonga County Water District.** On March 25, 2003, SMWD and Cucamonga County Water District (CCWD) entered into an exclusive three-year option agreement which, when exercised, would enable SMWD to enter into a water supply contract with CCWD for at least 25 years for the purchase and delivery of 4,250 AF of water each year over the term of the contract. The option and water supply contracts are specifically directed, and exclusive, to augmenting water supply reliability for the Ranch Plan. The effect of calling this water, in the event of MWD supply shortfalls, will be to enable the delivery of the amount of water necessary to meet the Ranch Plan demands during such shortfalls. The 4,250 acre-feet of water which has been secured under the CCWD agreements will provide at least 44% redundancy to the Ranch Plan's projected year 2025 domestic water demand of 9,586 9,528 acre-feet during multiple-dry year conditions.

Schools

Text Changes

Page 4.15-40

Page 4.15-40 is hereby revised and incorporated into the Final Program EIR to read as follows:

Elementary school sites are anticipated to be located in Planning Areas 2, 3, ~~7~~, and 8. Planning Area 3 would likely require two elementary schools. Each elementary school would be built on approximately 12 acres and would accommodate approximately 750 ~~700~~ children.

Page 4.15-40

Table 4.15-15 has been updated based on new information provided to the County by the Capistrano Unified School District. This information has been incorporated into the Final Program EIR as follows:

**TABLE 4.15-15
ESTIMATED STUDENT GENERATION**

Type of School	Number of Proposed Non-Senior Dwelling Units	Student Generation Factor	Potential Number of Students Generated
Elementary School	8,000	0.328 <u>0.358</u>	2,624 <u>2,864</u>
Middle School	8,000	0.110 <u>0.134</u>	880 <u>1,072</u>
High School	8,000	0.098 <u>0.127</u>	784 <u>1,012</u>
Total			4,288 <u>4,948</u>
Source: Capistrano Unified School District, 2004.			

Mitigation Program Changes

Project Design Feature

Page 4.15-41

- PDF 4.15-8 The project description provides for the incorporation of school sites into the land use plan. The project design assumes up to five elementary school sites, one middle school site, and a potential high school site, if deemed necessary by CUSD. The precise number, location and combination of elementary and joint elementary and middle school would be determined in consultation with CUSD.

Mitigation Measures

Page 4.15-42

- MM 4.15-5 Prior to issuance of any 500th residential building permit, excluding senior housing, the applicant shall enter into an agreement with CUSD regarding the development of future facilities and payment of costs. The agreement shall, at a minimum, provide for the payment of fees pursuant to California Government Code Section 65995. If fees are paid, the amount of fees to be paid will be determined based on the established State formula for determining construction costs. Applicable fees shall be paid prior to the issuance of each building permit.

Petroleum Lines

Mitigation Program Changes

Mitigation Measures

Page 4.15-47

- MM 4.15-6 Prior to recordation of final tract maps where the relocation of the Santa Fe Pipeline is required, except for financing purposes, the project applicant shall coordinate with the pipeline owner, Kinder-Morgan, to ensure that no notable disruptions to the fuel pipeline that extends through the project site would occur as a result of project implementation. Should an alignment for the SR-241 alignment be selected at the time of recordation of the final tract maps, the relocation will not place the pipeline within the right-of-way for the SR-241 extension, nor preclude the relocation of any portion of the pipeline currently within the right-of-way for the SR-241 alignment.

5.0 ALTERNATIVES TO THE PROPOSED PROJECT

Text Changes

Note: All references to the Williamson Act are no longer applicable.

Pages 5-18 and 5-19

Data from Table 5.4-2, pages 5-18 and 5-19 were inadvertently omitted from the last column (Alternative B-4 Reduced). From the top to bottom of this column, the data for Alternative B-4 Reduced is as follows: (June 23, 2004 Errata Sheet)

Biological Resources

Substantial adverse effect on Federal or State agency listed threatened or endangered species from habitat modification.	Less
Substantial adverse effect on species Identified as candidates for listing, sensitive, rare, or special status plant or animal species in local/regional plans, policies, or regulations, or by the CDFG or USFWS	Less
Substantial adverse effect on riparian habitat or sensitive natural community	Less
Substantial adverse effect on State or Federal-protected wetlands	Less
Interfere substantially with native resident movement or migratory or wildlife movement, or wildlife corridors	Similar
Conflict with San Juan Creek Watershed/ Western San Mateo Creek Watershed SAMP/MSAA Planning Principles	Similar for Consistency/ Less for AMP Implementation
Conflict with Southern Subregion NCCP/HCP Guidelines.	Greater for Consistency

Page 5-19

For the Alternative B-9, the text has been revised for the question regarding whether the alternative conflicts with the San Juan Creek Watershed/Western San Mateo Creek Watershed SAMP/MSAA Planning Principles. The revised response is as follows:

~~Less~~ Greater Consistency/Less for AMP Implementation (June 23, 2004 Errata Sheet)

Page 5-19

For the Alternative B-11, the text has been revised for the question regarding whether the alternative conflicts with the San Juan Creek Watershed/Western San Mateo Creek Watershed SAMP/MSAA Planning Principles. The revised response is as follows:

~~Greater~~ Less Consistency (June 23, 2004 Errata Sheet)

Page 5-25

For the B-11 Alternative, the text has been revised for the question regarding whether the alternative would significantly impact schools. The revised response is as follows:

Same Greater/Mitigated (June 23, 2004 Errata Sheet)

Page 5-57

The typographical error in the third paragraph of page 5-57 has been corrected. Other citations in the Draft Program EIR noting that the B-10 Alternative would result in significant unavoidable aesthetic impacts are correct.

Aesthetics and Visual Resources

Visual changes to the project site associated with the implementation of the B-10 Alternative are expected to be similar to the proposed project. This alternative would retain approximately 15,132 acres of the 22,815-acre site in permanent open space and wilderness park open space. The most significant change between the proposed project and this alternative would be the expansion of Planning Area 4 and the creation of a wilderness park in the northeastern portion of the Ranch Plan project area (i.e., within a portion of the area assumed as a part of the proposed project's Planning Area 9). This alternative would not result in any significant unavoidable aesthetic impacts or and night lighting impacts.

6.0 GROWTH-INDUCING IMPACTS

Page 6-3

The last paragraph on page 6-3 has been revised to read as follows:

For northern San Diego County, the Sub-Regional Areas (SRAs) near the proposed project area are 43 – Pendleton, 55 – Fallbrook, and 42 – Oceanside. SRA 43 is located in northwestern San Diego County, and encompasses MCB Camp Pendleton. MCB Camp Pendleton covers ~~over 250,000~~ 125,000 acres and includes 17.5 miles of shoreline. It is the largest undeveloped portion of coastal area left in Southern California....

Page 6-4

The second sentence in the third paragraph on page 6-4 is hereby revised and incorporated into the Final Program EIR as follows:

SRAs 43 and 55 have a large amount of vacant land. However, MCB Camp Pendleton encompasses all of SRA 43, so development opportunities are exceptionally limited, ~~and the area is projected to add only 15 housing units between 2000 and 2030, and only two jobs during that same period.~~ Camp Pendleton is projected to add anywhere from 300 to 2,500 housing units between 2000 and 2030. A total of 276 additional housing units have been added to the Base's inventory since 2000. The number of future jobs will likely be a function of the next Base Realignment and Closure Commission findings in 2005. Additionally, the portion of SRA 55 nearest the project site contains the Cleveland National Forest, where development is also restricted...

7.0 CUMULATIVE IMPACTS

Text Changes

Page 7-9

The following changes are made regarding the SR-241 Northbound Widening and incorporated into the Final Program EIR as follows:

"This initial phase of development required a Nationwide Section 404 permit and Section 1600 Agreement for improvements at stream crossings. Pursuant to the permits issued for the initial phase, the impacts associated with the project were mitigated through the restoration and development of wetland habitat and payment of fees for impacts to coastal sage scrub habitat. Mitigation for the current widening phase includes restoration and preservation only."

Page 7-10

To clarify, the following changes are made and incorporated into the Final Program EIR as follows:

...(SOCTIIP). The purpose of the SOCTIIP is to relieve congestion on I-5.

Page 7-11

To clarify, the following changes are made and incorporated into the Final Program EIR as follows:

...property along I-5. This project would not be funded or constructed by the TCA as TCA does not have jurisdiction over I-5 or responsibility to build such an alternative should it be selected.

Page 7-11

To clarify, the following changes are made and incorporated into the Final Program EIR as follows:

The following summarizes potential impacts of the various SOCTIIP alternatives. A brief summary of the types of mitigation for each impact is also discussed. Specific mitigation is dependant upon the alternative selected. For a full discussion of the mitigation proposed for each SOCTIIP alternative refer to the SOCTIIP Draft EIS/EIR.

- Air Quality: Each of the build alternatives would result in significant hydrocarbon (HC), carbon monoxide (CO), nitrogen oxide (NO_x), and fine particulate matter (PM₁₀) air quality impacts during construction. Similarly, each of the build alternatives would result in significant CO and NO_x impacts during operations. The no build alternatives would not result in significant air quality impacts. Mitigation measures related to air quality include emission and dust control per SCAQMD Rule 403, street sweeping, vehicle washing, and control of construction emissions.

- **Biological Resources:** Each of the build alternatives would result in significant unavoidable impacts to wildlife and vegetation as well as threatened and endangered species. Biological impacts are fully addressed in Section 7.4 of this EIR. The SOCTIIP Draft EIS/EIR includes 11 mitigation measures relating to wetlands and waters of the U.S. including such measures as acquiring the services of a project biologist to oversee biological monitoring, regulatory compliance, and restoration activities and implementation of a Biological Resources Management A further 40 mitigation measures related to Wildlife, Fisheries and Vegetation are described in the Draft EIS/EIR including ratios for preservation or restoration of native plant communities, avoidance and translocation of sensitive plant species, installation of fencing, low-light features adjacent to native habitats, pre-construction surveys for specified species and procedures for establishment of Environmentally Sensitive Areas. Twenty-nine mitigation measures are proposed for threatened and endangered species including species-specific management plans, focused plant survey and avoidance, and minimization measures for construction activities.
- **Farmland:** By converting farmland to non-agricultural use and conflicting with the Williamson Act, each of the six toll road alternatives would result in significant impacts to farmland as would the arterial improvements only (AIO) alternative. Neither the I-5 alternative nor either of the two no build alternatives would significantly impact farmland. Mitigation for farmland impacts includes the realignment of ranch access roads on the Ranch Plan project site, relocation of any corrals and/or windmills, all weather access for Marine Corps Base (MCB) Camp Pendleton agriculture operations, and pre-construction notification.
- **Aesthetics:** All the SOCTIIP alternatives, except the No Build Alternative, would result in significant aesthetic impacts by altering the visual quality of the area. The I-5 alternative, arterial improvements only, and those SR-241 alternatives that connect with I-5 in the vicinity of Avenida Pico would result in impacts to the existing urban environment by removing buildings and landscaping. The level of impact and nature of the impact would be different than the impacts associated with the construction of SR-241 through undeveloped areas. The toll road alternatives would result in substantial amounts of grading, removal of vegetation, and construction of an urban component in areas that are currently undeveloped. This would change the visual character and setting of the area. Mitigation for visual impacts includes preparation of design guidelines for aesthetics and landscaping, lighting per Caltrans, County, or Orange or location jurisdiction standards and restrictions on the illumination outside of right-of-way.
- **Cultural Resources:** Each of the build alternatives would have potentially significant adverse impacts on cultural resources. Because of the extensive amount of earth-moving activities that would be required for the construction, all of the build alternatives, including the AIO alternative, could result in potentially significant adverse impacts to archeological resources. Similarly, disturbance of historic resources is possible with the I-5 and SR-241 alternatives. Mitigation in the form of pre-construction surveys, salvage of paleontological and historical resources, data recovery of archeological resources, monitoring during construction of all cultural resources, and recordation of historic resources is proposed in the SOCTIIP EIS/EIR.
- **Hydrology and Drainage:** The CC and A7C-ALPV alternatives would result in significant adverse impacts due to encroachment of roadway elements on the Cañada Chiquita floodplain. With incorporation of project design features, none of the other alternatives would have significant hydrology and drainage impacts. No mitigation is proposed for

hydrology and drainage due to the incorporation of the PDFs that address the identified impacts.

- **Noise:** Implementation of the mitigation measures identified in the SOCTIIP EIS/SEIR would reduce construction-related impacts for each of the build alternatives except I-5 to a level considered less than significant. The I-5 alternative would include nighttime demolition along I-5 and, therefore, result in significant noise impacts. All the long-term significant adverse noise impacts associated with the SOCTIIP build alternatives could be reduced to below a level of significance with implementation of the mitigation measures discussed in the SOCTIIP EIS/SEIR. However, if mitigation is not implemented at any location, there would be a significant adverse noise impact at that location. Mitigation measures related to noise impacts include such measures as compliance with local noise ordinances, maintenance and muffling of construction equipment, designation of approved haul routes, detailed noise and sound barrier analysis, and subsequent implementation of same.
- **Land Use:** By requiring the temporary use of land to accommodate construction-related activities, conflicting with adopted land use plans, and dividing existing communities, each of the SOCTIIP build alternatives would result in significant unavoidable adverse impacts with respect to land use. Mitigation for land use include design refinements to avoid or minimize impacts to existing land uses and relocating the Capistrano Test Site gate and access road.
- **Socioeconomic Impact:** None of the SOCTIIP alternatives would result in adverse impacts related to Environmental Justice. However, the CC, A7C-ALPV, and I-5 alternatives would result in unavoidable adverse impacts related to socioeconomics by displacing residential and/or commercial uses and inducing growth. Mitigation related to socioeconomics include avoidance or minimization of temporary occupancy or permanent acquisition of property, compensation, and replacement of affordable housing units in San Clemente.
- **Recreation:** Each of the SOCTIIP would result in adverse impacts on one or more existing and/or planned recreation resources which cannot be mitigated to below a level of significance due to the fact that they would result visual, air quality, transportation, or noise impacts that could reduce individuals' enjoyment of recreation facilities. In addition, the FEC-M, FEC-W, CC, A7C-FEC-M, and I-5 alternatives would result in the acquisition of recreation lands. Mitigation measures related to recreation include such measures as refining the road design to avoid or minimize impacts related to construction and permanent acquisition of land used for recreation, consultation with affected property owners, and provide for existing and planned bikeways and riding/hiking trails.
- **Military Impacts:** Three SOCTIIP alternatives (FEC-W, FEC-M and A7C-FEC-M) would result in significant unavoidable impacts on military operations on MCB Camp Pendleton. This alignment traverses San Onofre State Beach, which is leased from the Department of the Navy. The roadway would sever this acreage from the remainder of the base, which could result in limitations on the future effectiveness of those acres for military training operations. Mitigation measures related to military uses include such measures as FAA approved aircraft construction lights, identification and use of approved access routes, implementation of security measures, and design of two underpasses for military use.

- Water Quality: The SOCTIIP Alternatives, with the exception of the No Build Alternative, would have the potential of having water quality impacts associated with pollutants in runoff from the roadway. However, current regulations require that the water be treated prior to release into downstream waters. Therefore, potentially significant short-term adverse impacts to water quality would be mitigated to below a level of significance. Six mitigation measures related to water quality are described in the Draft EIS/EIR including preserving vegetation on site as feasible, implementation, operation and maintenance of construction Best Management Practices, and implementation of a Storm Water Pollution Prevention Plan.

Page 7-47

The description of the City of Lake Forest Opportunities Study has been updated to read as follows:

The Opportunities Study includes a General Plan Amendment and Re-Zone of approximately 900 acres of vacant lands in the City of Lake Forest in the vicinity of the former Marine Corps Air Station El Toro. The General Plan Amendment would change the allowed land uses from industrial and commercial land uses to residential and mixed-uses. The vacant lands currently have approximately seven million square feet of approved industrial and commercial development rights. The number of residences considered in the General Plan Amendment and Re-Zone range between 5,394 and 6,617. Approximately 40 to 70 acres of neighborhood parks, 45 acres of community sports park, community/civic center and 500,000 to 650,000 square feet of commercial development could also be permitted as a result of the project.

Page 7-50

- Upper Chiquita Site--Located in a side canyon on the west side of Chiquita Canyon, north of Oso Parkway, this site would include a conventional earthfill dam and reservoir. The reservoir would have a HWL of 820 feet and an estimated capacity of 860 acre-feet. This site is outside of the Ranch Plan boundaries. The proposed reservoir is located within the Upper Chiquita Canyon Conservation Area over which the TCA owns a conservation easement."

Page 7-55

- ~~The project would result in the early removal of 1,856 acres from the existing Williamson Act contract and the associated Agricultural Preserve. This would be a significant unavoidable impact. (Impact 4.2-2)~~

Page 7-56

First paragraph:

Although some of the impacts listed above have been anticipated and are consistent with respective jurisdictional planning efforts, the implementation of the Ranch Plan and the above cumulative projects contribute to the cumulative loss of Important Farmland. The Ranch Plan would thus have project specific impacts and contribute to cumulative significant impacts on agricultural resources. ~~There are no other projects that involve a cancellation of a Williamson Act contract; therefore, the project would not contribute to a cumulative impact associated with the Agricultural Preserve.~~

Page 7-61

SOCTIIP

As described previously, the TCA, Caltrans, ~~and FHWA~~, EPA, USFWS, and ACOE are evaluating the SOCTIIP. At this time, the SOCTIIP is currently undergoing NEPA/CEQA review. The SOCTIIP EIS/EIR evaluates ~~eight-six~~ build alternatives and two no build alternatives. According to the recently released Draft EIS/EIR, Section 5.3.9 Cumulative Impacts Related to Biological Resources, the TCA and FHWA reviewed the cumulative impacts resulting from the SOCTIIP alternatives as well as an earlier iteration of the Proposed Project and the B-8 alternative. According to the Draft SOCTIIP EIS/EIR the FEC-M, FEC-W and A7C-FEC-M alternatives would result in the greatest fragmentation effects of the alternatives examined and would result in cumulative adverse impacts. Tables 7.4-1 through 7.4-4 (excerpted from the SOCTIIP DEIS/SEIR) sets forth the impacts by vegetation and species for these alternative alignments.

Page 7-72

To clarify, the following changes have been made to Table 7.4-6 and incorporated into the Final Program EIR as follows:

A7C-FEC-M

Riverside Fairy Shrimp: No direct impacts to Riverside Fairy Shrimp will occur from this alignment; however, grading possibility would affect vernal pool hydrology on Radio Tower Road mesa.

San Diego Fairy Shrimp: No direct impacts to San Diego Fairy Shrimp will occur from this alignment; however, grading possibility would affect vernal pool hydrology on Radio Tower Road mesa.

Page 7-75

To clarify, the following changes are made to Table 7.4-7 and are incorporated into the Final Program EIR as follows:

FEC-M Alternative

The FEC-M alternative would result in impacts to 49.0 acres of USACE jurisdiction based on the landscape level analysis U.S. Army Corps Engineer Research and Development Center (2003) and CDFG jurisdiction.

FEC-W Alternative

The FEC-W alternative would result in impacts to 38.7 acres of USACE jurisdiction based on the landscape level analysis U.S. Army Corps Engineer Research and Development Center (2003) and CDFG jurisdiction.

A7C-FEC-M

The A7C-FEC-M alternative would result in impacts to 42.9 acres of USACE jurisdiction based on the landscape level analysis U.S. Army Corps Engineer Research and Development Center (2003) and CDFG jurisdiction.

Page 7-86

To clarify, the following changes are made to Table 7.4-10 and incorporated into the Final Program EIR as follows:

Upper Chiquita Site

...However, provisions for this facility in this location were made at the time the USFWS issued the Section 7 Biological Opinion for the FTCN-Oso Section which provided for a 24-acre reservoir.

Exhibit Revisions

Exhibit 7.3-7 is hereby corrected and included in Section 4 of the Responses to Comments document.

8.0 PERSONS AND ORGANIZATIONS CONSULTED

Section 8, List of Preparers, of the Final Program EIR is hereby revised to read as follows (modifications are underlined):

San Diego Gas and Electric/Southern California Edison

Land Planning

Environmental Specialist..... Christopher P. Terzich

9.0 LIST OF REFERENCES

None

10.0 GLOSSARY OF TERMS

None

VOLUME II (June 23, 2004 Errata Sheet)

Exhibit 4.9-9c. The thread-leaved brodiaea major population should have a hatched pattern on the exhibit identifying the major population as a *key location*.

Exhibit 4.12-2, the legend of the exhibit has transposed information. On the legend, the "Dedicated Not Constructed" trails should be represented with a dot pattern. The "Proposed Trail Alignment" should be represented with a dashed pattern.

APPENDIX J (June 23, 2004 Errata Sheet)

Table 1-4 on page 43. A word processing conversion error resulted in dot marks (•) shown as question marks.

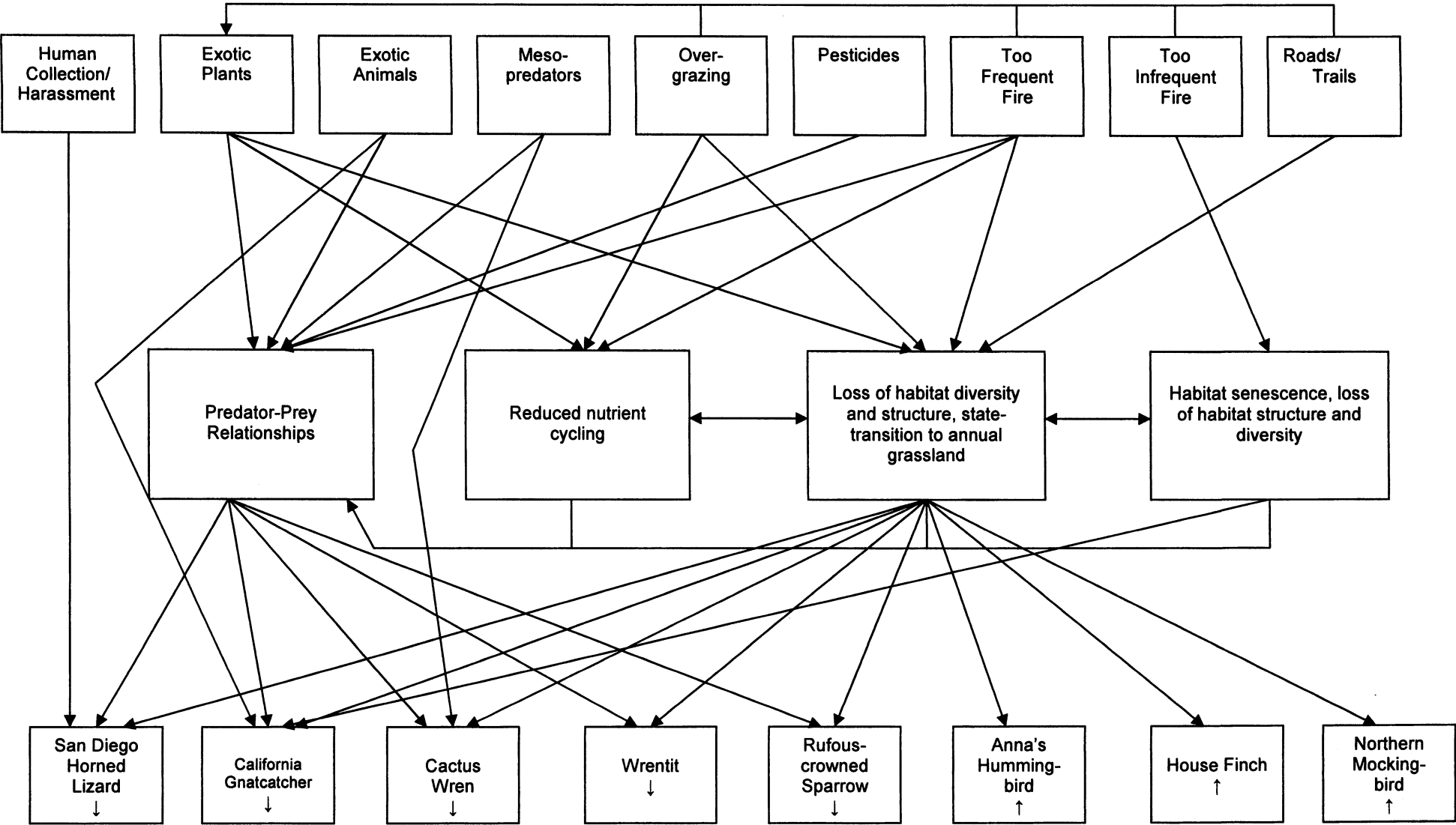
Table 1-6 on page 59. A word processing conversion error resulted in dot marks (•) shown as question marks.

Figure 2. The following data was inadvertently omitted from the bottom box in the figure. The data is: Evaluation and Feedback.

Figure 8. The data is inadvertently omitted from the figure. A revised figure follows this errata.

Figure 9. The following data was inadvertently omitted from the data in the first box on the left in the figure. The data is: Human Collection/Harassment.

Figure 8. COASTAL SAGE SCRUB FOCAL SPECIES STRESSOR MODEL



APPENDIX M BIOLOGICAL RESOURCES ALTERNATIVES ANALYSIS

Page M-90

SRP Tenet 5: Reserves should be biologically diverse

Table M-13 shows the amount and percentage of the major vegetation communities protected by the B-5, both in the overall B-5 open space and broken down by watersheds. Overall, the B-5 protects the large majority of the major vegetation communities. Protection ranges from a low of 72 percent for grassland to a high of 87 percent for chaparral. Other than grassland, the lowest overall conservation percentage of the major vegetation communities is 80 percent for woodland and forest. Because the B-5 Alternative focuses development in the San Juan Watershed, there is a bias toward protection of the major vegetation communities in the San Mateo Watershed compared to the Proposed Project, B-6 and B-9 alternatives. For example, 82 percent of the coastal sage scrub in the San Juan Watershed is protected compared to 99 percent in the San Mateo Watershed. In contrast, for Proposed Project the protection percentages are 87 percent for San Juan and 82 percent for San Mateo. The largest discrepancy in protection between watersheds is grassland, with 60 percent protection in the "Other Watersheds" (primarily the San Clemente Hydrological Area), 67 percent protection in the San Juan Watershed, and 98 percent protection in the San Mateo Watershed; a reflection of the extensive development in Chiquita Canyon (PA 2). As with the other alternatives, the protection of major vegetation communities in the San Clemente and Aliso Hydrological areas is substantially less than the San Juan and San Mateo watersheds, reflecting the existing urban character of these smaller watersheds.

Table M-14 compares the representation of the major vegetation communities in the B-5 Alternative with their representation in the planning area as a whole. For example, coastal sage scrub accounts for 40 percent of the total of the five major vegetation communities in the planning area and 42 percent of the total in the B-5 open space; i.e., coastal sage scrub is "over-represented" by 2 percent in the B-5 open space in relation to its occurrence in the planning area. Likewise, grassland is "under-represented" in the B-5 open space by three percent compared to the planning area. With maximum ranges of only -3 percent for grassland and +2 percent for coastal sage scrub, overall the five major vegetation communities are adequately represented in the B-5 Alternative in relation to their occurrence in the planning area.

The same comparison was applied to watersheds, with similar results. The maximum deviations from the planning area are grassland at three percent under-represented in the San Juan Watershed and over-represented by two percent in the San Mateo Watershed. Woodland and forest and riparian show almost no bias between the watersheds, with a maximum 1 percent over-representation of riparian in the San Mateo Watershed. Overall, the B-5 provides a balanced representation of the existing distribution of the major vegetation communities in the different watersheds.

Table M-15 compares the elevational distribution of the major vegetation communities in the planning area and the B-5 open space. As with the proposed project, the protection percentages increase with elevation for all the major vegetation communities. A comparison of the "% Within Vegetation Community" columns for the planning area and B-5 open space shows that the elevational distributions of the vegetation communities in the B-5 open space generally track the existing distributions in the planning area, but with a slight bias toward under-representations of the upland vegetation communities at less than 800 feet. For

example, coastal sage scrub is under-represented by six percent under 800 feet and over-represented by five percent above 800 feet. Chaparral, grassland and woodland and forest show similar elevational biases. The protection of riparian vegetation shows no elevational bias. Compared with other alternatives, the B-5 open space has the greatest under-representation of grassland at the lowest elevation range (<400 ft), with six percent less in the open space (21 percent) at less than 400 feet compared to existing conditions (27 percent). This is a result of impacts to grasslands in Chiquita Canyon and no impacts to grasslands in Cristianitos Canyon. This relative difference also is demonstrated in Table M-13, showing a -4 percent representation of grassland in the San Juan Watershed and a +7 percent representation in the San Mateo Watershed.

Page M-120

Revised table M-19, including percentages is provided below.

**TABLE M-19
ELEVATIONS OF VEGETATION COMMUNITIES PROTECTED BY THE
B-6 ALTERNATIVE OPEN SPACE AND ALREADY PROTECTED OPEN
SPACE COMPARED TO PLANNING AREA**

Vegetation Community	Elevation Range (ft.)	Planning Area		B-6 Alternative		
		Planning Area Acres ¹	% Within Vegetation Community	Open Space Acres (% of Total)	% Within Vegetation Community	% Deviation from Planning Area
Coastal Sage Scrub	0-400	1,414	7%	887 (63%)	5%	-2%
	401-800	9,825	50%	8,050 (82%)	47%	-3%
	801-1,200	6,562	33%	6,145 (94%)	36%	+3%
	>1,200	1,923	10%	1,875 (97%)	11%	+1%
Total		19,724		16,957 (86%)		
Chaparral	0-400	166	2%	99 (60%)	2%	0%
	401-800	4,640	63%	3,853 (83%)	60%	-3%
	801-1,200	2,010	27%	1,946 (97%)	30%	+3%
	>1,200	518	7%	514 (99%)	8%	+1%
Total		7,334		6,412 (87%)		
Grassland	0-400	4,005	27%	2,174 (54%)	22%	-5%
	401-800	8,121	54%	5,609 (69%)	56%	+2%
	801-1,200	2,551	17%	1,900 (74%)	19%	+2%
	>1,200	299	2%	287 (96%)	3%	+1%
Total		14,976		9,970 (66%)		
Woodland & Forest	0-400	174	10%	95 (54%)	6%	-4%
	401-800	1,005	55%	776 (77%)	53%	-2%
	801-1,200	509	28%	468 (92%)	32%	+4%
	>1,200	135	7%	135 (100%)	9%	+2%
Total		1,823		1,474 (81%)		
Riparian	0-400	1,289	25%	1,043 (81%)	24%	-1%
	401-800	3,088	59%	2,575 (83%)	59%	0%
	801-1,200	730	14%	656 (90%)	15%	+1%
	>1,200	106	2%	104 (98%)	2%	0%
Total		5,213		4,378 (84%)		

1. Acreages exclude Existing Use areas.
Source: Dudek 2004

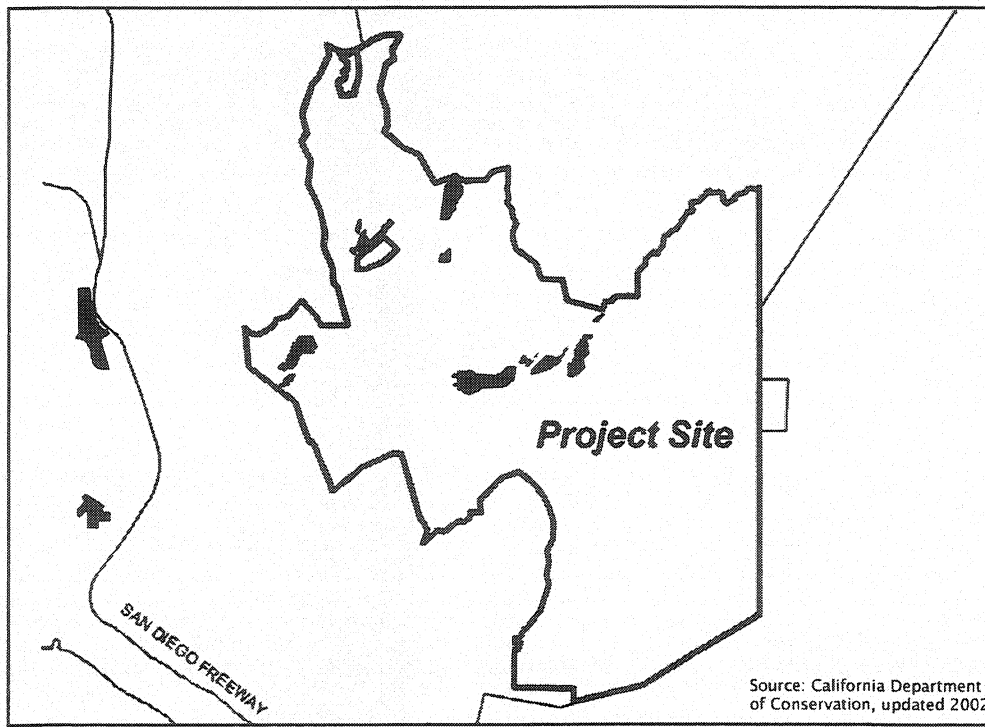
Page M-194

Formatting errors in Table M-29 have been corrected and included in the Final Program EIR as follows.

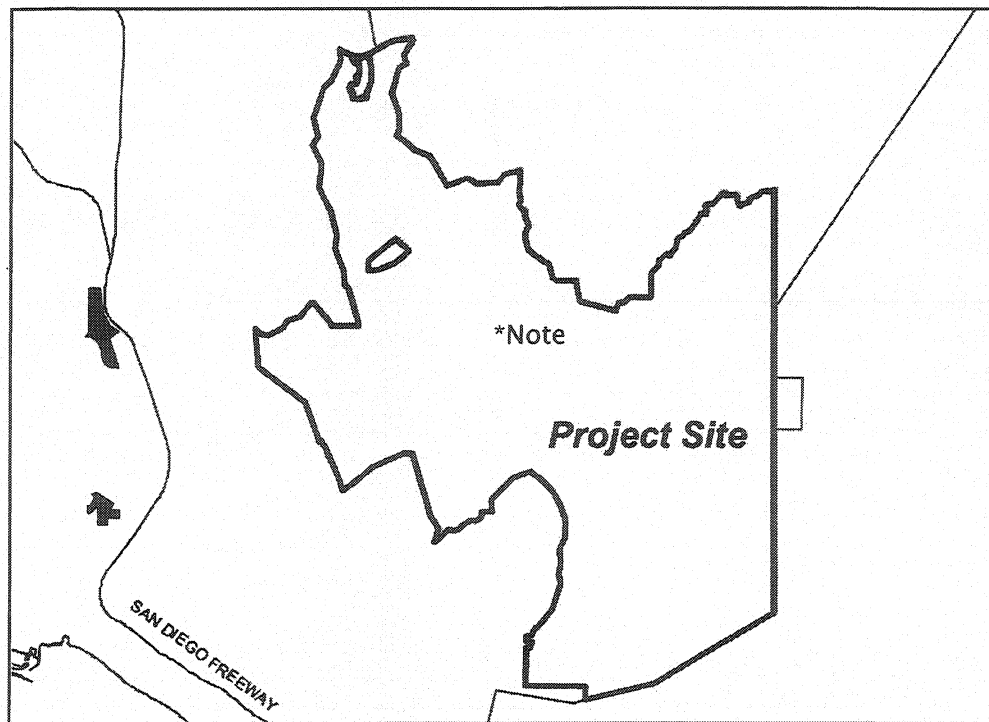
**TABLE M-29
OVERALL PROTECTION OF MAJOR VEGETATION COMMUNITIES IN THE
B-10 OPEN SPACE WITHIN WATERSHEDS**

Vegetation Community	Planning Area		B-10 Alternative		
	Planning Area Acres ¹	% of Vegetation Community	Open space Acres (% of total)	% of Vegetation Community	% Deviation from Planning Area
Coastal Sage Scrub	19,724		16,610 (84%)		
San Juan Creek	15,056	76%	12,682 (84%)	76%	0%
San Mateo Creek	3,772	19%	3,335 (88%)	20%	+1%
Other Watersheds ²	896	5%	593 (66%)	4%	-1%
Chaparral	7,333		6,131 (84%)		
San Juan Creek	4,219	58%	3,217 (76%)	52%	-6%
San Mateo Creek	2,748	37%	2,626 (95%)	43%	+6%
Other Watersheds	366	5%	288 (79%)	5%	0%
Grassland	14,979		10,031 (67%)		
San Juan Creek	8,215	55%	5,574 (68%)	56%	+1%
San Mateo Creek	3,093	21%	2,228 (72%)	22%	+1%
Other Watersheds	3,671	24%	2,229 (61%)	22%	-2%
Woodland & Forest	1,824		1,513 (83%)		
San Juan Creek	1,537	84%	1,286 (85%)	85%	+1%
San Mateo Creek	257	14%	209 (81%)	14%	-%
Other Watersheds	30	2%	18 (60%)	1%	-1%
Riparian	5,213		4,348 (83%)		
San Juan Creek	3,967	76%	3,285 (83%)	75%	-1%
San Mateo Creek	1,024	20%	946 (92%)	22%	+2%
Other Watersheds	222	4%	117 (53%)	3%	-1%


¹ Acreages exclude Existing Use areas.
² Other Watersheds include the San Clemente and Aliso Hydrological Areas



Existing General Plan Figure VI-1



Proposed General Plan Figure VI-I.

 Prime Farmland (Generalized)

Note: The scale of mapping does not allow the depiction of remaining residual areas of prime farmland.

Existing and Proposed Modifications to County Prime Farmland Map

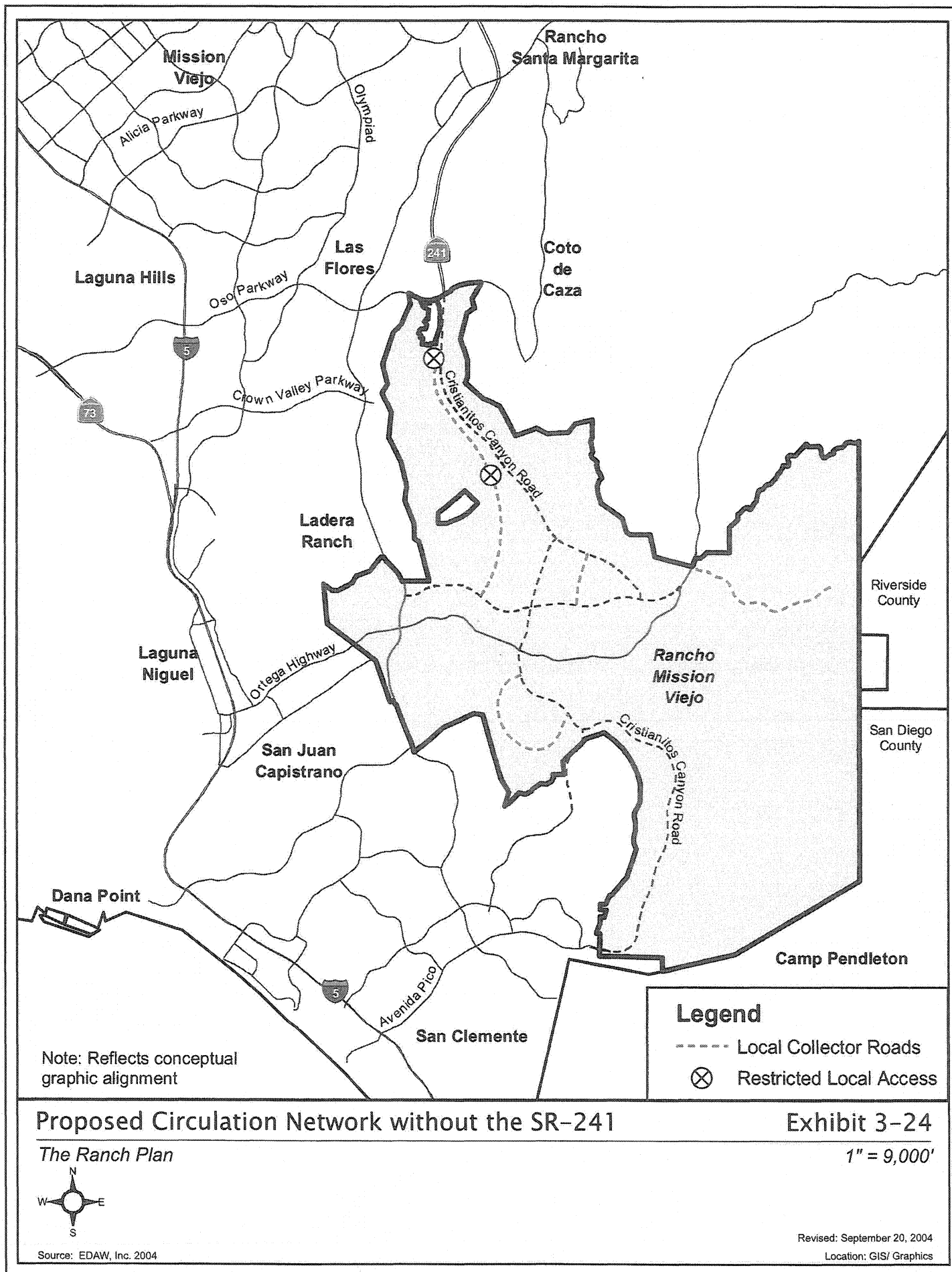
Exhibit 3-11

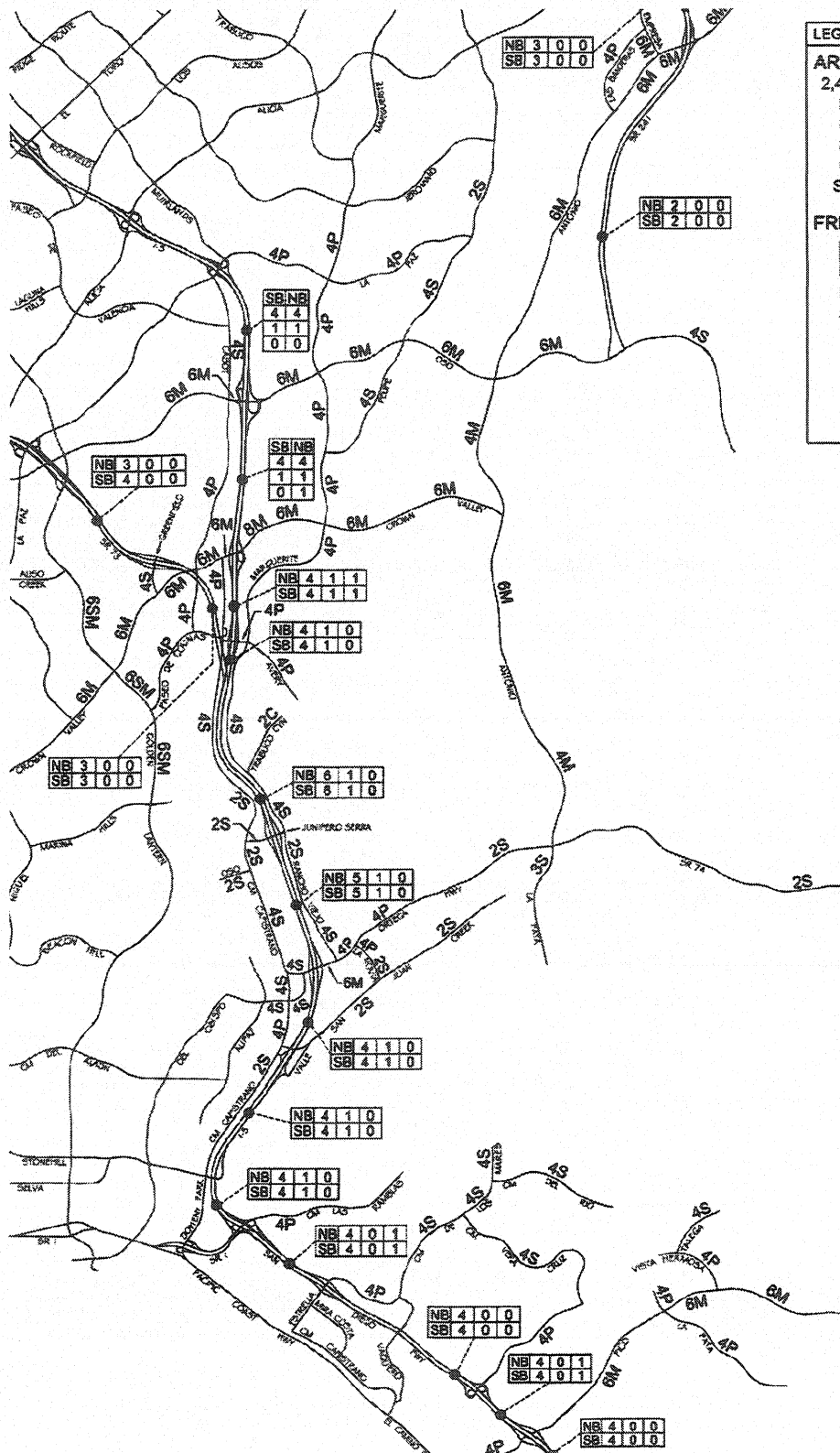
The Ranch Plan



Source: EDAW, Inc. 2003

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LEGEND	
ARTERIAL ROADS	
2,4,6,8	Number of Lanes (Two-Way)
M	Major Arterial
P	Primary Arterial
S	Secondary Arterial
C	Collector/Commuter Road
SM	Smart Street
FREEWAYS/TOLLWAYS	
NB	X Y Z
SB	X Y Z
NB: Northbound	
SB: Southbound	
X: Number of Mixed-Flow (General Purpose) Lanes	
Y: Number of High Occupancy Vehicle (HOV) Lanes	
Z: Number of Auxiliary Lanes	

Existing Circulation System

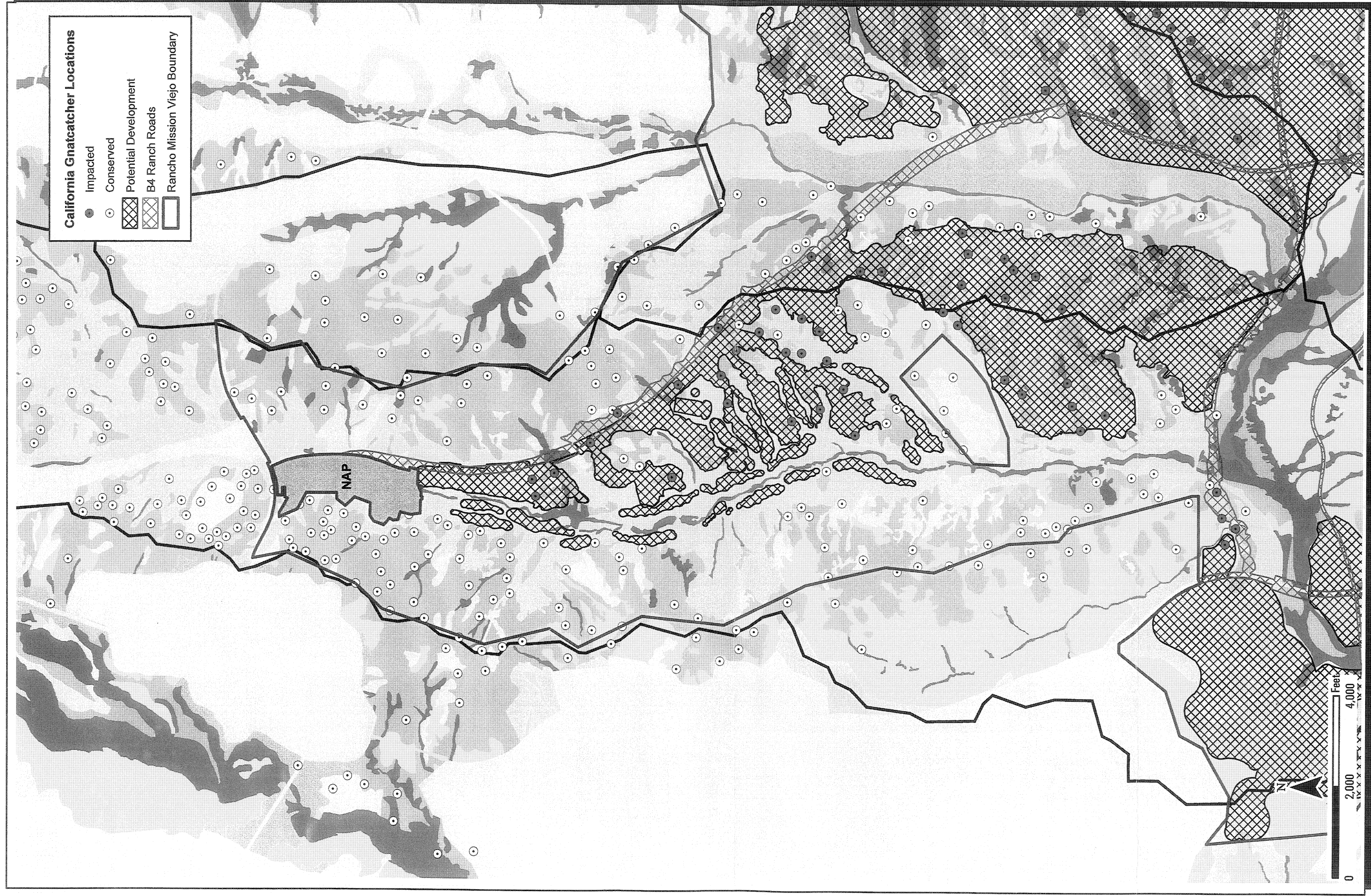
Exhibit 4.6-2

The Ranch Plan



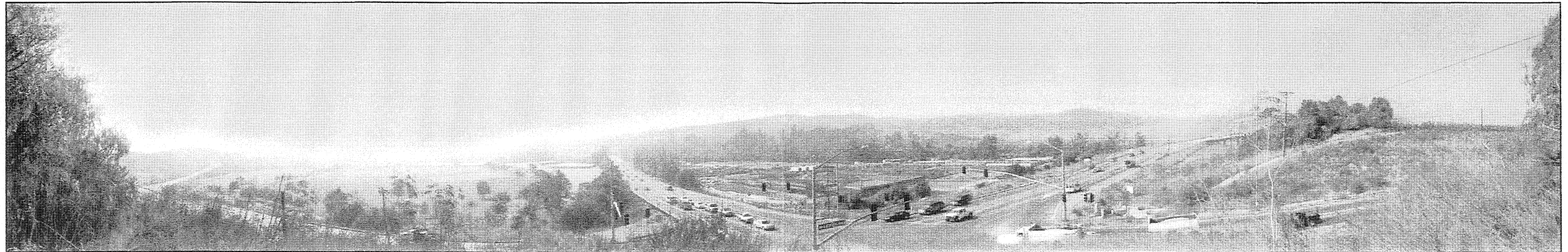
Source: Austin-Foust Associates, Inc.

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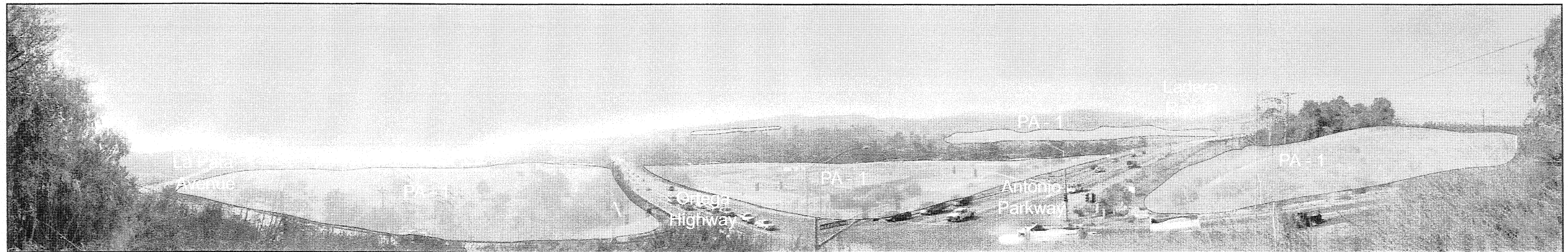


California Gnatcatcher Protection within Chiquita Canyon Major Population

Exhibit 4.9-13

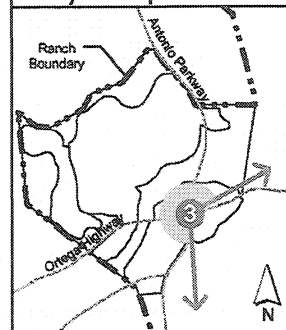


Existing




Proposed

Key Map



Legend

 Proposed Development Footprint

Viewshed Analysis

The Ranch Plan

Source: EDAW Inc.

Proposed Development footprint(s) show development horizontal areas only. Vertical development heights and finished elevations are not generally depicted, unless specifically designated in the view.

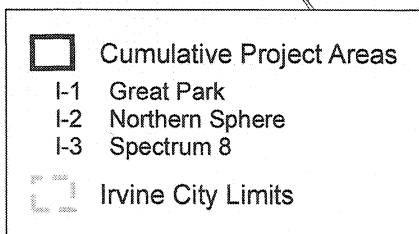
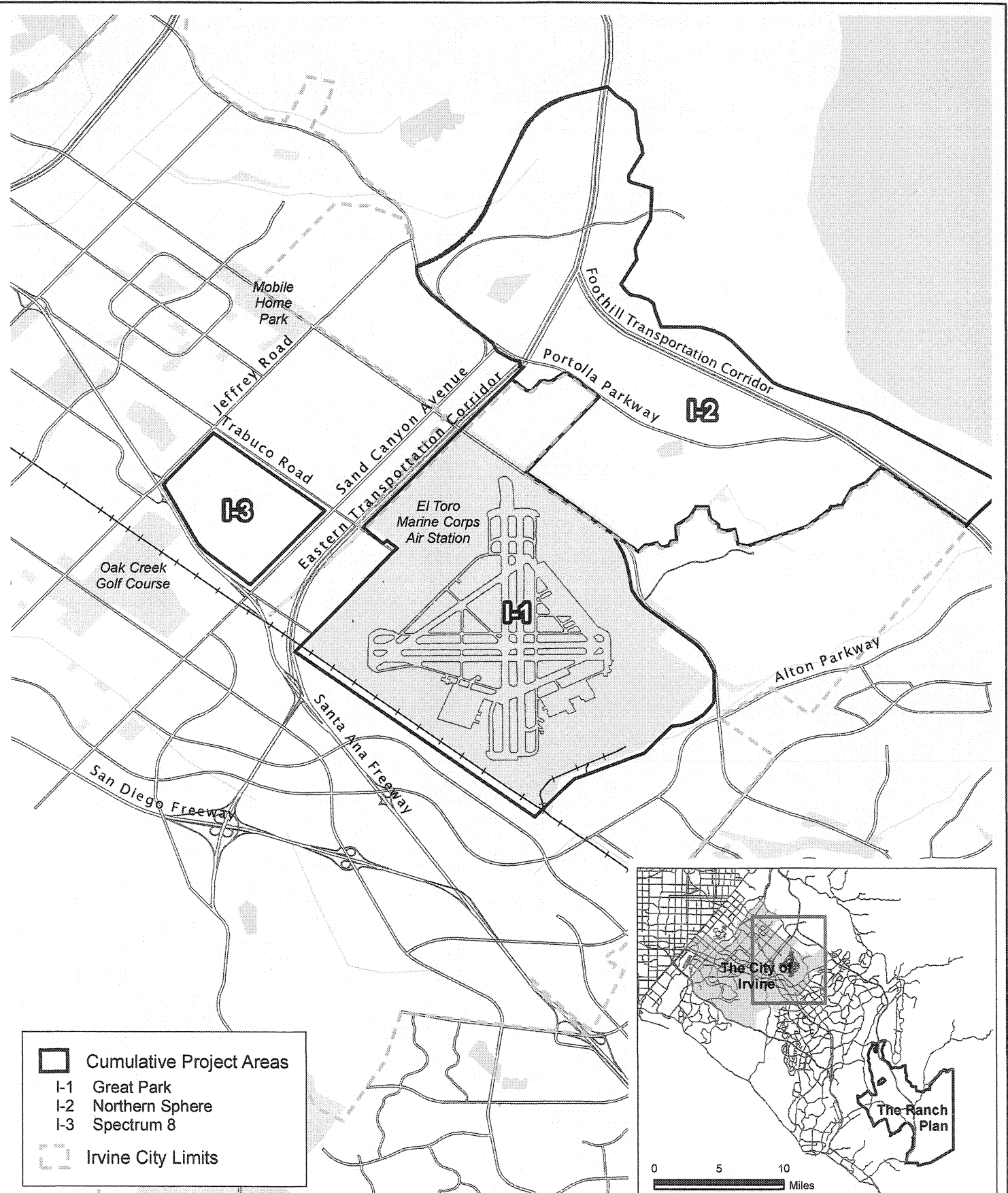
Exhibit 4.10-5

View 3:

Ortega Highway and Antonio Parkway

View Southeast Over PA-1

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City of Irvine Cumulative Projects

The Ranch Plan

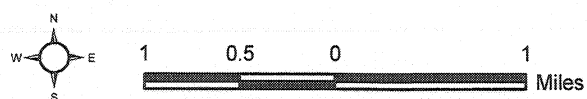


Exhibit 7.3-7

Bonterra
CONSULTING

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SECTION 5.0 PROPOSED COUNTY PREFERRED ALTERNATIVE

5.1 OVERVIEW OF THE PROPOSED COUNTY PREFERRED ALTERNATIVE – APPLICABLE CEQA GUIDELINES AND ISSUES ADDRESSED.

Due to the significance of the coordinated planning process for the implementation of all of the elements of the Proposed Project and the role of the NCCP Guidelines and SAMP Principles in defining CEQA impact assessment and mitigation criteria, the ability of the Proposed Project to formulate and implement a feasible Conservation Strategy is a central consideration in determining whether the Proposed Project can be approved with feasible avoidance, minimization and mitigation measures or whether an Alternative should be selected. As indicated in CEQA Guidelines 15126.6(a):

“An EIR shall describe a range of reasonable alternatives to the project . . . which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives” (*emphasis added*).

Section 5 of the Draft Program EIR reviews “Alternatives to the Proposed Project.” Appendix “M” of the Draft Program EIR applies the same sub-basin and landscape scale NCCP Guidelines and SAMP Principles analysis to the alternatives, at the same level of detail, as is applied to the Proposed Project in Section 4.9 of the Draft Program EIR. As indicated in CEQA Guidelines Section 15126.6 (b), “the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly” (*emphasis added*)

The Draft Program EIR identifies a number of potential impacts on species and habitat linkage/wildlife movement areas, which require additional avoidance, minimization and/or mitigation actions beyond those included in the Proposed Project. Further, the Wildlife Agencies have provided comments questioning whether the RMV Open Space is configured in such a manner as to be consistent with the NCCP Conservation Guidelines. The agencies’ comments regarding the lands that are proposed to be managed as RMV Open Space/habitat reserve lands address, among others, the following major issues:

- (1) The adequacy of the proposed RMV Open Space for purposes of protecting certain NCCP/SAMP “planning species;”
- (2) The characterization of the Proposed Project as locating development in every sub basin and the alleged failure to use adjacent open space areas effectively for enhancing the areas proposed for conservation in the plan; and
- (3) The potential for proposed development to fragment habitat/open space areas and thereby create wildlife movement constraints and edge effects.

CEQA impact and mitigation considerations raised in Issue (1) above, the ability of the Proposed Project to provide for the conservation of planning species, are generally addressed on a species-specific basis in Topical Responses 3.1.9.8 of the Response to Comments and in subsection 5.3 herein. However, to the extent that some of the comments regarding reserve design/wildlife movement involve specific planning species, those considerations will be reviewed below. Overall, the following analysis will focus on issues (2) and (3) revolving around the protection of habitat blocks (Issue [2]) - consistency with the NCCP/Science Advisors tenets

of reserve design) and the extent to which the Proposed Project provides open space configurations that meet habitat linkage/wildlife movement criteria established in the NCCP Guidelines (Issue [3]).

Because of the central role of these biological and conservation strategy issues in the selection of a preferred alternative, the following discussion focuses on these issues and considerations rather than on other topical areas examined in the EIR.

5.2 SUMMARY OF THE PROPOSED PROJECT CONSERVATION STRATEGY ISSUES RAISED IN THE SUB-BASIN CONSISTENCY REVIEWS AND LANDSCAPE-SCALE CONSISTENCY REVIEWS

The relationship of the Proposed Project to the NCCP/HCP planning program and guidelines is summarized in the draft EIR as follows:

"The Purpose of the Conservation Strategy of the Proposed Project is to address the elements of the NCCP/HCP strategy that assure the long-term protection of habitat values within the five major vegetation communities supporting the Draft NCCP/HCP Planning Guidelines Planning Species. . . . The Conservation Strategy . . . is comprised of:

- (1) The formulation of protected open space on RMV lands which could form the basis of a future Habitat Reserve in any future NCCP/HCP and SAMP/MSAA;
- (2) The provision of habitat connectivity (through the protection of Habitat Linkages and Wildlife Movement Corridors identified in the draft NCCP/HCP Planning Guidelines); and
- (3) The formulation and provisions for funding of a long-term Adaptive Management Program.

By assuring the long-term protection of habitat values of the Planning Species through the three major elements of the proposed Conservation Strategy, the Proposed Project intends to mitigate impacts that cannot be avoided or minimized to below a level of significance The Proposed Project will thus provide for a self-contained habitat protection and Adaptive Management Program that is not dependent on a future larger scale subregional NCCP/HCP and or SAMP/MSAA while at the same time providing a conservation plan that would be complementary to future NCCP/HCP and SAMP/MSAA planning per the revised NOP."

(DEIR, pp. 4.9-158 –4.9-159)

The following summary of the Proposed Project is included for purposes of facilitating comparison with the other "B" Alternatives. As reviewed in the Mitigation Program section of the Draft Program EIR the Proposed Project generally provides the protected habitats and adaptive management elements of an NCCP/HCP Conservation Strategy except where summarized in the following subsections. In order to reflect the twin objectives of furthering the conservation goals of the NCCP/HCP and SAMP/MSAA programs while also providing for a "stand-alone" conservation program (acting in conjunction with already protected regional open space), the term "RMV Open Space/habitat reserve lands" is employed to identify those lands that will be permanently protected and adaptively managed.

5.2.1 CONSISTENCY WITH BOTH LANDSCAPE LEVEL AND SUB-BASIN GUIDELINES/PRINCIPLES

5.2.1.1 Extent to which the Areas Proposed to be Adaptively Managed as Habitat Reserve Lands Encompass the Key Locations of NCCP Planning Species

The following summarizes the extent to which the proposed RMV Open Space adequately protects “planning species” as set forth in the Draft Program EIR.

Listed Species

As reviewed above, for the “planning species” that are listed species, the Proposed Project, in conjunction with other already protected open space areas within the planning area, protects the *key locations* for all listed species except for particular key locations of: (a) the thread-leaved brodiaea; (b) the coastal California gnatcatcher, and (c) the Riverside and San Diego fairy shrimp. Regarding the thread-leaved brodiaea, the Cristianitos Canyon area development (Planning Area 7) would need to be modified to avoid the *major population* in a *key location* as reviewed in the Mitigation Program and depicted in Exhibit 4.9-20c. Regarding the gnatcatcher, residential development in PA 6 would need to be re-configured to avoid the gnatcatcher *key location*; golf course design would also be required to avoid coastal sage scrub habitat and to provide additional native plants restoration areas. The Proposed Project combines with previously protected open space to achieve protection of more than 80 percent of the gnatcatcher *major population* north of San Juan Creek and, together with other open space commitments, protects more than 90 percent of gnatcatcher sites north of San Juan Creek and provides linkages for north-south and east-west species movement within the subregion and to areas to the north and south outside the subregion. In order to protect a *key location* for the Riverside and San Diego fairy shrimp, grading within PA 5 would need to avoid vernal pool habitat, including contributing hydrologic drainage areas, as required by Mitigation Measure 4.9-35.

The Proposed Project complements prior open space commitments protecting least Bell’s vireo habitat (GERA and the Arroyo Trabuco Golf Course) by providing a open space/habitat reserve configuration that would facilitate implementation of a major restoration effort in Gobernadora Canyon to protect least Bell’s vireo and southwestern willow flycatcher habitat and by providing invasive species control of giant reed (arundo) and other non native invasive species in San Juan Creek to help restore potential vireo and flycatcher habitat. Regarding the arroyo toad, The Proposed Project combines with prior open space actions upstream of RMV lands to protect a *key location* within San Juan Creek (including invasive species control) and would provide for recovery actions in downstream areas of San Juan Creek contiguous with previously protected upstream habitat areas.

NCCP Planning Species including listed species protection achieved in combination with previously protected open space is summarized in Table 4.9-36 of the Draft Program.

Unlisted Species

Of the unlisted species that are NCCP planning species, the Proposed Project protects the *key locations* for all such species with the exception of: (a) the many-stemmed dudleya; (b) the southwestern pond turtle; and (c) the grasshopper sparrow (all Alternatives impact the one location of the mud nama). The Mitigation Program includes project design considerations that, if accepted, would allow for the protection of *key locations* of the dudleya and southwestern pond turtle. Mitigation for the mud nama is set forth in the Plant Species, Translocation,

Propagation and Management Plan. Sixty percent of grasshopper sparrow locations and 54 percent of grassland habitat would be preserved to support this species in the RMV Open Space.

Protection for unlisted planning species achieved in combination with previously protected open space is summarized in Table 4.9-36 of the Draft Program EIR.

5.2.1.2 Habitat Blocks under the Proposed Project Alone and in Combination with Already Protected Open Space.

The Proposed Project RMV Open Space/habitat reserve lands would contain three major blocks of habitat: (1) the area west of Trampas Canyon extending all the way through Chiquita Canyon up to Oso Parkway, totaling approximately 4,184 acres; (2) the Sulphur Canyon/Riley Wilderness Park area extending through Gobernadora Canyon and along Chiquadora Ridge to San Juan Creek, comprising 2,710 acres; and (3) the southern San Juan Creek/upper Cristianitos Canyon/middle Gabino Canyon/La Paz Canyon habitat block, comprising 4,900 acres (which is contiguous with the 1,455 acre Donna O'Neill Conservancy block). (See Table 4.9-37 and Exhibit 4.9-22 of the Draft Program EIR)

Under the Proposed Project, the future Southern NCCP Habitat Reserve System would comprise about 43,090 acres not including the 40,000 acres within the Cleveland National Forest boundary). The RMV Open Space/habitat reserve lands and the already protected open space in the sub region combine to comprise six major habitat blocks (Exhibit 4.9-22: the Caspers block [12,674 acres], the San Mateo block [5,687 acres], the Lower Chiquita block [4,184 acres], the Upper Chiquita block [3,057 acres], the Arroyo Trabuco block [1,832 acres], and the Donna O'Neill Conservancy block [1,455 acres]). These habitat blocks have a combined total of 28,891 acres and are summarized in Draft Program EIR Table 4.9-37. The Caspers and San Mateo habitat blocks are separated to some extent functionally by estates, golf, and resort development in the Verdugo and upper Gabino sub-basins. The Chiquita Canyon habitat block connects with approximately 1,832 acres in Arroyo Trabuco, while the San Mateo/Verdugo habitat reserve areas connect with 47,200 acres in Caspers Wilderness Park, the Cleveland National Forest and the San Mateo Wilderness.

As can be seen from Exhibit 4.9-19, the Proposed Project RMV Open Space/habitat reserve lands and special linkage areas/uses protect all of the Habitat Linkages/Wildlife Corridors indicated on RMV property *linking with previously committed open space areas* except I, K, L, M, N, and O (see discussion in Attachment A).

As discussed in Topical Response 3.1.2.2, in comparison with other approved Habitat Reserve Systems of comparable sized lands with comparable habitat values, the Proposed Project, in conjunction with other subregional lands proposed to be included within the overall NCCP Habitat Reserve System, compares very favorably with the Otay Ranch plan area within the San Diego MSCP South County Segment Chula Vista Subarea Plan. The size and configuration of the proposed NCCP Habitat Reserve System also compares favorably with habitat blocks within the Jamul segment of the San Diego MSCP, the San Diego County MHCP and the two subareas within the County of Orange Central and Coastal subareas (the Central Subarea has about 20,000 acres of Habitat Reserve Lands while the Coastal Subarea has about 17,000 acres of Habitat Reserve Lands which include previously committed and acquired open space areas).

5.2.1.3 Overall Habitat Linkage/Wildlife Movement Corridor Connectivity within the Project Study Area under the Proposed Project.

The size of each of the major habitat blocks under the Proposed Project is shown in Exhibit 4.9-22 in the Draft Program EIR. Total habitat types protected on RMV lands within the RMV Open Space that would be managed for habitat protection purposes (i.e., habitat reserve lands) pursuant to the AMP is 14,640 acres (see Table 4.9-31 of the Draft Program EIR).

Potential conflicts identified in comments in the Draft Program EIR regarding habitat connectivity/fragmentation under the Proposed Project (see discussion in Attachment "A–Summary of Habitat Connectivity Issues under the Proposed Project") could be resolved through:

- Reducing the north-south dimension of development in middle Chiquita in PA 2 near the "narrows" to improve connectivity between Chiquita Canyon and Chiquadora Ridge gnatcatcher populations;
- Reducing or re-designing the estates area in upper Gobernadora in PA 3 to further protect Linkage I;
- Reducing impacts on the wetlands in the "ox-bow" area of lower Gobernadora in PA 3 to enhance Linkage G;
- Reducing or reconfiguring development in PA 6 in close proximity to the key location of gnatcatchers to provide for a buffer between development and the gnatcatcher key location;
- Reducing the size of PA 7 to further protect areas in proximity to sensitive plants;
- Eliminating development in upper Gabino and Verdugo Canyon to protect Linkages L, M and O and, in so doing, eliminate potential fragmentation impacts;

Specific project design measures would be required to further species protection goals as follows: (a) reducing the development area in PA 5 to avoid grading impacts to the vernal pools and associated contributing drainages in the vicinity of Radio Tower Road; (b) provision of setbacks from the existing stock pond in PA 6 to avoid impacts to spadefoot toad; (c) provision of setbacks from the existing stock pond in PA 6 to avoid impacts to pond turtle; and (d) avoidance and minimization of impacts to several plant species including brodiaea, tarplant, Coulter's saltbush, and many-stemmed dudleya.

The B4 Reduced Alternative, analyzed in the Draft Program EIR, would eliminate potential impacts on Linkage I but would not avoid or minimize the other potential impacts summarized above. In order to avoid or satisfactorily avoid or minimize the potentially significant impacts in the manner summarized above, the Project Applicant would need to assess the economic viability of the remaining developable lands and whether this Alternative continues to be a feasible alternative.

5.2.1.4 Feasibility of Assembling the RMV Portion of the RMV Open Space/Habitat Reserve Lands.

As in the case of the County of Orange Central and Coastal Subregion NCCP/HCP, the entire open space/habitat reserve on RMV lands could be assembled without the need for public

acquisition funds under the Proposed Project. Therefore, the Proposed Project could feasibly contribute habitat reserve areas to an overall future subregional NCCP Habitat Reserve System comparable in scale and configuration to habitat blocks contained within other approved NCCP/HCPs (Draft Program EIR page 4.9-221). However, the feasibility of assembling the proposed open space may become questionable if recommended changes to the Proposed Project set forth above would result in the need for public funds to complete the open space dedication and to adequately fund the adaptive management program (AMP). See Attachment C-1 for a general discussion of economic feasibility issues.

5.2.2 SUMMARY OF OVERALL HABITAT RESERVE/CONSERVATION STRATEGY ISSUES

Due to the specific habitat fragmentation/connectivity issues reviewed above, the Wildlife Agencies have asserted that the proposed RMV Open Space/habitat reserve lands does not meet broad-scale NCCP and SAMP reserve design guidelines and thus would conflict with the first element of a Conservation Strategy – assemblage of a Habitat Reserve consistent with NCCP General Policy 1 (see Draft Program EIR at p. 4.9-159). As noted in the description of the Proposed Project, the RMV Open Space/habitat reserve lands that would contribute to a potential future subregional Habitat Reserve System can be assembled entirely through a phased dedication program with no need for the use of public acquisition funds. However, the feasibility of assembling the RMV Open Space/habitat reserve lands may become questionable if the recommended changes to the Proposed Project result in the need for supplemental public funds, as discussed above. In any event, for the reasons noted above, the Proposed Project does not appear to be capable, as initially proposed, of providing the four elements of a subregional NCCP/HCP Conservation Strategy as indicated by the Wildlife Agencies' comments on the Draft Program EIR without significant modifications to which the Project Applicant has not agreed.

5.3 CONSIDERATION OF ALTERNATIVES THAT COULD AVOID OR SUBSTANTIALLY MINIMIZE THE POTENTIALLY SIGNIFICANT ADVERSE IMPACTS THAT WOULD RESULT FROM THE IMPLEMENTATION OF THE PROPOSED PROJECT

As described in Section 3 of Draft Program EIR 589, the actions under consideration by the County of Orange do not include adoption of an NCCP at this time. Nevertheless, Draft Program EIR 589 does examine the Proposed Project in light of NCCP standards because those standards have been formulated through the coordinated planning process. As reviewed in Section "A" above, according to CEQA Guidelines Section 15126.6(b): "Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment, the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project" In addition to evaluating the Proposed Project in light of NCCP standards that will be applied to the proposed Conservation Strategy at a future date, the coordinated planning process has allowed for the development of consistent project alternatives to be addressed in this GPA/ZC EIR and the future environmental documentation for the NCCP/HCP and SAMP/MSAA. Section 5 of the Draft Program EIR addresses alternatives to the Proposed Project, including alternatives considered and rejected and alternatives carried forward. The alternatives carried forward for further analysis in Section 5 include B-5, B-8, B-6, B-9, B-10 and B-11 in addition to the required "No Project" and "No Action" alternatives. Each of the alternatives carried forward for evaluation in the Draft Program EIR depict alternative development/open space configurations designed, in the case of those alternatives developed for the NCCP/HCP and SAMP/MSAA (B-5, B-6, B-8), to respond to onsite biologic resources and supporting natural processes. Alternatives B-9, B-10 and B-11 were developed after

development of the NCCP Guidelines and SAMP Watershed Planning Principles and specifically response to the protection, management and restoration recommendations therein.

A number of the concerns expressed in the comments on the Draft Program EIR regarding development in specific sub-basins or planning areas are addressed through alternative development/open space configurations as follows:

- Within Planning Area 2 (Chiquita sub-basin), the development/open space configurations vary from no development under Alternatives B-6 and B-8 to reduced development in middle Chiquita under B-10, to acquisition of middle Chiquita under B-9 to 1,740 acres of development under alternative B-5.
- Within Planning Area 3, B-5, B-6 and B-8 provide for increased development over other Alternatives to offset development reductions in other areas.
- Within Planning Area 4, Alternatives B-5, B-6, B-9, B-10 and B-11 provide for different planning area configurations involving potential offsets for development area reductions within the San Juan or San Mateo Creek watersheds.
- Within Planning Area 5, Alternatives B-5 and B-6 increase development areas to offset development area reductions elsewhere within the study area.
- Within Planning Area 6, the open space/development configurations vary from no development (B-5, B-6, B-8, B-9, and B-11) to 61 acres of development and no golf course under B-10 to 263 acres of development under the Proposed Project.
- Within Planning Area 7, the development/open space configurations vary from no development (B-5, B-8, B-9, to 473 acres of development and a golf course under B-10) to 1,350 acres under the B-11 alternative.
- Within Planning Area 9, the development/open space configurations vary from no development under the B-5, B-8, B-9, B-10 and B-11 alternatives to 580 acres under the B-6 alternative.

In response to the Wildlife Agencies' concerns regarding biological resources within the Chiquita and Cristianitos sub-basins while still attempting to meet the project purposes regarding the provision of much needed housing opportunities, the County developed the B-10 alternative which provides for 1,009 acres of development within Planning Area 2 in a development/open space configuration that avoids habitat linkage D while still providing some housing opportunities above the reclamation plant, 61 acres of development within Planning Area 6 and 468 acres of development within Planning Area 7 specifically designed to avoid and minimize impacts to sensitive species and habitats. The County has also developed the concept of "Planning Reserve" and applied this concept to the B-10 and B-11 alternatives such that applications for subsequent development entitlements (i.e., Master Area Plans) within the Planning Reserve areas A (Planning Area 2 above the Chiquita Reclamation Plant), B (Planning Areas 6 and 7 as applicable) and C (Planning Area 8) would be tied to a specific timeframe (five and 14 years, respectively) or confirmation of the alignment of the proposed SR-241 extension, whichever occurs first. The Planning Reserve would essentially put subsequent development entitlements for Planning Areas 2 above the (Chiquita Reclamation Plant), 6, 7, and 8 on hold for five to 14 years or confirmation of the alignment of the proposed SR-241 extension, whichever occurs first, and would require consideration of consistency with the NCCP guidelines and SAMP principles in conjunction with development review in those areas.

Attachment B contains tables M-1, M-2 and M-3 from Appendix M which provide an overview comparison of the "B" Alternatives. Further, Tables M-4 and M-5 in Appendix M to the Draft Program EIR provide a side-by-side analysis of Alternatives B-5 through B-11 with regard to: (a) Southern NCCP/HCP Sub-Basin Planning Guidelines Consistency Findings and (b) SAMP/MSAA Sub-Basin Planning Principles Consistency Findings. These tables can be compared with Draft Program EIR Table 4.9-24 and Table 4.9-25 for the Proposed Project. Similarly, the detailed "Conservation Analysis of Planning Species under the 'B' Alternatives set forth in Tables M-36 through M-41 of Appendix M can be compared with Table 4.9-36 of the Draft Program EIR for the Proposed Project. Habitat Block configurations and size in acres for the "B" Alternatives are set forth in Exhibits M-1 through M-6 of Appendix M.

The extent to which Alternatives B-5 through B-11 would or would not substantially avoid, minimize or mitigate the potentially significant impacts on biological resources summarized for the Proposed Project in Section "A" and the feasibility of such further avoidance, minimization or mitigation is reviewed in the following subsections. Economic feasibility issues are discussed in Attachment C-1.

5.3.1 ALTERNATIVE B-5

Alternative B-5 was developed to avoid new development within the San Mateo Creek Watershed and locate all new development within the San Juan Creek Watershed.

5.3.1.1 Overview of Alternative B-5

Major Landscape Features of the Proposed RMV Open Space/Habitat Reserve Lands

Alternative B-5 embodies an over-arching conservation goal of preserving the San Mateo Creek watershed portion of the planning area in its generally undeveloped current conditions (other than the existing Northrop Grumman facility). This conservation strategy for the San Mateo Creek watershed attempts to maximize large blocks of protected contiguous habitat in order to complement prior large-scale open space commitments in the eastern portion of the Southern Subregion and adjoining federal lands including: (a) the Starr Ranch Audubon Sanctuary and Caspers Wilderness Park north of San Juan Creek, (b) the Caspers Wilderness park area south of San Juan Creek created through a prior RMV dedication, (c) Cleveland National Forest areas in the upper San Juan Creek watershed, and (d) the San Mateo Wilderness.

Alternative B-5 maximizes the scale and contiguity of protected habitat in the eastern portion of the planning area, including major canyon connections through Cristianitos Canyon and Blind Canyon into adjoining Camp Pendleton areas and through Gabino Canyon, La Paz Canyon, Upper Verdugo Canyon, and Lucas Canyon to the San Mateo Wilderness. In these ways, Alternative B-5 protects the 17 percent of the watershed of San Mateo Creek located within the planning area in order to complement adjacent protected open space (the San Mateo Wilderness and adjacent portions of the Cleveland National Forest) and significant habitat areas within Camp Pendleton providing habitat for several listed species.

A fundamental assumption of the B-5 Alternative is that complete avoidance within the portion of the San Mateo Creek watershed within the planning area through concentration of development entirely within the San Juan watershed is a more beneficial conservation strategy than attempting to provide large-scale blocks of protected open space throughout the RMV landholdings. Alternative B-5 assumes the commitment of 9,257 acres of land in the San Mateo watershed to open space. Accordingly, significant land areas would need to be committed to development within the San Juan Creek watershed in order to: (a) meet County housing needs

and related project objectives that would not be addressed at all within the San Mateo watershed, and (b) provide a sufficient level of economic opportunity to justify a large land dedication by RMV (some amount of public acquisition would likely also be required within the RMV San Mateo watershed lands).

Summary of Issues Presented by the B-5 Alternative

1. B-5 Open Space System

As discussed in Chapter 5 and Appendix M of the Draft Program EIR, Alternative B-5 may not meet NCCP and SAMP reserve design tenets and species protection goals as further discussed below and, as a consequence, the amount of land area shown for development in Chiquita Canyon and on Chiquadora Ridge would need to be substantially reduced with a concomitant increase in open space in order to meet the NCCP and SAMP reserve design tenets and species protection goals.

2. Long-term Habitat Management

Because no new development is proposed for the San Mateo watershed, Alternative B-5 provides significant opportunities for long-term adaptive management in the San Mateo watershed, including addressing existing areas of severe erosion in clay soils (the clay pits in Cristianitos Canyon and hillside erosion in upper Gabino), provided there would be adequate funding for these efforts. Fire Management in the San Mateo watershed would be facilitated but would be more difficult within the San Juan watershed, particularly within Chiquita Canyon due to the extension of the proposed development bubble for urban uses to areas west of Chiquita Creek.

Conclusions Regarding Consistency with Subregional Conservation Goals and Objectives

Alternative B-5 presents the following issues regarding Consistency with Subregional Conservation Goals and Objectives:

- (a) Development location conflicts with NCCP Guidelines recommendations regarding protection of the Chiquita Canyon/Chiquadora Ridge California gnatcatcher *major population* and; goals and habitat restoration recommendations for maintaining and restoring gnatcatcher habitat within the Chiquita Canyon/Chiquadora Ridge major population;
- (b) The adequacy of Habitat Linkages/Wildlife Movement Corridors within the San Juan watershed;
- (c) The conflicts between proposed development and the protection of the Chiquita Creek and Gobernadora Creek systems. Impacts on Verdugo Canyon habitat areas and the generation of coarse sediments important to downstream habitat functions;
- (d) Potential impacts on arroyo toad habitat and proposed recovery actions in the San Juan Creek area and potential impacts to all of the other listed species, except the thread-leaved brodiaea;
- (e) The adequacy of Adaptive Management Program funding for vegetation and landform restoration in the San Mateo watershed.

- (f) Reductions in development areas would be required to comply with NCCP and SAMP policies and to avoid significant impacts within the San Juan watershed, (for example, development within PA 2 would have to be reduced to address protection of the Chiquita *major population* of California gnatcatchers).

To the extent that the reduction and/or relocation of development areas would result in the need for public funds to assemble the proposed open space areas and to provide adequate funding for the adaptive management program, feasibility of this alternative may be questionable.

Given the potential adverse impacts of the B-5 Alternative as summarized above and as further analyzed in Chapter 5 and Appendix M the Draft Program EIR, the B-5 would create greater adverse impacts compared to the Proposed Project within the San Juan watershed and thus is not recommended for further consideration.

5.3.2 ALTERNATIVE B-6

Alternative B-6 was developed to avoid future development in the Chiquita sub-basin east of Chiquita ridge and Verdugo sub-basin, concentrate new development in areas in the San Juan Creek watershed, and limit new development in the San Mateo Creek watershed to areas already disturbed by past uses.

5.3.2.1 Overview of Alternative B-6

Major Landscape Features of the Proposed RMV Open Space/Habitat Reserve Lands

Overall, the broad conservation goals of this Alternative B-6 are to maximize habitat protection in the Chiquita Canyon/Chiquadora Ridge area and in Verdugo Canyon in furtherance of habitat protection and “connectivity” goals while preserving large blocks of protected habitat within the San Mateo watershed. Given the lesser amount of land proposed for development under Alternative B-6—as compared with the Proposed Project and B-5—development intensities would have to be relatively high in all development areas in order to provide for the ability to construct 14,000 housing units.

With respect to the San Juan watershed, some of the key elements of the Alternative B-6 include committing all of the Chiquita sub-basin, Chiquadora Ridge and the Verdugo sub-basin to open space. Proposed development in the Gobernadora sub-basin and in the extension of Trampas Canyon to San Juan Creek are the same as in the B-5 Alternative, while proposed development in the eastern portion south of San Juan Creek (East Ortega) is substantially larger than in the Proposed Project.

With regard to the San Mateo watershed, the conservation goal is to increase the scale of the open space in the lower Gabino Canyon/Blind Canyon area and the upper Cristianitos Canyon area by transferring some development intensity to upper Gabino. Development in the Cristianitos Canyon (PA 7) and Northrup Grumman/Blind Canyon mesa (PA 8) are substantially reduced over the Proposed Project while development proposed for Cristianitos Meadows (PA 6) under the Proposed Project is eliminated. The development area and type of development proposed for upper Gabino (PA 9) is significantly increased over that proposed in the Ranch Plan Project.

In terms of connectivity in the western portion of the RMV lands, north-south connectivity from the Radio Tower Road area south of San Juan Creek to upper Chiquita Canyon and over to Gobernadora Creek is maximized. Compared with the B-5 Alternative, east-west connectivity

along the southern side of San Juan Creek is the same as in the B-5 Alternative and substantially less than under the Proposed Project. Preserving all of Verdugo Canyon also emphasizes connectivity with Caspers Wilderness Park north and south of San Juan Creek. The preservation of Verdugo Canyon also provides for avian species connectivity, although mammal movement could be more limited than under the Proposed Project proposal for low density and open space uses in upper Gabino (B-5, of course, proposes to commit all of the San Mateo watershed to open space). Connectivity in the lower reach of Gabino Creek would be somewhat enhanced compared with the Proposed Project (the major Gabino Creek riparian corridor and La Paz Canyon are preserved under all Alternatives). Connectivity along Cristianitos Creek is enhanced compared with the Proposed Project but is reduced where upper Cristianitos Canyon connects with the ridgeline draining down to San Juan Creek.

Summary of Issues Presented by the B-6 Alternative:

1. B-6 Open Space System

As discussed in Chapter 5 and Appendix M of the Draft Program EIR, except for development along the valley floor of Gobernadora Creek, in upper Gabino and development on the south side of San Juan Creek in the Trampas Canyon area, the Alternative B-6 proposed Open Space meets broad-scale NCCP and SAMP guidelines.

2. Long-term Habitat Management

Regarding Adaptive Management, Alternative B-6 is consistent with all of the major elements of the Adaptive Management Program except the Gobernadora Creek restoration plan and the upper Gabino coastal sage scrub/grasslands restoration area. Alternative B-6 is consistent with and helps carry out the comprehensive Invasive Species Control. Alternative B-6 proposes to protect all of the coastal sage scrub restoration areas in Chiquita Canyon. Within the Gobernadora sub-basin, the Sulphur Canyon and associated coastal sage scrub restoration areas are protected, but the area proposed for restoration of the creek meander is not protected. Valley grasslands restoration and enhancement areas proposed in the NCCP Guidelines for Narrow Canyon (within the Chiquita sub-basin), upper Cristianitos Canyon and Blind Canyon mesa would be protected. The coastal sage scrub/valley grasslands restoration/enhancement areas in upper Gabino Canyon would likely be precluded by development proposed under Alternative B-6. Alternative B-6 is consistent with the draft Grazing Management Plan and Fire Management Plan.

Conclusions Regarding Consistency with Subregional Conservation Goals and Objectives

Alternative B-6 presents the following issues regarding Consistency with Subregional Conservation Goals and Objectives:

- a) Impacts on thread-leaved brodiaea;
- b) Impacts on vernal pool habitat of the Riverside and San Diego fairy shrimp in proximity to Radio Tower Road;
- c) The potential inability to implement all of the Gobernadora Creek restoration actions protecting the least Bell's vireo and flycatcher populations;

- d) The extent of development in upper Gabino potentially impacting Gabino Creek and precluding Adaptive Management proposals for coastal sage scrub/native grasslands enhancement and restoration;
- e) The extent of development along the south side of San Juan Creek adjacent to Trampas Canyon;
- f) The adequacy of the linkage between upper Cristianitos and San Juan Creek; and
- g) Reductions in development areas would be required for purposes of assuring consistency with the NCCP Guidelines and Watershed Principles.

To the extent that the reduction and/or relocation of development areas would result in the need for public funds in order to assemble the open space/habitat reserve areas on RMV lands and to provide adequate funding of the adaptive management program, the feasibility of this alternative may be questionable.

Given the potential adverse impacts of the B-6 Alternative as summarized above and as further analyzed in Chapter 5 and Appendix M of the Draft Program EIR, while the B-6 Alternative eliminates impacts within the Chiquita sub-basin and on Chiquadora Ridge, the B-6 would create greater adverse impacts compared to the Proposed Project elsewhere within the San Juan watershed and would have greater impacts in upper Gabino and thus is not recommended for further consideration.

5.3.3 ALTERNATIVE B-8

Alternative B-8 was developed to allow new development in the western portion of the RMV adjacent to Ortega Highway, in and around the existing silica mining area in Trampas Canyon, and adjacent to the existing nursery, ranching and sand/gravel mining operations in the Gobernadora area and avoid new development within Chiquita Canyon and the San Mateo Creek watershed.

5.3.3.1 Overview of B-8

Major Landscape Features of the Proposed RMV Open Space/Habitat Reserve Lands

In comparison with the Proposed Project, B-5, B-6, B-9, B-10 and B-11 Alternatives, the B-8 Alternative proposes the largest amount of open space on RMV lands of any of the "B" Alternatives carried forward for consideration in the NCCP and SAMP programs and in the Draft Program EIR. Alternative B-8 identifies Chiquita Canyon, Verdugo Canyon and the entire RMV portion of the San Mateo watershed as open space. All of the habitat linkages and wildlife movement corridors identified in the Draft NCCP/HCP Guidelines would be protected. Except for impacts to gnatcatchers, many-stemmed dudleya and cactus wrens within the proposed development in the Gobernadora sub-basin, only limited impacts would occur to NCCP/HCP planning species. The B-8 Alternative would provide development in areas already substantially altered by past and present resource utilization activities and a third smaller development area adjacent to existing development. Overall, the B-8 Alternative would allow development on about 3,680 acres and provide 19,168 acres of Open Space on RMV lands. Approximately 84 percent of RMV lands would be maintained and managed as open space/habitat reserve lands.

Given the limited land area available for housing development, B-8 would likely not provide for as great a range of housing opportunities as the other "B" Alternatives. Given the B-8 Alternative's emphasis on maximizing open space with only limited contributions to the County housing needs and related objectives, Alternative B-8 is less an attempt to balance resource conservation and housing needs and is, instead, primarily a public acquisition alternative.

Summary of Issues Presented by the B-8 Alternative:

1. B-8 Open Space System

As discussed in Chapter 5 and Appendix M of the Draft Program EIR, with regard to assembling the B-8 Open Space, the B-8 Alternative commits approximately 84 percent of RMV lands to open space. The Alternative B-8 Open Space meets broad-scale NCCP and SAMP reserve design guidelines

2. Long-Term Habitat Management

Because the proposed Adaptive Management Program has been formulated without regard to any particular Alternative, Alternative B-8 would include all of the Adaptive Management Program recommended habitat restoration areas within the B-8 open space including costly soils stabilization actions in Cristianitos Canyon and upper Gabino Canyon.

Conclusions Regarding Consistency of the B-8 Alternative with Subregional Conservation Goals and Objectives

With regard to the assemblage of the RMV Open Space/habitat reserve lands on RMV lands, the B-8 Alternative would result in an open space to development ratio in excess of 5 to 1, a much larger ratio than any of the other alternatives that were carried forward for analysis in the Draft Program EIR. This raises the issue of how the B-8 open space compares with open space dedications for other similar large-scale development projects. As reviewed in Attachment "C," there are two large-scale land areas considered to be generally comparable to RMV lands with regard to resources and involvement in the NCCP program. These areas are the Newport Coast in Orange County (part of the County of Orange Central and Coastal NCCP/HCP) and Otay Ranch in the Chula Vista Subarea Plan area of San Diego County (part of the San Diego City and County MSCP program). Under the Newport Coast and Otay Ranch plans, the ratio of open space to development ratios is approximately 2 to 1. These two areas are under very stringent environmental regulations (the Newport Coast area was subject to the California Coastal Act of 1976 as well as the NCCP and Otay Ranch is subject to the NCCP) and contain lands with very high natural resource values (see Attachment "C"). The Aliso Viejo master plan in Orange County, an element of the Central and Coastal NCCP/HCP provided a 1 to 1 dedication ratio, or 50 percent preservation of open space/habitat areas. The open space area under the B-8 Alternative, at over a 5:1 ratio, is well in excess of any of the aforementioned master plans comparable to the RMV lands.

While the B-8 Alternative addresses habitat reserve design/connectivity issues raised in the wildlife agency comments with respect to Planning Area 2, Habitat Linkage I, Habitat Linkage N/ Planning Areas 6 and 7 and Habitat Linkages L, M and O/Planning Area 9, as noted above there is a substantial reduction in the amount of development area provided by this alternative. Thus, to a greater extent than the other "B" alternatives, the ability of this alternative to assemble the extensive open space lands, and to fund an adaptive management program for the substantial open space area, without public funds, is in question. For the above reasons,

the County staff has concluded that the County should not endorse the B-8 Alternative as the County preferred alternative and staff thus is not recommending it for further consideration.

5.3.4 Alternative B-9

Alternative B-9 was developed to emphasize protection of Chiquita Canyon through acquisition of middle Chiquita, create a large habitat block in the San Mateo watershed through concentrating development in and near areas with existing development and through the acquisition of upper Cristianitos Canyon and Gabino Canyon, and concentrate development in San Juan watershed in areas with lower resource values while continuing to protect high resource value areas such as Verdugo Canyon.

5.3.4.1 Overview of the B-9 Alternative

Major Landscape Features of the Proposed RMV Open Space/Habitat Reserve Lands

Alternative B-9 was prepared after completion of the Draft NCCP/HCP Planning Guidelines and Watershed Principles and, along with Alternative B-10, the B-9 Alternative is specifically designed to address the sub-basin level Guidelines and Principles. The B-9 Alternative focuses heavily on protecting resources associated with the Chiquita sub-basin and the San Mateo Creek Watershed:

- 1) The proposed B-9 Open Space would protect habitat and species in the Chiquita sub-basin above the treatment plant and west of Chiquita Creek. The Chiquita Canyon portion of the Chiquita sub-basin supports a majority of a major population in a key location of the coastal California gnatcatcher considered to be vital to sustaining gnatcatcher populations within the sub-region and to further recovery.
- 2) A large block of habitat and associated species in the San Mateo Watershed in the Cristianitos, La Paz and Gabino would be protected under this alternative

The following major landscape features would be included within the proposed RMV Open Space/habitat reserve lands:

□ San Juan Creek Watershed

- Chiquita Creek for its entire length, the entirety of Chiquita Ridge west of the creek and the adjacent uplands from the SMWD wastewater treatment facility to the headwaters of the Chiquita Creek
- Substantial contiguous habitat located south of San Juan Creek that would provide connectivity between the western portion of the planning area and Chiquita Canyon and San Juan Creek;
- Gobernadora Creek floodplain from San Juan Creek north to the point where it exits the Coto de Caza planned community;
- Extensive habitat connectivity from Upper and Middle Chiquita Canyon across Sulphur Canyon/Chiquadora Ridge through the Gobernadora Creek floodplain, across Upper Gobernadora through a 2,000 – 2,500 foot wildlife movement corridor to the Caspers Wilderness portion of the proposed Habitat Reserve

- The mesa area west of Trampas Canyon and south of San Juan Creek (i.e., the Radio Tower Road area);
- All of the San Juan Creek 100-year floodplain within the RMV property
- All of the mainstem creek and associated drainage within Verdugo Canyon
- San Mateo Creek Watershed
 - All of the Gabino Canyon sub-basin, with the exception of the Blind Canyon sub-unit;
 - All of the La Paz Canyon sub-basin on RMV property;
 - All of the Cristianitos Creek sub-basin;
 - The lower Cristianitos Creek floodplain to the RMV property line; and
 - That portion of Talega Creek on RMV property

Summary of Major Issues Presented by the B-9 Alternative

The review of the B-9 Alternative in Chapter 5 and Appendix M of the Draft Program EIR, as well as in relation to public comments and Responses to Comments, indicates that the major habitat reserve and management issues and considerations are as follows:

1. B-9 Open Space

This Alternative in conjunction with previously committed open space areas located within the Southern NCCP/HCP planning area would substantially meet the provisions of the sub-basin and landscape-scale guidelines and principles reviewed above.

2. Long-Term Habitat Management

Regarding Adaptive Management, Alternative B-9 generally is consistent with and helps carry out the comprehensive Invasive Species Control Plan. Alternative B-9 protects the coastal sage scrub restoration areas in Chiquita Canyon proposed under the AMP. Within the Gobernadora sub-basin, Sulphur Canyon and associated coastal sage scrub restoration areas are protected. Importantly, Alternative B-9 is consistent with the restoration proposed for Gobernadora Creek as reviewed in the Adaptive Management Program. Valley grasslands restoration and enhancement areas proposed in the NCCP Guidelines for Narrow Canyon within the Chiquita sub-basin and Upper Cristianitos Canyon are protected. However, valley grasslands restoration areas proposed for Blind Canyon Mesa would likely be largely precluded by development. The coastal sage scrub/valley grasslands restoration/enhancement areas in Upper Gabino Canyon would be consistent with the B-9. Alternative B-9 is consistent with the draft Grazing Management Plan and Fire Management Plan.

The B-9 Alternative provides the opportunity for important soils stabilization actions in Cristianitos Canyon and Upper Gabino. Both areas contain substantial land areas manifesting ongoing erosion in areas characterized by clay soils—erosion resulting from past clay mining actions in the case of Cristianitos Canyon and erosion resulting from cattle operations and local roads (some of which serve development located outside the planning area east of the RMV property line) in the case of Upper Gabino. However, given the cost of landform restoration,

particularly in Upper Gabino, and the absence of development in Upper Gabino to support land restoration costs as part of development, it is not clear whether major restoration could be undertaken (a lower cost approach to erosion control is set forth in the Grazing Management Plan Appendix J-4 of the Draft Program EIR).

Conclusions Regarding Consistency with Subregional Conservation Planning Goals and Objectives

While the B-9 Alternative addresses habitat reserve design/connectivity issues raised in the Wildlife Agencies' comments with respect to Planning Area 2, Habitat Linkage I, Habitat Linkage N/Planning Areas 6 and 7 and Habitat Linkages L, M and O/Planning Area 9, there is less overall development than the Proposed Project, and development footprints in certain areas are substantially different from the Proposed Project. To the extent that the reduction and/or relocation of development areas would result in the need for public funds in order to assemble the open space lands, and to fund the AMP, the feasibility of this alternative may be questionable and is therefore not proposed for further consideration.

5.3.5 ALTERNATIVE B-10

Alternative B-10 was developed to create housing opportunities comparable to those of the proposed project while achieving consistency with the NCCP and SAMP guidelines and principles in a manner similar to that of the B-9 Alternative without requiring the need for assuring public acquisition of habitat reserve lands.

5.3.5.1 Overview of the B-10 alternative

Major Landscape Features of the Proposed RMV Open Space/Habitat Reserve Lands

Alternative B-10 was formulated by the County of Orange in significant part to provide a non-acquisition alternative to the B-9 Alternative that addresses housing needs and other related project objectives, while being responsive to the sub-basin recommendations contained in the draft NCCP/HCP Planning Guidelines and Watershed Principles, particularly for the Chiquita, Cristianitos and Gabino sub-basins. In formulating the B-10 alternative, the County used the same basic approach as the B-9 Alternative, but attempted to provide for more balanced development/protection that would allow the B-10 Open Space to be assembled solely through development dedications. This approach would address the uncertainties in the B-9 Alternative regarding concerns with relying on public acquisition for a significant portion of the proposed open space, including the availability of public funds and the need to reach agreement on an acquisition with RMV. As formulated, the B-10 Alternative presents a non-acquisition alternative that could be implemented entirely through landowner dedications in phase with development.

The primary differences between the B-10 Alternative and the Proposed Project are:

- 1) Reduction and re-arrangement of development acreage in the Chiquita sub-basin (Planning Area 2) by moving proposed development acreage immediately below Tesoro High School to the development area proposed below the reclamation plant;
- 2) Reduction in development acreage at the top of the Gobernadora sub-basin (Planning Area 3)

- 3) Increase in development acreage in Central San Juan and development in a small portion of the Verdugo sub-basin outside of Verdugo Canyon (Planning Area 4);
- 4) Decrease in development areas in Cristianitos sub-basin (Planning Areas 6 and 7) and relocation of the golf course proposed for PA 6 from west of Cristianitos Creek to a location in PA 7 east of the Creek;
- 5) Reduction and re-arrangement of development acreage in the Talega sub-basin (Planning Area 8); and
- 6) Removal of development acres from upper Gabino (Planning Area 9) and reduced impacts (including habitat function enhancements) for the road crossing of lower Gabino Creek

The primary differences between B-10 and B-9 Alternatives are:

- 1) Middle Chiquita – The B-10 includes development above the treatment plant identical with that of the B-4 except for the deletion of a development area under B-4 that is just below Tesoro High School. The B-9 does not provide for development in Planning Area 2 above the Chiquita Reclamation Plant.
- 2) Upper Cristianitos/PA 6 – Two small development areas (totaling 61 acres) are provided west of the creek but the Proposed Project golf course is shifted to the east side of the creek and moved to PA 7. The B-9 does not provide for development in Planning Area 6.
- 3) Upper Cristianitos/PA 7 – As noted above, the Proposed Project golf course is shifted from the west side of the creek in PA 6 out of the gnatcatcher *key location* area over to the east side of the creek to be located in PA 7; the golf course comprises approximately 250 acres of the 468-acre development area. Additionally, approximately 228 acres of estate development is provided for under low density approach in PA 7. The B-9 does not provide for development in Planning Area 7.
- 4) The B-10, as well as the B-11, assumes that the FTCS would be constructed in the Far East alignment as shown in the MPAH. The sub-basin consistency analysis for the B-10 and B-11 analyzed the consistency of MPAH alignment with the guidelines. However, because the final alignment for the FTC-S project has yet to be selected, site specific impacts on species and habitats are not included. Potential impacts of this alignment and other alignments are addressed in the Draft Program EIR cumulative impacts review for the Proposed Project. The Proposed Project and B-9 Alternatives do not assume a specific FTC-S alignment for purposes of NCCP Guidelines and Watershed Planning Principles consistency analysis.

A major feature of the B-10 Alternative affecting the overall open space system is the use of a Planning Reserve designation in three significant areas on RMV lands. The following is the description of the Planning Reserve designation taken from the Ranch Plan GPA EIR:

“The Planning Reserve designation covers certain areas containing sensitive natural resources that would not be proposed for development until later phases of the project and/or until specified pre-conditions to development have been satisfied. Three distinct Planning Reserve areas have been identified for the B-10 Alternative: (1) Planning Reserve A—the northern portion of Planning Area 2 (Chiquita); (2) Planning Reserve B—

the entirety of Planning Areas 6 and 7 (Cristianitos); and Planning Reserve C–Planning Area 8.

..... The precise footprint of development within each Planning Reserve would be identified as part of the more detailed planning efforts to be carried out in the future and would consider the guidelines and principles applicable to those areas.” (*emphasis added*)

(Draft Program EIR, p. 5-72)

The Ranch Plan Draft Program EIR further describes the Planning Reserve designation as follows:

“Conditions of approval/mitigation measures (including provisions of any adaptive management program) that are imposed on the project in conjunction with General Plan amendment and zone change approvals would be applicable to the Planning Reserve areas only at such times as these areas were to receive subsequent development entitlements (i.e., entitlements in addition to General Plan amendment and zone change approvals).

Applications for subsequent development entitlements (i.e., Master Area Plans) within the Planning Reserve areas would be allowed to be submitted according to the following schedules:

- (1) Planning Reserve A: Five years after final approval of the Ranch Plan GPA/ZC or until confirmation of the proposed SR-241 extension alignment and/or until specified infrastructure is available, whichever occurs first;
- (2) Planning Reserve B: Five years after final approval of the Ranch Plan GPA/ZC or until confirmation of the proposed SR-241 extension alignment and/or until specified infrastructure is available, whichever occurs first;
- (3) Planning Reserve C: Fourteen years after final approval of the Ranch Plan GPA/ZC or until confirmation of the proposed SR-241 extension alignment and/or until specified infrastructure is available, whichever occurs first;

Any future plan for development proposed within the Planning Reserve areas would be required to incorporate and would be evaluated for consistency with, the guidelines and principles (including planning, management and restoration recommendations) that are applicable to the specific area(s) proposed for development and/or conservation. (*emphasis added*)

As with the Ranch Plan, it is intended that the plans for development and conservation under this alternative be complementary to any NCCP/HCP and/or any SAMP/MSAA programs covering the project site that are completed in the future. Therefore, at such times as an NCCP/HCP and/or SAMP/MSAA were to be finally approved, any mitigation programs applicable to the project site (including any Planning Reserve areas that have received subsequent development entitlements) would be adapted for inclusion as part of that NCCP/HCP and or SAMP/MSAA (*emphasis added*).

In any event, as with the applicant’s proposed project [i.e., the Ranch Plan GPA] and other development alternatives, any required federal and state permits (including those needed to allow take of listed species, or to authorize impacts on jurisdictional waters

and/or streambeds) would need to be obtained prior to the commencement of development activities within the affected area, including the Planning Reserve areas.” (Draft Program EIR, at pp. 5-72 to 5-73)

Summary of Issues Presented by the B-10 Alternative

The review of the B-10 Alternative in the Draft Program EIR, as well as in relation to public comments and Responses to Comments, indicates that the major habitat reserve and management issues and considerations are as follows:

1. B-10 Open Space

The Alternative B-10 proposed open space meets broad-scale NCCP and SAMP guidelines. Compared with the other alternative (the Proposed Project) with the potential to assemble the RMV Open Space/habitat reserve lands without public acquisition, the B-10 Alternative proposes very similar development acreage (7,683 vs. 7,694). However, the B-10 strategically rearranges development acres to further protect resources in the Chiquita, Cristianitos, and Gabino sub-basins. The B-10 Alternative also seeks to enhance the protection of habitat linkage/wildlife movement corridor I leading from Sulphur Canyon (linkage H) to Casper's Park by decreasing development at the top of Gobernadora and linkage M by removing development from upper Gabino. Thus, the B-10 Alternative provides for very limited development within the San Mateo watershed, thereby creating a large block of habitat reserve lands on the eastern boundary of the study area that connects with Casper's Wilderness Park, the Cleveland National Forest, the San Mateo Wilderness Area and Camp Pendleton. As noted above, B-10 also places particular emphasis on protecting habitat linkages/wildlife movement corridors I and M.

The B-10 Alternative, in conjunction with previously protected open space, would provide four major habitat blocks (see Exhibit M-5 of Appendix M of the Draft Program EIR): (i) the Eastern block (21,867 acres) is not only very expansive on its own but connects to substantial uninterrupted open space to the east in the Cleveland National Forest, San Mateo Wilderness, and Camp Pendleton; (ii) the Upper Chiquita block (3,209 acres); (iii) the Lower Chiquita block (4,245 acres); and (iv) the Arroyo Trabuco block (1,832 acres). These habitat blocks combined total about 31,153 acres. Although small development areas and a golf course are located in Planning Areas 6 and 7, each development area avoids (and would be required to demonstrate such avoidance at the time of development approval) *key locations* of the gnatcatcher and thread-leaved brodiaea, as well as other populations of both species and other sensitive plant species. The golf course in Planning Area 7 would be expected to provide fire buffer functions for the Donna O'Neill Land Conservancy, key locations of listed species and habitat movement areas comparable to those identified in the Draft Program EIR and Responses to Comments for the golf course proposed for PA 6 under the Proposed Project. Taken together, the B-10 open space system would protect a very large block of habitat containing sensitive species and providing connectivity with large-scale protected habitat areas in close proximity to these lands.

2. Long-Term Habitat Management

Regarding Adaptive Management, Alternative B-10 generally is consistent with and helps carry out the comprehensive Invasive Species Control Plan. Alternative B-10 protects the coastal sage scrub restoration areas in Chiquita Canyon. Within the Gobernadora sub-basin, Sulphur Canyon and associated coastal sage scrub restoration areas are protected. Importantly, Alternative B-10 is consistent with the restoration proposed for Gobernadora Creek as reviewed in the Adaptive Management Program. Valley grasslands restoration and enhancement areas

proposed in the NCCP Guidelines for Narrow Canyon within the Chiquita sub-basin are protected. Although the small residential development area under B-10 would potentially impact a portion of the valley grasslands restoration in upper Cristianitos Canyon, the vast majority of the potential restoration area would be avoided. In addition, Mitigation Measure 4.9-32 requires that the landscape plans for the proposed PA 7 golf course include a minimum of 60 acres of native habitats. However, valley grasslands restoration areas proposed for Blind Canyon Mesa would likely be largely precluded by development, but, similar to PA 7, opportunities for creating new native habitats within the PA 8 golf course are provided for in the proposed Mitigation Measure 4.9-33. The coastal sage scrub/valley grasslands restoration/enhancement areas in Upper Gabino Canyon would be protected under the B-10. Alternative B-10 is consistent with the draft Grazing Management Plan and Fire Management Plan.

Upper Gabino contains substantial land areas manifesting ongoing erosion in areas characterized by clay soils – erosion resulting from cattle operations and local roads (some of which serve development located outside the planning area) in the case of Upper Gabino. These issues would need to be addressed by the AMP.

Conclusions Regarding Consistency with Subregional Conservation Planning Goals and Objectives

Alternative B-10 is generally consistent with subregional conservation planning goals and objectives. The B-10 Alternative can be implemented without any requirement for the use of public acquisition funds. The B-10 Alternative Planning Reserve designation provides for assuring consistency with any future NCCP and/or SAMP plans. Additionally, the timing provisions for each of the Planning Reserve areas should provide opportunities for further discussions of potential acquisition between the landowner (should the landowner be willing) and interested parties in conjunction with the NCCP and SAMP processes.

One area requiring further review is the adequacy of funding for soils stabilization required to address existing erosion in areas generating fine sediments in upper Gabino Canyon. This issue is addressed below under the B-10 Modified Alternative.

5.3.6 ALTERNATIVE B-11

Alternative B-11 was developed to address housing needs identified in OCP 2000 while maintaining an Open Space system protecting the mainstem creeks in both the San Juan and San Mateo Watersheds.

5.3.6.1 Overview of B-11

Major Landscape Features of the Proposed RMV Open Space/Habitat Reserve Lands

The County of Orange to address housing needs and other related project objectives, while acknowledging the sub-basin recommendations contained in the draft NCCP/HCP Planning Guidelines and Watershed Principles prepared Alternative B-11. The open space proposed under B-11 focuses on providing a large block of habitat in the eastern portion of the San Mateo watershed, while preserving habitat linkages/wildlife movement corridors along mainstem creeks in both San Juan and San Mateo watersheds.

Summary of Issues Presented by Alternative B-11:

1. B-11 Open Space

As discussed in Chapter 5 and Appendix M of the Draft Program EIR, Alternative B-11 provides a large block of habitat in the eastern portion of the study area and a block of habitat in Chiquita Canyon. However, the B-11 Alternative provides for very substantial development in middle Chiquita and Planning Area 7, along with development in all other Planning Areas except Planning Area 9. The amount of development is in excess of that under the Proposed Project or any other Alternative. Consequently, the B-11 Alternative would require greater proposed modifications than the Proposed Project. Further, although the B-11 would provide for assemblage of the open space system without requiring public acquisition funding, the B-11 open space system does not provide species protection or habitat connectivity comparable to either the B-10 Alternative or the Proposed Project with modifications summarized previously. Therefore, the B-11 Alternative does not reduce impacts to species and habitats identified in conjunction with the review of the Proposed Project, and is inferior in most regards to the B-10 Alternative.

2. Long-Term Habitat Management

Alternative B-11 would provide adequate funding for the AMP.

Conclusions Regarding Consistency with Subregional Conservation Planning Goals and Objectives

Although addressing the OCP 2000 housing goals, the B-11 Alternative does so at the cost of not reducing impacts on species and habitat systems identified in conjunction with the review of the Proposed Project. Further, the B-11 does not meet subregional conservation goals to the extent of the B-10 Alternative and therefore is not proposed for further consideration.

5.4 PROPOSED COUNTY PREFERRED ALTERNATIVE

5.4.1 B-10 ALTERNATIVE

During preparation of the Draft Program EIR, the County developed Alternative B-10 to respond to 1) biological resources present within the study area and 2) the need for housing within the County. The B-10 Alternative in particular was developed to respond to concerns raised by the Wildlife Agencies and interested members of the general public regarding the amount and location of development in 1) Planning Area 2 above the Chiquita Reclamation Plant; 2) Planning Area 3 at the boundary within Coto de Caza; 3) Planning Areas 6 and 7; 4) Planning Area 8; and 5) Planning Area 9. To respond to these concerns, as described in the Draft Program EIR, Alternative B-10 has three primary differences that distinguish it from the proposed Ranch Plan project: a) the location and amount of development; b) location of proposed regional parks; and c) use of the Planning Reserve concept as described above.

On an overall basis, the Alternative B-10 proposed open space meets landscape-scale NCCP and SAMP guidelines, as well as providing consistency with the NCCP sub-basin guidelines and principles and consistency with the watershed principles planning species as reviewed in Appendix M and Tables M-4, M-5, M-10 and M-11 (see Draft Program EIR, at pp. M-184-187). Consistency with guidelines/principles is achieved with respect to the protection of planning species, major vegetation communities, habitat blocks, connectivity, species diversity, significant hydrologic and geomorphic processes and water quality.

The B-10 Alternative:

- Protects the Chiquita Canyon portion of the Chiquita sub-basin and, consistent with the NCCP Species Accounts and sub-basin guidelines, supports and protects over 80 percent of a *major population* in a *key location* of the coastal California gnatcatcher considered to be vital to sustaining gnatcatcher populations within the sub-region and to contributing significantly to further recovery of the species;
- Protects the *key locations* of the thread-leaved brodiaea;
- With further grading avoidance measures in Planning Area 5, protects all *key locations* of vernal pools of the Riverside and San Diego fairy shrimp;

The County staff has carefully considered the comments received on the Draft Program EIR, in particular those focused on impacts to sensitive biological resources and those related to the provision of housing within the County. The General Plan provides the goals, objectives, and policies for new developments including goals for affordable housing, habitat preservation, highway and infrastructure construction, recreation, and other general plan topics. Each of these goals is given equal weight in the General Plan; however, to fully attain one goal may preclude attainment of another, competing goal. For example, preserving habitat competes with providing land for housing and jobs, or meeting regional housing projections competes with meeting highway level of service standards.

In analyzing which alternative is preferred, the County staff considered the need to balance the competing goals of the General Plan so the preferred plan attains important objectives of each goal without precluding attainment of competing goals. In particular, the County staff sought to balance project objectives relating to the protection of habitats, aquatic resources, and watersheds with the needs and goals of southern Orange County as reflected in the plans and policies of the Orange County General Plan, particularly those related to housing, land use, and transportation.

The County also considered the purpose of the NCCP program which defines an NCCP as a plan that "identifies and provides for the regional or area wide protection and perpetuation of natural wildlife diversity, while allowing compatible and appropriate development and growth" (NCCP Act of 1991, Section 2805[a]). The County has determined that the B-10 alternative, with certain modifications described below, best reflects all of the above Board adopted goals, objectives and policies and meets the project objectives and therefore is the County's Preferred Alternative.

5.4.2 MODIFICATIONS TO B-10 ALTERNATIVE

The County is recommending certain modifications to the B-10 Alternative. To distinguish this modified alternative from the B-10 Alternative, this alternative will be referred to as the B-10 Modified Alternative. The B-10 Modified Alternative is described below.

5.4.2.1 Amount and Location of Development

The B-10 Modified Alternative proposes 7,683 acres of development and 15,132 acres of open space as depicted on Exhibit 5-A and set forth in Table 5-A. The following summary identifies, 1) changes proposed within areas proposed for development under the B-10 Alternative and 2) changes outside areas proposed for development under the B-10 Alternative.

Changes Proposed within Areas Proposed for Development under the B-10 Alternative

- The B-10 Modified Alternative proposes the development of 14,000 dwelling units. This is a decrease of 450 dwelling units from the B-10 Alternative. 14,000 dwelling units are equal to that proposed by the Ranch Plan Project.
- The B-10 Modified Alternative proposes that 6,000 of the 14,000 dwelling units will be designated as senior housing. This is equal to that proposed by the B-10 Alternative and the Ranch Plan Project.
- The B-10 Modified Alternative proposes the development of 251 acres of Urban Activity Center equal to that proposed by the Ranch Plan Project. This is an increase of 157 acres of Urban Activity Center from the B-10 Alternative. The increase in Urban Activity Center allows greater flexibility for residential mix-use within those designated areas (within the 14,000 dwelling unit limit) equal to that proposed by the Ranch Plan Project.
- The B-10 Modified Alternative proposes development of 80 acres of Business Park, equal to that proposed by the Ranch Plan Project. This is a decrease of 180 acres from the B-10 Alternative.
- The B-10 Modified Alternative proposes the development of 50 acres of neighborhood center, equal to that proposed by the Ranch Plan Project. This is a decrease of five acres from the B-10 alternative.
- The B-10 Modified Alternative proposes the development 25 acres of golf resort, equal to that proposed by the B-10 alternative. This is a decrease of five acres from the Proposed Project.

Changes outside Areas Proposed for Development under the B-10 Alternative

- The B-10 Modified Alternative proposes the development of up to ten two-acre estate lots in the upper Gabino sub-basin selected as a sub-set of the estate lot footprints previously identified and evaluated under the proposed Ranch Plan project. This is an addition of 20 acres of development in the Gabino sub-basin compared to the B-10 Alternative. Compared to the Proposed Project, this a decrease of a golf course, casitas, and 90 estate lots.

5.4.2.2 Regional Parks

Under the proposed Ranch Plan project a new regional park, Rancho Mission Viejo Regional Park, is proposed by the Project Applicant. Under the B-10 Alternative, expansions to existing Riley Regional Park and Caspers Regional Park are proposed. Under the B-10 Modified Alternative, no new regional parks or expansions of existing regional parks are proposed as discussed further below under recreation.

5.4.2.3 Planning Reserve

The Planning Reserve overlay is applied to the B-10 Modified Alternative for the same planning areas and with the same conditions relative to timing as the B-10 Alternative for Planning Reserves A and B with a clarification regarding alternate access. The timing for Planning Reserve C is modified as follows:

Planning Reserve A: Five years after final approval of the Ranch Plan GPA/ZC or until confirmation of the proposed SR-241 extension alignment and/or until alternate access is available, whichever occurs first;

Planning Reserve B: Five years after final approval of the Ranch Plan GPA/ZC or until confirmation of the proposed SR-241 extension alignment and/or until alternate access is available, whichever occurs first;

Planning Reserve C: Upon termination of the Northrup Grumman lease or until confirmation of the proposed SR-241 extension alignment and/or until alternate access is available, whichever occurs first;

5.4.2.4 Infrastructure

As for the Proposed Project, infrastructure facilities will be necessary to support the B-10 Modified Alternative. These facilities fall into four general categories: roads, bikeways/trails, sewer and water, and drainage facilities. The following description of the infrastructure facilities for the B-10 Modified Alternative is based on the infrastructure for Proposed Project due to the similarities in location and size of development uses. Where the B-10 Modified Alternative varies from the Proposed Project adjustments to the need for and size of facilities have been made and are noted in italics.

Roads

The circulation system for B-10 Modified Alternative would consist of the following elements as shown on Exhibit 5-A:

- Cow Camp Road (formerly known as New Ortega Highway) would extend from Antonio Parkway to the existing Ortega Highway near the common boundary of Rancho Mission Viejo and Caspers Wilderness Park. Cow Camp Road would be constructed as a major arterial between Antonio Parkway and an interchange with SR-241, if the extension of SR-241 is approved. Alternately, if the extension of SR-241 is not approved, Cow Camp Road would be constructed as a major arterial between Antonio Parkway and "F" Street (a secondary arterial along the SR-241 alignment, as shown on the MPAH). Cow Camp Road would be constructed as a primary arterial highway between the SR-241 extension (if approved) or "F" Street and the existing Ortega Highway.
- From Pico Avenue, the existing Cristianitos Road would be upgraded from a private ranch road to modified County collector standards with variances as required for existing geometry and constraints associated with sensitive habitat and/or species to Avenida Talega in Planning Area 5. From Avenida Talega in Planning Area 5, Cristianitos Road would be constructed as a four-lane primary arterial to the future extension of SR-241 as proposed by the Ranch Plan Project under a with SR-241 scenario. Under a without SR-241 scenario, Cristianitos Road would be constructed as a four-lane secondary arterial to Oso Parkway in the same alignment as the SR-241 as reviewed for the Proposed Project in Section 4.9 Biological Resources of the Draft Program EIR.
- Avenida Talega would be reclassified (downgraded) on the Circulation Plan and the MPAH in unincorporated Orange County from a secondary arterial highway to a collector road (56 feet of right-of-way).

- No connection or access to Crown Valley Parkway is proposed. The County had initially requested that Crown Valley Parkway, east of Antonio Parkway, be deleted from the Circulation Plan and the MPAH. This action would also involve the deletion of the proposed Crown Valley Parkway interchange with the proposed extension of SR-241. *In subsequent discussions and in consideration of the lack of consensus on this deletion, the County is withdrawing its proposal to delete this segment from the MPAH.* Relocation of the interchange from Crown Valley Parkway to Cristianitos Road would also require the concurrence of the TCA, Caltrans, and FHWA.
- Chiquita Canyon Road would serve the north-south traffic demand from development adjacent to it. The road would extend from Cow Camp Road northerly to Oso Parkway, and connect to Tesoro Creek Road in the vicinity of Tesoro High School. Chiquita Canyon Road would be constructed as a two-lane collector with provisions that the roadway may be gated and accessible for local traffic only. Should SR-241 not be constructed, Chiquita Canyon Road would intersect with Cristianitos Road in lower Chiquita entirely within the boundaries of development within Planning Area 2 as shown in Exhibit 3-24 of the Draft Program EIR.
- Gobernadora Road would provide internal circulation to Planning Area 3. The proposed road would connect to a newly proposed interchange with SR-241, and extend southerly to connect to Cow Camp Road in the east of Planning Area 3. The road would be constructed as either a four-lane secondary or a modified collector (includes a protected median with provisions for protected left turns).
- Center Gobernadora Road (formerly known as East Gobernadora Road) would be an internal loop road to provide circulation for the eastern portion of Planning Area 3. The road would connect to Cow Camp Road and Gobernadora Road. The road would be constructed as a two-lane collector.
- Trampas Road, a primary loop road, would provide internal circulation to Planning Area 5. The proposed road would connect to Cristianitos Road and would be constructed as a two-lane collector and a right-of-way reserve for a four-lane community collector.
- Verdugo Road would provide access to Planning Area 4. This two-lane collector within PA 4 boundaries would connect to Cow Camp Road near Caspers Wilderness Park. Outside of PA 4 boundaries, a combination of existing Verdugo Road and existing ranch roads will provide access to the proposed ten estate lots.

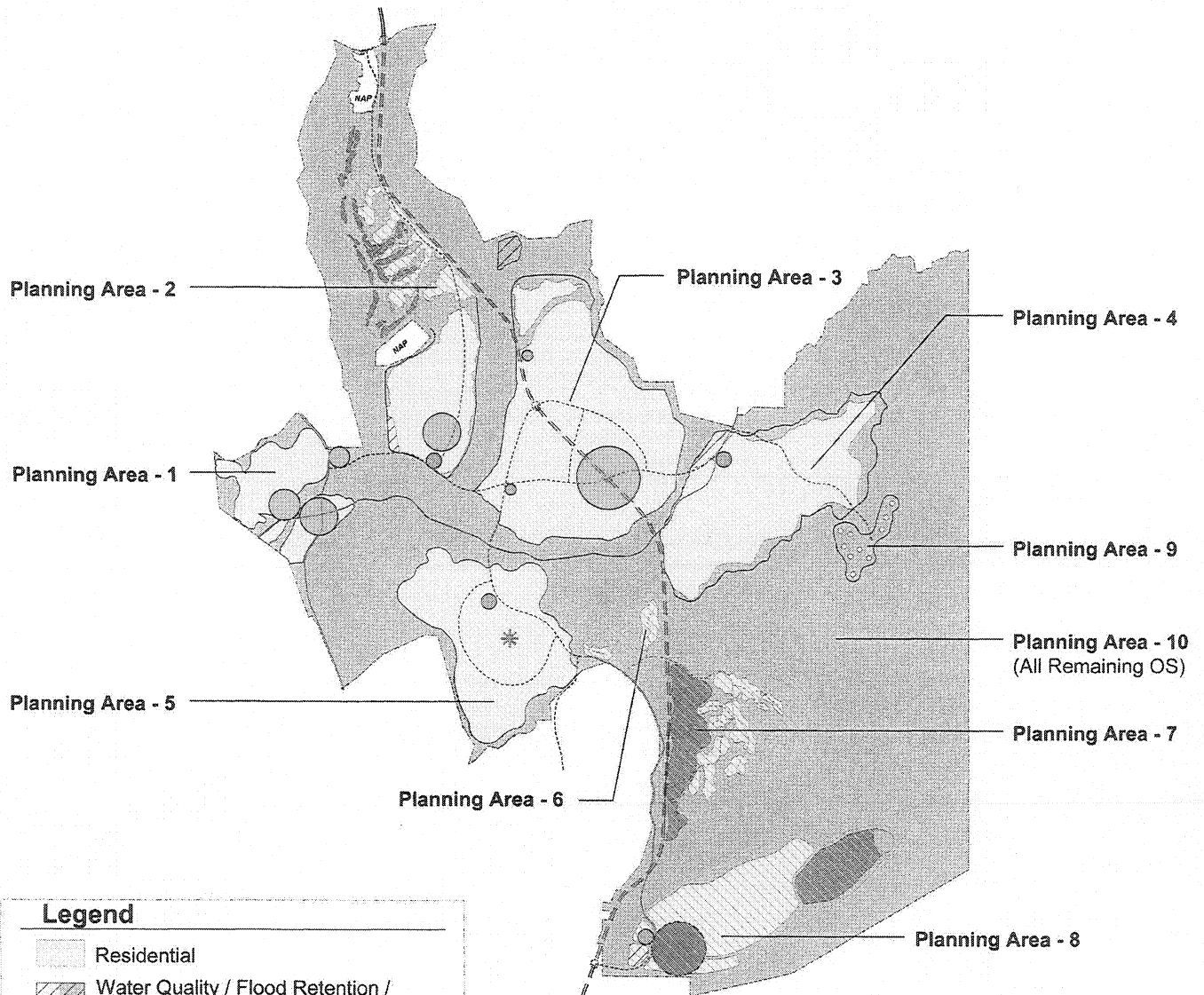
Bikeways and Trails

Bikeways and trails are shown on Exhibit 5-B as follows:

- Class I Off-Road Bikeway along the north side of San Juan Creek.
- San Juan Creek Riding and Hiking Trail along the south side of San Juan Creek
- Internal Community Trails

Sewer and Water

Sewer and water facilities are shown on Exhibits 5-C, 5-D, and 5-E. Domestic water is shown on Exhibit 5-C, non-domestic on Exhibit 5-D and waste water on Exhibit 5-E. Domestic and Non-Domestic Water Facilities needed to support the B-10 Modified Alternative are shown below in Table 5-B. No non-domestic water would be supplied to the ten estate lots in the Gabino Sub-basin. Onsite sewage absorption systems such as a septic tank would provide sewer treatment for these ten lots. Wastewater needs for B-10 Modified are set forth below in Table 5-C.



Legend

- Residential
- Water Quality / Flood Retention / Detention Basin
- Urban Activity Center
- Neighborhood Center
- Business Park
- Golf Course (*)
- Golf / Resort
- Open Space
- Planning Reserve

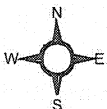
► Reflects relative size and approximate location
 == FTC - South Shown for Informational Purposes Only

Alternative B-10 Modified

Alternative B-10 Modified

Exhibit 5-A

1" = 8,500'



Source: EDAW, Inc.

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Table 5-A

Source: EDAW, Inc. 2004

Table 5-B

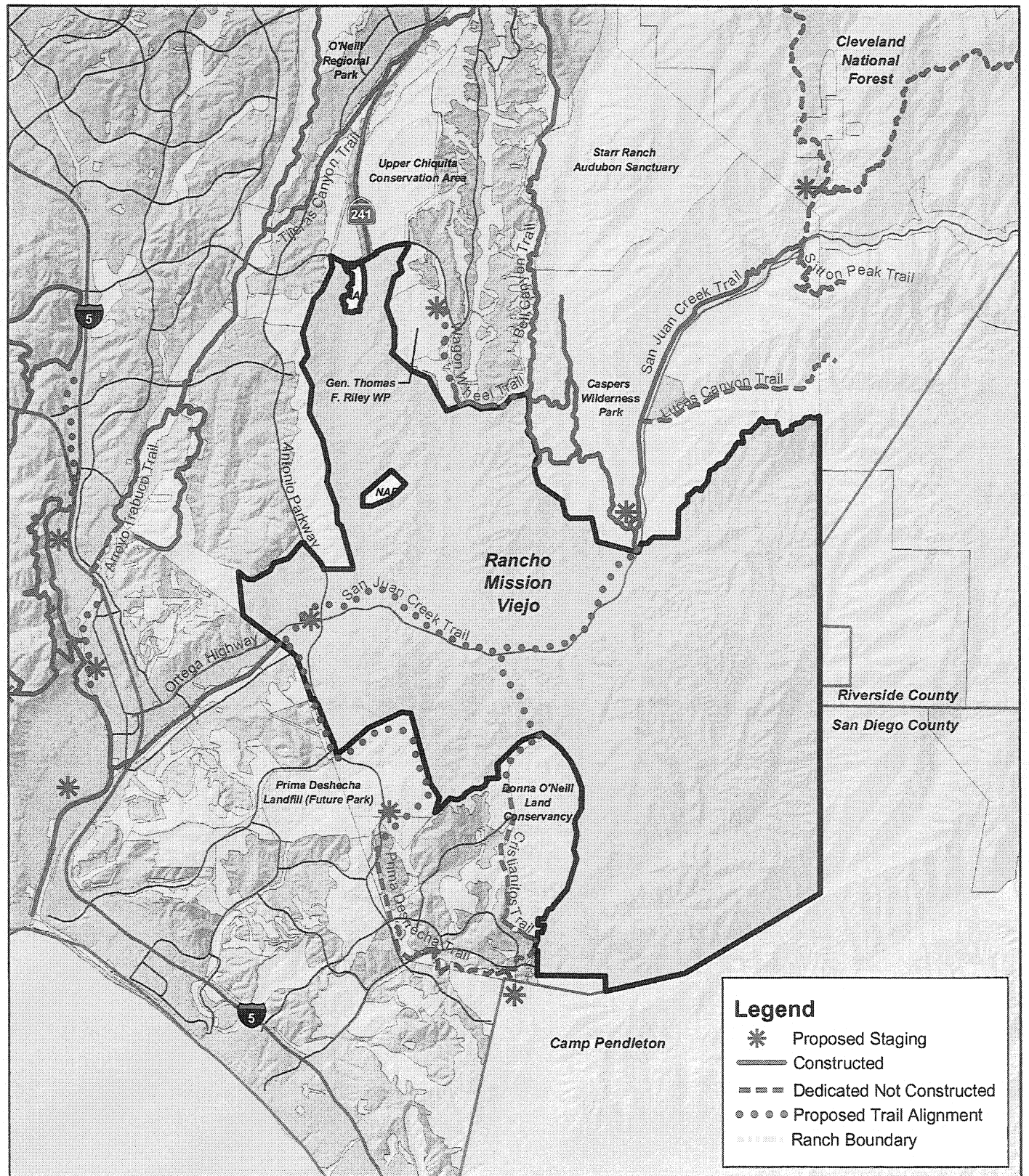
Location	Type of Facility	Facility Capacity
Planning Area 1	One (1) Zone 1 Domestic Water Reservoir No. 1	4.4 MG
	One (1) Zone A Non-Domestic Water Reservoir No. 1	4.3 MG
Planning Area 2	One (1) Zone 2 Domestic Water Reservoir No. 1	1.0 MG
	One (1) Zone B Non-Domestic Water Reservoir No. 1	3.5 MG
	One (1) Zone A Non-Domestic Water Pump Station No. 1	2,440 gpm
	One (1) Zone B Non-Domestic Water Pump Station No. 1	4,320 gpm
Planning Area 3	One (1) Zone 1 Domestic Water Reservoir No. 2	5.3 MG
	One (1) Zone 2 Domestic Water Reservoir No. 2	5.4 MG
	One (1) Zone 3 Domestic Water Reservoir No. 1	1.4 MG
	One (1) Zone 3 Domestic Water Pump Station No. 1	500 gpm
	One (1) Zone A Non-Domestic Water Reservoir No. 2	2.3 MG
	One (1) Zone B Non-Domestic Water Reservoir No. 2	3.4 MG
	One (1) Zone B Non-Domestic Water Pump Station No. 2	2,370 gpm
Planning Area 4	One (1) Zone 2 Domestic Water Reservoir	2.5 to 3.0 MG
	One (1) Zone 3 Domestic Water Reservoir	Undetermined
	One (1) Zone 3 Domestic Water Pump Station	Undetermined
	One (1) Zone 4 Domestic Water Reservoir	Undetermined
	One (1) Zone 4 Domestic Water Pump Station	Undetermined
	One (1) Zone B Non-Domestic Water Reservoir	2.0 to 2.5 MG
Planning Area 5	One (1) Zone 2 Domestic Water Reservoir No. 3	2.9 MG
	One (1) Zone 3 Domestic Water Reservoir No. 2	1.5 MG
	One (1) Zone 4 Domestic Water Reservoir No. 1	1.1 MG
	One (1) Zone 3 Domestic Water Pump Station No. 2	1,000 gpm
	One (1) Zone 4 Domestic Water Pump Station No. 1	400 gpm
	One (1) Zone A Non-Domestic Water Reservoir No. 3	1.2 MG
	One (1) Zone B Non-Domestic Water Reservoir No. 3	2.3 MG
	One (1) Zone A Non-Domestic Water Pump Station No. 2	2,870 gpm
	One (1) Zone B Non-Domestic Water Pump Station No. 3	1,560 gpm
Planning Area 7	One (1) Zone 2 Domestic Water Reservoir No. 4	0.9 MG
	One (1) Zone A Non-Domestic Water Reservoir No. 4	1.0 MG
	One (1) Zone B Non-Domestic Water Reservoir No. 4	1.6 MG
	One (1) Zone B Non-Domestic Water Pump Station No. 5	3,950 gpm
Planning Area 8	One (1) Zone 2 Domestic Water Reservoir No. 5	3.9 MG
	One (1) Zone 3 Domestic Water Pump Station No. 4	320 gpm
	One (1) Zone B Non-Domestic Water Reservoir No. 5	2.0 MG
	One (1) Zone C Non-Domestic Water Reservoir No. 1	0.7 MG
	One (1) Zone C Non-Domestic Water Pump Station No. 1	510 gpm
gpm: gallons per minute MG: million gallons		
Source: Tetra Tech, Inc., 2004		

Table 5-C

Location	Type of Facility	Facility Capacity
Planning Area 2	One Small Wastewater Lift Station	260 gpm
Planning Area 3	One Small Wastewater Lift Station	350 gpm
	One Large Wastewater Lift Station	4,850 gpm
Planning Area 8	One Large Wastewater Lift Station	1,684 gpm
	One Large Wastewater Station: ID No. 3	2,720 gpm
	Expansion to Talega Lift Station	1,684 gpm
Source: Tetra Tech, Inc., 2004		

Drainage and Water Quality

Drainage facilities are also shown on Exhibit 5-D. Drainage facilities for B-10 Modified Alternative would include the Gobernadora flood control/water quality basin located between Coto de Caza and Planning Area 3 development boundary and the flood control/water quality basin located within Planning Areas 2, 4 and 8. These flood control/water quality facilities are the same as those included in the proposed Ranch Plan Project. Outfalls would also be necessary to support B-10 Modified and would be in the same location as the Proposed Project. Combined control facilities described in the WQMP for the B-10 Alternative would also be associated with each Planning Area under the B-10 Modified Alternative. The exact location of these facilities is undetermined; however, the Conceptual Water Quality Management Plan and its Appendix B2 set forth the necessary area, volume, and catchment location for these facilities. Up to 20 acres within the San Juan Watershed and up to 30 acres in the San Mateo Watershed would be used for these facilities. While the majority of these facilities will be located within the developed portion of planning areas, in Planning Area 2, these could be associated with the proposed golf course or, in the case of Planning Area 7, could either be associated with proposed golf course or the existing mining ponds.

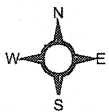


Riding and Hiking Trails

Alternative B-10 Modified

Exhibit 5-B

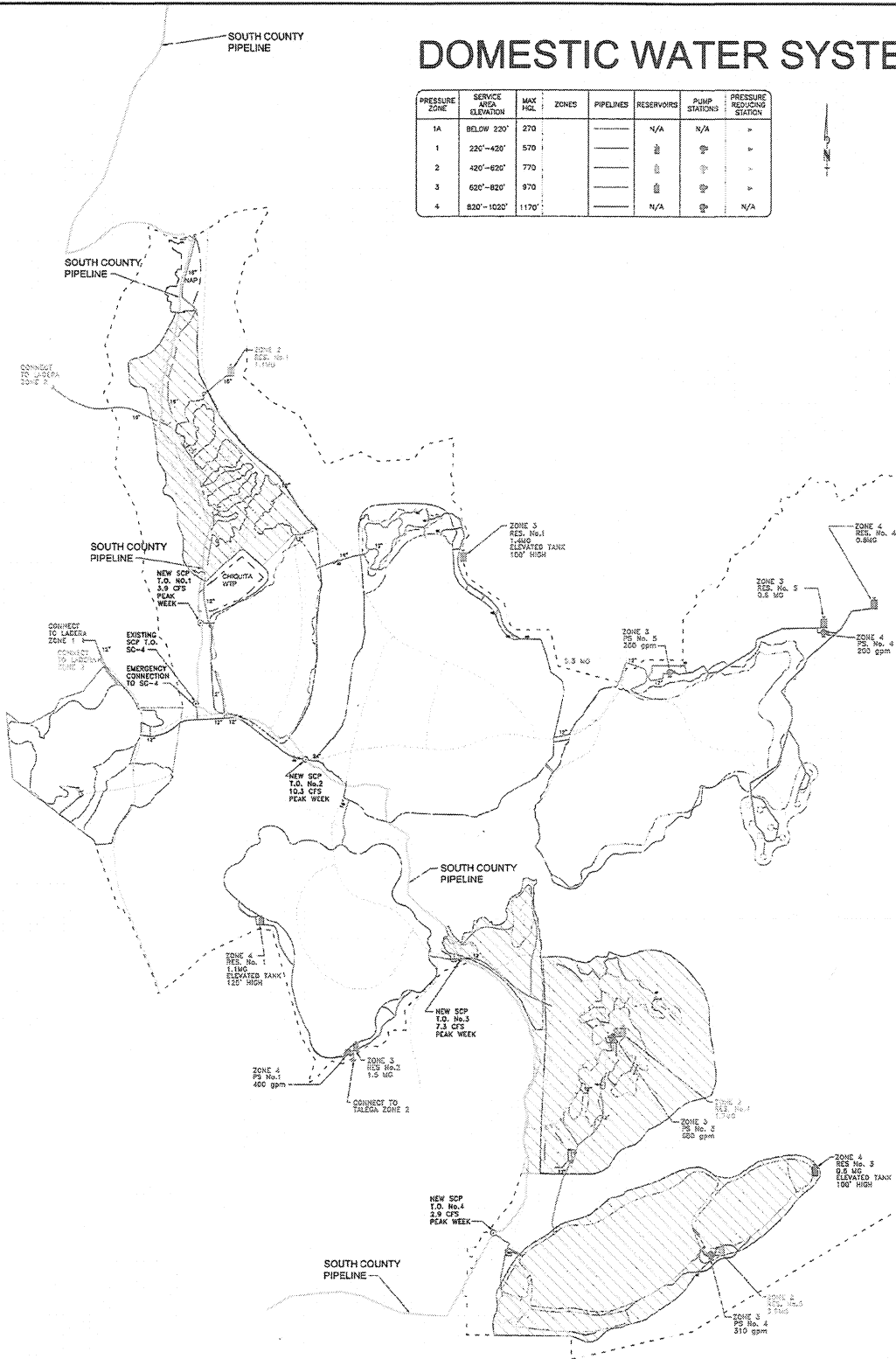
1" = 9,000'



Source: EDAW, Inc.

DOMESTIC WATER SYSTEM

PRESSURE ZONE	SERVICE AREA ELEVATION	MAX. HGL	ZONES	PIPELINES	RESERVOIRS	PUMP STATIONS	PRESSURE REDUCING STATION
1A	BELOW 320'	270			N/A	N/A	>
1	220'-420'	570			RES. No. 1	PS. No. 1	>
2	420'-620'	770			RES. No. 2	PS. No. 2	>
3	620'-820'	970			RES. No. 3	PS. No. 3	>
4	820'-1020'	1170'			N/A	PS. No. 4	N/A

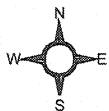


Domestic Water System

Alternative B-10 Modified

Exhibit 5-C

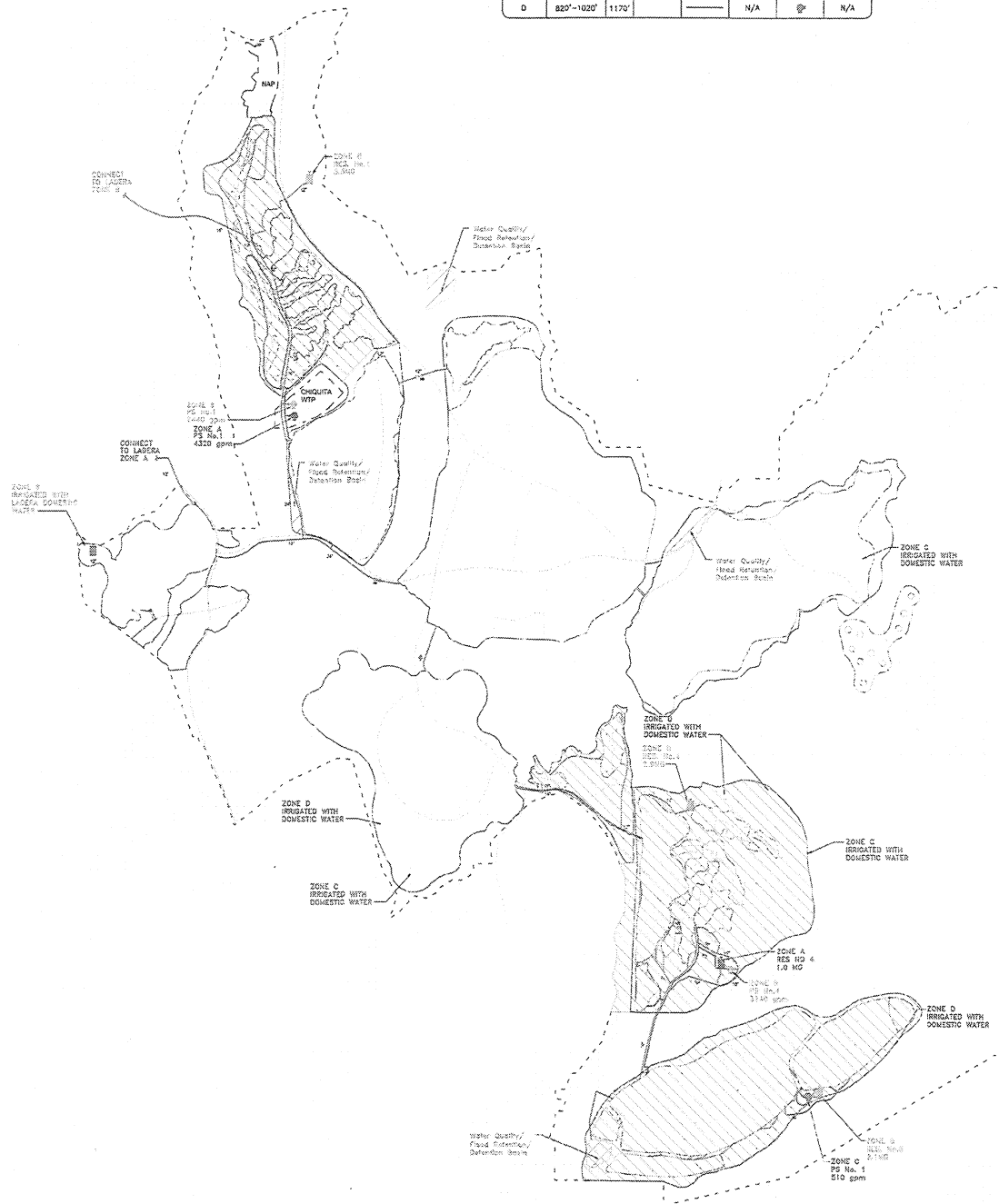
1" = 7,500'



Source: Tetra Tech

NON-DOMESTIC WATER SYSTEM

PRESSURE ZONE	SERVICE AREA ELEVATION	MAX. MGD	ZONES	PIPELINES	RESERVOIRS	PUMP STATIONS	PRESSURE REDUCING STATION
A1	BELOW 220'	270		-----	N/A	N/A	>
A	220'-420'	570		-----	■	⊕	>
B	420'-620'	770		-----	■	⊕	>
C	620'-820'	970		-----	■	⊕	>
D	820'-1020'	1170'		-----	N/A	⊕	N/A

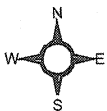


Non-Domestic Water System

Alternative B-10 Modified

Exhibit 5-D

1" = 7,500'

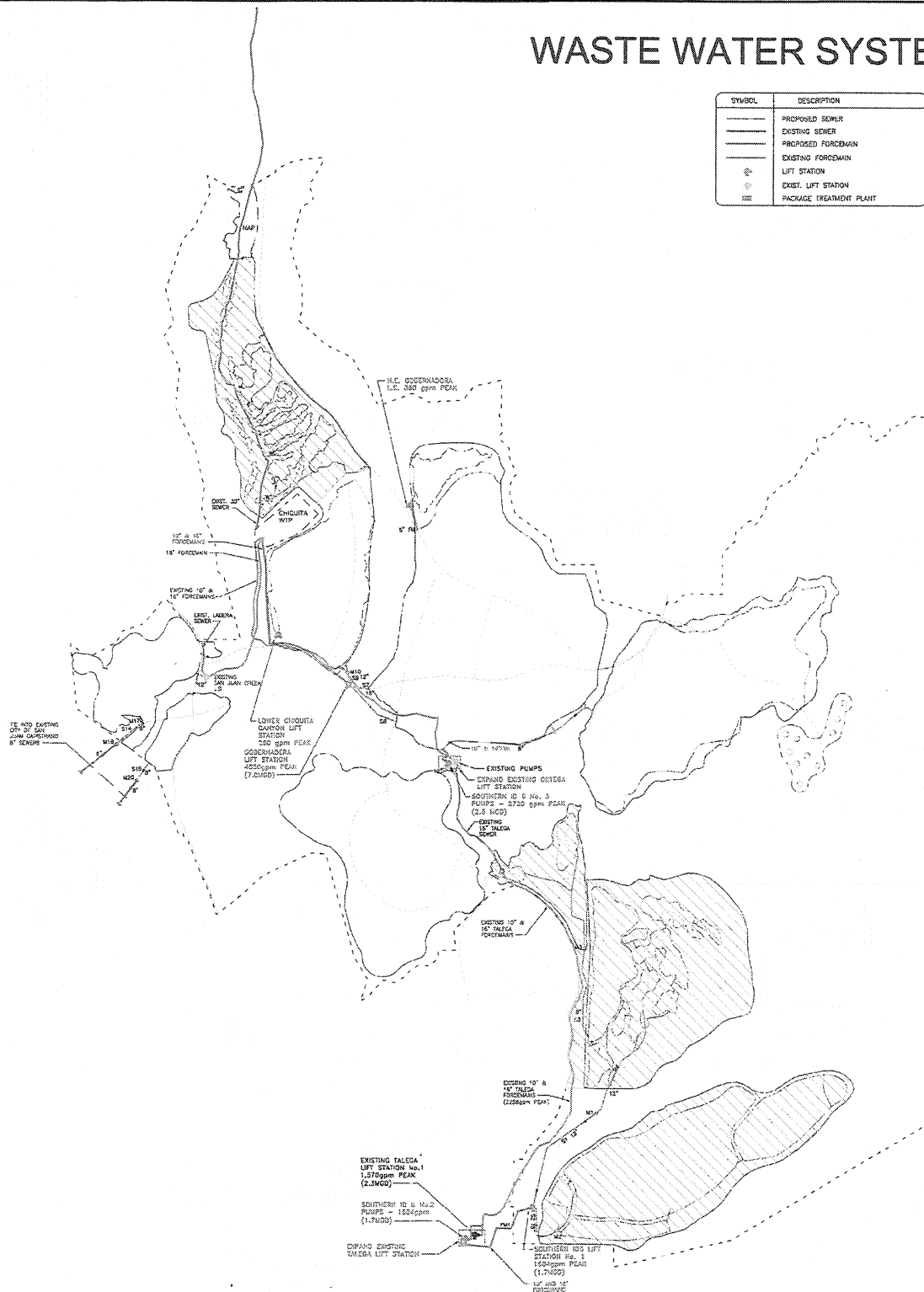


Source: Tetra Tech

WASTE WATER SYSTEM

SYMBOL	DESCRIPTION
	PROPOSED SEWER
	EXISTING SEWER
	PROPOSED FORCEMAIN
	EXISTING FORCEMAIN
	LIFT STATION
	EXIST. LIFT STATION
	PACKAGE TREATMENT PLANT

N
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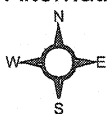


Waste Water System

Alternative B-10 Modified

Exhibit 5-E

1" = 7,500'



Source: Tetra Tech

5.4.3 ENVIRONMENTAL IMPACTS ASSOCIATED WITH B-10 MODIFIED ALTERNATIVE

The following is an evaluation in accordance with Section 15088.5 of the CEQA Guidelines of whether the changes recommended by the County to the B-10 Alternative will result in any new significant environmental impacts not previously evaluated in the Draft Program EIR.

5.4.3.1 Land Use and Related Planning Programs

The changes recommended by the County to the B-10 Alternative will not result in any new significant land use or related planning programs impacts not previously evaluated in the Draft Program EIR. The B-10 Modified Alternative would be consistent with the General Plan and zoning policies. There is no adopted Habitat Conservation Plan or NCCP. Consistency of this alternative with the draft NCCP Guidelines is discussed below under Biological Resources. Similar to the B-10 Alternative and the Proposed Project, the B-10 Modified Alternative would be considered inconsistent with the regional housing projections and thus would have an unavoidable, significant impact. Previously identified land use compatibility issues associated with Planning Area 8 will remain the same for the B-10 Modified Alternative as for the B-10 Alternative and the proposed Ranch Plan project.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.3.2 Agriculture

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to agricultural resources not previously evaluated in the Draft Program EIR for the B-10 Alternative. Similar to the B-10 Alternative, conversion of Important Farmland to urban uses would be a significant impact.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.3.3 Population and Housing

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to population and housing not previously evaluated in the Draft Program EIR. The B-10 Modified Alternative would not be expected to exceed the cumulative regional or local growth projections. The B-10 Modified Alternative would provide for 14,000 dwelling units, the same as the Proposed Project compared to 14,450 in the B-10 Alternative and 20,000 assumed by OCP-2000M. Similar to the Proposed Project and B-10 Alternative, a limited number of existing housing units would be displaced; however, replacement opportunities exist on the project site. Given the limited number of units, a substantial number of people would not be affected.

No mitigation measures are proposed related to Population and Housing.

5.4.3.4 Geology and Soils

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to geology and soils not previously evaluated in the Draft Program EIR. As described above, B-10 Modified assumes the development of up to ten estate lots in the Gabino sub-basin. Landslides have been mapped within Planning Area 9 that could potentially expose persons and structures to onsite landslides. As with the Proposed Project, corrective grading and slope stabilization can be accomplished using conventional grading techniques. Collapsible

and/or compressible soils are located throughout the planning areas, including Planning Area 9, that can be remediated with proper foundation design. Alluvial areas of Planning Area 9 adjacent to Gabino Canyon subject to liquefaction can be mitigated through conventional grading techniques. Any grading activities that expose soil in Planning Area 9 to erosion would be mitigated through compliance with the Orange County Grading Manual, County Standard Conditions of Approval and County permit process.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.3.5 Water Resources

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to hydrology and water quality not previously evaluated in the Draft Program EIR. The Draft Program EIR evaluated the B-10 Alternative relative to water quality impacts as did the Conceptual Water Quality Management Plan. As described above, B-10 Modified assumes the development of ten estate lots in the Gabino sub-basin. These lots would be served by on-site sewage absorption systems such as a septic tank. The County of Orange has guidelines governing on-site sewage absorption systems that provide for a uniform approach to the percolation testing requirements and design criteria. Orange County is responsible for the review and approval of all percolation tests and design plans for onsite sewage systems. The County guidelines set forth required percolation tests and design standards for trench leach fields, seepage pits and septic tanks and setbacks requirements for sewage disposal for septic tanks, trench leach fields, and seepage pits. Compliance with these guidelines will ensure that no impacts to water quality will occur as a result of installation of onsite sewage absorption systems for the ten estate lots. A new mitigation measure has been added for the B-10 Modified Alternative as noted below.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.3.6 Transportation and Circulation

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to transportation and circulation not previously evaluated in the Draft Program EIR. The reduction in dwelling units to 14,000 will result in the same long-term impacts as the Proposed Project.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.3.7 Air Quality

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to air quality not previously evaluated in the Draft Program EIR. As with the B-10 Alternative, the B-10 Modified Alternative is expected to require similar amounts of cut and fill grading when compared to the Proposed Project. As with the Proposed Project and B-10 Alternative, the B-10 Modified Alternative would result in significant unavoidable construction-related emissions associated with carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), and particulate matter (PM₁₀). Operational emissions would also be similar to the B-10 Alternative and the Proposed Project because of comparable vehicular traffic. As with the B-10 Alternative and the Proposed Project, this alternative would result in significant unavoidable operational emissions associated with CO, VOCs, NO_x, and PM₁₀.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.3.8 Noise

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to transportation and circulation not previously evaluated in the Draft Program EIR. Because the distribution of traffic for the B-10 Modified Alternative would be substantially similar to the Proposed Project, traffic noise impacts between the two development scenarios would be substantially the same. The B-10 Modified Alternative would also not be expected to result in any new significant off-site project-specific or cumulative traffic noise impacts. With respect to potential off-site noise impacts from on-site project activities, the B-10 Modified Alternative would not be expected to result in any significant noise impacts.

Compliance with County of Orange standard conditions would ensure appropriate noise abatement is included in project design so that residential and non-residential uses are not significantly impacted by traffic noise. The B-10 Modified Alternative proposes commercial uses that could be located adjacent to residential uses. As with the B-10 Alternative and the Proposed Project, the application of County standard conditions would ensure that commercial and golf course uses would not significantly impact any proposed residential uses. Park impacts would be mitigated to a less than significant level.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.3.9 Biological Resources

The impacts to biological resources resulting from the Proposed Project are described in Section 4.9 of the Draft Program EIR. Impacts resulting from the B-10 Alternative are summarized in Section 5 of the Draft Program EIR and described in detail in Appendix M to the Draft Program EIR. The changes recommended by the County to the B-10 Alternative which need to be reviewed in the context of this analysis are 1) the development of up to ten estate lots in the Gabino sub-basin; and 2) the infrastructure associated with the B-10 Modified Alternative.

Estate Lots

As described above, the County is recommending a change to the B-10 Alternative that would provide for up to ten two-acre estate lots in the Gabino sub-basin as shown in Exhibit 5-A. The Draft Program EIR analysis for the Proposed Project examined the impacts that would result from 100 estate lots, a 218-acre golf course, and 20 acres of attached casitas being developed in upper Gabino, La Paz and Verdugo sub-basins. No estate lots would be developed in the Verdugo sub-basin under the B-10 Modified Alternative, and this would result in less impacts to biological resources than the Proposed Project, and would be the same as the B-10 alternative. No new significant impacts to biological resources in the Verdugo sub-basin would occur. Under the Proposed Project, four estate lots are located in the La Paz sub-basin. Under the B-10 and B-10 Modified Alternative, these lots would be eliminated, thus reducing an impact of the Proposed Project. Under the Proposed Project, 36 estate lots are located in the upper Gabino sub-basin along with a 218-acre golf course and 20 acres of attached casitas. Under the B-10 Modified, up to ten two-acre estate lots would be developed. This represents a substantial reduction in development in Upper Gabino (i.e., 26 estate lots, a 218-acre golf course and 20 acres of casitas would be eliminated) and associated environmental impacts compared with the Proposed Project. Because the B-10 Alternative proposes no development in the Gabino sub-basin, the ten estates proposed by the B-10 Modified Alternative represent a small (20-acre) increase in development over the B-10 Alternative. Each lot is approximately two acres in size, and impacts from the structure, related improvements (i.e., any driveways),

and fuel modification would be limited to 1.25 acres of the two acres as shown in the example provided as Exhibit 5-F. Thus, while an owner would own a two-acre lot, improvements within that two acres would be limited to 1.25 acres of the lot.

The ten estate sites were selected in consideration of the following biological factors:

1. Maintain wildlife movement corridor/linkages L, M, O, and P identified by the NCCP Guidelines;
2. Provide a substantial habitat block contiguous with existing protected open space in Caspers Wilderness Park, the Cleveland National Forest, and Camp Pendleton;
3. Avoid impacts to listed species and other special status species;
4. Provide for full implementation the Coastal Sage Scrub/Valley Needlegrass Grassland restoration recommended in the NCCP Guidelines for upper Gabino Canyon; and
5. Minimize impacts to clay soils and associated native grasslands.

Other non-biological factors, such as access and infrastructure, were also considered in the selection of the ten lots.

As described previously in Section 4.9 of the Draft Program EIR, 100 estate lots were evaluated for the Proposed Project, including the ten estate lots selected for inclusion in the B-10 Modified Alternative therefore all impacts for the ten lots have been previously evaluated. The ten lots address the above biological factors in the following manner:

1. Maintain wildlife movement corridor/linkages L, M, O and P identified by the NCCP Guidelines.

Linkages L, M, O, and P shown in Exhibit 4.9-19 of the Draft Program EIR are recognized as important habitat linkages and wildlife corridors to support dispersal and movement of both small, relatively sedentary species such as the cactus wren and large, mobile species such as mountain lion, mule deer, and bobcat. For the smaller species such as cactus wren, contiguous patches of coastal sage scrub are needed to support dispersal and for large species uninterrupted linkages/corridors along drainages or ridgelines are desirable to allow for unhindered movement.

The ten estate lots in the Gabino Sub-basin are located 1,000 feet or more west of Gabino Creek. These lots are configured in such a way that provides for "live-in" and dispersal habitat for smaller, sedentary species; primarily a mosaic of coastal sage scrub, grassland, and chaparral that will maintain north-south habitat connections in the Gabino sub-basin west of Gabino Creek. No development is proposed east of Gabino Creek thereby providing both "live-in" habitat for smaller, sedentary species and allowing for unconstrained movement along the canyon floor/riparian corridor by larger species such as mountain lion, bobcat, and mule deer. As a result of no development east of the creek combined with the extensive open space that would remain in the area, including the Cleveland National Forest and Caspers Wilderness Park, wildlife movement, including mountain lion, would be accommodated in the region.

The proposed configuration of the ten estate lots address the recognized important function of wildlife dispersal and movement through Planning Area 9 by siting development in a way that maintains habitat connectivity and provides for continued wildlife movement along major drainages identified as linkages L, M, O, and P in the NCCP Guidelines. No new significant impacts to wildlife movement linkages/corridors would occur with the proposed changes associated with the B-10 Modified Alternative.

2. Provide a substantial habitat block contiguous with existing protected open space in Caspers Wilderness Park, the Cleveland National Forest, and Camp Pendleton

Appendix M provides the analysis of alternatives including the habitat blocks associated with the B-10 alternative. Table M-28 of Appendix M identifies the B-10 Eastern habitat block as 21,867 acres of which 8,609 acres are located within the study area (RMV) boundary. The addition of ten estate lots in this habitat block will not alter the function of this habitat block. Using the same "minimum convex polygon" method for delineating the habitat block area around the estate lots as was used for the Proposed Project (see Exhibit 4.9-22), the ten estate lots would reduce the Eastern habitat block by approximately 168 acres or only 0.8 percent of the 21,867-acre block. As noted above, both "live-in" habitat and wildlife movement corridors would be protected. With less than a one percent decrease in the Eastern habitat block, no new significant impacts associated with habitat fragmentation would occur with the proposed changes associated with the B-10 Modified Alternative.

3. Avoid impacts to listed species and other special status species.

No impacts to listed species would occur with the proposed ten estate lots. The change to the B-10 Alternative associated with the ten estate lots would result in a small increase (seven acres) in acres of coastal sage scrub that would be impacted compared to the B-10 alternative, however, as noted in the Draft Program EIR (Exhibit 4.9-2b), this coastal sage scrub is not occupied gnatcatcher habitat. An additional 4.5 acres of chaparral and 1.2 acres of riparian impacts would also occur with the B-10 Modified Alternative. These impacts to coastal sage scrub, chaparral, and riparian have been previously analyzed in the Draft Program EIR as part of the Proposed Project therefore no new significant impacts to vegetation communities would occur as a result of proposed changes associated with the B-10 Modified Alternative. The only sensitive species affected would be one acre of western dichondra, a CNPS List 4 species that would be impacted by one estate lot. Therefore no significant impacts to unlisted special status species would occur.

4. Provide for full implementation the Coastal Sage Scrub/Valley Needlegrass Grassland restoration recommended in the NCCP Guidelines for upper Gabino Canyon

The Draft Program EIR identifies that Upper Gabino contains substantial land areas manifesting ongoing erosion in areas characterized by clay soils—erosion resulting from local roads (some of which serve development located outside the study area in Riverside County) and to a lesser degree, cattle operations. To address this erosion, restoration of coastal sage scrub and valley needlegrass grassland is recommended as shown on Figure 6-1 of the NCCP Guidelines—Appendix G-2 to the Draft Program EIR. The ten estate lots have been sited in such a manner to allow for full implementation of this restoration recommendation. Furthermore, placement of the proposed ten estate lots within Planning Area 9 would provide additional annual fees to support implementation of the Adaptive Management Program, including the Grazing Management Plan and the Habitat Restoration Plan (Appendices J-4 and J-2, respectively) which provide for restoration as recommended in conjunction with a rotational grazing pattern that favors native grasslands.

5. Minimize impacts to clay soils and associated native grasslands.

As noted previously, the ten selected sites would impact small acreages of chaparral, riparian and coastal sage scrub, thus impacts to clay soils and associated native grasslands have been minimized. Overall, the B-10 Modified impacts less grassland habitat than the Proposed Project and the same amount as the Proposed Project.

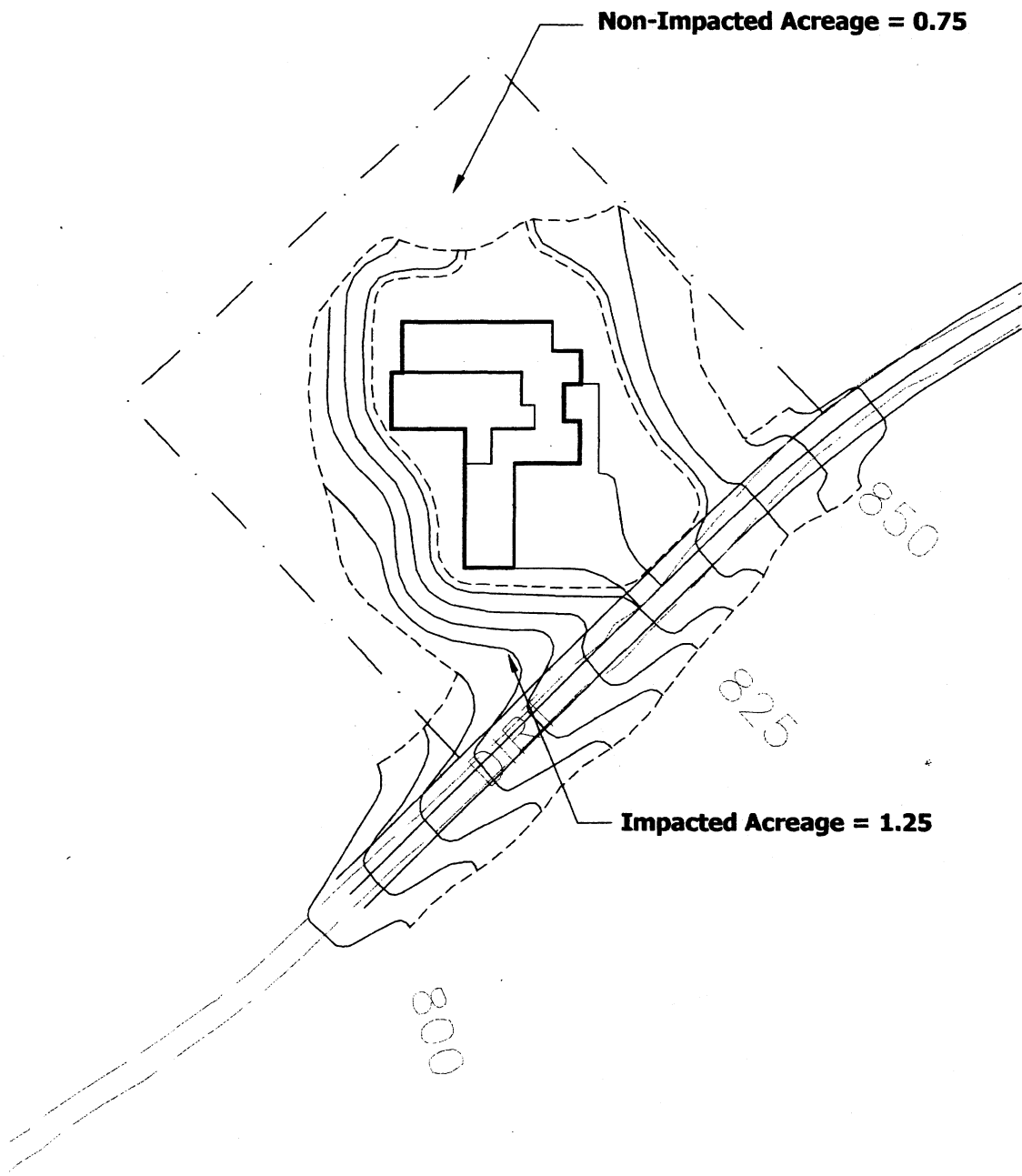
Infrastructure

As described above, the B-10 Modified Alternative would require supporting infrastructure such as roads, bikeways and trails, drainage facilities, and water and sewer facilities. The Proposed Project analyzed the impacts associated with these types of facilities as described in Section 4.9 and shown in Exhibits 4.9-11 through 4.9-21 of the Draft Program EIR. The following discussion reviews whether the infrastructure necessary to support the B-10 Modified Alternative would result in any new significant impacts not analyzed as part of the Proposed Project or the consistency analysis for the B-10 Alternative.

Roads

The circulation system for B-10 Modified Alternative would consist of the following elements as shown on Exhibit 5-11 of the Draft Program EIR and described above:

- Construction of Cow Camp Road: Impacts resulting from construction of Cow Camp Road are analyzed for the Proposed Project and in the B-10 alternative consistency analysis, no new significant impacts would occur under the B-10 Modified Alternative.
- Upgrade of existing Cristianitos Road: The Proposed Project examined the impacts resulting from construction of a new Cristianitos Road east of the existing Cristianitos Road. Upgrading existing Cristianitos Road will result in fewer impacts to biological resources than the Proposed Project. No change to the B-10 Alternative consistency analysis reviewed in Appendix M would result from the B-10 Modified Alternative. No new significant impacts would occur under the B-10 Modified Alternative.
- Reclassification and construction of Avenida Talega: Impacts resulting from construction of a downgraded Avenida Talega are analyzed for the Proposed Project and in the B-10 alternative consistency analysis, no new significant impacts would occur under the B-10 Modified Alternative.
- No connection or access to Crown Valley Parkway is proposed under the B-10 Modified Alternative; however, the County is withdrawing its proposal to delete this segment from the MPAH. Since the B-10 Modified Alternative does not propose to construct this facility, no new significant impacts would occur.



Impact Summary:
Impacted Acreage = 63 %
Non-Impacted Acreage = 37 %

Typical Estate Lot Grading

Alternative B-10 Modified

Exhibit 5-F

No Scale



Source: EDAW, Inc.

- Construction of Chiquita Canyon Road: Impacts resulting from construction of Chiquita Canyon Road are analyzed for the Proposed Project and in the B-10 alternative consistency analysis. No new significant impacts would occur under the B-10 Modified Alternative.
- Construction of Gobernadora Road: This road is internal to the development area of Planning Area 3, thus, no new significant impacts would occur under the B-10 Modified Alternative.
- Construction of Center Gobernadora Road: This road is internal to the development area of Planning Area 3, thus, no new significant impacts would occur under the B-10 Modified Alternative.
- Construction of Trampas Road: This road is internal to the development area of Planning Area 5, thus, no new significant impacts would occur under the B-10 Modified Alternative.
- Construction of Verdugo Road: Verdugo Road is an existing ranch road used by both RMV and persons owning property adjacent to the Ranch in Riverside County. Under the B-10 Modified Alternative, this road would be improved, i.e., paved as a two-lane collector to service Planning Area 4. Outside of Planning Area 4, a combination of existing Verdugo Road and existing ranch roads would provide access to the ten lots in Upper Gabino. A deviation from County subdivision access requirements would be necessary for this type of access. This type of access was reviewed for the Proposed Project and found not to result in significant impacts; therefore, no new significant impacts would occur under the B-10 Modified Alternative relative to Verdugo Road and access to the ten lots.

Bikeways and Trails

- Class I Off-Road Bikeway along the north side of San Juan Creek. This proposed bikeway is analyzed under the Proposed Project, thus, no new significant impacts would occur under the B-10 Modified Alternative.
- San Juan Creek Riding and Hiking Trail along the south side of San Juan Creek. This proposed trail is analyzed under the Proposed Project, thus, no new significant impacts would occur under the B-10 Modified Alternative.
- Internal community trails. Internal community trails are analyzed under the Proposed Project, thus, no new significant impacts would occur under the B-10 Modified Alternative.

Sewer and Water

Domestic and non-domestic water facilities needed to support the B-10 Modified Alternative are shown above in Table 5-B. Table 5-C shows wastewater facilities. As shown in Table 5-B, under the B-10 Modified Alternative, Planning Area 4 will need additional supporting infrastructure. The additional zone 2 reservoir will be located within the development footprint of PA 4, thus, no new significant impacts will occur as a result of this reservoir. The additional zone 3 and 4 reservoirs and associated pump stations will be located outside the PA 4 development footprint in the locations previously

evaluated as part of development of PA 9 under the Proposed Project. The additional zone B reservoir will also be located outside the PA 4 development footprint in the location previously evaluated as part of development of PA 9 under the Proposed Project. The ten estate lots will be provided sewer by onsite septic tanks to be located within the assumed 1.25-acre average impact zone. Thus, no new significant impacts from sewer and water facilities would occur under the B-10 Modified Alternative.

Drainage and Water Quality

Drainage facilities for B-10 Modified Alternative would include the Gobernadora flood control/water quality basin located below Coto de Caza and the flood control/water quality basins located within Planning Areas 2, 4, and 8 as shown on Exhibit 5-B. These facilities are the same as those included in the proposed Ranch Plan project. Outfalls would also be necessary to support B-10 Modified and would be in the same location as the Proposed Project. These facilities are analyzed for the Proposed Project in Section 4.9 Biological Resources and shown in Exhibits 4.9-11 through 4.9-21 of the Draft Program EIR. No new significant impacts would occur under the B-10 Modified Alternative. Combined control facilities described in the WQMP for the B-10 Alternative would also be associated with each Planning Area under the B-10 Modified Alternative. While the exact location of these facilities is undetermined at this time; however, the Conceptual Water Quality Management Plan and its Appendix B2 set forth the necessary area, volume and catchment location for these facilities. Up to 20 acres within the San Juan Watershed and up to 30 acres in the San Mateo Watershed would be used for these facilities. With the potential exception of Planning Area 2 and 7, these facilities will be within the development footprint of each planning area. In Planning Area 2, these facilities may be located in conjunction with the proposed golf course. In Planning Area 7, these facilities may be located in conjunction within the proposed golf course or existing mining ponds. Thus, no new significant impacts from drainage facilities would occur under the B-10 Modified Alternative.

Based on preliminary analysis, which is subject to further refinement, Tables 5-D and 5-E present impacts to vegetation communities and species resulting from development of the Modified B-10 Alternative. Based on preliminary analysis, which is subject to further refinement, Tables 5-F and 5-G present impacts to upland vegetation communities and USACE and CDFG jurisdiction resulting from development of the modified B-10 Alternative.

As shown in Table 5-D, the B-10 Modified Alternative would generally result in fewer impacts to sensitive species than the Proposed Project. Of the 44 species in the table, permanent impacts for 16 species would remain the same, 19 would have fewer impacts, and 9 would have greater impacts. For the California gnatcatcher, for example, the overall impact to locations is less, with 71 locations impacted under the B-10 Modified versus 72 under the Proposed Project. For the other eight species that would have greater impacts under the B-10 Modified, the following additional impacts would occur: one Cooper's hawk nest site, one red-shouldered hawk nest site, eight rufous-crowned sparrow nests sites, one western whiptail site, one white-tailed kite nest site, 711 Catalina mariposa lily individuals, two mud nama individuals, and 0.1-acre impact to western dichondra. None of these increased impacts are considered significant and they would not require additional mitigation measures beyond those identified for the Proposed Project. Several of the reduced impacts for the B-10 Modified Alternative are substantial. For example, impact for the cactus wren are reduced from 222 locations under the B-4 to 193 under the B-10 Modified. Grasshopper sparrow impacts are reduced from 262 locations to 223 locations, and many-stemmed dudleya impacts are reduced from 26,799 individuals to

17,720 individuals. The foregoing impacts are those which would occur prior to the implementation of project design features and minimization/avoidance measures.

The B-10 Modified Alternative and the Proposed Project would have almost identical total impacts to natural upland vegetation communities and non-habitat land covers (see Tables 5-E and 5-F). For natural habitats, the B-10 Modified would have greater permanent impacts to coastal sage scrub (187 acres), chaparral (391 acres) and forest (49 acres), and less impact to grassland (488 acres). The higher impacts to coastal sage scrub, chaparral, and forest are due to the larger footprint of Planning Area 4 under the B-10 Modified Alternative. These increases are not considered significant because there are very few sensitive species in the coastal sage scrub and chaparral in Planning Area 4. The lower impact to grassland primarily is due to smaller development footprints in Planning Areas 6 and 7 in Cristianitos Canyon. The 488 acre increase in grassland under the B-10 Modified provides more habitat for the grasshopper sparrow, foraging raptors and several plant species, such as thread-leaved brodiaea and many-stemmed dudleya. Overall, the B-10 Modified Alternative would not have a significantly greater impact on upland vegetation communities, and the tradeoff between grasslands and shrub habitats results in a net increase of habitat for several sensitive grassland species. The B-10 Modified Alternative would have fewer impacts to USACE and CDFG jurisdiction compared to the Proposed Project (16.61 acres of wetlands (Table 5-G) versus 29.77 acres (Table 4.9-30 of the Draft Program EIR) and 134.72 acres of riparian (Table 5-G) versus 152.77 acres (Table 4.9-30 of the Draft Program EIR)). The foregoing impacts are those which would occur prior to the implementation of project design features and minimization/avoidance measures.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D. A number of mitigation measures related to impacts of the Proposed Project are no longer applicable to the Preferred Project due to avoidance or reduction of those impacts to a less than significant level due to the open space/development configuration of the Preferred Project. Mitigation measures identified in the Draft Program EIR that are no longer applicable to the Preferred Project are noted as deleted.

5.4.3.10 Aesthetics and Visual Resources

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to aesthetics and visual resources not previously evaluated in the Draft Program EIR. Visual changes to the project site associated with the implementation of the B-10 Modified Alternative are expected to be similar to the B-10 Alternative and the Proposed Project. As described above, B-10 Modified assumes the development of ten estate lots in the Gabino sub-basin. As with the Proposed Project, this development could be visible from private estates east of the property boundary (View H). However, because of the limited amount of residential development that would occur under the B-10 Modified Alternative, no new significant unavoidable aesthetic impacts or night lighting impacts would occur.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

Table 5-D

**COMPARISON OF THE B-10 MODIFIED ALTERNATIVE AND THE PROPOSED PROJECT
SENSITIVE SPECIES IMPACTS¹**

Species	RMV Total	B-10 Modified Alternative		Proposed Project	
		Total Permanent Impacts	Temporary Infrastructure in RMV Open Space	Total Permanent Impacts	Temporary Infrastructure in RMV Open Space
Barn Owl	25	12	2	12	2
California Gnatcatcher	243	71	3	72	1
California Horned Lark	15	3	1	4	1
Cactus Wren	523	193	3	222	4
Cooper's Hawk	23	5	0	4	0
Grasshopper Sparrow	584	223	5	262	2
Great Horned Owl	9	2	0	2	0
Least Bell's Vireo	30	1	1	2	0
Loggerhead Shrike	2	1	0	1	0
Long-eared Owl	4	1	0	1	0
Red-diamond Rattlesnake	11	5	0	7	0
Orange-throated Whiptail	147	42	1	45	2
Red-shouldered Hawk	25	4	1	3	0
Red-tailed Hawk	59	22	1	23	1
Riverside Fairy Shrimp	2	1	0	1	0
Rufous-crowned Sparrow	356	133	4	125	4
San Diego Fairy Shrimp	3	1	0	1	0
San Diego Horned Lizard	43	7	0	17	0
Southwestern Pond Turtle	12	3	0	7	0
Southwestern Willow Flycatcher	6	0	0	0	0
Tricolored Blackbird	3	1	0	1	0
Two-striped Garter Snake	7	1	0	3	0
Coast Patch-nosed Snake	1	0	0	0	0
Western Spadefoot Toad	15	5	0	7	0
Western Whiptail	53	11	2	10	2
White-Tailed Kite	14	2	0	1	0
Yellow Warbler	17	1	0	1	0
Yellow -breasted Chat	75	14	1	14	0
Plants					
Beaked Spikerush					
Locations	2	1	0	1	0
Individuals	1501	1	0	1	0
Catalina Mariposa Lily					
Locations	100	71	1	64	2
Individuals	4881	4163	1	3425	5
Chaparral Beargrass					
Locations	6	0	0	0	0
Individuals	6	0	0	0	0
Coulter's Saltbush					
Locations	34	11	7	25	9
Individuals	3086	62	28	478	51
Fish's Milkwort					
Locations	1	0	0	0	0
Individuals	5	0	0	0	0

Table 5-D (Continued)

**COMPARISON OF THE B-10 MODIFIED ALTERNATIVE AND THE PROPOSED PROJECT
SENSITIVE SPECIES IMPACTS¹**

Species	RMV Total	B-10 Modified Alternative		Proposed Project	
		Total Permanent Impacts	Temporary Infrastructure in RMV Open Space	Total Permanent Impacts	Temporary Infrastructure in RMV Open Space
Many-stemmed Dudleya					
Locations	284	156	19	195	22
Individuals	47192	17720	368	26799	126
Mesa Brodiaea					
Locations	2	1	0	1	0
Individuals	2	1	0	1	0
Mud Nama					
Locations	3	3	1	2	1
Individuals	9850	9502	15	9500	5
Palmer's Grapplinghook					
Locations	81	66	1	69	1
Individuals	27131	22378	3	22306	8
Salt Spring Checkerbloom					
Locations	3	1	1	1	1
Individuals	1503	3	3	3	3
Small-flowered Microseris					
Locations	20	20	6	18	0
Individuals	28775	4104	577	20933	0
Southern Tarplant					
Locations	38	23	12	29	18
Individuals	146067	30321	3307	41055	3068
Thread-leaved Brodiaea					
Locations	30	11	3	21	0
Individuals	9314	428	77	6792	0
Upright Burhead					
Locations	1	0	0	0	0
Individuals	1	0	0	0	0
Vernal Barley					
Locations	6	5	0	6	0
Individuals	11921	5424	0	11921	0
Western Dichondra					
Locations	4	1	0	0	0
Area	40 acres	1.0 acre	0	0	0
1 The impacts numbers reported in the table are those before implementation of project design features and Minimization/ Avoidance Measures that would reduce impacts to a level less than significant.					
Note: Preliminary analysis subject to further refinement.					
Source: Dudek, 2004					

Table 5-E

**B-10 MODIFIED ALTERNATIVE
IMPACTS TO VEGETATION COMMUNITIES/
LAND COVERS IN THE STUDY AREA**

Vegetation/Land Cover	B-10 Modified Alternative			
	Proposed Development Area (Acres)	Permanent Infrastructure in RMV Open Space (Acres)	Total Permanent Impacts (Acres)	Temporary Infrastructure in RMV Open Space (Acres)
Grassland	1,785.8	140.1	1,925.9	46.2
Coastal Sage Scrub	2,091.6	120.3	2,211.9	42.8
Riparian	*	*	*	*
Open Water	63.7	1.3	65.0	2.1
Freshwater Marsh	*	*	*	*
Watercourses	*	*	*	*
Vernal Pools	0.0	0.0	0.0	0.0
Woodland	88.6	4.1	92.7	1.4
Forest	172.7	3.9	176.6	0.4
Chaparral	1,083.2	19.7	1,102.9	9.5
Cliff & Rock	4.1	0.0	4.1	0.0
Subtotal – Natural Habitats	5,289.7	289.4	5,579.1	102.4
Developed	344.1	55.2	399.3	16.5
Disturbed	276.2	32.4	308.6	10.6
Agriculture	1,349.7	116.3	1,466.0	24.7
Subtotal – Non-habitat Land Covers	1,970.0	203.9	2,173.9	51.8
Total	7,259.7	493.3	7,753.0	154.2
<p>* Impacts on Riparian, Freshwater Marsh, and Watercourses are determined by the impact on USACE and CDFG jurisdictional areas.</p> <p>Note: Preliminary analysis subject to further refinement.</p> <p>Source: Dudek 2004</p>				

Table 5-F

**COMPARISON OF B-10 MODIFIED ALTERNATIVE AND THE PROPOSED PROJECT
IMPACTS TO UPLAND VEGETATION COMMUNITIES/
LAND COVERS IN THE STUDY AREA**

	B-10 Modified Alternative		Proposed Project	
	Total Permanent Impacts (Acres)	Temporary Infrastructure in RMV Open Space (Acres)	Total Permanent Impacts (Acres)	Temporary Infrastructure in RMV Open Space (Acres)
Grassland	1,925.9	46.2	2,413.6	41.3
Coastal Sage Scrub	2,211.9	42.8	2,024.8	50.6
Riparian	*	*	*	*
Open Water	65.0	2.1	72.6	2.3
Freshwater Marsh	*	*	*	*
Watercourses	*	*	*	*
Vernal Pools	0.0	0.0	0.0	0.0
Woodland	92.7	1.4	95.8	2.4
Forest	176.6	0.4	127.1	1.2
Chaparral	1,102.9	9.5	711.8	10.6
Cliff & Rock	4.1	0.0	4.1	0.0
Subtotal – Natural Habitats	5,579.1	102.4	5,449.8	108.4
Developed	399.3	16.5	422.9	11.2
Disturbed	308.6	10.6	348.8	10.4
Agriculture	1,466.0	24.7	1,531.4	25.7
Subtotal – Non-habitat Land Covers	2,173.9	51.8	2,303.1	47.3
Total	7,753.0	154.2	7,752.9	155.7
* Impacts on Riparian, Freshwater Marsh, and Watercourses are determined by the impact on USACE and CDFG jurisdictional areas.				
Note: Preliminary analysis subject to further refinement.				
Source: Dudek 2004				

Table 5-G

**B-10 MODIFIED ALTERNATIVE IMPACTS
ON CORPS AND CDFG JURISDICTION AREAS**

Proposed Development Area (acres)			Permanent Infrastructure in RMV Open Space (acres)			Total Permanent Impacts (acres)			Temporary Infrastructure Impacts in RMV Open Space (acres)		
USACE ¹											
Wetlands	Waters	Total	Wetlands	Waters	Total	Wetlands	Waters	Total	Wetlands	Waters	Total
8.98	30.40	39.38	7.63	5.80	13.43	16.61	36.20	52.81	3.18	1.25	4.43
CDFG ²											
Riparian	Un-vegetated	Total	Riparian	Un-vegetated	Total	Riparian	Un-vegetated	Total	Riparian	Un-vegetated	Total
106.05	14.87	120.92	28.67	2.07	30.74	134.72	16.94	151.66	8.35	0.73	9.08

¹ Please note that these numbers for other infrastructure (except roads) are in part based upon WES delineation data and likely over-estimate the total impacts. For the purposes of this impact analysis, the jurisdictional status of the WES polygons were based on the "ACOE-CDFG" and "Riparian" fields in the WES shapefile provided by Dudek and Associates. In order to provide the most conservative estimate of impacts, all Corps polygons characterized by hydrophytic communities were designated as wetland.

² Please note that the CDFG totals may change after CDFG makes determinations regarding several unresolved features currently totaling 91.65 acres of impact.

Note: Preliminary analysis subject to further refinement

Source: GLA 2004

5.4.3.11 Cultural and Paleontological Resources

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to cultural and paleontological resources not previously evaluated in the Draft Program EIR. As described above, B-10 Modified assumes the development of ten estate lots in the upper portion of the Gabino sub-basin within the estate footprints evaluated as part of the Proposed Project. Similar to the Proposed Project, these ten estate lots could impact archeological site CA-ORA-1134.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.3.12 Recreation

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to recreational resources not previously evaluated in the Draft Program EIR. As described in the Draft Program EIR, the Orange County General Plan Recreation Element is made up of three elements: Local Parks, Regional Riding and Hiking Trails and Regional Recreation Facilities which set forth a comprehensive strategy for the acquisition, development operation, maintenance, management and financing of County recreation facilities which are necessary to meet Orange County's existing and future recreational needs.

Regarding regional recreational facilities, the County currently has approximately 9,000 acres of existing regional parks of which 3,300 acres (O'Neill Regional Park) are within two miles of the project site. In addition, the County currently has 23,600 acres of wilderness parks of which slightly more than 9,000 acres (Riley and Caspers) are within the two-mile radius of the project site. For the reasons described below, under the B-10 Modified Alternative, the County is not requesting fee dedication of Sulphur Canyon as an expansion to General Thomas F. Riley Park. The County is also not requesting fee dedication of Verdugo Canyon as an expansion to Caspers Park. This modification to the B-10 Alternative is not anticipated to result in overuse of regional recreational facilities such that a substantial physical deterioration of these facilities would occur or be accelerated.

Due to a shortage of funds for park management purposes, the County is not a position to receive fee dedications of land that will entail a perpetual management obligation to maintain existing resource values. Under the B-10 Modified Alternative, Sulphur Canyon and Verdugo Canyon will be part of the RMV Open Space and subject to the RMV Open Space Adaptive Management Program which will maintain existing resource values and where possible enhance existing resource values through such management actions as invasives control. Through the open space agreement required under PDF 9-1, Sulphur Canyon and Verdugo Canyon will be protected. PDF 9-1 requires the Project Applicant and the County to agree on a mechanism for ensuring the protection of the RMV Open Space. While the precise mechanism will be finally determined at the time of the agreement, the County has, in the past, generally required project applicants to perpetually protect open space required as mitigation for project impacts through the grant of conservation easements.

Regarding the provision of regional riding and hiking facilities and bikeways, the B-10 Modified proposes the same facilities as the B-10 Alternative and the Proposed Project therefore no significant new impacts would occur.

As required by the Quimby Act, subdivided property for the purpose of residential uses are required to either dedicate land or pay fees for local parks. It is assumed that parkland would be provided for within the development areas. Similar to the B-10 Alternative and the Proposed Project, it is assumed that residents would use parks within the project area, effectively reducing the potential for deterioration of the existing parks in surrounding areas.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.3.13 Mineral Resources

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to mineral resources not previously evaluated in the Draft Program EIR. As described above, B-10 Modified assumes the development of ten estate lots in the Gabino sub-basin, development of these estate lots would not impact mineral resources.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.3.14 Hazards and Hazardous Materials

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to hazards and hazardous materials not previously evaluated in the Draft Program EIR. Impacts associated with hazardous materials for the B-10 Modified Alternative would be similar to those associated with the B-10 Alternative and the Proposed Project. The B-10 Modified Alternative would provide for residential development in locations that have been subject to agricultural or other uses. Potential contaminants associated with residual pesticides and fertilizers, as well as locations of stained soil and other contaminants known to occur on-site, would pose the same risk as would occur for the B-10 Alternative and the Proposed Project.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.3.15 Public Services and Utilities

The changes recommended by the County to the B-10 Alternative will not result in any new significant impacts to public services and utilities not previously evaluated in the Draft Program

EIR. The public services and utility demands associated with the B-10 Modified Alternative would be similar to the B-10 Alternative and the Ranch Plan because of similar levels of proposed development. The B-10 Modified Alternative proposes the same residential development (14,000 dwelling units) as the Proposed Project, accordingly, similar wastewater, solid waste, library, and energy services would be expected. As described above, B-10 Modified assumes the development of ten estate lots in the Gabino Sub-basin. Emergency services would be substantially less than those required for the Proposed Project, but slightly more than those required for the B-10 Alternative. Similar to the B-10 Alternative, the B-10 Modified Alternative would eliminate development in the more remote large lot, low-density residential development in Planning Area 7, thus reducing this impact identified for the Proposed Project.

Mitigation measures applicable to the B-10 Modified Alternative are set forth in Appendix D.

5.4.4 CONCLUSION REGARDING PROPOSED COUNTY PREFERRED ALTERNATIVE

Based on the analysis discussed above, the County has determined that changes recommended by the County to the B-10 alternative will not cause a significant new impact not previously analyzed in the Draft Program EIR.

Attachment A

Summary of Habitat Connectivity Issues under the Proposed Project

Although all habitat blocks are connected to at least one other habitat block, several potential linkage areas reflect some degree of conflict with the Draft NCCP/HCP Planning Guidelines:

- 1) **Linkages D and E:** The Wildlife Agencies commented in the Draft Program EIR to the effect that "The proposed housing, golf course, and the north-south roadway from Gobernadora to Oso Parkway combine to eliminate currently available habitat for breeding and restrict available areas for movement and dispersal between Chiquita Canyon and Gobernadora Creek across Chiquadora Ridge. Additionally, the Wildlife Agencies commented regarding the adequacy of the habitat within Linkage E to remain as viable gnatcatcher habitat, potentially affecting habitat linkage functions. In response to the agency concerns, Habitat Linkage D is consistent with the NCCP Guidelines. Habitat protected within Linkage E will support linkage/connectivity functions because: All *major and important populations in key locations* in the study area are directly and functionally connected. The Chiquita *major population/key location* is internally connected through the "Narrows" (Linkage D), to Arroyo Trabuco via Linkage B, to the Chiquita Conservancy and Coto de Caza to the north and northeast, to Caspers Wilderness Park via Linkage I, and to San Juan Creek via Chiquita Ridge (Linkage C), Sulphur Canyon (Linkage H) and Chiquadora Ridge (Linkage G) (see Draft Program EIR, Exhibit 4.9-8). From San Juan Creek, direct habitat linkages extend north to *important populations* in Caspers Wilderness Park and NAS Starr Ranch and south to *important populations/key locations* in Trampas Canyon (Linkage K) and Upper Cristianitos (Linkage J) in the San Mateo Watershed. North-south dispersal between the San Mateo Watershed portion of the study area and MCB Camp Pendleton is mediated by Linkage N along Cristianitos Creek.
- 2) **Linkage G:** The dimensions of the connectivity area just above the mouth of Gobernadora Creek in the area of the "ox-bow" have been the subject of Wildlife Agencies comments. Additional minimization of impacts in this area through project design would increase the dimension of this connectivity area.
- 3) **Linkage I:** The habitat linkage area across the upper portion of the Gobernadora planning area (PA 3) is approximately 1,000 feet wide rather than the 2,000 to 2,500 feet recommended in the NCCP Sub-basin Guidelines. This inconsistency with the NCCP sub-basin guidelines is minimized by the low density estates nature of development in the upper portion of the Gobernadora planning area providing additional open space as a buffer between limited development and the proposed habitat linkage. However, Linkage I provides extremely important connectivity functions from Chiquita and Gobernadora Canyons to Caspers Regional Park and the guidelines conflict would be significant.
- 4) **Linkage J:** According to the Wildlife Agencies, the wildlife movement corridor between PAs 3 and 4 appears to be only 300 to 400 feet wide in some places and needs to be widened and adequately buffered. However, it is important to assess the adequacy of this Linkage J in terms of: (1) dimensions of the San Juan Creek floodplain and the scale of the proposed 300-foot setback area when added to the size of the existing floodplain (i.e., adding a total lateral dimension of 600 feet to the scale of the existing floodplain); (2) other conditions affecting aquatic species such as the arroyo toad with regard to live-in, habitat linkage functions; and (3) other conditions affecting aquatic,

small and large mammal and avian species movement along the San Juan Creek corridor. These issues are summarized below:

- a. At its narrowest, the distance between Planning Area 3 and Planning Area 4 is 338 feet. North and south of the narrowest point, the distance between planning areas increases up to approximately 1,300 feet within the key location for the arroyo toad population. An additional 300 feet of setback on both sides of the creek (i.e., a total of 600 feet of setbacks) would make the narrowest movement corridor 938 feet.
- b. Other conditions affecting habitat linkage functions for aquatic species. For most aquatic riparian species, the 100-year floodplain defines the area providing live-in, habitat linkage functions. According to the prior critical habitat designation for the arroyo toad (which has been incorporated by reference into the new proposed critical habitat designation):

"The width of the upland component of critical habitat varies based on topography. The habitat widens in broad alluvial valleys and narrows in places where streams run through constricted canyons or between surrounding hills."
(Fed. Reg. Vol. 66, 2/7/01, 9420)

Although the upland habitat use patterns of this species are poorly understood, activity probably is concentrated in the alluvial flats (areas created when sediments from the stream are deposited) and sandy terraces found in valley bottoms of currently active drainages (Service 1999, Griffin et al. 1999, Sweet in litt. 1999, Ramirez 2000, Holland and Sisk 2000)."
(lb. 9415)

Thus, in broad alluvial valleys such as the San Juan Creek streamcourse, arroyo toad "activity probably is concentrated in alluvial flats . . . and sandy terraces found in valley bottoms of currently active drainages," as confirmed in a recent study of San Juan Creek arroyo toad movement (Ramirez 2003). Almost all locations of yellow warblers and yellow-breasted chats are found within these areas of San Juan Creek. For these species, not only is the additional 600 feet (total) of setback from the 100-year floodplain significant, but also the invasive species control program is vital. As shown in the Invasives Species Control Plan Appendix J-3 to the Draft Program EIR, extensive areas of the San Juan Creek streamcourse are presently characterized by large-scale infestations of giant reed (*arundo*) and other non-native species. As a consequence, both water-supply for arroyo toad breeding and riparian vegetation important to aquatic/riparian species has been and is being displaced both as a result of the presence and continuing expansion of giant reed vegetation, and as a result of the tremendous water consumption demands of giant reed. Implementation of the Invasive Species Control Plan is essential to enhancing and restoring live-in and foraging habitat for all aquatic/riparian species found within the San Juan Creek floodplain.

- c. Other conditions affecting aquatic, small and large mammal and avian species movement along the San Juan Creek corridor. In terms of wildlife movement and arroyo toad lateral foraging and estivation, the southern side of San Juan Creek is currently impacted by Ortega Highway and attendant noise and road kill impacts; the B-4 Alternative proposal to relocate the Ortega Highway functions to

the north side of the Creek would eliminate a very extensive barrier to movement by species and thereby significantly reduce species mortality caused by moving vehicles. The Response to Comments 3.1.9.8 addressing mountain lion movement details the manner in which mountain lion movement and other mammal movement will be protected through bridge designs and the 300-foot setbacks on both sides of the 100-year floodplain. As reviewed in Response to Comments 3.1.9.8 addressing the gnatcatcher, avian species such as the gnatcatcher move along corridors with riparian and other vegetation as well as habitat such as coastal sage scrub (e.g., extensive lengths of Linkage N through the Cristianitos sub-basin contain grasslands, riparian habitat and chaparral rather than coastal sage scrub).

For the above reasons, it is concluded that the dimensions of Linkage J along San Juan Creek are adequate for habitat linkage and wildlife movement functions, and thus are consistent with the NCCP landscape level and sub-basin guidelines.

Additionally, the ACOE has questioned the adequacy of the portion of Linkage J extending from the San Juan Creek watershed to the San Mateo watershed in terms of the dispersal of aquatic amphibians and reptiles over extended time periods. While landscape level connections exist on the Ranch Plan project site between San Juan Creek and San Mateo Creek, the potential for dispersal by southwestern pond turtles, arroyo toads, or spadefoot toads is hindered due to unsuitable habitat features.

- 5) **Linkage N:** The golf course within PA 6 is intended to serve a connectivity function for avian and terrestrial species but, according to GPA EIR comments from the Wildlife Agencies, the movement areas for species may not be sufficient due to proximity to the Cristianitos Canyon planning area (PA 7). In response to wildlife agency concerns, a similar set of circumstances was reviewed by USFWS during the Section 7 consultation for the Arroyo Trabuco golf course, involving 15 pairs of gnatcatchers and 12 pairs of least Bell's vireo, and a large-scale development (Ladera) immediately to the east of the Arroyo Trabuco golf course site. Through careful siting, habitat enhancement and restoration and dedications of protected habitat, a Biological Opinion was issued allowing the golf course to proceed. Although provisions would need to be made in the review of the proposed PA 6 golf course, the Section 7 consultation for the Arroyo Trabuco Golf Course, as well as the designation of the Shady Canyon and Limestone Canyon golf courses as Special Linkage Areas in the Central and Coastal NCCP/HCP and associated Implementation Agreement, indicate that golf courses can be designed to maintain and facilitate wildlife movement rather than cause adverse impacts to wildlife movement (see the golf course Special Linkage designations in Section 6.1 of the Central/Coastal NCCP/HCP Implementation Agreement; also see discussion of golf courses as wildfire buffers and role in creating refugia at p. 7-70 of the County of Orange Central and Coastal NCCP/HCP final EIR with the County of Orange and USFWS as co-lead agencies). Mitigation Measure 4.4-32 specifies a minimum of 60 acres of native habitats be included in the golf course landscape plans to assure avoidance of five gnatcatcher sites potentially impacted by the golf course and to provide for enhanced/restored native vegetation within the Cristianitos sub-basin.
- 6) **Linkage N:** The dimension of the connectivity area east of Cristianitos Creek in the Cristianitos sub-basin has also been the subject of Wildlife Agencies comment (according to the agencies, the development of PAs 6 and 7 would channel gnatcatcher and grasshopper sparrow movement through a golf course and along a narrow band of low-elevation habitat along the Donna O'Neill Conservancy and would subject the

remaining wildlife movement corridor to numerous edge effects from the golf course and adjacent residential uses – “reserve design should not impose artificial linkages on the landscape at the expense of natural linkages”). However, the entire area to the west of the creek (Donna O'Neill Land Conservancy) has already been preserved for connectivity as well as habitat protection purposes and the development in Cristianitos Canyon is set back from Cristianitos Creek a minimum of 200 feet and an average of 500 feet. However, the dimension of the setback for PA 7 east of Cristianitos Creek could be impacted functionally through the cumulative impacts of PA 7 residential development and the Far East Alignment of SOCTIP should that alignment be selected. Potential golf course issues are addressed above under “e.”

The Wildlife Agencies have also commented on potential edge effects and impacts on the key location of gnatcatchers within and adjacent to PA 6. Proposed residential development would potentially impact up to six out of 13 gnatcatcher sites. While gnatcatchers have been demonstrated to sustain populations in close proximity to urban areas (see Dudek 2004), the potential impacts of up to 50 percent of the small population of gnatcatcher locations within and adjacent to PA 6, in combination with the potential limitations an avoidance due to grading needs for residential uses (golf courses have considerably more flexibility in terms of grading than to residential areas subject to safety standards), make approval of residential development in PA 6 problematic due to potentially significant adverse impacts (by way of contrast, distinct grading limits are defined for residential areas in middle Chiquita and, overall, the potential impacts to gnatcatchers in middle Chiquita are comparatively less in number and considerably less in significance given the total population of the Chiquita/Chiquadora *major population/ key location*).

- 7) **Linkages L, M and O:** Connectivity between upper Gabino and upper Verdugo canyons could be impeded to some extent by the golf course proposed for upper Gabino and the O'Neill Ranch estates in both upper Gabino and Verdugo canyons (the Wildlife Agencies have commented that reserve design principles cannot be met through golf course design and the scattered residential development as proposed), although avian and small mammal movement would not be limited in any significant way. Since development proposed for upper Gabino was intended, in part, to absorb the costs of likely costly soils stabilization required to address existing erosion (generating excess fine sediments with impacts on aquatic species and associated habitats), a small compact development area could contribute towards funding soil stabilization activities without impacting wildlife movement. Careful siting of a smaller compact development could also allow full implementation of the CSS/VGL restoration recommendations including rotational grazing as a means of increasing native grassland productivity.

Attachment B

Summary Tables for the "B" Alternatives

**TABLE [M-1]
VEGETATION COMMUNITY/LAND COVER IMPACTS BY PROJECT ALTERNATIVES
(INCLUDES DEVELOPMENT ACRES ONLY-NOT INFRASTRUCTURE)**

Vegetation/Land Cover	RMV	B-5	B-6	B-8	B-9	B-10	B-11
		Impacts (acres)	Impacts (acres)	Impacts (acres)	Impacts (acres)	Impacts (acres)	Impacts (acres)
Agriculture	2554.8	1957.7	846.0	614.3	1141.3	1349.7	1446.9
Chaparral	3792.9	801.5	796.4	466.0	1091.9	1078.7	1201.3
Developed	534.7	274.5	397.2	209.3	349.6	344.1	351.9
Disturbed	501.2	327.5	399.9	246.7	250.3	276.2	331.3
Forest	311.9	171.2	164.4	95.4	171.7	172.7	172.1
Grassland	5040.9	1059.3	1841.3	833.5	1552.9	1785.8	2019.9
Open Water	135.7	63.4	64.4	62.5	62.7	63.7	64.3
Freshwater Marsh	25.2	7.9	8.0	7.2	7.5	7.6	7.4
Riparian	1920.3	367.8	345.0	202.5	365.9	378.3	413.2
Cliff & Rock	6.2	4.1	4.1	4.1	4.1	4.1	4.1
Coastal Sage Scrub	7682.0	1989.2	1733.2	880.8	2061.0	2084.6	2491.2
Water Courses	13.2	0.0	0.0	0.0	0.0	0.0	0.0
Vernal Pools	19.9	4.1	4.1	0.0	0.0	0.0	0.0
Woodland	275.9	141.2	135.8	57.6	108.4	88.6	90.9
Total	22814.8						
Source: Dudek 2004							

**TABLE [M-2]
ALTERNATIVE ANALYSIS**

USACE				
Alternative	Wetlands (acres)	Waters (acres)	Total USACE (acres)	
B5	13.35	34.92	48.27	
B6	22.10	41.57	63.67	
B8	7.70	16.95	24.65	
B9	8.62	27.51	36.13	
B10	8.98	30.30	39.28	
B11	13.36	35.84	49.20	
CDFG Jurisdictional				
Alternative	Riparian (acres)	Unvegetated (acres)	Total CDFG (acres)	Unresolved*
B5	119.06	10.72	129.78	90.47
B6	129.4	19.28	148.68	91.65
B8	56.6	7.65	64.25	90.47
B9	100.7	12.75	113.45	90.47
B10	104.84	14.77	119.61	90.49
B11	118.53	18.92	137.45	91.65
* Total Area for features being proposed as non-jurisdictional for which CDFG has not yet made their final determination.				
Source: Dudek 2004				

**TABLE [M-3]
RMV SENSITIVE SPECIES DEVELOPMENT AREA IMPACTS**

Species	RMV	B-5	B-6	B-8	B-9	B-10	B-11
		Impact	Impact	Impact	Impact	Impact	Impact
Wildlife							
Barn Owl	25	11	9	9	10	12	12
California Gnatcatcher	243	90	32	21	46	55	76
California Horned Lark	15	8	1	0	1	3	1
Cactus Wren	523	192	137	58	161	180	217
Cooper's Hawk	23	5	3	1	5	5	5
Grasshopper Sparrow	584	263	97	40	115	199	238
Great Horned Owl	9	2	3	1	2	2	2
Least Bell's Vireo	30	1	1	0	0	0	0
Loggerhead Shrike	2	0	0	0	0	0	0
Long-eared Owl	4	0	0	0	0	0	0
Red-diamond Rattlesnake	11	4	2	2	4	4	4
Orange-throated Whiptail	147	64	49	31	37	41	43
Red-shouldered Hawk	25	7	5	2	4	4	4
Red-tailed Hawk	59	21	16	8	17	18	20
Riverside Fairy Shrimp	2	1	1	1	1	1	1
Rufous-crowned Sparrow	356	161	72	46	90	119	149
San Diego Fairy Shrimp	3	1	1	1	1	1	1
San Diego Horned Lizard	43	9	2	0	7	7	7
Southwestern Pond Turtle	12	2	3	2	2	2	3
Southwestern Willow Flycatcher	6	0	0	0	0	0	0
Tricolored Blackbird	3	2	0	0	0	1	0
Two-striped Garter Snake	7	1	2	0	0	1	0
Coast Patch-nosed Snake	1	0	0	0	0	0	0
Western Spadefoot Toad	15	6	6	5	5	5	5
Western Whiptail	53	15	5	3	5	8	7
White-tailed Kite	14	1	1	1	2	2	2
Yellow Warbler	17	2	1	0	0	0	0
Yellow-breasted Chat	75	13	9	7	8	9	8
Plants							
Beaked Spikerush							
Locations ²	2	2	0	0	0	0	0
Individuals ³	1501	1501	0	0	0	0	1501
Catalina Mariposa Lily							
Locations	100	76	7	4	55	61	60
Individuals	4881	4378	22	5	4051	4103	4191
Chaparral Beargrass							
Locations	6	0	0	0	1	0	0
Individuals	6	0	0	0	1	0	0
Coulter's Saltbush							
Locations	34	16	4	0	0	4	1
Individuals	3086	926	100	0	0	9	6
Fish's Milkwort							
Locations	1	0	0	0	0	0	0
Individuals	5	0	0	0	0	0	0
Many-stemmed Dudleya							

TABLE [M-3] (Continued)
RMV SENSITIVE SPECIES DEVELOPMENT AREA IMPACTS

Species	RMV	B-5	B-6	B-8	B-9	B-10	B-11
		Impact	Impact	Impact	Impact	Impact	Impact
Locations	284	156	114	63	113	118	124
Individuals	47192	19269	17284	6205	12562	15771	18341
Mesa Brodiaea							
Locations	2	0	0	0	1	1	1
Individuals	2	0	0	0	1	1	1
Mud Nama							
Locations	3	2	2	2	2	2	2
Individuals	9850	9500	9500	9500	9500	9500	9500
Palmer's Grapplinghook							
Locations	81	63	43	31	57	62	60
Individuals	27131	21744	4684	3178	20273	22338	22385
Salt Spring Checkerbloom							
Locations	3	3	1	1	1	1	1
Individuals	1503	1503	3	3	3	3	3
Small-flowered Microseris							
Locations	20	2	8	2	2	10	15
Individuals	28775	25	1475	25	25	2675	5475
Southern Tarplant							
Locations	38	27	0	0	0	11	1
Individuals	146067	52688	0	0	0	23726	750
Thread-leaved Brodiaea							
Locations	30	6	11	0	7	8	15
Individuals	9314	2335	6473	0	248	275	6508
Upright Burhead							
Locations	1	0	0	0	0	0	0
Individuals	1	0	0	0	0	0	0
Vernal Barley							
Locations	6	2	6	2	2	4	6
Individuals	11921	5400	11921	5400	5400	5421	11921
Western Dichondra							
Locations	4	0	1	0	0	0	0
Area ⁴	40 acres	0	10 acres	0	0	0	0
Source: Dudek 2004							

Attachment C

Open Space Mitigation Requirements for Large-Scale Master Plans/NCCP Plans

In order to assess the reasonableness of potential dedication requirements for the proposed GPA, the County has reviewed both large-scale master plans within Orange County and comparable plans outside the County that were also approved as NCCPs. The Response to Comments identifies a number of master plans within Orange County including Aliso Viejo, Ladera and the Newport Coast. Given the significance of the coordinated planning process, the County has selected two master plans that were also approved under the NCCP Act and Section 10 of FESA, Newport Coast in Orange County and Otay Ranch in San Diego County, for further review of "reasonableness" for assessing valid open space protection/dedication requirements for the proposed GPA.

Newport Coast was selected as one potential comparison because: (a) it contains very significant resources, including major canyons and sensitive species (e.g., the coastal California gnatcatcher and cactus wrens); (b) it has been subject to stringent regulatory review by the California Coastal Commission, as well as Orange County; and (c) the open space areas within the Newport Coast are the focal element of the Coastal Reserve portion of the County of Orange Central and Coastal NCCP/HCP approved in 1996. Although smaller than the GPA study area (9,290 acres as compared with 22,815 acres under the proposed GPA), the significance of the resource areas and the importance of the Newport Coast to the Central and Coastal NCCP/HCP present a good basis for comparative analysis. And, at 9,290 acres, the Newport Coast is certainly a sizeable area.

Otay Ranch was selected as a second potential comparison because it contains very significant resources – according to the City and County of San Diego MSCP:

"The Otay Ranch comprises the largest privately held ownership of Coastal sage scrub vegetation in the United States. The Combination of CSS and other habitats, varying geography, location at the boundaries of several plant floras (unique combinations of plants) make the Ranch a unique biological resource."

(MSCP, p. 3-12)

Given the significance of its resources, Otay Ranch has been subject to stringent regulatory review both under the initial MSCP and then in conjunction with the Chula Vista Subarea Plan component of the overall MSCP; the Otay Ranch resources were the focal element of the "Southern Area" of the MSCP. Comprising 22,899 acres, the three landholdings comprising Otay Ranch are almost identical in size with the Proposed Project study area at 22,815 acres. In light of the biological resources found on the Otay Ranch and its significance for the MSCP NCCP plan, Otay Ranch constitutes a good comparison for examining the reasonableness of dedication requirements.

Newport Coast Local Coastal Program

In order to provide for valid comparisons between the Proposed Project and the Newport Coast LCP, differences in categorization of "open space" and "development" under the two plans have been harmonized. For instance, Newport Coast classifies golf courses as "open space" while the Proposed Project categorizes golf courses as "development;" the Newport Coast golf course acreage was subtracted from "open space" and added to "development" in order to provide a valid comparison. Because the Newport Coast LCP encompassed Crystal Cove State Park, the park lands were included in "open space" totals for that project; however, in order to focus on

private landowner dedication mitigation obligations, including open space to development ratios, the Crystal Cove State Park lands were subtracted from open space totals presented below.

The Newport Coast LCP was approved at different points in time as it evolved – a major Local Coastal Program Amendment re-structuring the plan in 1987, and then subsequently amended in 1996 shortly after the review and approval of the Central and Coastal NCCP/HCP. The 1987 LCP was in effect at the time of the 1996 NCCP/HCP approval; the 1996 LCP is included because it was undertaken in part in response to the NCCP/HCP. The following are the summaries for both the 1987 and the 1996 plans:

(1) Newport Coast Local Coastal Program First Amendment (Sept 1987)

(a) Open Space Dedications

4,027 acres – includes Wilderness Park dedications as well as preservation dedications for major canyons such as Los Trancos but not golf course and State Park acreage

(b) Development Acreage

2,575 acres (1,922 acres of residential, 286 acres of tourist commercial and 367 acres of golf course)

(2) Second Amendment to the Newport Coast Local Coastal Program

(a) Open Space Dedications

4,148.2 acres

(b) Development Acreage

2,502.4 acres – includes, residential, tourist commercial and increase in golf course acreage due to reduction in tourist commercial (there are slight differences in totals for the two plans due to treatment of a few small parcels)

(3) Open Space Protection Percentages

In terms of privately owned open space lands required to be dedicated as mitigation for development impacts, the percentage open space protection under the two different Newport Coast plans is as follows:

1987 Newport Coast LCP = **61% open space protection**

1996 Newport Coast LCP = **62% open space protection**

Otay Ranch

As reviewed at the local government level, Otay Ranch was approved for 24,224 dwelling units. Table 3-1 from the San Diego MSCP (Conservation by Project in South County Segment) contains resource summaries for Otay Ranch which includes areas within the Chula Vista Subarea and within the County of San Diego (Chula Vista MSCP Planning Area). In February 2003, the City of Chula Vista issued a public review draft of the City of Chula Vista Subarea

Plan which contains current resource summaries that do not differ significantly from the tables in the original MSCP plan and it is these summaries that are provided below:

Open Space Dedications

11,285 acres – “undisturbed habitat types”

Development in Vegetation Communities

5,873 acres – Subarea Plan indicates that there are 17,157 acres of undisturbed habitat types (the remaining acreage approved for development is agricultural land or other disturbed lands comprising 5,742 acres of land in addition to the 5,873 acres of habitat authorized for conversion)

Open Space Protection Percentages

2003 Subarea Plan = **66% of undisturbed habitat**

According to the Chula Vista Subarea Plan:

“The Otay Ranch Planning documents establish specific conveyance standards for achieving assembly of the 11,375-acre Otay Ranch Preserve, which will mitigate for impacts to biological resources from development projects, including planned infrastructure within the Otay Ranch. A conveyance schedule was adopted as part of the [Resource Management Plan 2], which provides that for each acre of development impact to land within Otay Ranch, 1.188 acres of habitat is dedicated into the Otay Ranch Preserve, regardless of the existence of habitat [i.e., dedication is triggered by development on both undisturbed and disturbed lands] or of the habitat value of the land being developed” (emphasis added)

Conclusions Regarding Open Space Dedication Standards

Based on the Newport Coast and Otay Ranch approvals, open space dedication standards for areas with very high natural resource values have ranged between 61 to 62 percent in the case of Newport Coast to 66 percent in the case of Otay Ranch. The open space dedication/development ratios are in the range of 2 to 1, with a slightly lower standard for Newport Coast.

The Proposed Project would impact 5,449.8 acres of permanent impacts to natural habitats (Table 4.9-29) out of 19,226.3 acres of natural habitats (see Table 4.9-1). The percentage of natural habitats that would be protected is 72 percent. If temporary impacts are added to the habitats impacts totals, the Proposed Project would impact 5,558 acres of natural habitats and result in protection of 71 percent of natural habitats.



Attachment C-1

Economic Feasibility Issues

Pursuant to CEQA Guidelines Section 15126.6, in selecting alternatives to the proposed project, the lead agency is to consider alternatives that could feasibly obtain most of the basic objectives of the project. The discussion of alternatives should focus on those "capable" of avoiding or substantially lessening any significant effects of the project. Feasibility may take into account many factors including economic viability. The Draft Program EIR considers certain alternatives that (1) provide for less development (due either to a reduction in the density/intensity of development, or a reduction in the total acreage proposed for development) than the applicant's proposed project, and/or (2) modify the locations of the applicant's proposed development. Depending on the magnitude of reductions in the amount of development allowed and the effect of modifying the locations of development, such alternatives could affect the economic viability of the project. In turn, this would affect (1) the amount of open space that could be dedicated by the project proponent under a given alternative (instead of necessitating that dedication rights to certain portions of the open space be acquired with alternative funds, e.g., public funds) and (2) the amount of project-generated funding that would be available to support the Adaptive Management Program that is proposed for project open space.

The project applicant has expressed particular concern regarding the economic feasibility of alternatives B-5, B-6, B-8, and B-9. The question of economic feasibility/viability is complex and, as noted above, may be affected not only by the density/intensity of development and development acreage provided by an alternative, but also by the location of that acreage, as well as the related costs of development and infrastructure in given areas.

While the analysis of economic feasibility of developing a particular alternative is beyond the scope of the Draft Program EIR, the feasibility of assembling habitat reserve lands as RMV Open Space is a key consideration that will ultimately need to be factored into decisions regarding the feasibility of any alternative selected for approval by the County. It should be noted that the potential need for public acquisition of open space lands under alternatives B-5, B-6, B-8, and B-9 was discussed with, and acknowledged by, the wildlife agencies participating in the NCCP Working Group during that part of the NCCP/HCP process when the alternatives were developed. It should also be noted that the availability of such public funds, and the applicant's willingness to sell specific lands for such purposes, have not yet been demonstrated. The latter point should be viewed in the context of state and federal public policy to acquire lands from willing sellers (see County of Orange Central and Coastal NCCP/HCP Implementation Agreement, Section 5.2.4[c]). With regard to public funding, the limited availability of acquisition funds from prior bond issues, and governmental budgetary constraints are noted. In the event that adequate funding is not available, a given alternative may not be capable of providing for a conservation strategy capable of maintaining net habitat value over the long-term.

In the review and comparison of alternatives that is presented in Section 5 of the Response to Comments, the question of economic feasibility is noted where economic feasibility concerns may arguably be expected to affect the ability to assemble the RMV Open Space and to implement the Adaptive Management Program without alternative (e.g., public) funding.

ATTACHMENT D

MITIGATION MEASURES APPLICABLE TO B-10 MODIFIED

Land Use and Related Planning Programs

Project Design Features

- PDF 4.1-1 Prior to approval of the first Master Area Plan, the landowner shall enter into an agreement with the County regarding the 15,132-acre RMV Open Space. The agreement shall address:
- Method of preservation for this open space (i.e., conservation easement or similar mechanism)
 - Permitted uses within the open space as defined in the PC Text;
 - Non-permitted uses within the open space as defined in the PC Text;
 - Phasing of open space preservation areas. Phasing of open space areas will be consistent with development phasing; and
 - Funding mechanism for implementation of the Adaptive Management Program (AMP) as described in the Draft Program EIR.
- PDF 4.1-2 A component of the *Ranch Plan Planned Community Program Text* is the provision for the processing of Master Area Plans, which would cover an entire Planning Area, as well as Subarea Plans for smaller areas within each Planning Area. These plans would address the project's compliance with the zoning regulations, as well as other applicable codes and requirements. The Master Area Plan shall cover the entire Planning Area and address the provisions for a Master Area Plan as defined in Section II.B.3a of the *Ranch Plan Planned Community Program Text*. In addition to a Master Area Plan, Subarea Plans addressing the provisions outlined in Section II.B.3b of the *Ranch Plan Planned Community Program Text* shall be required for all development areas. Multiple Subarea Plans addressing portions of a Planning Area may be prepared, provided a Master area Plan for all development areas has prepared. (The requirements for the Master Area Plan and the Subarea Plan are provided in Section 3.4.5.)
- PDF 4.1-3 The project proposes a mix of uses and housing densities, including estates, single-family conventional housing, multi-family units, senior housing, and apartments that would provide housing opportunities for a range of income levels. Of the 14,000 dwelling units proposed within the Ranch Plan PC Area, the Environmental Impact Report has analyzed the provision of approximately 6,000 senior citizen housing dwelling units. Each Master Area Plan shall provide a statistical table estimating the proposed senior citizen housing dwelling units by Planning Subarea. Each subsequent Subarea Plan shall then specify the location and number of Senior Housing dwelling units as regulated by Section III.A.5 of this Ranch Plan PC Text. An Annual Monitoring Report (per General Note 11) will be prepared each year as an inventory of dwelling units.

PDF 4.1-4 In conjunction with the processing of the site development permit for any golf course, the applicant will submit an Integrated Golf Course Management Plan (IGCMP), which will provide direction for the operation of the golf course. The IGCMP will provide overall structure and guidance for turf grass management that creates desirable playing conditions while protecting adjacent sensitive habitats and species. The IGCMP would:

- a. Describe the cultural, mechanical, biological, fertilizer, and irrigation strategies necessary to achieve and maintain turf health and vigor.
- b. List anticipated pests, monitoring methods, area-specific damage thresholds, and control strategies for each identified pest.
- c. Provide information on the type and class of pesticide, selection considerations, methods and restrictions for application, and environmental considerations.
- d. Describe methods for monitoring chemicals in surface, storm, and groundwater. Mitigation and corrective actions would be identified.

Implementation of the IGCMP will be the responsibility of the golf course operator. The IGCMP shall be approved by the County of Orange in accordance with the applicable water quality requirements. The County of Orange will not be responsible for the management or maintenance of the proposed facility.

Standard Conditions of Approval

There are no standard conditions of approval applicable to land use.

Mitigation Measures

MM 4.1-1 Prior to sale, lease, or rental of any residential structure or portion thereof within Planning Area 8, the applicant/owner shall provide to each prospective purchaser, lessee, or tenant a notice and statement of acknowledgment that shall be executed by the prospective purchaser, lessee or tenant that the property within Planning Area 8 may be subject to overflight and sound of military operations of MCB-Camp Pendleton. The form and method of distribution of said notice and statement of acknowledgment shall be as approved by the Manager, Building Permits.

MM 4.1-2 At the time of Master Area Plan approval for Planning Area 8, the Planning Director shall evaluate the most current RCUZ for MCB Camp Pendleton to ensure that noise sensitive land uses are not constructed in areas that would exceed state noise standards.

MM 4.1-3 Prior to the sale, lease or rental of any residential, commercial or industrial structure or portion thereof within Planning Area 5, the applicant/owner shall provide to each prospective purchaser, lessee, or tenant a notice and statement of acknowledgement that shall be executed by the prospective purchaser, lessee or tenant that the property within Planning Area 5 is located immediately adjacent to Prima Deshecha Landfill, a facility that will continue to operate until its scheduled closure in 2067 or until it reaches its design capacity in accordance

with the 2001 General Development Plan and all subsequent amendments thereto. The form and method of distribution of said notice and statement acknowledging same shall be approved by the Director, Integrated Waste Management Department or his designee.

Agriculture

Project Design Features

- PDF 4.2-1 The project has incorporated provisions into the project design to continue the cattle ranching activities and maintain the agricultural operation or portions of The Ranch. The ongoing grazing will be conducted in compliance with the Grazing Management Plan proposed as part of the Adaptive Management Plan (Appendix J) to ensure protection of sensitive species.
- PDF 4.2-2 The project provides for continued citrus production in Planning Areas 2, 7, and 10 and avocado orchards in Planning Areas 2 and 7. The location and amounts of the agricultural resources shall be identified as part of the Master Area Plan for Planning Areas 2, 7, and 10.

Standard Conditions and Regulations

There are no standard conditions and regulations applicable to agriculture.

Mitigation Measures

- MM 4.2-1 Prior to planting of the planned orchards in Planning Area 7, a qualified biologist shall survey the site for listed species to avoid potential environmental impacts. Should any listed species be identified the location of the planned orchards will be modified to avoid the resources or a mitigation plan consistent with the applicable requirements outlined in Section 4.9, Biological Resources, shall be developed and implemented.

Population and Housing

Project Design Features

- PDF 4.3-1 The Ranch Plan would provide a slightly higher jobs/housing ratio than SCAG's assumed ratio for Orange County. This would increase the overall jobs/housing balance for southern Orange County, which is currently below the SCAG ratio.
- PDF 4.3-2 Rancho Mission Viejo would relocate displaced residents prior to approval of demolition permits. Mitigation Measure 4.3-1 further supports this project design feature.

Standard Conditions and Regulations

There are no standard conditions and regulations related to population, housing and employment impacts.

Mitigation Measures

- MM4.3-1 In conjunction with approval of an Area Plan for those portions of Planning Areas 1 and 3 where existing residential units would be displaced, the applicant shall provide evidence of relocation of any remaining residents.

Geology and Soils

Project Design Features

- PDF 4.4-1 The earth-fill dams located within the boundaries of the development areas that impound the existing on-site reservoirs shall be removed concurrent with grading.

Standard Conditions and Regulations

- SC 4.4-1 Prior to the issuance of a grading permit, the applicant shall submit a geotechnical report to the Manager of Subdivision and Grading, for approval. The report shall meet the requirements outlined in the County of Orange Grading Code and Manual. (County of Orange Standard Condition of Approval, G01)
- SC 4.4-2 Prior to the issuance of any grading permits, the Manager of Subdivision and Grading shall review the grading plan for conformance with the grading shown on the approved tentative map. If the applicant submits a grading plan which the Manager of Subdivision and Grading determines to show a significant deviation from the grading shown on the approved tentative map, specifically with regard to slope heights, slope ratios, pad elevations or configurations, the Subdivision Committee shall review the plan for a finding of substantial conformance. If the Subdivision Committee fails to make such a finding, the applicant shall process a revised tentative map; or, if a final map has been recorded, the applicant shall process a new tentative map or a site development permit application per Orange County Zoning Code Sections 7-9-139 and 7-9-150. Additionally, the applicant shall process a new environmental assessment for determination by the decision making entity. (County of Orange Standard Condition of Approval, G02)
- SC 4.4-3 Prior to the recordation of a subdivision map or prior to the issuance of any grading permit, whichever comes first, and if determined necessary by the County of Orange Manager, Subdivision and Grading, the applicant shall record a letter of consent from the affected property owners permitting off-site grading, cross lot drainage, drainage diversions and/or unnatural concentrations. The applicant shall obtain approval of the form of the letter of consent from the Manager, Subdivision and Grading Services before recordation of the letter. (County of Orange Standard Condition of Approval, G04)
- SC 4.4-4 Prior to issuance of grading permits, the Manager of Subdivision and Grading shall determine that the proposed grading is consistent with the grading depicted within the approved planning application. (County of Orange Standard Condition of Approval, G09)
- SC 4.4-5 The proposed development shall be designed in compliance with the Uniform Building Code (UBC), accepted industry standards, and the County's earthquake safety Municipal Code requirements.

Mitigation Measures

- MM 4.4-1** Prior to the approval of the first tentative tract map in each Planning Area, the applicant shall submit a geotechnical report to the Deputy Director, Planning and Development Services, for approval. The report shall meet the requirements outlined in the County of Orange Grading Code and Manual, and as appropriate, shall adequately address each of the following issues to the satisfaction of the Deputy Director, Planning and Development Services:
- a. Locate, define and map the activity status of any faults within the development area of the project site, and if any active faults are encountered, determine the appropriate structural setbacks.
 - b. Identify and map areas where grading activities may encounter unconsolidated soils (e.g., alluvial deposits, colluvium, native soil, debris flow deposits) susceptible to soil creep, liquefaction, landslides, or settlement. Define specific measures to be taken when such soils are encountered during grading (i.e., removal and replacement with compacted fill, slope stabilization, etc.).
 - c. Identify and map areas where fill is to be placed on top of unconsolidated soils (e.g., alluvium, colluvium, landslide debris). Define specific measures to be taken when such fills are anticipated during grading (i.e., removal and recompaction of unconsolidated soils, settlement monitoring in deep canyon areas, etc.).
 - d. Locate and map all landslides within the development area of the project site and evaluate the lateral extent, depth and potential instability as a result of grading and the potential effects of settlement due to fill loads. Define specific measures to be taken during grading (i.e., bury under proposed fills, complete or partial removal, slope stabilization, avoidance, etc.).
 - e. Identify and map areas susceptible to debris flows and surficial slumping, including potential debris flow volumes. Define specific measures to be taken during grading (i.e., removal during mass grading, containment within a debris basin, etc.).
 - f. Identify and map areas susceptible to expansive soils. Define specific measures to be taken during grading (i.e., pre-saturation of expansive soils during construction, reinforcement of building foundations and concrete slabs, removal and replacement with non-expansive granular soil beneath structures, etc.).
- MM 4.4-2** Prior to the approval of the first tentative tract map for Planning Area 9, the applicant shall submit a geotechnical report to the Deputy Director, Planning and Development Services, for approval, and demonstrating that residential development shall be sited to avoid mapped landslides. The report shall meet the requirements outlined in the County of Orange Grading Code and Manual.

Water Resources

Project Design Features

- PDF 4.5-1 *Site Design Watershed Planning Principles* – Land use planning guidance criteria were developed as part of the NCCP/HCP and SAMP/MSAA processes to assist in preserving the existing hydrologic functions within the watershed. These principles (the *Watershed Planning Principles*) were utilized as a framework to assist in planning the project to minimize project hydrologic impacts and to preserve the natural water resources.
- PDF 4.5-2 *Flood Control Detention Facilities* – Dedicated areas are to be provided throughout the project area to provide sufficient storage for runoff volumes to mitigate increases in peak discharges and to offset impacts of existing development.
- PDF 4.5- 3 *Water Quality Management Plan* – A conceptual Water Quality Management Plan (the *Draft WQMP*) has been developed for the proposed project in compliance with the Model Water Quality Management Plan requirements of the County of Orange DAMP. The *Draft WQMP* addresses the following elements:
- **Site-design BMPs:** Site design BMPs have been selected to address the creation of a hydrologically functional project design that seeks to mimic the natural hydrologic regime.
 - **Source Control BMPs:** Source controls BMPs (routine non-structural BMPs, routine structural BMPs, and BMPs for individual categories/project features) have been selected, including a combined flow and water quality control system to address hydrologic water balance and water quality treatment.
 - **Urban Runoff and Stormwater Control Elements:** Water balance and flow duration analyses and conceptual combined flow and water quality control systems have been prepared for each sub-basin.
 - **Stormwater BMP Operation and Maintenance Program:** An operation and maintenance program has been developed to address the following elements: Maintenance Responsibility, General Operation and Maintenance Activities, Routine Operation and Maintenance Activities and Major Operation and Maintenance Activities
 - **Stormwater Monitoring Program:** A stormwater monitoring program has been developed for the Water Quality BMPs.
- PDF 4.5-4 *Water Conservation* – Water captured in the combined flow and water quality control system and in flood control detention facilities, where possible, will be percolated, infiltrated and/or re-captured for re-use as a supplemental source of irrigation water.

Standard Conditions and Requirements

Drainage/Flood

SC 4.5-1 **Drainage Study.** Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only) or prior to the issuance of any grading permits, whichever comes first, the following drainage studies shall be submitted to and approved by the Manager, Subdivision and Grading:

- A. A drainage study of the project including diversions, off-site areas that drain onto and/or through the project, and justification of any diversions; and
- B. When applicable, a drainage study evidencing that proposed drainage patterns will not overload existing storm drains; and
- C. Detailed drainage studies indicating how the project grading, in conjunction with the drainage conveyance systems including applicable swales, channels, street flows, catch basins, storm drains, and flood water retarding, will allow building pads to be safe from inundation from rainfall runoff which may be expected from all storms up to and including the theoretical 100-year flood.

SC 4.5-2 **Drainage Improvements.**

- A. Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only) or prior to the issuance of any grading permits, whichever comes first, the applicant shall in a manner meeting the approval of the Manager, Subdivision and Grading:
 - 1) Design provisions for surface drainage; and
 - 2) Design all necessary storm drain facilities extending to a satisfactory point of disposal for the proper control and disposal of storm runoff; and
 - 3) Dedicate the associated easements to the County of Orange, if determined necessary.
- B. Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only) or prior to the issuance of any certificates of use and occupancy, whichever occurs first, said improvements shall be constructed in a manner meeting the approval of the Manager, Construction.

SC 4.5-3 **Drainage Improvements**

- A. Prior to the issuance of any grading permits, the applicant shall in a manner meeting the approval of the Manager, Subdivision and Grading:
 - 1) Design provisions for surface drainage; and
 - 2) Design all necessary storm drain facilities extending to a satisfactory point of disposal for the proper control and disposal of storm runoff; and
 - 3) Dedicate the associated easements to the County of Orange, if determined necessary.

- B. Prior to the issuance of any certificates of use and occupancy, said improvements shall be constructed in a manner meeting the approval of the Manager, Construction.

SC 4.5-4 **Master Plan of Drainage.** Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only), the subdivider shall participate in the applicable Master Plan of Drainage in a manner meeting the approval of the Manager, Subdivision and Grading, including payment of fees and the construction of the necessary facilities.

SC 4.5-5 **Subordination of Easements.** Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only), the subdivider shall not grant any easements over any property subject to a requirement of dedication or irrevocable offer to the County of Orange or the Orange County Flood Control District, unless such easements are expressly made subordinate to the easements to be offered for dedication to the County. Prior to granting any of said easements, the subdivider shall furnish a copy of the proposed easement to the Manager, Subdivision and Grading, for review and approval. The Santa Margarita Water District shall restore other improvements or facilities located within the easement, if it has consented to the location of such improvements or facilities to the extent that the exercise of its rights in connecting with the easement impacts other improvements or facilities located within the easement; however, in no event shall Santa Margarita Water District be responsible for the cost of relocating its facilities in event of conflicts with such improvements or facilities.

SC 4.5-6 **Regional Facility Improvements.** Prior to the recordation of a subdivision map, the applicant shall improve Regional Facility _____ by the construction of _____ and dedicate right-of-way to the Orange County Flood Control District in a manner meeting the approval of the Manager, Subdivision and Grading.

SC 4.5-7 **Runoff Management Plan.** Prior to the issuance of any grading permits, applicant shall submit a Runoff Management Plan (RMP) to the Manager, Subdivision and Grading for review and approval.

Water Quality

SC 4.5-8 **Water Quality Management Plan.** Prior to the recordation of any final subdivision map (except those maps for financing or conveyance purposes only) or the issuance of any grading or building permit (whichever comes first), the applicant shall submit for review and approval by the Manager, Inspection Services Division, a Water Quality Management Plan (WQMP) specifically identifying Best Management Practices (BMPs) that will be used onsite to control predictable pollutant runoff. This WQMP shall identify, at a minimum, the routine structural and non-structural measures specified in the current Drainage Area Management Plan (DAMP). The WQMP may include one or more of the following:

- Discuss regional water quality and/or watershed programs (if available for the project);

- Address Site Design BMPs (as applicable) such as minimizing impervious areas, maximizing permeability, minimizing directly connected impervious areas, creating reduced or “zero discharge” areas, and conserving natural areas;
- Include the applicable Routine Source Control BMPs as defined in the DAMP;
- Demonstrate how surface runoff and subsurface drainage shall be managed and directed to the nearest acceptable drainage facility (as applicable), via sump pumps if necessary.

SC 4.5-9

Compliance with the WQMP. Prior to the issuance of a certificate of use and occupancy, the applicant shall demonstrate compliance with the WQMP in a manner meeting the satisfaction of the Manager, Inspection Services Division, including:

- Demonstrate that all structural Best Management Practices (BMPs) described in the project’s WQMP have been implemented, constructed and installed in conformance with approved plans and specifications;
- Demonstrate that the applicant has complied with all non-structural BMPs described in the project’s WQMP;
- Submit for review and approval an Operations and Maintenance (O&M) Plan for all structural BMPs for attachment to the WQMP;
- Demonstrate that copies of the project’s approved WQMP (with attached O&M Plan) are available for each of the incoming occupants;
- Agree to pay for a Special Investigation from the County of Orange for a date (12) twelve months after the issuance of a Certificate of Use and Occupancy for the project to verify compliance with the approved WQMP and O&M Plan; and
- Demonstrate that the applicant has agreed to and recorded one of the following: 1) the CC&Rs (that must include the approved WQMP and O&M Plan) for the project Home Owner’s Association; 2) a water quality implementation agreement that has the approved WQMP and O&M Plan attached; or 3) the final approved Water Quality Management Plan (WQMP) and Operations and Maintenance (O&M) Plan.

SC 4.5-10

Stormwater Pollution Prevention Plan. Prior to the issuance of any grading or building permits, the applicant shall demonstrate compliance under California’s General Permit for Stormwater Discharges Associated with Construction Activity by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board and a copy of the subsequent notification of the issuance of a Waste Discharge Identification (WDID) Number or other proof of filing in a manner meeting the satisfaction of the Manager, Building Permit Services. Projects subject to this requirement shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). A copy of the current SWPPP shall be kept at the project site and be available for County review on request.

- SC 4.5-11 **Erosion and Sediment Control Plan.** Prior to the issuance of any grading or building permit, the applicant shall submit a Erosion and Sediment Control Plan (ESCP) in a manner meeting approval of the Manager, Building Permit Services, to demonstrate compliance with local and state water quality regulations for grading and construction activities. The ESCP shall identify how all construction materials, wastes, grading or demolition debris, and stockpiles of soil, aggregates, soil amendments, etc. shall be properly covered, stored, and secured to prevent transport into local drainages or coastal waters by wind, rain, tracking, tidal erosion or dispersion. The ESCP shall also describe how the applicant will ensure that all BMPs will be maintained during construction of any future public right-of-ways. A copy of the current ESCP shall be kept at the project site and be available for County review on request.
- SC 4.5-12 Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only) or the issuance of any grading or building permits, whichever occurs first, within the FP-2 Zoning District, the applicant shall submit all of the necessary documents to the Federal Emergency Management Agency (FEMA) to receive a Conditional Letter of Map Revision (CLOMR) of the Flood Insurance Rate Map (FIRM). Concurrently, the applicant shall submit to the Manager, Subdivision and Grading, three (3) sets of the calculations and plans showing the method of satisfying FEMA and FP-2 Zoning District Regulations, all in a manner meeting the approval of the Manager, Subdivision and Grading.

Mitigation Measures

- MM 4.5-1 **Runoff Management Plan.** Prior to the approval of the first Area Plan, or other planning level approval, for any part of the Ranch, the applicant shall prepare a detailed Runoff Management Plan ("ROMP") that shall be approved by the Manager, Flood Control Division, and the Manager, Watershed and Coastal Resources Division, and that meets the following standards and specifications:
- a. The ROMP shall cover the entire Ranch within the regional watersheds (San Juan Creek and San Mateo Creek) and sub-watersheds affected by the Area Plan or other planning level approval, and shall be consistent with Orange County criteria including the Orange County Hydrology Manual and its addendum ("OCHM"), the Orange County Flood Control Design Manual ("FCDM"), and any other County criteria and/or standards that are applicable.
 - b. The ROMP shall separately cover the San Juan Creek watershed or the San Mateo Creek watershed, depending on the Ranch Plan development proposed and the regional and sub-watershed(s) affected. For the San Juan Creek watershed, the ROMP shall extend to the downstream boundary of the Ranch. For the San Mateo Creek watershed, the ROMP shall extend to the County border for those portions of the Ranch Plan area that are located within the watershed.
 - c. The ROMP shall be separate from the preliminary analyses submitted as part of the GPA/ZC submittals using the U.S. Army Corps of Engineers HEC-1 hydrology application.

- d. The ROMP shall be accomplished to a greater level of detail using criteria established by the OCHM and the FCDM.
- e. The ROMP shall re-evaluate and verify baseline conditions, project conditions for all phases of development, post-project conditions, impacts of the development through all phases and scenarios of development, and mitigation measures needed to ameliorate development impacts through all the phases and scenarios of development (including the full Ranch Plan development) within the affected watershed(s), all accomplished to criteria established by the OCHM and FCDM.
- f. The ROMP shall analyze existing conditions, potential impacts, and proposed mitigation measures for sediment mass balance, watershed sediment yield, sediment transport and the stability of the creek and watersheds and/or increased erosion potential and other hydraulic characteristics of the creeks and watersheds (San Juan Creek and San Mateo Creek) within the project site and off-site to the La Novia Bridge for development within the San Juan Creek watershed and to the County boundary for development within the San Mateo Creek watershed for all phases of the development.
- g. The ROMP shall analyze and demonstrate that development of the Ranch Plan will not produce adverse impacts during 2-, 5-, 10-, 25-, 50- and 100-year events, including but not limited to increases in runoff peak discharge, increases in runoff volume, channel aggradation/degradation, erosion and channel stability within the project site and off-site from the headwaters of the watershed to the La Novia Bridge for development within the San Juan Creek watershed, and to the County boundary for development within the San Mateo watershed for portions of the streamcourse potentially impacted by the project development. The analyses set forth in the ROMP shall be for existing conditions and for all phases of development, including with and without required mitigation measures.
- h. The ROMP shall analyze in sufficient detail to enable the size and alignment of flood control and storm drain facilities, and site selection choices for the retarding basins, water quality detention basins and other mitigation measures to be more precisely evaluated and established. The ROMP should include the preparation of a water quality site design BMP concept plan. The applicant shall work with the County to provide the level of design detail in these facilities that is appropriate to the level of planning and approval at each project phase.
- i. The ROMP shall include details as to the proposed future ownerships and maintenance responsibilities, and long term funding (including funding plans for maintenance) for the proposed ROMP flood control and storm drain facilities, retarding basins, and water quality detention basins.
- j. The ROMP shall include proposed Orange County Flood Control District (OCFCD) and/or County ownership facilities identified in sufficient detail with proposed configuration, sizes, alignment, rights-of-way widths, etc. for review and approval during the ROMP review process as to whether

- the ownership of proposed flood control/drainage facilities are to become OCFCD or County facilities.
- k. The ROMP shall provide that any proposed diversions between watersheds shall be subject to the approval of the Manager, Flood Control Division.
 - l. The ROMP shall provide that any future revisions to the ROMP in order to accommodate land use changes or other issues that have the potential of modifying or invalidating previous conclusions regarding peak discharges and runoff volumes shall require the approval of the Manager, Flood Control Division.
 - m. Consistent with the ROMP, and in order to mitigate project impacts on channel stability and erosion, the applicant shall implement a monitoring and accompanying mitigation program that provides, among other things, assurance for provisions of dedication of any lands needed within the Ranch to accomplish necessary mitigations, if any. Said monitoring and mitigation program shall be subject to the approval of the Manager, Flood Control Division. Monitoring for project impacts shall be conducted for San Juan Creek and its major tributaries within and downstream of the Ranch to the La Novia Bridge; if the San Mateo Creek watershed is affected, the monitoring shall cover those portions of San Mateo Creek and its major tributaries that are within the County and that are likely to be impacted by the project. The monitoring activities shall continue during the project development phases and shall extend for a period of 10 years following the completion of the final grading of the last planning area of the Ranch Plan that includes at least two (2) storm events that generate discharges of at least 20 percent of computed 100-year high confidence discharges, all in a manner meeting the approval of the Manager, Flood Control Division. The accompanying mitigation program shall be based on a detailed study of the watershed and data collected from the monitoring program funded by the applicant. Said mitigation program shall be in addition to the mitigation measures (e.g., construction of flood control structures, setting up funds through bonds, etc.) formulated in the ROMP for items that are found to be not adequately mitigating development-related impacts. The applicant and the County/OCFCD will meet in good faith to formulate a plan for remediating and/or improving any under-performing mitigation measures, all at no cost to the County/OCFCD.
 - n. If a Locally Preferred Plan (LPP) is developed that contemplates or otherwise assumes Ranch Plan development within the San Juan Creek watershed, the County and the applicant may pursue an alternative mitigation measure strategy based on the LPP that includes (i) mitigation measures within the Ranch and (ii) participation in offsite mitigation measures to the extent that said alternative mitigation measures are determined to be consistent with (a) the objectives of the County's Drainage Area Master Plan for water quality purposes, the (b) the ROMP and (c) the MPD.

- MM 4.5-2 Master Plan of Drainage.** Prior to the approval of the first Master Area Plan (or other planning level approval) covering any portion of the Ranch, the applicant shall prepare a Master Plan of Drainage ("MPD") that (i) is in a manner receiving the approval of the Manager, Flood Control Division and the Manager, Watershed and Coastal Resources Division and (ii) shows all flood control, storm drain, and water quality features within the affected watershed(s).
- MM 4.5-3 Master Area Plan-Level Water Quality Management Plan.** Prior to the approval of a Master Area Plan for each Planning Area, the applicant shall prepare a Master Area Plan WQMP that (i) is consistent with the terms and content of the Draft WQMP (see PDF 4.5-3) and (ii) provides more particularized information and detail concerning how the provisions of the Draft WQMP will be implemented within the area covered by the individual Master Area Plan. At a minimum, each Master Area Plan WQMP will provide supplemental and refined information concerning (i) how site-design, source-control and treatment control BMPs will be implemented at the Master Area Plan level for the area in question, (ii) potential facility sizing and location within the subject Master Area Plan area, and (iii) monitoring, operation and maintenance of stormwater BMPs within the relevant Master Area Plan area.
- MM 4.5-4 Sub-Area Plan-Level Water Quality Management Plan.** Prior to the approval of a Sub-Area Plan for any portion of the project area that is the subject of an approved Master Area Plan, the applicant shall prepare a Sub-Area Plan WQMP that (i) is consistent with the terms and content of the Draft WQMP (see PDF 4.5-3), (ii) is consistent with the terms and content of the relevant Master Area Plan WQMP (see MM 4.5-3) and (iii) provides more particularized information and detail concerning how the provisions of the Draft WQMP and the relevant Master Area Plan WQMP will be implemented within the area covered by the individual Sub-Area Plan. At a minimum, each Sub-Area Plan WQMP will provide supplemental and refined information concerning (i) how site-design, source-control and treatment control BMPs will be implemented at the Sub-Area Plan level for the area in question, (ii) the size, location and design features of the individual water resource facilities to be developed within the subject Sub-Area Plan area, and (iii) monitoring, operation and maintenance of the stormwater BMPs within the relevant Sub-Area Plan area.
- MM 4.5-5 Flood Control Detention Facilities.** As appropriate during Ranch Plan development process, the applicant will be required to construct and implement flood control detention facilities to provide hydrologic mitigation for increases in peak discharges. Detention facilities will be located at the lower end of each of the major developed planning areas as necessary within the Ranch Plan project. While the specific design and characteristics of each basin will be refined during the project design process, planning level information is provided in this section to characterize the facilities and their functions. Initial basin locations are shown on Exhibit 4.5-13 for the Ranch Plan. The specific number, size and locations of the basins will be determined during the ROMP process. Further refinement may be achieved during the design process. Table 4.5-27 provides an initial estimate of the range of storage volumes that may be required in each of the major planning areas. Refined design and analysis of the basins needs to ensure that these facilities mitigate regional flood control facility impacts and address uncertainties such as timing of hydrograph peaks and the interaction with other elements within the watershed drainage network.

The detention basins will be designed as “off-line” from most of the major stream channels. It is initially planned that the Gobernadora detention basin would be located within the channel and designed as a “flow through” basin. Generally speaking, flow from the development areas will be routed through the basins prior to discharge to the mainstem stream channels. By contrast, flows from undeveloped areas will not be routed through the basins, but will generally follow existing drainages directly to the main channels.

The basins will be designed to include an initial forebay area for trapping of sediment, floating debris, etc). The sediment forebay will be designed for easy maintenance, with an elongated shape maximize the opportunity for sediment (and pollutants adsorbed to the sediment particles) to settle out, and to allow easy sediment removal by an excavator on the access road. Maintenance standards will be established for maximum depth of accumulated sediment in the forebay basins prior to removal. An overflow weir will connect the forebay to the main detention facility. This larger facility will include the entrance zone, the main storage area and the outlet structure. The basin will have sloped, vegetated sides, a perimeter access road, and a ramp access to the basin floor. The entire detention facility will be fenced to preclude public access. The floor of the basin will likely be colonized by emergent vegetation. This can provide additional water quality improvement of urban runoff, and evaporation potential during the dry season. In addition, this vegetation will provide incidental avian and wildlife habitat. However, the primary intent of the structures is to provide sediment trapping in the forebay, and flood detention in the main basin. As such, maintenance protocols and regulatory permits should be established prior to the design process to facilitate the required periodic sediment removal and facility maintenance.

The outlet structure will be configured to control a wide range of flows, providing flow management from the 2- to 100-year flow event. It will also include an overflow spillway, designed to safely convey floods in excess of the outlet structure capacity directly to the stream. A subdrain will be provided to insure complete drainage within several days following a flow event.

A key element in the long-term effectiveness of the detention facilities is the establishment of an on-going maintenance and monitoring program. The applicant will establish both a management entity and a funding source to insure the implementation of a program to accomplish the following goals:

- **Monitoring:** The monitoring program will track the performance of the detention facilities as well as the stability of the various stream channels within and downstream of the Ranch Plan project (to La Novia Bridge for San Juan Creek and to County border for San Mateo Creek). The monitoring will serve to identify the regular maintenance needs of the facilities as well as track any emerging problems with erosion or sedimentation in the stream channels. The monitoring shall be in a manner receiving the approval of the County/OCFCD.
- **Detention basin maintenance will include:**
 - Identifying the rate of sediment buildup in the forebay or in the main facility and provision for sediment removal when the accumulated

sediment reaches a specified depth. The initial sizing criteria for basin volume will include provision for this loss of storage during the period of sediment accumulation.

- **Emergent Vegetation Management:** A vegetation management plan will be specified for all of the structural elements of the flood detention system. The applicant will work with the County to identify elements of the detention basin that can accommodate some vegetation (for example if water quality ponds are included in the facility, vegetation criteria will be developed for these). Based on County recommendations, vegetation will be precluded from the active flood detention basins to facilitate sediment removal activities.
- **Vector/Nuisance Management:** The design and maintenance of the basins will include prevention of vector problems such as mosquitoes, rodents, algal blooms etc.
- **Structural Components:** The basin inlet and outlet structures will require periodic maintenance to remove accumulated debris and replacement of damaged or aging elements. If the basins include a water recovery program (i.e., use of detained or infiltrated water for irrigation), the pumps and associated facilities (screens, pipes, valves) will require ongoing monitoring/maintenance.
- **Facility Appearance/Landscaping:** The detention basins will be large elements situated at visible locations within the development areas. As such their design and maintenance are important from an aesthetic perspective. The perimeter fencing, access roads and landscaping, on the basin side slopes will require ongoing irrigation and upkeep to insure that the basins represent visually appealing facilities. The basins will be designed to meet the County of Orange design requirements.

MM 4.5-6 Combined Flow and Water Quality Control System. All developments will be designed in order to achieve flow duration matching, address the water balance, and provide for water quality treatment through a combined flow and water quality control system (termed combined control system).

Combined Control System Components

The proposed combined control system will include one or more of the following components (see Exhibits 4.5-14, 4.5-15, and 4.5-16), each of which provides an important function to the system:

- Flow Duration Control and Water Quality Treatment (FD/WQ) Basin
- Infiltration Basin
- Bioinfiltration Swale
- Storage Facility for Recycling Water for Non-Domestic Supply
- Diversion Conduit to Export Excess Flows out of the Sub-basin.

The flow duration control and water quality treatment basin provides the initial flow and water quality treatment control functions to the system. The remaining components address the excess flows, alone or in combination with each other,

generated during wet weather. Additional water quality treatment control is also provided in the infiltration basin and bioinfiltration swale. The following subsections describe each combined control system component in more detail.

1. Flow Duration Control and Water Quality Treatment (FD/WQ) Basin

The flow duration control and water quality treatment (FD/WQ) basin will provide both flow control and water quality treatment in the same basin. Detention basins are the most common means of meeting flow control requirements. The concept of detention is to collect runoff from a developed area and release it at a slower rate than it enters the collection system. The reduced release rate requires temporary storage of the excess amounts in a basin with release occurring over a few hours or days. The volume of storage needed is dependent on 1) the size of the drainage area; 2) the extent of disturbance of the natural vegetation, topography and soils, and creation of impervious surfaces that drain to the stormwater collection system; 3) the desired detention capacity/time for water quality treatment purposes; and 4) how rapidly the water is allowed to leave the FD/WQ basin, i.e., the target release rates.

The FD/WQ basin shall incorporate extended detention to provide water quality treatment for storm flows. The FD/WQ basin shall also incorporate wetland vegetation in a low flow channel along the bottom of the basin for the treatment of dry weather flows and small storm events.

To the extent feasible depending on the topography and grade, the FD/WQ basin will be located in areas where there is a larger depth to groundwater and more infiltrative soils. The FD/WQ basin shall be designed to have two active volumes, a low flow volume and a high flow volume. The low flow volume is designed to capture small to moderate size storms, the initial portions of larger storms, and dry weather flows. The high flow volume is designed to store and release higher flows to maintain, to the extent possible, the pre-development runoff conditions.

2. Infiltration Basin

The second element in the combined control system shall consist of a separate downstream, shallow basin designed to infiltrate stormwater where soils have a high infiltration capacity. The infiltration basin is sized to infiltrate all the flows released from the lower volume in the FD/WQ basin; nonetheless, an overflow system would convey excess flows that may occur during very wet years to the bioinfiltration swale discussed below. Features of the proposed combined control system that shall guard against groundwater contamination include: 1) pretreatment of all runoff in a FD/WQ basin before it enters the infiltration basin, and 2) locating infiltration basins where there is at least 10 feet of separation to the groundwater.

3. Bio-infiltration Swale

The third element of the combined control system shall be a bio-infiltration swale that leads from the FD/WQ basin to the stream channel. A bio-infiltration swale is a relatively flat, shallow vegetated conveyance channel

that removes pollutants through infiltration, soil adsorption, and uptake by the vegetation. In areas characterized by terrains with good infiltration capabilities, flows released from the FD/WQ basin and carried in the bio-infiltration swale will mimic pre-development conditions, in which low flows infiltrate in the soils and only high flows reach the main stem of the stream channel. In catchments where development is located on less pervious soils and therefore pre-development runoff is higher, the swale may be lined to better mimic pre-development hydrology or flows may be piped to the stream.

4. Storage Facility for Recycling Water for Non-Domestic Supply

The fourth possible element of the combined control system shall be storage of surface water flows for recycling where there is opportunity for reuse of water for irrigation, such as a golf course, residential common area, or local park. All elements of the combined flow and water quality control system shall be reviewed with the SMWD for determination of feasibility of reuse and connection to non-domestic irrigation facilities. Diversion of outflows from the FD/WQ basin to non-domestic water supply reservoirs will be conducted if feasible and cost effective.

5. Diversion Conduit to Export Flows out of the Sub-basin

The fifth possible element of the combined control system shall be the provision to export flows out of the sub-basin. This element provides an additional option that may be employed to better preserve the pre-development water balance within the sub-basin. Such diversions may be desirable where excess runoff could result in increased stormwater flows or increased base flows in sensitive streams. However, all diversions of drainage area are subject to approval by the County of Orange. The diversions would be for excess runoff only and would only be feasible for development bubbles that adjoin other sub-basins having less sensitive stream channels, or are close to San Juan Creek or Lower Cristianitos Creek, which have characteristics that allow them to handle additional flows without causing damage to the stream channel. In some locations, such as Cañada Chiquita, it may also be feasible to divert flows to the wastewater treatment plant for reclamation.

MM 4.5-7

Stream Stabilization Program. Prior to the recordation of a subdivision map, unless otherwise specified by the provisions of the applicable master area or planning area-specific ROMP (as appropriate), the development applicant shall prepare a stream stabilization program, including funding, that will be implemented by the HOA or other responsible entity to mitigate anticipated limited local effects of erosion associated with drainage system outlets from the development or downstream of detention basins. These effects from erosion are to be addressed with non-structural biotechnical and geomorphic approaches aggressively at the first phase and if not effective then limited structural measures would be implemented. These approaches vary by terrain and the character of the channels:

1. Sandy and Silty-sandy terrain: Water quality and infiltration basins and ponds will be constructed along unnamed tributary channels and channel-less valleys. Appropriate energy dissipation will be installed downstream of each

structure or control point. 'Hungry water' or potential downcutting will be controlled by a progressive sequence of:

- a. establishment of hydrophytic vegetation, either turf-forming (such as salt grass or sedges) or with interpenetrating roots (such as willows); then
- b. placement of turf-reinforced mats (TRM) or other flexible and biodegradable membrane to abet vegetative growth to stabilize the small drainages downstream of controls; then,
- c. conventional erosion control fabrics and structures using techniques developed over the years to control gully- or small-channel incision.

In through-flowing named stream corridors, the potential scale of incision is larger, and is most reasonably addressed by a progressive sequence to include:

- a. attempting to reduce runoff volumes and peaks from the watershed, by a combination of additional retarding of flow and use of (reconnecting, where needed) floodplains for flows of moderate to high recurrence.
 - b. Reducing sediment yields from disturbed watershed upstream, such that avulsion (sudden channel changes, such as recently seen in Gobernadora Creek) can be minimized.
 - c. Where the bed remains within the root zone of riparian vegetation, widening the riparian corridor, and managing its vegetation to promote dense interpenetrating roots, such as naturally occurs along many reaches of these streams, perhaps in combination with reconfiguring the channel pattern to increase sinuosity to a stable thalweg length-to-channel slope value.
 - d. Emplacing well-keyed structural grade control, with a wide variety of potential designs.
2. Clayey terrain: Differences between existing and future conditions will be the least in this terrain. Clayey terrains are also most resistant to incision, in most cases. Hence, biotechnical stabilization is most favored in this setting, especially for the smaller unnamed channels downstream from the small retarding and infiltration basins proposed at many locations. A progressive sequence of:
- a. establishing hydrophytic or woody riparian vegetation, especially along the bases and crests of banks;
 - b. installing turf-reinforcing mats and other shear-resistant soft structures;
 - c. slight widening of channels where feasible without diminishing bank strength imparted by riparian vegetation, if significant; and
 - d. engineering slopes using fabrics, or placing thoroughly-keyed structural controls, usually in combination with a., b., and c., above.

MM 4.5-8

Stream Monitoring Program. Consistent with the provisions of the applicable master area or planning area-specific ROMPs (as appropriate), a stream monitoring program shall be developed, with assured funding source, by the applicant, and at no cost to County/OCFCD, prior to the construction within the watershed which will include reporting requirements in order to observe changes in the natural alluvial stream system. The minimum program will include and address the following items:

1. **Stream Walks** – A geomorphologist or engineer familiar with both (a) flood conveyance estimation and (b) the bed conditions required to meet habitat needs and conditions for species of concern will walk critical reaches of named channels within the project each year in late April. The stream-walker will note bed conditions, measure high-water marks, note new sources of sediment or bank distress along the channels, estimate Manning's 'n' (roughness) at key locations, and assess whether bed and bank vegetation is suitable to meet conveyance and habitat objectives. Stream walks will occur during years 1, 2, 3, 4, 5, and 10 following substantial grading in a named-stream basin, and during any year within the first 10 seasons when 6-hour rainfall intensities exceed the 5-year recurrence at a nearby pre-selected recording rainfall gauge. The stream-walker will also similarly canvass the lower two miles of Bell Canyon and the upper Chiquita watershed north of Oso Parkway, two stream segments with largely-intact and formally-preserved watersheds, which can serve as control. Photographs showing key sites or problems will be taken. The individual conducting the walks shall be sufficiently senior and knowledgeable as to be registered as a geologist or engineer with the state. This individual will prepare an annual report by June 20 of the relevant year(s) specifying maintenance or repair measures needed to maintain suitable sediment transport and bed conditions
2. **Major Stream Cross Sections Monitoring** – Monumented cross sections will be established and surveyed on:
 - a) lower Narrow Creek
 - b) Chiquita Creek (four locations)
 - c) Gobernadora Creek (four locations)
 - d) Bell Creek (two locations)
 - e) Upper Cristianitos Canyon (three locations)
 - f) Lower Gabino Creek (three locations)
 - g) Gabino Creek within 0.5 mile of La Paz Creek
 - h) La Paz Creek within 0.6 mile of Gabino Creek

Additional monitoring sections will also be provided on San Juan Creek and all monitoring locations will first be approved by the County of Orange before implementation. The cross sections will be spaced approximately 0.6 to 1.2 miles apart and approved by the County. They will be surveyed to the

nearest 0.05 feet vertical, and include notations of bed material encountered and qualitative descriptions of vegetation, and other observations conforming to geomorphic conventions, such as the International Hydrologic Vigil Network standards. The initial surveys will be conducted prior to grading, with resurveys during years 1, 3, 5 and 10 following initial grading or at frequencies determined by the County of Orange. Re-surveys will also be conducted during years when 6-hour rainfall intensities exceed the 5-year recurrence at a nearby pre-selected recording rainfall gauge or selected occurrences by the County of Orange. Results will be analyzed by the stream-walker, and included in the related report, recommending maintenance and restorative measures. The report will be submitted by May 20 of each year, to allow design and implementation (where needed) prior to the next winter

3. Periodic aerial photography – Aerial photographs of the entire project area will be taken during May or June following project approval, and during each subsequent May or June of years ending in a '5' or '0', until the project has been completed as defined by the County of Orange. Resolution of the photographs will be sufficient to prepare 200-foot scale maps with 2-foot (or 0.5-meter) contours. Contour maps will be prepared for the San Juan Creek channel corridor from the Verdugo Canyon confluence to 0.5 mile downstream of Antonio Parkway showing the topography of the bed and of the banks to elevations 15 feet above the adjoining bed. LIDAR (Light Detection and Ranging) or other technologies can be substituted for now-conventional photogrammetric methods. A qualified geomorphologist shall review the aerial photographs of the entire project area, identifying new upland sources of sediment, event-related or land-use disturbance, or evidence of channel change and instability. The geomorphologist will also assess discontinuities in sand transport throughout the project area, and will present an assessment of changes, if any, in the San Juan Creek corridor. Results will be presented in a report to be prepared by July 15 of each year, including recommendations for maintenance, repair, or other actions.
4. Evaluation of changes downstream of ponds and basins – Longitudinal profiles and channel or drainage-way cross sections will be established downstream of basins or ponds with capacities exceeding one acre-foot, or which create a 4-foot elevation change in the energy grade line. Resurveys will occur whenever the stream-walker and/or the geomorphologist reviewing the aerial photos identify actual or incipient incision or erosion. Resurveys will be completed prior to July 1 when and where the need is identified in the May 20 report discussed above.
5. Supplemental assessments – Adaptive management of channels means changing with the flow of time. Nothing in the program above precludes problem- or condition-related investigations. Additional assessments may be conducted as deemed needed by the applicant to achieve the bed and bank conditions sought.

MM 4.5-9

Prior to issuance of a building permit for any estate lot in Planning Area 9, the Project Applicant shall comply with the County of Orange On-site Sewage Absorption System Guidelines.

Transportation and Circulation

Project Design Features

- PDF 4.6-1 Antonio Parkway at Cow Camp Road is a new intersection that shall be designed to have adequate capacity with and without the proposed SR-241 extension. Lane configurations and potential grade separations shall be determined subject to the review and approval of the County of Orange in future design studies to ensure that the intersection provides the needed capacity for long-range cumulative demand and, therefore, operates at an acceptable level of service.

Standard Conditions and Regulations

- SC 4.6-1 As a part of the submittal of a Tentative Tract Map for an Urban Activity Center development, the project applicant shall submit a Transportation Demand Management (TDM) program consistent with the requirements of the County of Orange TDM Ordinance.
- SC 4.6-2 Prior to the recordation of a subdivision map, the subdivider shall place notes on the final map which release and relinquish vehicular access rights to all arterial highways to the County of Orange, except for access locations approved by the County of Orange, in a manner meeting the approval of the Manager, Subdivision and Grading. (County of Orange Standard Condition of Approval, T01, Access Rights)
- SC 4.6-3 Prior to the recordation of a subdivision map, the subdivider shall place a note on the map, in a manner that meets the approval of the Manager, Subdivision and Grading Services, that states:
- "The private streets constructed within this map shall be owned, operated and maintained by the developer, successors or assigns. The County of Orange shall have no responsibility therefore unless pursuant to appropriate sections of the Streets and Highways Code of the State of California, the said private streets have been accepted into the County Road System by appropriate resolution of the Orange County Board of Supervisors." (County of Orange Standard Condition of Approval, T02, Private Street Responsibility)"
- SC 4.6-4 Prior to the recordation of a subdivision map, the subdivider shall design and construct the following improvements in accordance with plans and specifications meeting the approval of the Manager, Subdivision and Grading:
- A. Streets, bus stops, on-road bicycle trails, street names, signs, striping and stenciling.
 - B. The water distribution system and appurtenances shall also conform to the applicable laws and adopted regulations enforced by the County Fire Chief.
 - C. Underground utilities (including gas, cable, electrical and telephone), streetlights, and mailboxes. (County of Orange Standard Condition of Approval, T04, Public Improvements)

- SC 4.6-5 Prior to the issuance of building permits, the applicant shall pay fees for the Major Thoroughfare and Bridge Fee Program for the Foothill/Eastern Transportation Corridor, in a manner meeting the approval of the Manager, Subdivision and Grading. (County of Orange Standard Condition of Approval, T05, Major Thoroughfare and Bridge Fee Programs)
- SC 4.6-6 Prior to the issuance of any grading permits, the applicant shall provide adequate sight distance per Standard Plan 1117 at all street intersections, in a manner meeting the approval of the Manager, Subdivision and Grading. The applicant shall make all necessary revisions to the plan to meet the sight distance requirement such as removing slopes or other encroachments from the limited use area in a manner meeting the approval of the Manager, Subdivision and Grading Services. (County of Orange Standard Condition of Approval, T07, Site Distance)
- SC 4.6-7 Prior to the recordation of a subdivision map, the subdivider shall install all underground traffic signal conduits (e.g., signals, phones, power, loop detectors) and other appurtenances (e.g., pull boxes) needed for future traffic signal construction, and for future interconnection with adjacent intersections, all in accordance with plans and specifications meeting the approval of the Manager, Subdivision and Grading. (County of Orange Standard Condition of Approval, T08, Traffic Signal Conduit)
- SC 4.6-8 A. Prior to the recordation of a subdivision map or the issuance of any building permits, whichever occurs first, the subdivider shall provide plans and specifications meeting the approval of the Manager, Subdivision and Grading, for the design of the following improvements:
- 1) Internal street common private drive system.
 - 2) Entrance to the site to emphasize that the development is private by use of signs and other features.
- B. Prior to the recordation of a subdivision map, the applicant shall construct the above improvements in a manner meeting the approval of the Manager, Construction.
- C. Prior to the issuance of any building permits, the subdivider shall provide plans meeting the approval of the Manager, Subdivision & Grading, for the design of the internal pedestrian circulation system within the development. (County of Orange Standard Condition of Approval, T12, Internal Circulation)
- SC 4.6-9 Prior to the recordation of a subdivision map, the subdivider shall dedicate a signal maintenance easement to the County of Orange at the project site access, in a manner meeting the approval of the Manager, Subdivision and Grading. (County of Orange Standard Condition of Approval, T13b, Traffic Signal Maintenance Easement)
- SC 4.6-10 Prior to the recordation of a subdivision map, the subdivider shall (design and construct/provide a cash deposit of ___ percent of the cost of / enter into an agreement with the County of Orange, accompanied by financial security, for the cost of ___ % of) a traffic signal at the intersection of ___ and ___, in a manner

meeting the approval of the Manager, Subdivision and Grading.¹ (County of Orange Standard Condition of Approval, T14b, Traffic Signal Installation)

- SC 4.6-11 Prior to the recordation of a subdivision map, the applicant shall delineate on the subdivision map a two way reciprocal access and parking easement to all parcels within the map and place a note on the final map reserving the easement for the benefit of all parcels on the map, in a manner meeting the approval of the Manager, Subdivision and Grading. (County of Orange Standard Condition of Approval, T15, Access Easement for Commercial Centers)
- SC 4.6-12 Prior to the recordation of a subdivision map, the applicant shall submit a traffic study of the development for review and approval by the Manager, Subdivision and Grading, in accordance with the Growth Management Plan, Transportation Implementation Manual. The applicant shall retain a traffic engineer licensed in the State of California to perform the traffic study. (County of Orange Standard Condition of Approval, T16, Traffic Study)
- SC 4.6-13 Prior to the approval of any subdivision map (except for financing purposes) for the Ranch Plan development within 1,000 feet of the center line of the conceptual Crown Valley Parkway as shown on the current (as of the date of the Ranch Plan GPA/ZC approval) Master Plan of Arterial Highway (MPAH), between Antonio Parkway and the Foothill Transportation Corridor (FTC), the Director, Resource & Development Management Department (RDMD), County of Orange in consultation with Manager Programming/Planning of Orange County Transportation Authority (OCTA) shall make a finding that said subdivision map does not preclude implementation of Crown Valley Parkway as an MPAH facility.
- SC 4.6-14 Prior to recordation of the first tract map (except for financing purposes) for Planning Areas 2, 3, or 5 in the Ranch Plan development, the applicant shall enter into an agreement with the Foothill/Eastern Transportation Corridor Agencies (TCA) to address right-of-way, cost, phasing, implementation and roles and responsibilities relating to all roadway connections to and/or crossings of the SR-241 extension within the Ranch Plan, and/or funding/phasing/ construction of other roadways (i.e., F Street) that are needed in the even the extension of SR-241 does not occur. The agreement between the applicant and the TCA shall also be reviewed and approved by the Director, RDMD, County of Orange, for consistency with SCRIP/Development Agreement phasing/milestone objectives.

Mitigation Measures

- MM 4.6-1 Table 4.6-26 and Table 4.6-27 identify the transportation improvement program proposed as mitigation for the Ranch Plan project for year 2025 and year 2010, respectively. The improvements differ depending on whether the SR-241 southerly extension is assumed. The project applicant shall participate on a fair share basis for improvements associated with cumulative impacts. Funds shall be paid to the County of Orange pursuant to the SCRIP.

¹ The specific location of intersections and percentage of deposit would be determined at a future date by the County of Orange.

MM 4.6-2 The mitigation program is based on the buildout of land uses in the surrounding area and may change based on the effects of the future land development and future changes to regional transportation patterns. The intersection and freeway ramp improvements shall be implemented and/or pro-rata payment shall be made in accordance with the transportation improvement phasing plan of the SCRIP. Prior to the approval of each Master Area Plan, a traffic analysis which supplements *The Ranch Plan EIR Traffic Report* (Austin-Foust Associates, Inc., May 2004) shall be submitted for review and approval to the County, Director of Planning and Development Services. The traffic study shall include:

- a. An evaluation of how any proposed refinements to the circulation system and/or milestones remain in substantial compliance with appropriate Development Agreement obligations and Program EIR mitigation measures.
- b. Average Daily Trips generated by uses proposed within the planning area, as distributed onto the surrounding circulation system (both within the Ranch Plan PC Area, and in the surrounding vicinity) including the peak hour characteristics of those trips.

MM 4.6-3 No improvements are proposed herein to address the cumulative impacts of the project on I-5 mainline. Improvements to the I-5 mainline are a part of regional transportation improvement programs with associated timing and funding sources. If the responsible agencies establish a cumulative mitigation program, the project applicant shall participate on a fair share basis.

Air Quality

Project Design Features

PDF 4.7-1 The project has been designed to minimize the need for external vehicular trips through the provision of residential, commercial, office, and institutional uses within the boundaries of the project site, thereby reducing vehicular air emissions.

Standard Conditions and Regulations

Construction: Fugitive Dust Emissions (PM₁₀)

SC 4.7-1 All construction contractors shall comply with South Coast Air Quality Management District (SCAQMD) regulations, including Rule 403, Fugitive Dust, and Rule 402, Nuisance. All grading (regardless of acreage) shall apply best available control measures for fugitive dust in accordance with Rule 403. To ensure that the project is in full compliance with applicable SCAQMD dust regulations and that there is no nuisance impact off the site, the contractor would implement each of the following:

- a. Moisten soil not more than 15 minutes prior to moving soil or conduct whatever watering is necessary to prevent visible dust emissions from traveling more than 100 feet in any direction.

- b. Apply chemical stabilizers to disturbed surface areas (i.e., completed grading areas) within five days of completing grading or apply dust suppressants or vegetation sufficient to maintain a stabilized surface.
- c. Water excavated soil piles hourly or cover with temporary coverings.
- d. Water exposed surfaces at least twice a day under calm conditions. Water as often as needed on windy days when winds are less than 25 miles per day or during very dry weather in order to maintain a surface crust and prevent the release of visible emissions from the construction site.
- e. Wash mud-covered tires and under-carriages of trucks leaving construction sites.
- f. Provide for street sweeping, as needed, on adjacent roadways to remove dirt dropped by construction vehicles or mud, which would otherwise be carried off by trucks departing from project sites.

Construction: ROC and NO_x Emissions

SC 4.7-2 The applicant shall comply with the following measures, as feasible, to reduce NO_x and ROC from heavy equipment.

- a. Turn equipment off when not in use for more than five minutes.
- b. Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications.
- c. Lengthen the construction period during smog season (May through October) to minimize the number of vehicles and equipment operating at the same time.

Mitigation Measures

Construction: Diesel Emissions

MM 4.7-1 In order to reduce diesel fuel engine emissions, the project applicant shall require that all construction bid packages include a separate "Diesel Fuel Reduction Plan." This plan shall identify the actions to be taken to reduce diesel fuel emissions during construction activities (inclusive of grading and excavation activities). Reductions in diesel fuel emissions can be achieved by measures including, but not limited to, the following: a) use of alternative energy sources, such as compressed natural gas or liquefied petroleum gas, in mobile equipment and vehicles; b) use of "retrofit technology," including diesel particulate traps, on existing diesel engines and vehicles; and c) other appropriate measures. Prior to the issuance of a grading permit, the Diesel Fuel Reduction Plan shall be filed with the County of Orange. The Diesel Fuel Reduction Plan shall include the following provisions:

- a. All diesel fueled off-road construction equipment shall be California Air Resources Board (CARB) certified or use post-combustion controls that reduce pollutant emissions to the same level as CARB certified equipment.

CARB certified off-road engines are engines that are three years old or less and comply with lower emission standards. Post-combustion controls are devices that are installed downstream of the engine on the tailpipe to treat the exhaust. These devices are now widely used on construction equipment and are capable of removing over 90 percent of the PM₁₀, carbon monoxide, and volatile organic compounds from engine exhaust, depending on the specific device, sulfur content of the fuel, and specific engine. The most common and widely used post-combustion control devices are particulate traps (i.e., soot filters), oxidation catalysts, and combinations thereof.

- b. All diesel fueled on-road construction vehicles shall meet the emission standards applicable to the most current year to the greatest extent possible. To achieve this standard, new vehicles shall be used or older vehicles shall use post-combustion controls that reduce pollutant emissions to the greatest extent feasible.
- c. The effectiveness of the latest diesel emission controls is highly dependant on the sulfur content of the fuel. Therefore, diesel fuel used by on-road and off-road construction equipment shall be low sulfur (≥ 15 ppm) or other alternative low polluting diesel fuel formulation such as PuriNO_xTM or Amber363. Low sulfur diesel fuel shall be required by existing regulations after the year 2007 and it is already being produced and sold as the regulation is phased in.

Local and Regional Operational Impacts

- MM 4.7-2 With the submittal of each Master Area Plan, the project applicant shall identify locations where alternative fueling facilities could be sited.
- MM 4.7-3 Prior to approval of a site development permit or tentative tract map, a landscape plan shall be submitted that identifies how shade trees can be incorporated into parking lot designs (to reduce evaporative emissions from parked vehicles); where shade trees can be sited (to reduce summer cooling needs); and how shade trees would be incorporated into bicycle and pedestrian path design. Prior to issuance of building permits, the applicant shall identify how the use of light-colored roof materials and paint to reflect heat to the extent feasible has been incorporated into the design plans.

Construction

- MM 4.7-4 All construction staging areas and stockpile sites will be located as far as feasible from residential areas. This provision will apply to currently existing residential areas and to future residential developments that are completed prior to later development stages.

A vegetative buffer zone, including trees and shrubs, will be placed between grading sites and residential areas or other locations where sensitive receptors can be reasonably expected.

Noise

Project Design Features

No project design features have been identified.

Standard Conditions and Regulations

Construction Noise

- SC 4.8-1 During construction, the project applicant shall ensure that all noise generating activities be limited to the hours of 7 a.m. to 8 p.m. on weekdays and Saturdays. No noise generating activities shall occur on Sundays and holidays in accordance with the County of Orange *Noise Ordinance*.
- SC 4.8-2 A. Prior to the issuance of any grading permits, the project proponent shall produce evidence acceptable to the Manager, Building Permits Services, that:
- (1) All construction vehicles or equipment, fixed or mobile, operated within 1,000' of a dwelling shall be equipped with properly operating and maintained mufflers.
 - (2) All operations shall comply with Orange County Codified Ordinance Division 6 (Noise Control).
 - (3) Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings.
- B. Notations in the above format, appropriately numbered and included with other notations on the front sheet of the project's permitted grading plans, will be considered as adequate evidence of compliance with this condition. (County of Orange Standard Condition N10)

Residential Development

- SC 4.8-3 The applicant shall sound attenuate all residential lots and dwellings against present and projected noise (which shall be the sum of all noise impacting the project) so that the composite interior standard of 45 dBA CNEL for habitable rooms and a source specific exterior standard of 65 dBA CNEL for outdoor living areas is not exceeded. The applicant shall provide a report prepared by a County-certified acoustical consultant, which demonstrates that these standards will be satisfied in a manner consistent with Zoning Code Section 7-9-137.5, as follows:
- a. Prior to the recordation of a subdivision map or prior to the issuance of grading permits, as determined by the Manager, Building Permits Services, the applicant shall submit an acoustical analysis report to the Manager, Building Permits Services, for approval. The report shall describe in detail the exterior noise environment and preliminary mitigation measures. Acoustical design features to achieve interior noise standards may be included in the report in which case it may also satisfy Condition B below.

- b. Prior to the issuance of any building permits for residential construction, the applicant shall submit an acoustical analysis report describing the acoustical design features of the structures required to satisfy the exterior and interior noise standards to the Manager, Building Permits Services, for approval along with satisfactory evidence which indicates that the sound attenuation measures specified in the approved acoustical report have been incorporated into the design of the project.
- c. Prior to the issuance of any building permits, the applicant shall show all freestanding acoustical barriers on the project's plot plan illustrating height, location and construction in a manner meeting the approval of the Manager, Building Permits Services. (County of Orange Standard Condition N01)

Multi-Family Residential Development

- SC 4.8-4 Prior to the issuance of any certificates of use and occupancy, the applicant shall perform field testing in accordance with Title 24 Regulations to verify compliance with FSTC and FIIC standards if determined necessary by the Manager, Building Inspection Services. In the event such a test was previously performed, the applicant shall provide satisfactory evidence and a copy of the report to the Manager, Building Inspection Services, as a supplement to the previously required acoustical analysis report. (County of Orange Standard Condition N09)

Non-Residential Development

- SC 4.8-5 Except when the interior noise level exceeds the exterior noise level, the applicant shall sound attenuate all nonresidential structures against the combined impact of all present and projected noise from exterior noise sources to meet the interior noise criteria as specified in the Noise Element and Land Use/Noise Compatibility Manual.

Prior to the issuance of any building permits, the applicant shall submit to the Manager, Building Permit Services, an acoustical analysis report prepared under the supervision of a County-certified acoustical consultant which describes in detail the exterior noise environment and the acoustical design features required to achieve the interior noise standard and which indicates that the sound attenuation measures specified have been incorporated into the design of the project. (County of Orange Standard Condition N02)

Noise-Generating Equipment (Non-Residential Projects)

- SC 4.8-6 Prior to the issuance of any building or grading permits, the applicant shall obtain the approval of the Manager, Building Permits Services of an acoustical analysis report and appropriate plans which demonstrate that the noise levels generated by this project during its operation shall be controlled in compliance with Orange County Codified Ordinance, Division 6 (Noise Control). The report shall be prepared under the supervision of a County-certified Acoustical Consultant and shall describe the noise generation potential of the project during its operation and the noise mitigation measures, if needed, which shall be included in the plans and specifications of the project to assure compliance with Orange County Codified Ordinance, Division 6 (Noise Control). (County of Orange Standard Condition N08)

Other

- SC 4.8-7 Prior to the issuance of certificates of use and occupancy, the developer shall produce evidence to the Manager, Building Inspection Services, that the Department of Real Estate has been notified that the project area is adjacent to a regional transportation corridor. The corridor is expected to be a high capacity, high-speed, limited-access facility for motor vehicles, and will have provisions for bus lanes and other mass transit type facilities. (County of Orange Standard Condition N12)

Mitigation Measures

Cumulative Vehicular Traffic Noise

- MM 4.8-1 For Camino Capistrano, north of Junipero Sera, prior to the issuance of precise grading permits, a detailed acoustical study shall be performed by a qualified acoustical consultant and submitted to the County of Orange to determine the specific height and location of the noise barriers required to meet the County's noise standards. To be effective, a noise barrier is required to have a surface density of at least 3.5 pounds per square foot and have no openings or cracks. It may be constructed as a solid wall, an earthen berm, or a combination of the two. It may be constructed of wood studs with stucco exterior, 1/4-inch plate glass, 5/8-inch Plexiglas, any masonry material, or a combination of these materials.

Biological Resources

Project Design Features

- PDF 4.9-1 Prior to approval of the first Master Area Plan, the landowner shall enter into an agreement with the County regarding the 15,132-acre RMV Open Space. The agreement shall address:
- Method of preservation for this open space (i.e., conservation easement or similar mechanism)
 - Permitted uses within the open space as defined in the PC Text;
 - Non-permitted uses within the open space as defined in the PC Text;
 - Phasing of open space preservation areas. Phasing of open space areas will be consistent with development phasing; and
 - Funding mechanism for implementation of the Adaptive Management Program (AMP) as described in the Draft Program EIR.
- PDF 4.9-2 Upon dedication of land to the RMV Open Space in accordance with the terms of the open space agreement described in PDF 9-1, the project applicant shall implement the Adaptive Management Program contained in Appendix J on the RMV Open Space, including the following sub-plans;
- Plant Species, Translocation, Propagation and Management Plan;
 - Habitat Restoration Plan;
 - Invasive Species Control Plan;
 - Grazing Management Plan; and
 - Wildland Fire Management Plan.

Mitigation Measures

- MM 4.9-1 Prior to issuance of a grading permit for Planning Area 2, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that two of the four small thread-leaved brodiaea locations are protected. Consistency with this mitigation measure for the portion of Planning Area 2 subject to Planning Reserve shall be addressed in accordance with the requirements of the Planning Reserve Designation.
- MM 4.9-2 Prior to issuance of a grading permit for Planning Area 2, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the *key location* and *major population* of southern tarplant in the Chiquita sub-basin have been substantially avoided. Consistency with this mitigation measure for the portion of Planning Area 2 subject to Planning Reserve shall be addressed in accordance with the requirements of the Planning Reserve Designation.
- MM 4.9-3 Prior to issuance of a grading permit for Planning Area 2, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to the *key location* and *major population* of Coulter's saltbush in the Chiquita sub-basin have been substantially avoided. Consistency with this mitigation measure for the portion of Planning Area 2 subject to Planning Reserve shall be addressed in accordance with the requirements of the Planning Reserve Designation.
- MM 4.9-4 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-5 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-6 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-7 Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that a minimum of a 200-foot setback (average 500 feet) from Cristianitos Creek has been incorporated into the project design.
- MM 4.9-8 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-9 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-10 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-11 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-12 Deleted, not applicable to the B-10 Modified Alternative
- MM4.9-13 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-14 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-15 Deleted, not applicable to the B-10 Modified Alternative

- MM 4.9-16 Prior to issuance of a grading permit for Planning Area 7, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that impacts to native grasslands in the Lower Gabino subunit are substantially avoided. Additionally, applicant shall further demonstrate to the County's Director of Planning Services Department or his/her designee compliance with the NCCP Habitat Restoration Program for native grasslands.
- MM 4.9-17 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-18 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-19 Prior to issuance of a grading permit for Planning Area 8, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the facilities specified in the Water Quality Management Plan to address pollutants of concern and conditions of concern are shown on the project plans.
- MM 4.9-20 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-21 Deleted, not applicable to the B-10 Modified Alternative
- MM 4.9-22 Prior to issuance of a grading permit for construction of Cristianitos Road from PA 5 to PA 2 and Cow Camp Road, the applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the design for the specified portions of Cristianitos Road and Cow Camp Road includes the following features to facilitate wildlife movement:
- The bridge shall have minimum height dimensions of 20 feet.
 - Chain link fencing of 10 feet in height shall be installed on the north and south approaches to the bridge for a distance of 100 feet to deter wildlife from accessing the roadway.
 - All lighting on the bridge, if required for public health and safety, shall be shielded to prevent spillover effects.
- MM 4.9-23 Prior to issuance of a grading permit for widening of Cristianitos Road, the applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the design for Cristianitos Road includes the following features to facilitate wildlife movement:
- Culverts shall be constructed at the crossing of Gabino Creek and Cristianitos Creek.
 - Culverts shall have minimum dimensions of 15 x 15 feet.
 - The bottom of the culverts shall be natural substrate.
 - Light shall be visible from one end of the culverts to the other.
 - Vegetation installed at either end of the culverts shall be native-low growing species to prevent predator-prey stalking.
 - Chain link fencing of 10 feet in height shall be installed on the north and south approaches to the culverts for a distance of 100 feet to deter wildlife from accessing the roadway.
 - All lighting on the road above the culverts, if required for public health and safety, shall be shielded to prevent spillover effects.

- MM 4.9-24 Prior to design of the proposed ground tanks, project applicant shall coordinate with SMWD to review potential alternative locations for these tanks that would avoid impacts to linkages G and K, while still meeting SMWD siting criteria for ground tanks.

If alternative sites cannot be identified, the following measure will apply:

- MM 4.9-25 In conjunction with construction of these tanks, SMWD shall employ measures to reduce construction impacts, including fencing sensitive habitats and implementing of erosion control. Post construction all temporary disturbance areas shall be restored with native species. All manufactured slopes associated with the ground tanks shall be restored with native species. Lighting shall be restricted to necessary safety lighting and shall be shielded to reduce spillover into native habitats.

- MM 4.9-26 During construction, a construction-monitoring program shall be implemented to mitigate for short-term noise impacts to nesting raptors, to the satisfaction of the County of Orange, Manager, Subdivision and Grading. Indirect impacts shall be mitigated by limiting heavy construction (i.e., mass grading) within 300 feet of occupied raptor nests. Occupied raptors nests shall be marked as "Environmentally Sensitive Areas" on grading/construction plans and shall be protected with fencing consisting of T-bar posts and yellow rope. Signs noting the area as an "Environmentally Sensitive Area" will be attached to the rope at regular intervals.

- MM 4.9-27 All plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California shall be prohibited from development and fuel management zones adjacent to the RMV Open Space. The plant palette for fuel management zones adjacent to the RMV Open Space shall be limited to those species listed on the Orange County Fire Authority Fuel Modification Plant List. Plants native to Rancho Mission Viejo shall be given preference in the plant palette.

Prior to issuance of fuel modification plan approvals, the County of Orange shall verify that: 1) plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California are not included in plans for fuel management zones adjacent to the RMV Open Space and, 2) the plant palette for fuel management zones adjacent to RMV Open Space is limited to those species listed on the Orange County Fire Authority Fuel Modification Plant List.

Prior to the recordation of a map for a tract adjacent to the RMV Open Space, the County of Orange shall verify that the CC&Rs contain language prohibiting the planting of plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California in private landscaped areas.

- MM 4.9-28 Lighting shall be shielded or directed away from RMV Open Space habitat areas through the use of low-sodium or similar intensity lights, light shields, native shrubs, berms or other shielding methods.

Prior to the issuance of building permits for a tract with public street lighting adjacent to RMV Open Space habitat areas, the County of Orange shall verify

that measures to shield such lighting have been incorporated in the building plans.

- MM 4.9-29** Access to the RMV Open Space shall be managed and directed as specified in the Open Space Agreement between the County of Orange and RMV. Where potential conflicts between development and open space are identified per the agreement the following shall occur:

Prior to the issuance of building permits for a tract adjacent to the RMV Open Space, the County of Orange shall verify that measures, such as fencing, signs, etc., to direct the public to public access points within the RMV Open Space have been incorporated into the building plans. To the extent that public access points are not identified, the County of Orange shall verify that measures, such as fencing, signs etc., to prohibit public access have been incorporated into the building plans.

- MM 4.9-30** Biological resources outside of the impact area shall be protected during construction. To ensure this protection, the Project Applicant shall prepare and implement a Biological Resources Construction Plan (BRCP) that provides for the protection of the resource and established the monitoring requirements. The BRCP shall contain at a minimum the following:

- Specific measures for the protection of sensitive amphibian, mammal, bird, and plant species during construction.
- Identification and qualification of habitats to be removed.
- Design of protective fencing around conserved habitat areas and the construction staging areas.
- Specific construction monitoring programs for sensitive species required by Wildlife Agencies including, but not limited to, programs for the arroyo toad, western spadefoot toad, southwestern pond turtle, cactus wren, and coastal California gnatcatcher. Such measures shall be consistent with prior Section 7 consultations and 1600 agreements e.g., Arroyo Trabuco Golf Course.
- Specific measures required by Wildlife Agencies e.g., Arroyo Trabuco Golf Course for the protection of sensitive habitats including, but are not limited to, erosion and siltation control measures, protective fencing guidelines, dust control measures, grading techniques, construction area limits, and biological monitoring requirements.
- Provisions for biological monitoring during construction activities to ensure compliance and success of each protective measure. The monitoring procedures will (1) identify specific locations of wildlife habitat and sensitive species to be monitored; (2) identify the frequency of monitoring, monitoring methodology (for each habitat and sensitive species to be monitored); (3) list required qualifications of biological monitor(s); and (4) identify reporting requirements.

- MM 4.9-31 Prior to issuance of grading permits for Planning Area 4, the County's Director of Planning Services/designee shall verify that wetland/riparian habitat for tricolored blackbird at the mouth of Verdugo Canyon has been avoided.
- MM 4.9-32 Prior to issuance of grading permits for the proposed golf course in Cristianitos sub-basin, the County's Director of Planning Services/designee shall verify that the landscape plans for the golf course include native habitats which could contribute to the restoration of grasslands in the sub-basin. A minimum of sixty acres of native habitats shall be included in the landscape plans.
- MM 4.9-33 Prior to issuance of grading permits for the proposed golf course in Blind subunit, the County's Director of Planning Services or his/her designee shall verify that the landscape plans for the golf course include native habitats including native grassland which could contribute to the restoration of grasslands in the sub-basin. A minimum of sixty acres of native habitats shall be included in the landscape plans.
- MM 4.9-34 Deleted, not applicable to the B-10 Modified Alternative.
- MM 4.9-35 Prior to issuance of a grading permit for Planning Area 5, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that all vernal pools in the Trampas Sub-basin have been avoided.
- MM 4.9-36 Palmer's grapplehook seed shall be collected prior to project impacts for use in the seed mix for coastal sage scrub/native grassland restoration areas. Receiver sites will support clay soils and other conditions suitable for Palmer's grapplehook. In addition, where feasible, clay soils will be salvaged from development areas and appropriately transported to restoration areas to provide a seed bank.
- MM 4.9-37 Catalina mariposa lily shall be salvaged and relocated to the coastal sage scrub/native grassland restoration and enhancement areas by the Project Applicant; or seed can be collected prior to project impacts for use in the seed mix for coastal sage scrub/native grassland restoration areas. The receiver sites shall support conditions suitable for Catalina mariposa lily. In addition, where feasible, clay soils shall be salvaged from development areas and appropriately transported to restoration areas to provide a seed bank. Implementation details of the salvage and relocation program shall be identified in the Final Plant Species Translocation, Propagation and Management Plan.
- MM 4.9-38 Vernal barley seed shall be collected prior to project impacts for use in the seed mix for coastal sage scrub/native grassland restoration areas. The receiver sites shall support clay soils and other conditions suitable for vernal barley. In addition, where feasible, clay soils shall be salvaged from development areas and appropriately transported to restoration areas to provide a seed bank. Implementation details of the salvage and relocation program shall be identified in the Final Plant Species Translocation, Propagation and Management Plan.
- MM 4.9-39 Small-flowered microseris seed shall be collected prior to project impacts for use in the seed mix for coastal sage scrub/native grassland restoration areas. The receiver sites shall support clay soils and other conditions suitable for small-

flowered microseris. In addition, where feasible, clay soils shall be salvaged from development areas and appropriately transported to restoration areas to provide a seed bank. Implementation details of the salvage and relocation program shall be identified in the Final Plant Species Translocation, Propagation and Management Plan.

- MM 4.9-40 Mud nama innoculum (topsoil and dried pants to obtain seed) shall be collected prior to project impacts for use in the relocation of this species. The receiver sites shall support appropriate soils and other conditions suitable for mud nama. Implementation details of the salvage and relocation program shall be identified in the Final Plant Species Translocation, Propagation and Management Plan.
- MM 4.9-41 Prior to issuance of a grading permit for Planning Area 6, the Project Applicant shall demonstrate to the satisfaction of the County's Director of Planning Services Department or his/her designee that the gnatcatcher *key location* is avoided.
- MM 4.9-42 The project applicant shall obtain Section 404, 1600 and FESA/CESA permits as applicable, including compliance with requirements regarding "no net loss" of wetland habitat.
- MM 4.9-43 In conjunction with future regulatory permitting, the project applicant shall examine further minimization of impacts to wetlands in the "ox-bow" area of the Gobernadora sub-basin in order to increase the dimension of Linkage G.

Aesthetics and Visual Resources

Project Design Features

- PDF4.10-1 Approximately two-thirds of the project site shall be retained in open space.
- PDF4.10-2 A 2,100-foot-wide buffer shall be provided between Coto de Caza and the project site.
- PDF 4.10-3 Within Planning Area 4 and along the easterly development edge of Planning Area 3 adjacent to Caspers Wilderness Park, the exterior lighting shall be designed and located to confine direct rays to the premises. In addition, parking lots and lighting within Planning Area 4 and along the easterly development edge of Planning Area 3 shall be designed and constructed in a manner that minimizes the diffusion of refractive light into surrounding neighborhoods and/or into the night sky.
- PDF 4.10-4 Within Planning Area 4 and along the easterly development edge of Planning Area 3 adjacent to Caspers Wilderness Park, the Master Area Plan shall demonstrate that the exterior walls, and particularly the roofing materials, of residences and businesses visible from Caspers Regional Park are compatible with the natural surroundings.

Standard Conditions and Regulations

- SC 4.10-1 The applicant shall install landscaping, equip for irrigation, and improvements on lots in accordance with an approved plan as stated below:

- A. Detailed Plan – Prior to the issuance of any building permit(s), the applicant shall submit a detailed landscape plan showing the detailed irrigation and landscaping design to the Manager, Subdivision and Grading for approval, in consultation with the Manager HBP/Program Management. Detailed plans shall show the detailed irrigation and landscaping design and shall take into account the previously approved landscape plan for the Ranch Plan project, the County Standard Plans for landscape areas, adopted plant palette guides, applicable scenic and specific plan requirements, Water Conservation Measures contained in Board Resolution 90-487 (Water Conservation Measures), and Board Resolution 90-1341 (Water Conservation Implementation Plan).
- B. Installation Certification – Prior to the issuance of final certificates of use and occupancy and the release of financial security, if any, guaranteeing the landscape improvements, said improvements shall be installed and shall be certified by a licensed landscape architect or licensed landscape contractor, as having been installed in accordance with the approved detailed plans. The applicant shall furnish said certification, including an irrigation management report for each landscape irrigation system, and any other required implementation report determined applicable, to the Manager, Construction, and the Manager, Building Inspection Services, prior to the issuance of any certificates of use and occupancy. (County of Orange Standard Conditions of Approval, LA01b)

- SC 4.10-2
- A. Prior to the issuance of precise grading permits, the applicant shall prepare a detailed landscape plan for privately maintained common areas which shall be reviewed and approved by the Manager, Subdivision and Grading. The plan shall be certified by a licensed landscape architect or a licensed landscape contractor, as required, as taking into account the approved preliminary landscape plan (if any), County Standard Plans for landscape areas, adopted plant palette guides, applicable scenic and specific plan requirements, Water Conservation Measures contained in Board Resolution 90-487 (Water Conservation Measures), and Board Resolution 90-1341 (Water Conservation Implementation Plan).
 - B. Prior to the issuance of certificates of use and occupancy, applicant shall install said landscaping and irrigation system and shall have a licensed landscape architect or licensed landscape contractor, certify that it was installed in accordance with the approved plan.
 - C. Prior to the issuance of any certificates of use and occupancy, the applicant shall furnish said installation certification, including an irrigation management report for each landscape irrigation system, and any other implementation report determined applicable, to the Manager, Building Inspection Services. (County of Orange Standard Conditions of Approval, LA02b)

- SC 4.10-3
- Prior to issuance of any building permit, the applicant shall demonstrate that all exterior lighting has been designed and located so that all direct rays are confined to the property in a manner meeting the approval of the Manager, Building Permit. (County of Orange Standard Conditions of Approval, LG01)

Mitigation Measures

Night Lighting

- MM4.10-1 All lighting along the perimeter of natural areas, particularly street lights, shall be downcast luminaries and shall be shielded and oriented in a manner that will prevent spillage or glare into the remaining natural and open space areas. Final lighting orientation and design shall be to the satisfaction of the County of Orange, Manager, Building Permit. Prior to final inspection or issuance of a certificate of occupancy, where applicable, the Manager, Building Permit, shall cause to be performed a photometric field inspection of the approved lighting system for the project. The inspection shall verify the proper construction and installation of materials within the approved plan, determine the actual light patterns and values through light meter testing and observation, and determine the extent of any errant lighting. Deviations and/or violations shall be corrected prior to the final clearance for the project.

Cultural and Paleontological Resources

Project Design Features

- PDF 4.11-1 The Ranch Plan project has been designed to avoid/minimize significant impacts to known archaeological and historic resources.

Standard Conditions and Regulations

Prehistoric and Historic Archaeological Resources

- SC 4.11-1 Prior to the issuance of any grading permit, the applicant shall provide written evidence to the County or Orange Manager, Subdivision and Grading, that applicant has retained a County-certified archaeologist to observe grading activities and salvage and catalogue archaeological resources as necessary. The archaeologist shall be present at the pre-grade conference; shall establish procedures for archaeological resource surveillance; and shall establish, in cooperation with the applicant, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate. If the archaeological resources are found to be significant, the archaeological observer shall determine appropriate actions, in cooperation with the project applicant, for exploration and/or salvage.

Prior to the release of the grading bond, the applicant shall obtain approval of the archaeologist's follow-up report from the Manager, Harbors, Beaches & Parks HBP/Coastal and Historical Facilities. The report shall include the period of inspection, an analysis of any artifacts found and the present repository of the artifacts. Applicant shall prepare excavated material to the point of identification. Applicant shall offer excavated finds for curatorial purposes to the County of Orange, or its designee, on a first refusal basis. These actions, as well as final mitigation and disposition of the resources shall be subject to the approval of the Manager, HBP/Coastal and Historical Facilities. Applicant shall pay curatorial fees if an applicable fee program has been adopted by the Board of Supervisor, and such fee program is in effect at the time of presentation of the materials to the County of Orange or its designee, all in a manner meeting the approval of the

Manager, HBP/Coastal and Historical Facilities. (County of Orange Standard Conditions of Approval, A04)

Paleontological Resources

SC 4.11-2 Prior to the issuance of any grading permit, the project contractor shall provide written evidence to the Manager, Subdivision and Grading, that contractor has retained a County certified paleontologist to observe grading activities and salvage and catalogue fossils as necessary. The paleontologist shall be present at the pre-grade conference, shall establish procedures for paleontological resources surveillance, and shall establish, in cooperation with the contractor, procedures for temporarily halting or redirecting work to permit sampling, identification, and evaluation of the fossils. If the paleontological resources are found to be significant, the paleontologist shall determine appropriate actions, in cooperation with the contractor, which ensure proper exploration and/or salvage.

Prior to the release of any grading bond, the contractor shall submit the paleontologist's follow up report for approval by the County Manager, HBP/Coastal and Historical Facilities. The report shall include the period of inspection, a catalogue and analysis of the fossils found, and the present repository of the fossils. The contractor shall prepare excavated material to the point of identification. The contractor shall offer excavated finds for curatorial purposes to the County of Orange, or its designee, on a first-refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to approval by the HBP/Coastal and Historical Facilities. The contractor shall pay curatorial fees if an applicable fee program has been adopted by the Board of Supervisors, and such fee program is in effect at the time of presentation of the materials to the County of Orange or its designee, all in a manner meeting the approval of the County Manager, HBP/Coastal and Historical Facilities. (County of Orange Standard Condition of Approval, A07)

Mitigation Measures

Prehistoric and Historic Archaeological Resources

MM 4.11-1 Prior to the approval of final plans and specifications for the development of Area Plans, the project applicant shall prepare a Cultural Resources Management (CRM) Plan to address the presence of cultural resources, evaluate the significance of any resource finds, provide final mitigation and monitoring program recommendations, and determine proper retention or disposal of resources. The CRM Plan shall be reviewed and approved by the County Director of Planning in Consultation with the County Manager, Harbors, Beaches & Parks HBP/Coastal and Historical Facilities.

MM 4.11-2 Based on the mitigation standards set forth in the California Environmental Act (CEQA) Guidelines §15126.4(b) and Public Resources Code §21083.2, prior to the approval of any Area Plan for Planning Areas 7 and 9, as applicable, the applicant shall provide the County of Orange with evidence regarding the determination of eligibility of prehistoric sites CA-ORA-535, -753, -754, -1134, -1137, and -1138 and historic sites 30-176631, -176633, -176634, and -176635. Should a site(s) be deemed ineligible for listing on the National Register of Historic Places (NRHP) or California Register of Historic Places (CRHR), no

further mitigation is required. Should a site(s) be deemed eligible, the County of Orange standard conditions and requirements and subsequent Mitigation Measure 4.11-3 shall apply.

MM 4.11-3 As applicable, the following archaeological sites shall be mitigated to a less than significant level: CA-ORA-535, -656, -753, -754, -882, -913, -997, -1043, -1048, -1121, -1222, -1134, -1137, -1138, -1449, -1556, -1559, -1560, and -1565, and historic sites CA-ORA-29, 30-176631, 30-176633, 30-176634, and 30-176635. Based on the mitigation standards set forth in the California Environmental Act (CEQA) Guidelines §15126.4(b) and Public Resources Code §21083.2, mitigation shall be accomplished through implementation of one of the following mitigation options consistent with the Cultural Resources Management Plan:

- a. Relocation of grading boundaries/fuel modification zones to completely avoid disturbance to the site(s). Should the boundary relocation be infeasible, an archaeological monitor shall be present during grading and fuel modification brush clearance in the vicinity of archaeological resources (note: confidential archaeological mapping is on file at the County of Orange). Fencing or stakes shall be erected outside of the sites to visually depict the areas to be avoided during construction.
- b. Prior to grading in the vicinity of archaeological resources (note: confidential archaeological mapping is on file at the County of Orange), Phase III data recovery (salvage excavations) shall be conducted for these archaeological sites or any other sites within the potential impact area of development that cannot be avoided. The Phase III work shall provide sufficient scientific information to fully mitigate the impacts of development on these sites and be performed in accordance with standards of the State Office of Historic Preservation.

In accordance with California Health and Safety Code Section 7050.5, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains. The County Coroner shall make such determination within two working days of notification of discovery. The County Coroner shall be notified within 24 hours of the discovery. If the County Coroner determines that the remains are or believed to be Native American, the County Coroner shall notify the Native American Heritage Commission in Sacramento within 24 hours. In accordance with California Public Resources Code Section 5097.98, the Native American Heritage Commission must immediately notify those persons it believes to be the most likely descended from the deceased Native American. The descendants shall complete their inspection within 24 hours of notification. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

Recreation

Project Design Features

PDF 4.12-1 Deleted not applicable to B-10 Modified Alternative.

- PDF 4.12-2 The project incorporates 20 to 25 acres of sports parks.
- PDF 4.12-3 The project provides for 15,132 acres of open space within the Ranch Plan boundaries. The large amount of open space would provide for protection of many of the major ridgelines. Specifically, the open space in Planning Area 10 would provide a buffer with the General Thomas F. Riley and Ronald W. Caspers Wilderness Parks. This minimizes indirect impacts on the existing parks.
- PDF 4.12-4 The project provides for trail linkages between the Ladera Ranch and the Ranch Plan community trails, which provides connection to the regional trail system.
- PDF 4.12-5 The project would facilitate implementation of the Master Plan of Regional Riding and Hiking Trails, through the construction of portions of the San Juan Creek, the Cristianitos, and the Prima Deshecha trails.
- PDF 4.12-6 The project would facilitate implementation of the Master Plan of County Bikeways through construction of portions of the San Juan Creek Bikeway.
- PDF 4.12-7 The project proposes the construction of up to *four* golf courses.
- PDF 4.12-8 Local park sites will be provided in accordance with the provisions of the Orange County Local Park Code as contained in the Park Implementation Plan for the Ranch Plan PC Area. Park sites will also be identified at the Master Area Plan level per Section II.B.3.a.6.

Standard Conditions and Regulations

- SC 4.12-1 A. Prior to the recordation of any subdivision map that creates building sites and is immediately adjacent to or contains a public park lot, the subdivider shall make an irrevocable offer of fee dedication for local park purposes to the County of Orange or its designee over Lot(s) ____². The form of the offer shall be suitable for recordation as approved by the Manager, Current Planning Services. Said offer shall be free and clear of money and all other encumbrances, liens, leases, fees, easements (recorded and unrecorded), assessments and unpaid taxes except those meeting the approval of the Manager, Current Planning Services.
- B. The subdivider applicant shall grade Lot(s) _____, the public park site(s), to provide a minimum acres of creditable local park land and shall secure the park site(s) against erosion and shall stub out sewer, water, gas, electricity, telephone, storm drain, etc., connections to the property lines.
- C. The developer, or his assigns, and successors in interest shall maintain the offered park site(s) until such time as the County or its designee accepts the offer of dedication. (Standard Condition CP01 Public Park Dedication)
- SC 4.12-2 A. Prior to the recordation of an applicable subdivision map which creates building sites, the subdivider shall make an irrevocable offer to dedicate an easement over Lot(s) ____ for private local park purposes to the County of

² The lot numbers would be tied to specific lots identified on the tentative tract map when it is filed. At the GPA/ZC there is no tentative tract map; therefore, the precise lot numbers or letters are unknown and a placeholder is provided.

Orange in a form approved by the Manager, the Manager, Current Planning Services. The subdivider shall not grant any other easement over the private park easement which is inconsistent with the local park uses, unless that easement is made subordinate to said local park easement in a manner meeting the approval of the Manager, Current Planning Services.

- B. Prior to the recordation of an applicable final subdivision map, the subdivider shall submit a preliminary concept plan of the proposed private recreation facilities to the Manager, Current Planning Services, for review and approval. (Standard Condition CP02 Private Park Dedication)

- SC 4.12-3 A. Prior to the recordation of the first subdivision map, the subdivider shall make an irrevocable offer of dedication in fee to the County of Orange, or its designee, of Lot(s) _____ for regional park purposes in a form approved by the Manager HBP/ Program Management suitable for recording. Said offer shall be free and clear of money and all other encumbrances, liens, leases, fees, easements (recorded and unrecorded), assessments and unpaid taxes, except those meeting the approval of the Manager, HBP/Program Management. The subdivider, or assigns, and successors shall be responsible for maintenance and upkeep of the above-referenced lot(s), until the County or its designee accepts the offer.

- B. Prior to recordation of any subdivision map, the subdivider shall survey and monument all lots dedicated or offered for dedication for regional park purposes. Applicant shall stake the property line of the dedication area(s) with durable, long lasting, high visibility markers at all angle points and line of sight obstructions to the satisfaction of the Manager, Program Management. (Standard Condition HP01 Regional Park Dedication)

- SC 4.12-4 Prior to the recordation of each applicable subdivision map, the subdivider shall reserve open space Lots _____ for granting in fee to a homeowner's association who shall be responsible for their maintenance and upkeep in a manner meeting the approval of the Manager HBP/Program Management. (Standard Condition HP02 Open Space Dedications)

- SC 4.12-5 The subdivider shall provide an easement for a recreational trail for riding and hiking trail purposes in accordance with the following:

- A. Prior to the recordation of an applicable subdivision map, the subdivider shall:
1. Irrevocably offer a recreation easement for riding and hiking trail purposes in a location and in a manner meeting the approval of the Manager HBP/ Program Management. The subdivider shall not grant any easement(s) over the property subject to the recreation easement unless such easements are first reviewed and approved by the Manager HBP/Program Management.
 2. Design the necessary improvements for the trail, including, but not limited to grading, erosion control, signage, fencing, and a grade-separated crossing, as applicable, in a manner meeting the approval of the Manager HBP/ Program Management, in consultation with the Manager, Subdivision and Grading. Trail design shall also avoid affecting areas known to contain

sensitive biological resources as identified in Section 4.9, Biological Resources.

3. Enter into an agreement, accompanied by financial security, with the County of Orange, to insure the installation of the necessary improvements.
- B. Prior to the issuance of precise grading permits, applicant shall obtain approval from the Manager HBP/ Program Management, that the proposed grading provides for and will not interfere with or preclude the installation of the recreational riding and hiking trail.
- C. Prior to the issuance of final certificates of use and occupancy and the release of financial security guaranteeing the riding and hiking trail improvements, the applicant shall install the riding and hiking trail improvements in a manner meeting the approval of the Manager HBP/Program Management, in consultation with the Manager, Construction. (Standard Condition HP03 Recreation Easement for Regional Trail)

Mitigation Measures

MM 4.12-1 In conjunction with approval of the first Master Area Plan, the applicant shall develop a Master Trail and Bikeways Implementation Plan for the Ranch Plan that would establish viable routes for trails and bikeways to provide connectivity to community trails and bikeways in adjacent developments and with existing and proposed recreational facilities. The Master Trail and Bikeways Implementation Plan shall meet with the approval by the Director of PSD in consultation with the Manager, Harbors Beaches and Parks/Program Management.

Mineral Resources

Project Design Features

- PDF 4.13-1 The project would provide for the ONIS surface mining to continue within Planning Area 5 as an interim use until such time as development is proposed.
- PDF 4.13-2 Temporary excavation/extraction of construction aggregate or construction-related materials extraction shall be allowed during construction grading and on-site earthmoving activities to promote project construction efficiencies and limit long distance transportation of construction aggregate and construction related material.

Standard Conditions of Approval

There are no standard conditions of approval that would reduce impacts to mineral resources.

Mitigation Measures

No mitigation measures have been identified that would reduce the impact to mineral resources.

Hazards and Hazardous Materials

Project Design Features

- PDF 4.14-1 The project has been designed to address potential impacts from the Prima Deshecha landfill by incorporating setbacks from fill activities to avoid any potential exposure to potential hazardous materials impacts that may be associated with landfill activities.

Standard Conditions and Regulations

- SC 4.14-1 Prior to the recordation of a subdivision map, the subdivider shall submit a "Hazardous Materials Assessment" and a "Disclosure Statement" covering the property (both fee and easement) which will be offered for dedication or dedicated to the County of Orange or the Orange County Flood Control District, for review and approval by the Manager, Subdivision and Grading, in consultation with the Manager, PFRD/Environmental Resources. (Orange County Standard Condition of Approval HM-01)
- SC 4.14-2 Prior to the issuance of a grading or building permit, the contractor shall submit to the Fire Chief a list of all hazardous, flammable and combustible liquids, solids or gases to be stored, used or handled on site. These materials shall be classified according to the Uniform Fire Code and a document submitted to the Fire Chief with a summary sheet listing the totals for storage and use for each hazard class.

Mitigation Measures

- MM 4.14-1 Prior to the issuance of a grading permit, the contractor shall develop an approved Health and Safety Contingency Plan (HSCP) in the event that unanticipated/unknown environmental contaminants are encountered during construction. The plan shall be developed to protect workers, safeguard the environment, and meet the requirements of the California Code of Regulations (CCR), Title 8, General Industry Safety Orders – Control of Hazardous Substances.

The HSCP should be prepared as a supplement to the Contractor's Site-Specific Health and Safety Plan, which should be prepared to meet the requirements of CCR Title 8, Construction Safety Orders.

Specifically, the HSCP must:

1. Describe the methods, procedures, and processes necessary to identify, evaluate, control, or mitigate all safety and health hazards associated with any soil, groundwater and/or air contamination that may be encountered during field construction activities.
2. Apply to all site construction workers, on-site subcontractors, site visitors, and other authorized personnel who are involved in construction operations.

3. Be approved by the Manager of Subdivision and Grading Services (PDS) in consultation with the Manager of Environmental Resources (PFRD) and/or their appointed consultant team.

The HSCP will take effect only if materials affected by environmental contaminants are exposed during construction. This includes undocumented waste materials, contaminated soils, affected groundwater, and related substances that may be classified as hazardous or regulated materials, and/or materials that could endanger worker or public health. If affected materials are encountered, the HSCP will be implemented to reduce the potential exposure to the environment and workers at the site. All site workers will be required to perform work in a prescribed manner to reduce the potential that they will endanger themselves, others, or the general public.

- MM 4.14-2 During construction, if environmentally affected soil, groundwater, or other materials are encountered on-site, the project engineer shall be quickly mobilized to evaluate, assess the extent of, and mitigate the affected materials. The contractor or owner's consultant shall be responsible for implementing all applicable sampling and monitoring of the project. At present, applicable sampling and monitoring activities are expected to include air monitoring (both for personal protection and SCAQMD Rule 1166 compliance), collecting soil and groundwater samples for analysis, and documenting mitigation activities. Specific applicable sampling and monitoring requirements will vary, depending upon the nature, concentration, and extent of affected materials encountered.
- MM 4.14-3 Prior to approval of Area Plan for areas within Planning Areas 1, 2, 3, 4, and 7, that have been used for agricultural activities where pesticides or herbicides have been used, the applicant shall conduct an investigation to assess the possible presence of residual pesticides and herbicides in accordance with applicable Department of Toxic Substance Control (DTSC) Guidance for Sampling Agricultural Soils. If necessary, a remediation program shall be developed and implemented for those areas where the soils testing program has identified that residual pesticides and herbicides exceed DTSC Guidance, to ensure soils meet standards for proposed uses within previous agricultural areas. If significant contamination is encountered, the results of the testing/investigation, etc. will be provided to OCHCA, or other appropriate agency, for direction and oversight.
- MM 4.14-4 Prior to issuance of a grading permit or a demolition permit for any on-site building constructed prior to 1973, the building shall be screened for lead-based paint prior to demolition. If lead-based paint is identified, it shall be mitigated in accordance with all applicable federal, state and local regulatory requirements.
- MM 4.14-5 Prior to issuance of a demolition permit for any structure constructed before 1980, the applicant shall test for asbestos containing materials. Should the building being demolished contain asbestos, the applicant shall comply with notification and asbestos removal procedures outlined in SCAQMD Rule 1403 to reduce asbestos related health risks.
- MM 4.14-6 Prior to issuance of grading permits for Planning Areas 1, 3, 4, 5, and 8, respectively, the applicant shall remove, or require the leaseholder to remove,

all storage tanks (UST and AGT), fuel dispensers, clarifiers and crushing equipment in compliance with OCHCA regulations. This shall include soil and groundwater sampling in and around any existing USTs, dispensers, clarifiers, crushing operations, and maintenance areas, with analysis for petroleum hydrocarbons, heavy metals, and PAHs to determine if any contaminants exist in the tank pit area or in surrounding areas. If contaminants exist, the level of impact shall be assessed and a remediation plan shall be developed, if required pursuant to applicable laws and regulations. If significant contamination is encountered, the results of the testing/investigation, etc. will be provided to OCHCA, or other appropriate agency, for direction and oversight.

- MM 4.14-7 Prior to approval of Area Plan for areas within Planning Areas 1, 3, and 5, respectively, where soil staining has been identified, the applicant or leaseholder shall test the contaminated soils to assess their level of impact and a remediation plan shall be developed, if required pursuant to applicable laws and regulations. If significant contamination is encountered, the results of the testing/investigation shall be provided to OCHCA, or other appropriate agency, for direction and oversight of the remediation.
- MM 4.14-8 Prior to issuance of grading permits for the portion of Planning Area 3 currently occupied by Catalina Pacific Concrete (CPC), the applicant or leaseholder shall provide verification to OCHCA that the truck washout recycling pond and related chemicals within the CPC lease area have been dismantled/removed and the pond contents removed/disposed in compliance with applicable regulations.
- MM 4.14-9 Prior to approval of an Area Plan for those locations within Planning Area 5 where the UST's were removed, and the overburden storage area where previously contaminated soil was relocated, the applicant or leaseholder shall conduct further investigation regarding the level of contamination. If contamination exists at a level that requires action pursuant to applicable laws and regulations, a remediation plan shall be prepared. If significant contamination is encountered, the results of the testing/investigation shall be provided to OCHCA, or other appropriate agency, for direction and oversight of the remediation.
- MM 4.14-10 Prior to approval of Area Plan for the Trampas Dam area of Planning Area 5, a Phase II testing program shall be developed and implemented to more precisely determine the chemical composition associated with the tailings within Trampas Dam. Once the nature of the tailings is known, a removal program shall be developed to ensure the proper handling and disposal of the material. If the testing program identifies a violation of applicable standards, a remediation program shall be developed and verification of remediation to adopted standards will be submitted to OCHCA prior to issuance of grading permits.
- MM 4.14-11 In conjunction with the Master Area Plan for Planning Area 8 the applicant shall contact the Army Corps of Engineers Formally Used Defense Sites coordinator to determine if areas within the development area were used by the military as firing ranges. For any sites identified, plus the two areas within Planning Area 8 previously used for pistol ranges, the applicant or leaseholder shall

provide verification of soil sampling and testing. If significant contamination is encountered, the results of the testing/investigation, etc. will be provided to OCHCA, or other appropriate agency, for direction and oversight (this may be the water board) that spent ammunition have been removed and soils tested to assess residual lead and copper concentrations. Soil with residual lead or copper concentrations exceeding US EPA's PRGs shall be removed from the property and disposed of at an appropriate facility.

- MM 4.14-12** Prior to approval of Area Plans for the Northrop Grumman Space Technology Test Site (TRW) lease portion of Planning Area 8, the applicant or leaseholder shall develop a comprehensive closure plan to assess, monitor, and mitigate any residual threats to human health or the environment which may remain as a result of site operations and closure. This plan shall address any existing, historical, or threatened releases of any hazardous substances or petroleum products into structures, soil, and/or groundwater beneath the property at any of the locations where these chemicals have been/are used. The comprehensive closure plan shall comply with regulations put forth by the California Department of Toxic Substances (DTSC) which is tasked with enforcing the California Health and Safety Code, Title 22 of the California Code of Regulations and Title 40 of the Code of Federal Regulations and the San Diego Regional Water Quality Control Board (SDRWQCB) which is tasked with enforcing the Water Code (Porter-Cologne Water Quality Control Act). If the comprehensive closure plan identifies the need for remediation, verification of completion of the remediation program shall be submitted to OCHCA, or other appropriate agency prior to issuance of grading permits for those areas subject to remediation.
- MM 4.14-13** Prior to issuance of grading permits within each Planning Area, the Environmental Site Assessments (ESAs) will be updated for that grading permit area. If the Phase I Update identifies new actual or potential impacts, a Phase II ESA will be completed as necessary for the grading area by the landowner or subsequent project applicant. During the Phase II ESA, samples from potential areas of concern will be collected and submitted for laboratory analysis to confirm the nature and extent of potential impacts. If hazardous materials are identified during the site assessments, the appropriate response/remedial measures will be implemented including directives of the OCHCA and/or Regional Water Quality Control Board (RWQCB), as appropriate. If soil is encountered during site development that is suspected of being impacted by hazardous materials, work will be halted and site conditions will be evaluated by a qualified environmental professional. If requested by the qualified environmental professional, the results of the evaluation will be submitted to OCHCA and/or RWQCB, and the appropriate remedial measures will be implemented, as directed by OCHCA, RWQCB, or other applicable oversight agency, until all specified requirements of the oversight agencies are satisfied and a no-further-action status is attained.
- MM 4.14-14** The Master Area Plan prepared for those Planning Areas containing oil wells (Planning Areas 3 and 9) shall graphically depict the location of all oil wells. Prior to issuance of building permits for those locations with oil wells, the applicant shall submit verification that final building plans have undergone review by the Department of Conservation, Division of Oil, Gas, and

Geothermal Resources and remedial action in compliance with well abandonment procedures has been completed.

Project Design Features

- PDF 4.14-2 The project provides for a minimum 110-foot fuel modification zone surrounding all development areas.
- PDF 4.14-3 A *Wildland Fire Management Plan* is contained in the Adaptive Management Program provided in Appendix J. The Adaptive Management Program is further discussed in Section 4.9, Biological Resources.

Standard Conditions and Regulations

There are no standard conditions of approval associated with wildland fires.

Mitigation Measures

- MM 4.14-15 Prior to approval of tentative subdivision maps and site-specific development projects with the project area, the landowner or subsequent project applicant shall submit evidence demonstrating compliance with all applicable OCFA conditions for development projects within a Special Fire Protection Area.

Fire Services

Project Design Features

- PDF 4.15-1 Construction of water storage and conveyance improvements consistent with the *Plan of Works for Improvement Districts 4C, 4E and 5 and 6*, prepared by Tetra Tech Inc. for SMWD would ensure sufficient water for all necessary fire protection systems.
- PDF 4.15-2 Roadways, with the exception of Verdugo Road and other local access roads in Planning Area 9, will be designed in conformance with the Orange County Standard Plans. This is supplemented with Mitigation Measure 4.15-2. Applicants may request alternative roadway designs as an Alternate Means and Methods, including roadways within Planning Area 9.

Standard Conditions and Regulations

- SC 4.15-1 Prior to the recordation of a subdivision map, the subdivider shall design and construct water distribution system and appurtenances that conform to the applicable laws and adopted regulations enforced by the County Fire Chief, in accordance with plans and specifications meeting the approval of the Manager, Subdivision and Grading. (County of Orange Standard Condition of Approval T04)

Mitigation Measures

- MM 4.15-1 The Ranch Plan Fire Protection Program shall be approved prior to the approval of the first Area Plan. The Ranch Plan project shall conform to the Orange County Fire Authority (OCFA) Special Fire Protection Area (SFPA) Guidelines and exclusions shall be applied to the project by application on a subarea basis

in conformance with the Ranch Plan Fire Protection Program. The project applicant shall participate in, and maintain an approved OCFA Wildland Management Plan for all wildland interface areas and designed open spaces. Prior to approval of the first subdivision, the developer shall enter into a Secured Fire Protection Agreement with OCFA for the provision of necessary facilities, apparatus, and fire and rescue supplies and equipment for the Ranch Plan. This comprehensive plan will address fire and emergency medical service delivery within the project site, and will specify the timeframes and trigger points for initiation of services within the project by geographic area. The Secured Fire Protection Agreement shall ensure that OCFA fire protection and emergency medical performance objectives can be achieved for the Ranch Plan area. The applicant will ensure that development is phased in a manner that allows the maximum use of existing fire protection resources before new resources are required to be established.

MM 4.15-2 As part of the Area Plan and tentative tract map process, the developer shall coordinate with OCFA on street design to ensure arterial highways and local streets meet OCFA requirements, provide adequate turn around locations and widths, and signal preemption is installed in all new traffic signals within the Ranch Plan area. For gated communities, emergency opening devices shall be installed.

MM 4.15-3 Prior to approval of the first Master Area Plan, applicant shall gain Orange County Fire Authority (OCFA) approval of a Ranch Plan Fire Protection Program, per the requirements of Section II.D, including a Planned Community-wide Fuel Modification Plan. If adaptive management tools (grazing, prescribed fires, etc.) for controlling the growth of vegetation surrounding Ranch Plan development are not successful and vegetation transitions from Fuel Model 2 (FM2) to Fuel Model 4 (FM4), as classified by the BEHAVE Fire Behavior Fuel Modeling System, the OCFA may choose a total Fuel Modification zone width based on the BEHAVE model anticipated flame lengths plus 20-feet for defensible space.

Law Enforcement Services

Project Design Features

PDF 4.14-3 A OCSO substation site would be provided within the project limits to reduce response times and better serve the Ranch Plan area.

Standard Conditions and Regulations

There are no standard conditions associated with police services.

Mitigation Measures

MM 4.15-4 Prior to approval of the first tentative tract map, except for financing purposes, the Orange County Sheriff's Department and the project applicant shall enter into an agreement specifying the level of service and supporting facilities needed to adequately serve the project area, and the amount of funding to be provided by the project applicant. The agreement will specify the timeframes and trigger points for initiation of services within the project by geographic area.

Energy Resources

Project Design Features

- PDF 4.15.4 The project design has incorporated provisions for the construction of up to two 138/12 kV electrical substations and a 138 kV transmission line to serve the substations. Additionally, the project would extend the 12-inch high power gas line along Ortega Highway from the west of I-5 to Antonio Parkway, and the construction of a gas regulating station at the corner of Antonio Parkway and Ortega Highway.
- PDF 4.15-5 Unless otherwise waived by the Director, PDS, all permanent electric transmission lines less than 66 kV shall be subsurface within those portions of the Ranch Plan approved for development.

Standard Conditions and Regulations

- SC 4.15-2 Prior to recordation of final tract maps for the proposed land development area, the project applicant shall coordinate with SDG&E in the design and implementation of future electrical service and facilities (transmission lines, access road, etc.) within the project study area to ensure that: (1) no notable service disruptions during the extension and upgrading of these services would arise; (2) the nature, design, and timing of electrical system improvements are in accordance with all SDG&E requirements; and (3) the improvements are adequate to serve the proposed land uses.
- SC 4.15-3 Prior to recordation of final tract maps for the proposed land development area, the project applicant shall coordinate with SDG&E to ensure that no notable disruptions to the existing 138 kV transmission line that extends through the project study area would occur as a result of project implementation.
- SC 4.15-4 Prior to recordation of final tract maps for the proposed land development area, the project applicant shall coordinate with SoCalGas in the design and implementation of future natural gas service and facilities within the project study area to ensure that: (1) no notable service disruptions during the extension and upgrading of these services would arise; (2) the nature, design, and timing of natural gas system improvements are in accordance with SoCalGas requirements; and (3) the improvements are adequate to serve the proposed land uses.

Mitigation Measures

No mitigation beyond the project design features and standard conditions is required.

Water Supply

Project Design Features

- PDF 14.5-6 The project has incorporated provisions for the placement and sizing of facilities in compliance with the Plan of Works developed by SMWD.

Standard Conditions and Requirements

- SC 4.15-5 Prior to recordation of final tract maps for the proposed land development area, the project applicant shall coordinate with SMWD and MWD to ensure that no notable disruptions to the existing domestic and non-domestic water facilities that extend through the project study area would occur as a result of project implementation.
- SC 4.15-6 During development of area plans, the project applicant shall coordinate with SMWD to determine specific sizing and placement of water facilities.

Mitigation Measures

No mitigation measures have been identified for the project related to water supply.

Wastewater

Project Design Features

- PDF 4.15-7 The project has incorporated provisions for the placement and sizing of wastewater treatment and conveyance facilities as specified in the Plan of Works.

Standard Conditions and Regulations

- SC 4.15-7 Prior to recordation of final tract maps for the proposed land development area, the project applicant shall coordinate with SMWD to ensure that no notable disruptions to the existing sewer conveyance facilities, which extend through the project study area, would occur as a result of project implementation.
- SC 4.15-8 During development of area plans, the project applicant shall coordinate with SMWD to determine specific sizing and placement of wastewater facilities.

Mitigation Measures

No mitigation measures have been identified for the project related to wastewater.

School Services

Project Design Features

- PDF 4.15-8 The project description provides for the incorporation of school sites into the land use plan. The project design assumes up to five elementary school sites, one middle school site, and a potential high school site, if deemed necessary by CUSD. The precise number, location and combination of elementary and joint elementary and middle school would be determined in consultation with CUSD.

Standard Conditions and Requirements

- SC 4.15-9 Prior to the recordation of final tract map, the project applicant shall provide for the payment of fees pursuant to California Government Code Section 65995, unless other provision are required of the applicant through the agreement with CUSD (see mitigation measure 4.15-5).

Mitigation Measures

- MM 4.15-5 Prior to *issuance of any* residential building permit, excluding senior housing, the applicant shall enter into an agreement with CUSD regarding the development of future facilities and payment of costs. The agreement shall, at a minimum, provide for the payment of fees pursuant to California Government Code Section 65995. If fees are paid, the amount of fees to be paid will be determined based on the established State formula for determining construction costs. Applicable fees shall be paid prior to the issuance of each building permit.

Solid Waste Management

Project Design Features

There are no PDFs addressing Solid Waste.

Standard Conditions and Regulations

- SC 4.15-10 Prior to approval of the first master area plan, a Solid Waste Management Plan shall be prepared and submitted to OCWMD for review and approval. This plan, which shall include specific measures to reduce the amount of refuse generated by construction of the proposed project, shall be developed to meet waste reduction requirements established by the California Integrated Waste Management Act of 1989.

Mitigation Measures

Because implementation of the proposed project is not expected to result in significant impacts to the solid waste system, no mitigation measures related to solid waste management have been identified.

Petroleum Lines

Project Design Features

There are no PDFs associated with petroleum line impacts.

Standard Conditions and Regulation

There are no standard conditions and regulations associated with petroleum line impacts.

Mitigation Measures

- MM 4.15-6 Prior to recordation of final tract maps where the relocation of the Santa Fe Pipeline is required, except for financing purposes, the project applicant shall coordinate with the pipeline owner, Kinder-Morgan, to ensure that no notable disruptions to the fuel pipeline that extends through the project site would occur as a result of project implementation. Should an alignment for the SR-241 alignment be selected at the time of recordation of the final tract maps, the relocation will not place the pipeline within the right-of-way for the SR-241 extension, nor preclude the relocation of any portion of the pipeline currently within the right-of-way for the SR-241 alignment.

Library Services

Project Design Features

There are no Project Design Features for Library Services.

Standard Conditions and Regulations

SC 4.15-11 Prior to the recordation of any final tract/parcel map for the proposed land development area, the project proponent shall pay appropriate developer fees, as determined by the County of Orange, for needed library facilities.

APPENDIX A

SB 1468

August 18, 2003

Senator John Burton
Senate President Pro Tem
State Capitol, Room 205
Sacramento, CA 95814

Dear Senator Burton:

This letter is to clarify the intent of legislation I authored last session, Senate Bill 1468 (Chapter 971, 2002).

Encroachment on military activities in California is a matter of serious concern to the State and its citizens, to the Armed Forces and Department of Defense, and to the Nation. Increasingly, growth and development in the vicinity of military land and airspace has the potential to impact military readiness activities carried out in the State. Senate Bill 1468, which I introduced last term and which was enacted effective on January 1, 2003, amends the Government Code and the Public Utilities Code to address these concerns. In particular, SB 1468 requires local planning agencies to "[c]onsider the impact of new growth on military readiness activities carried out on military bases, installations, and operating and training areas, when proposing zoning ordinances or designating land uses covered by the general plan for land, or other territory adjacent to military facilities, or underlying designated military aviation routes and airspace."

The purpose of SB 1468 is to address and resolve urban encroachment impacts on military activities. In order to balance the State's immediate need to address these issues while accommodating established local planning processes, the act includes two conditions that must be met before a city or county shall be required to comply. First, there must be "an agreement . . . entered into between the United States Department of Defense or other federal agency and the State of California through the office of Planning and Research for the federal government to fully reimburse" local government costs of implementation. Second, the requirements of the act are triggered only when "[t]he city or county undertakes its next general plan revision." This letter clarifies the intent of SB 1468 regarding these two conditions.

SB 1468 Letter to the Senate Journal
August 18, 2003
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It is the intent of SB 1468 that the requirement for a federal-State reimbursement agreement can be met in several ways. California is home to a substantial presence of each of the four branches of the Armed Services and the Department of Defense, with military installations, airspace and training areas in every region, touching dozens of communities of the State. In this context, it may be necessary or desirable for the State to enter into multiple reimbursement agreements to implement SB 1468. For example, the State may alternatively enter into a single overarching reimbursement agreement with the Department of Defense; or separate reimbursement agreements with each of the Armed Services; or an agreement or agreements covering only a portion of the State; or an agreement or agreements covering the activities and installations of only selected Armed Services. SB 1468 contemplates that each of these approaches is appropriate, furthers the purposes of SB 1468, and satisfies the condition regarding reimbursement agreements as to a city or county covered by SB 1468.

Regarding the second condition, the act does not specifically require the immediate revision of general plans to address compatibility concerns with military readiness. The requirements of SB 1468 are triggered whenever "[t]he city or county undertakes its next general plan revision." Although state law does not define "revision," to effectuate the purposes of SB 1468, this term should be broadly construed. The 1998 Edition of the General Plan Guidelines published by the Office of Planning and Research is instructive in this regard. The General Plan Guidelines states, for example, in Chapter 2, Page 35: "The most common sort of revision to a general plan is an amendment associated with a privately-initiated development project." Under SB 1468, the term "general plan revision" is intended to include, and thus the condition is satisfied by any, large-scale general plan amendments, substantial modifications or significant updates to a local general plan.

Sincerely,

ORIGINAL SIGNED BY

WM. J. "PETE" KNIGHT
Senator, 17th District

APPENDIX B
TRAFFIC RESOURCE MATERIAL

TRAFFIC RESOURCE MATERIAL (TRM)

TRM1	SCSAM Socioeconomic Vehicle Trip Rates
TRM2	Senior Housing Trip Rates
TRM3	Crown Valley Parkway Extension Deletion
TRM4	New Ortega Highway Diversion
TRM5	Mitigation needed in 2010 but not in 2025
TRM6	Kaleidoscope/Crown Valley Parkway volumes
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TRM8	Traffic Share Examples
TRM9	Alternative B9 Summary Information
TRM10	SR-73 Ramp and Mainline Data
TRM11	2025 No-Project ADT Volume Diagram

TRM1
SCSAM Socioeconomic Vehicle Trip Rates

Attached Table TRM1 summarizes the SCSAM ten socioeconomic vehicle trip rates according to the following five trip purposes:

1. Home-Based Work/University (HBW/U)
2. Home-Based Other (HBO)
3. Home-Based School (HBSch)
4. Work-Based Other (WBO)
5. Other-Based Other (OBO)

The trip generation for each purpose is in the form of average daily traffic (ADT) vehicle tripends separated into “productions” and “attractions.” Productions represent the trip generation at the resident end of home-based trips or the origins of non-home-based trips. Attractions represent the non-resident end of home-based trips or the destination end of non-home-based trips.

The ADT trips are split into productions and attractions by purpose using a set of splitting factors. The vehicle trip rates for each of the ten socioeconomic categories listed in the table were derived from regression analysis and relationships embodied in the OCTAM 3.1 regional model. A detailed discussion on the derivation of these rates is provided in the documentation for SCSAM.

TRM1

SCSAM SOCIOECONOMIC VEHICLE TRIP RATES

Socioeconomic Variable	Daily Trips	Trip Type	-----Trip Purpose-----				
			HBW/U	HBO	HBSch	WBO	OBO
Single Family Dwelling Units ¹	3.33	Productions	--	1.61	--	--	.54
		Attractions	.05	.38	--	.24	.51
Multi Family Dwelling Units ¹	2.28	Productions	--	.94	--	--	.38
		Attractions	.05	.33	--	.24	.34
Population	.50	Productions	.04	.30	.16	--	--
		Attractions	--	--	--	--	--
Employed Residents	1.18	Productions	1.18	--	--	--	--
		Attractions	--	--	--	--	--
Income (millions of dollars)	28.00	Productions	--	23.97	--	--	1.51
		Attractions	--	1.01	--	--	1.51
Retail Employees	22.00	Productions	--	--	--	1.67	3.65
		Attractions	1.03	9.36	--	2.62	3.67
Service Employees	5.40	Productions	--	--	--	.90	1.00
		Attractions	1.08	.91	--	.47	1.04
Other Employees	2.80	Productions	--	--	--	.80	.19
		Attractions	1.09	.15	--	.36	.21
Elementary/High School Students	.95	Productions	--	--	--	--	.01
		Attractions	--	--	.92	.01	.01
College/University Students	1.50	Productions	--	--	--	--	.20
		Attractions	.90	--	--	.20	.20

¹ Occupied and unoccupied

TRM2
Senior Housing Trip Rates

Table TRM2 provides a comparison between the rates derived from the socioeconomic data conversion and trip generation data for senior housing. This table also summarizes the various sources used in compiling the trip rates for senior housing.

TRM2

SURVEY OF SENIOR HOUSING TRIP RATES

Description	Unit	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Senior Housing	DU	.06	.19	.25	.20	.13	.33	3.50
Senior Adult Housing – Detached ¹	DU	.08	.12	.20	.16	.10	.26	3.71
Retirement Community ²	DU	.08	.12	.20	.17	.11	.28	4
Senior Adult Housing – Detached ³	DU	.08	.09	.17	.15	.12	.27	4.00
Senior Housing Trip Generation ⁴	DU	.10	.06	.16	.10	.15	.25	4.52
Sun City Lincoln Hills Equivalent DU ⁵	DU	--	--	--	--	--	.21	3.71
Brentwood Active Adult Housing ⁶	DU	--	--	--	--	--	.44	4.26
North Natomas Age Restricted Single Family ⁷								
ASHA Retirement Community	DU	--	--	.29	--	--	.34	3.43
Elderly Housing – Detached	DU	--	--	.21	--	--	.23	2.39
North Natomas Senior Apts ⁷								
Recommended for Seniors Apartments		--	--	--	--	--	--	3.08
Recommended for Seniors Single Family		--	--	--	--	--	--	6.30
Palmia Retirement Community ⁸	DU	.06	.08	.14	.11	.07	.18	4.40

Source: ¹ "Trip Generation," 7th Edition, Institute of Transportation Engineers (ITE) 2003.

² "San Diego Traffic Generators," SANDAG, April 2002.

³ Trip Generation, 6th Edition, Institute of Transportation Engineers (ITE) 1997.

⁴ "Senior Housing Trip Generation & Parking Demand Characteristics," ITE 66th Annual Meeting, 1996.

⁵ "Final Report – Sun City Lincoln Hills EDU Study," Fehr & Peers Associates, July 16, 2001.

⁶ "Final Report – Brentwood Active Adult Housing Traffic Fee Review," Fehr & Peers Associates, May 18, 1999.

⁷ North Natomas Nexus Study Update 2001, Economic & Planning Systems.

⁸ "Two Residential Communities in South Orange County," Austin-Foust Associates, Inc., February 2003.

TRM3
Crown Valley Parkway Extension

TRM3 provides a summary table, which identifies intersection deficiencies for the current MPAH (which includes the Crown Valley Parkway extension) and for the MPAH with Proposed Amendments (which has the deletion of Crown Valley Parkway from the MPAH). Both MPAH alternatives assume the same land use plan. The results indicate that the deficiencies are the same if the Crown Valley Parkway extension is built according to the current MPAH.

TRM3

2025 MPAH BUILDOUT WITH PROJECT INTERSECTION DEFICIENCIES

Intersection	Jurisdiction	Buildout of Current MPAH	MPAH Buildout With Proposed Amendments
4. Felipe & Oso	Mission Viejo	■	■
5. Antonio & Oso	Unincorporated	■	■
11. Marguerite & Crown Valley	Mission Viejo	■	■
12. Antonio & Crown Valley	Unincorporated	■	■
20. Golden Lantern & Paseo de Colinas	Laguna Niguel	■	■
27. Rancho Viejo & Ortega	San Juan Capistrano	■	■
29. Antonio/La Pata & Ortega	Unincorporated	■	■
43. Antonio & New Ortega	Unincorporated	(a)	■
59. SR-241 NB Ramps & Antonio	Rancho Santa Margarita	■	■

☐ - No deficiency at this location.

☒ - Deficiency at this location.

(a) This intersection is not a part of the current Master Plan of Arterial Highways (MPAH).

TRM4
New Ortega Highway Diversion

This analysis evaluates the effect of retaining existing Ortega Highway as a rural highway serving through traffic. The data presented here for 2025 with-Project conditions with the committed circulation system plus La Pata Avenue. The base case assumes that Ortega Highway would have a lower speed than currently enforced and would function as a slow speed local roadway. New Ortega Highway would serve as the route of choice for through traffic. The alternative assumes that through traffic would use existing Ortega Highway.

The ADT volumes for the base case and the alternative are shown in the attached diagram and the corresponding peak hour turn movement volumes can be found in the attached ICU worksheets. The shift in through traffic between the base case and the alternative affects around 400 trips during the AM peak hour and 450 trips during the PM peak hour.

As shown, the change in peak hour volumes under the alternative versus the base case results in slight reductions in the ICU values but does not result in a change in the level of service for either intersection.

29. La Pata & Ortega

2025 Proposed Project (Base Case)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	310	.18*	350	.21*
NBT	2	3400	1410	.43	1140	.39
NBR	0	0	40		200	
SBL	1	1700	60	.04	80	.05
SBT	2	3400	1470	.43*	1310	.39*
SBR	1	1700	1610	.95	1050	.62
EBL	2	3400	920	.27*	1370	.40*
EBT	1	1700	50	.03	430	.25
EBR	1	1700	470	.28	310	.18
WBL	1	1700	150	.09	30	.02
WBT	1	1700	250	.15*	150	.09*
WBR	1	1700	60	.04	80	.05
Right Turn Adjustment Clearance Interval			SBR	.52* .05*	SBR	.23* .05*
TOTAL CAPACITY UTILIZATION			1.60		1.37	

2025 Proposed Project (w/Ortega Hwy Diversion)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	310	.18*	350	.21*
NBT	2	3400	1376	.43	1043	.39
NBR	0	0	74		297	
SBL	1	1700	115	.07	154	.09
SBT	2	3400	1433	.42*	1252	.37*
SBR	1	1700	1447	.85	975	.57
EBL	2	3400	851	.25*	1512	.44*
EBT	1	1700	83	.05	288	.17
EBR	1	1700	470	.28	310	.18
WBL	1	1700	187	.11	88	.05
WBT	1	1700	413	.24*	225	.13*
WBR	1	1700	131	.08	129	.08
Right Turn Adjustment Clearance Interval			SBR	.43* .05*	SBR	.20* .05*
TOTAL CAPACITY UTILIZATION			1.57		1.40	

43. Antonio & New Ortega

2025 Proposed Project (Base Case)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	40	.02	80	.05
NBT	3	5100	1060	.21*	1450	.28*
NBR	f		1200		1330	
SBL	2	3400	680	.20*	970	.29*
SBT	3	5100	1460	.29	1200	.24
SBR	d	1700	40	.02	60	.04
EBL	1	1700	60	.04	50	.03
EBT	1	1700	60	.04*	70	.04*
EBR	1	1700	80	.05	70	.04
WBL	2	3400	1280	.38*	1410	.41*
WBT	1	1700	40	.02	60	.04
WBR	f		900		930	
Right Turn Adjustment Clearance Interval			EBR	.01* .05*		.05*
TOTAL CAPACITY UTILIZATION			.89		1.07	

2025 Proposed Project (w/Ortega Hwy Diversion)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	45	.03	80	.05
NBT	3	5100	1133	.22*	1504	.29*
NBR	f		1305		1154	
SBL	2	3400	623	.18*	901	.26*
SBT	3	5100	1157	.23	1269	.25
SBR	d	1700	40	.02	60	.04
EBL	1	1700	60	.04	50	.03
EBT	1	1700	60	.04*	65	.04*
EBR	1	1700	80	.05	75	.04
WBL	2	3400	1073	.32*	1276	.38*
WBT	1	1700	35	.02	60	.04
WBR	f		827		876	
Right Turn Adjustment Clearance Interval			EBR	.01* .05*		.05*
TOTAL CAPACITY UTILIZATION			.82		1.02	

TRM5
Mitigation needed in 2010 but not in 2025

The mitigation program for the 2010 conditions primarily includes measures that are included in the overall long-range improvement program and is therefore, early implementation of said improvements. Two exceptions are the intersections of Rancho Viejo Road & Ortega Highway and La Novia Ave & San Juan Creek Road. These two intersection require mitigation in 2010 that are not a part of the long range mitigation program. The intersections and those mitigation measures are identified in the attached table.

2010 CIRCULATION SYSTEM MEASURES NOT NEEDED FOR 2025

Location	Jurisdiction	Improvement(s)	2010 Scenario
27. Rancho Viejo Rd & Ortega Hwy	San Juan Capistrano	Convert eastbound right-turn lane to shared third through/right-turn lane.	Committed Circulation System
33. La Novia Ave & San Juan Creek Rd	San Juan Capistrano	Add second eastbound left-turn lane.	Committed Circulation System

TRM6
Kaleidoscope/Crown Valley Parkway volumes

The attached ICU worksheets summarize the peak hour volumes and ICU values for the Kaleidoscope & Crown Valley Parkway intersection, for each of the proposed project scenarios. As shown, the intersection is forecast to operate satisfactorily under each scenario.

1. Kaleidoscope & Crown Valley

2025 Proposed Project (Committed Circulation System)							
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C	
NBL	0	0	60		80		
NBT	1	1700	0	.05*	0	.06*	
NBR	0	0	30		20		
SBL	1.5		10		60	{.02}*	
SBT	0.5	3400	0	.00	0	.02	
SBR	1	1700	10	.01	80	.05	
EBL	2	3400	50	.01*	170	.05*	
EBT	4	6800	2740	.41	3740	.55	
EBR	0	0	20		20		
WBL	1	1700	40	.02	60	.04	
WBT	4	6800	3250	.48*	3680	.55*	
WBR	0	0	10		30		
Clearance Interval				.05*		.05*	
TOTAL CAPACITY UTILIZATION				.59		.73	

2025 Proposed Project (Committed w/La Pata)							
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C	
NBL	0	0	60		80		
NBT	1	1700	0	.05*	0	.06*	
NBR	0	0	30		20		
SBL	1.5		10		60	{.02}*	
SBT	0.5	3400	0	.00	0	.02	
SBR	1	1700	10	.01	80	.05	
EBL	2	3400	50	.01*	170	.05	
EBT	4	6800	2700	.40	3760	.56*	
EBR	0	0	20		20		
WBL	1	1700	40	.02	60	.04*	
WBT	4	6800	3200	.47*	3650	.54	
WBR	0	0	10		30		
Clearance Interval				.05*		.05*	
TOTAL CAPACITY UTILIZATION				.58		.73	

2025 Proposed Project (Committed w/La Pata & FTC-S)							
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C	
NBL	0	0	60		80		
NBT	1	1700	0	.05*	0	.06*	
NBR	0	0	30		20		
SBL	1.5		10		60	{.02}*	
SBT	0.5	3400	0	.00	0	.02	
SBR	1	1700	10	.01	80	.05	
EBL	2	3400	50	.01*	170	.05*	
EBT	4	6800	2760	.41	3720	.55	
EBR	0	0	20		20		
WBL	1	1700	40	.02	60	.04	
WBT	4	6800	3170	.47*	3620	.54*	
WBR	0	0	10		30		
Clearance Interval				.05*		.05*	
TOTAL CAPACITY UTILIZATION				.58		.72	

2025 Proposed Project (MPAH Buildout with Amendments)							
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C	
NBL	0	0	60		80		
NBT	1	1700	0	.05*	0	.06*	
NBR	0	0	30		20		
SBL	1.5		10		60	{.02}*	
SBT	0.5	3400	0	.00	0	.02	
SBR	1	1700	10	.01	80	.05	
EBL	2	3400	50	.01*	170	.05	
EBT	4	6800	2680	.40	3600	.53*	
EBR	0	0	20		20		
WBL	1	1700	40	.02	60	.04*	
WBT	4	6800	3090	.46*	3450	.51	
WBR	0	0	10		30		
Clearance Interval				.05*		.05*	
TOTAL CAPACITY UTILIZATION				.57		.70	

TRM7

Corrected ICU calculation for Los Alton/Crown Valley Parkway intersection

The lane geometrics for the intersection of Los Altos & Crown Valley Parkway have been corrected for the 2025 Proposed Project (Current MPAH Buildout) scenario. The attached ICU worksheet presents the revised ICU calculation for this intersection.

9. Los Altos & Crown Valley

2025 Proposed Project (Current MPAH Buildout)

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	30	.01	510	.15
NBT	1	1700	20	.06*	20	.19*
NBR	0	0	90		300	
SBL	0	0	40		210	
SBT	1	1700	20	.04*	30	.14*
SBR	1	1700	50	.03	120	.07
EBL	1	1700	150	.09*	80	.05
EBT	4	6800	1700	.29	3250	.49*
EBR	0	0	300		90	
WBL	1	1700	450	.26	190	.11*
WBT	4	6800	2830	.46*	2290	.34
WBR	0	0	290		20	
Clearance Interval				.05*		.05*
Note: Assumes N/S Split Phasing						

TOTAL CAPACITY UTILIZATION .70 .98

TRM8
Traffic Share Examples

Project shares are calculated using a standard formula that is used by the County of Orange and jurisdictions within Orange County to determine a future project share on a given facility. The attached table summarizes the formula and calculation steps used for two locations (one an existing facility and the other a future new facility).

TRAFFIC SHARE EXAMPLES

Traffic Share Summary (Circulation System Mitigation Locations)				
Location		Future Traffic -Ranch	Existing Traffic*	Total Traffic
ARTERIAL ROADS				
Oso Pkwy (I-5 to Marguerite Pkwy)	Trips (ADT)	4,708	53,539	69,757
	Share	29%		
Avenida La Pata extension	Trips (ADT)	2,379	10,700	21,801
	Share	21%		

* In the case of the Avenida La Pata extension, this is traffic from existing land uses that will use the new facility. (Existing trips are assigned to the future circulation system to derive existing trips that will use this new roadway.)

Formula to calculate project share is =

$$\frac{\text{Project traffic}}{\text{Total traffic minus traffic from existing land uses}}$$

Example 1: Oso Pkwy (I-5 to Marguerite Pkwy) =

$$\frac{4708}{(69,757 - 53,539)}$$

$$= 29\%$$

Example 2: Avenida La Pata Extension =

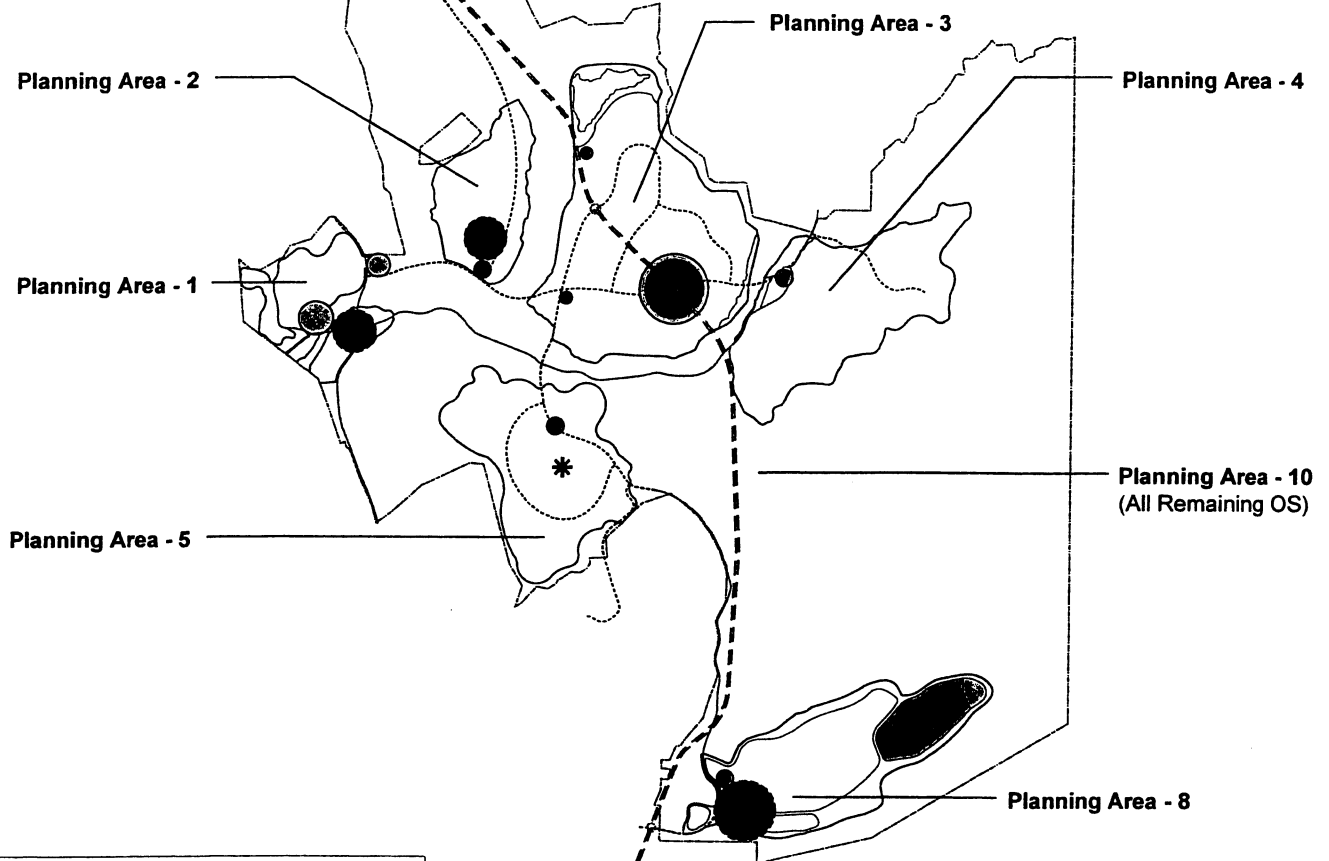
$$\frac{2379}{(21,801 - 10,700)}$$

$$= 21\%$$

TRM9
Alternative B9 Summary Information

The attached data summarizes the land use information and traffic forecast data for the B-9 Alternative. It is in the same format as supplied for each alternative studied in the EIR Traffic Study. The following list summarizes the data:

- Planning Area Diagram
- Socioeconomic Data by Land Use Category
- Trip Generation by Land Use Category by Socioeconomic Category
- Productions and Attractions by Socioeconomic Category
- Trip Generation by Socioeconomic Category
- Trip Generation by Land Use Category
- ADT Volumes Diagram for Committed Circulation System plus La Pata
- ADT Volumes Diagram for Committed Circulation System plus La Pata and FTC-S
- Freeway Mainline Volumes for Committed Circulation System plus La Pata
- Freeway Mainline Volumes for Committed Circulation System plus La Pata and FTC-S
- Freeway Ramp Volumes for Committed Circulation System plus La Pata
- Freeway Ramp Volumes for Committed Circulation System plus La Pata and FTC-S
- Intersection Capacity Utilization (ICU) Summary Table for Committed Circulation System plus La Pata
- Intersection Capacity Utilization (ICU) Summary Table for Committed Circulation System plus La Pata and FTC-S



Legend

- Residential
- Urban Activity Center
- Neighborhood Center
- Business Park
- Golf Course (*)
- Golf / Resort
- Open Space

▶ Reflects relative size and approximate location
 --- FTC - South Shown for Informational Purposes Only

Ranch Plan/EDAW -B-9 Alternative

Land Use	Socioeconomic Data by Land Use Category										
	Amount	Single Family Residential	Multi-Family Residential	Population	Employed Residents	Income	Retail Employment	Service Employment	Other Employment	Elementary & High School Enrollment	College & University Enrollment
1. Single Family - Detached	4,212	4,212	0	13,268	7,160	337	0	0	0	0	0
2. Single Family - Attached	2,808	0	2,808	8,705	4,493	197	0	0	0	0	0
3. Senior Housing	4,960	0	4,960	6,944	992	50	0	0	0	0	0
4. Senior Apartments	640	0	640	896	128	6	0	0	0	0	0
5. Apartments	980	0	980	2,450	1,274	49	0	0	0	0	0
7. General Commercial	800	0	0	0	0	0	1,600	200	40	0	0
8. Specialty Retail	180	0	0	0	0	0	288	117	9	0	0
9. R&D/Business Park	3,660	0	0	0	0	0	0	1,830	9,150	0	0
10. Office	560	0	0	0	0	0	11	504	1,445	0	0
11. Golf Course	450	0	0	0	0	0	0	225	0	0	0
12. Elementary/Middle School	4,200	0	0	0	0	0	0	0	462	4,200	0
13. High School	900	0	0	0	0	0	0	0	99	900	0
16. Resort Hotel	250	0	0	0	0	0	0	175	50	0	0
TOTAL		4,212	9,388	32,263	14,047	639	1,899	3,051	11,255	5,100	0

**Ranch Plan/EDAW -
B-9 Alternative**

Land Use	Trip Generation by Land Use Category By Socioeconomic Category											
	Single Family Residential	Multi-Family Residential	Population	Employed Residents	Income	Retail Employment	Service Employment	Other Employment	Elementary & High School Enrollment	College & University Enrollment	Total Tripends	Trip Rate
1. Single Family - Detached	14,026	0	6,634	8,449	9,435	0	0	0	0	0	38,544	9.2
2. Single Family - Attached	0	6,402	4,352	5,302	5,504	0	0	0	0	0	21,560	7.7
3. Senior Housing	0	11,309	3,472	1,171	1,389	0	0	0	0	0	17,340	3.5
4. Senior Apartments	0	1,459	448	151	179	0	0	0	0	0	2,237	3.5
5. Apartments	0	2,234	1,225	1,503	1,372	0	0	0	0	0	6,335	6.5
7. General Commercial	0	0	0	0	0	35,200	1,080	112	0	0	36,392	45.5
8. Specialty Retail	0	0	0	0	0	6,336	632	25	0	0	6,993	38.8
9. R&D/Business Park	0	0	0	0	0	0	9,882	25,620	0	0	35,502	9.7
10. Office	0	0	0	0	0	246	2,722	4,045	0	0	7,013	12.5
11. Golf Course	0	0	0	0	0	0	1,215	0	0	0	1,215	2.7
12. Elementary/Middle School	0	0	0	0	0	0	0	1,294	3,990	0	5,284	1.3
13. High School	0	0	0	0	0	0	0	277	855	0	1,132	1.3
16. Resort Hotel	0	0	0	0	0	0	945	140	0	0	1,085	4.3
TOTAL	14,026	21,405	16,131	16,576	17,879	41,782	16,475	31,513	4,845	0	180,632	0.0

12337

**Ranch Plan/EDAW -
B-9 Alternative**

Productions and Attractions by Socioeconomic Category													
	Productions							Attractions					
	Socioeconomic Amount	Home-based Work	Home-based Other	Home-based School	Work-based Other	Other-based Other	Total	Home-based Work	Home-based Other	Home-based School	Work-based Other	Other-based Other	Total
Socioeconomic Land Use													
1 Single Family Residential	4,212	0	6,775	0	0	2,286	9,061	196	1,613	0	996	2,160	4,965
2 Multi-Family Residential	9,388	0	8,840	0	0	3,553	12,393	449	3,125	0	2,226	3,211	9,011
3 Population	32,263	1,291	9,679	5,162	0	0	16,131	0	0	0	0	0	0
4 Employed Residents	14,047	16,576	0	0	0	0	16,576	0	0	0	0	0	0
5 Income	639	0	15,304	0	0	965	16,269	0	644	0	0	965	1,609
6 Retail Employment	1,899	0	0	0	3,175	6,936	10,111	1,964	17,758	0	4,972	6,978	31,671
7 Service Employment	3,051	0	0	0	2,751	3,064	5,816	3,295	2,784	0	1,433	3,147	10,660
8 Other Employment	11,255	0	0	0	9,013	2,143	11,156	12,259	1,702	0	4,065	2,332	20,358
9 Elementary/High School	5,100	0	0	0	0	53	53	0	0	4,685	53	53	4,792
10 College/University	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		17,866	40,597	5,162	14,940	19,001	97,567	18,163	27,625	4,685	13,746	18,846	83,066
													180,632

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**Ranch Plan/EDAW -
B-9 Alternative**

Trip Generation by Socioeconomic Category								
Socioeconomic Category	Amount	AM Peak Hour			PM Peak Hour			ADT
		Inbound	Outbound	Total	Inbound	Outbound	Total	
1. Single Family Residential	274	535	810	1,345	773	581	1,354	14,026
2. Multi-Family Residential	460	792	1,252	2,044	1,190	892	2,082	21,405
3. Population	161	1,289	1,450	2,739	878	486	1,364	16,131
4. Employed Residents	107	2,165	2,272	4,437	1,628	108	1,736	16,576
5. Income	252	881	1,133	2,014	1,005	676	1,681	17,879
6. Retail Employment	1,709	818	2,527	3,345	1,876	2,285	4,161	41,782
7. Service Employment	884	271	1,156	1,427	601	1,091	1,692	16,475
8. Other Employment	2,417	505	2,922	3,427	877	2,507	3,384	31,513
9. Elementary/High School. Enrollment	536	38	574	612	131	178	309	4,845
10. College/Univ. Enrollment	0	0	0	0	0	0	0	0
Total	6,800	7,294	14,095	21,389	8,961	8,804	17,765	180,632

Trip Generation by Land Use Category								
Land Use	Amount	AM Peak Hour			PM Peak Hour			ADT
		Inbound	Outbound	Total	Inbound	Outbound	Total	
1. Single Family - Detached	4,212	528	2,634	3,162	2,495	1,193	3,687	38,544
2. Single Family - Attached	2,808	293	1,548	1,841	1,423	641	2,064	21,560
3. Senior Housing	4,960	305	917	1,222	1,011	636	1,647	17,340
4. Senior Apartments	640	39	118	158	130	82	213	2,237
5. Apartments	980	89	444	534	416	192	608	6,335
7. General Commercial	800	1,506	709	2,215	1,623	2,005	3,628	36,392
8. Specialty Retail	180	295	135	430	308	390	699	6,993
9. R&D/Business Park	3,660	2,495	573	3,069	1,074	2,692	3,766	35,502
10. Office	560	466	114	581	223	515	739	7,013
11. Golf Course	450	65	20	85	44	80	125	1,215
12. Elementary/Middle School	4,200	540	52	592	144	249	393	5,284
13. High School	900	116	11	127	31	53	84	1,132
14. Resort Hotel	250	61	18	79	38	74	112	1,085
Total		6800	7294	14095	8961	8804	17765	180632

2025 Freeway Mainline LOS Summary
- B-9 Alternative (Committed Circulation System with La Pata and FTC-S)

Location	Direction	Lanes	AM Peak Hour				PM Peak Hour			
			Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS
I-5 n/o Oso	NB	4+1H	9,600	9,540	.99	E	9,600	8,970	.93	E
	SB	4+1H	9,600	8,220	.86	D	9,600	8,960	.93	E
I-5 n/o Crown Valley	NB	4+1H+1A	10,600	8,410	.79	D	9,600	8,490	.88	D
	SB	4+1H	9,600	8,300	.86	D	9,600	8,380	.87	D
I-5 n/o Avery	NB	4+1H+1A	9,600	6,490	.68	C	9,600	6,670	.69	C
	SB	4+1H+1A	9,600	6,640	.69	C	9,600	6,420	.67	C
I-5 n/o SR-73	NB	4+1H	9,600	6,520	.68	C	9,600	6,260	.65	C
	SB	4+1H	9,600	6,090	.63	C	9,600	6,070	.63	C
I-5 n/o Junipero Serra	NB	6+1H	13,600	11,460	.84	D	13,600	10,270	.76	D
	SB	6+1H	13,600	9,350	.69	C	13,600	11,350	.83	D
I-5 n/o Ortega	NB	5+1H	11,600	10,680	.92	E	11,600	9,560	.82	D
	SB	5+1H	11,600	8,800	.76	D	11,600	10,720	.92	E
I-5 n/o Camino Capistrano (a)	NB	4+1H	9,600	9,800	1.02	F	9,600	8,720	.91	E
	SB	4+1H	9,600	7,840	.82	D	9,600	9,380	.98	E
I-5 s/o Camino Capistrano	NB	4+1H	9,600	9,620	1.00	E	9,600	8,910	.93	E
	SB	4+1H	9,600	7,520	.78	D	9,600	9,150	.95	E
I-5 n/o Hermosa (a)	NB	4	8,000	7,860	.98	E	8,000	8,190	1.02	F
	SB	4	8,000	7,710	.96	E	8,000	8,340	1.04	F
I-5 n/o Pico	NB	4+1A	9,000	7,500	.83	D	9,000	7,780	.86	D
	SB	4+1A	9,000	7,220	.80	D	9,000	7,880	.88	D
I-5 s/o Pico (a)	NB	4	8,000	7,600	.95	E	8,000	8,060	1.01	F
	SB	4	8,000	7,070	.88	D	8,000	8,260	1.03	F

(a) This segment of I-5 is forecast to operate deficiently in the AM and/or PM peak hour in one or both directions (i.e., the LOS is worse than the LOS E performance standard adopted by Caltrans for the I-5 mainline).

2025 Freeway Ramp LOS Summary
- B-9 Alternative (Committed Circulation System with La Pata)

Interchange	Ramp	Lanes	Peak Hour Capacity	AM Peak Hour			PM Peak Hour		
				Volume	V/C	LOS	Volume	V/C	LOS
I-5 at Oso	SB Direct On	1	1,080	460	.43	A	750	.69	B
	SB Loop On	1	1,080	710	.66	B	390	.36	A
	NB Direct On	1	1,500	1,240	.83	D	730	.49	A
	NB Loop On	1	1,500	230	.15	A	590	.39	A
	SB Off (a)	1	1,500	1,100	.73	C	1,730	1.15	F
	With Mitigation	2	2,250	1,060	.47	A	1,670	.74	C
	NB Off	1	1,500	790	.53	A	1,010	.67	B
I-5 at Crown Valley	SB On	1	1,800	690	.38	A	810	.45	A
	NB Direct On (a)	1	1,500	1,460	.97	E	1,620	1.08	F
	With Mitigation	1	1,500	1,210	.81	D	1,420	.95	E
	NB Loop On	1	1,080	950	.88	D	950	.88	D
	SB Off (a)	2	2,250	1,970	.88	D	3,050	1.36	F
	With Mitigation	2	3,000	1,700	.57	A	2,920	.97	E
	NB Off	1	1,500	1,250	.83	D	690	.46	A
I-5 at Avery	SB On	1	1,080	530	.49	A	630	.58	A
	NB On	1	1,500	550	.37	A	790	.53	A
	SB Off	1	1,500	740	.49	A	910	.61	B
	NB Off	1	1,500	660	.44	A	840	.56	A
I-5 at Junipero Serra	SB On	1	1,080	390	.36	A	440	.41	A
	NB On (a)	1	1,080	1,160	1.07	F	1,020	.94	E
	With Mitigation	1	1,080	1,070	.99	E	920	.85	D
	SB Off	1	1,500	830	.55	A	980	.65	B
	NB Off	1	1,500	320	.21	A	320	.21	A
I-5 at Ortega	SB On	1	1,500	420	.28	A	460	.31	A
	NB On (a)	1	1,500	1,900	1.27	F	1,880	1.25	F
	Mitigated with the reconstruction of the I-5/Ortega Highway interchange.								
	SB Off	2	2,250	2,140	.95	E	2,060	.92	E
I-5 at Cm Capistrano	NB Off	1	1,500	840	.56	A	730	.49	A
	SB On	1	1,500	640	.43	A	510	.34	A
	NB On	1	1,500	860	.57	A	480	.32	A
	SB Off	1	1,500	990	.66	B	1,390	.93	E
I-5 at Vista Hermosa	NB Off	1	1,500	490	.33	A	750	.50	A
	SB On	1	1,080	540	.50	A	330	.31	A
	NB Direct On	1	1,500	880	.59	A	1,160	.77	C
	NB Loop On	1	1,080	210	.19	A	230	.21	A
	SB Off	1	1,500	1,450	.97	E	1,130	.75	C
I-5 at Avd Pico	NB Off	1	1,500	630	.42	A	610	.41	A
	SB On	1	1,500	810	.54	A	1,290	.86	D
	NB On	1	1,500	1,340	.89	D	1,490	.99	E
	SB Off	2	2,250	1,930	.86	D	1,310	.58	A
	NB Off	1	1,500	1,180	.79	C	1,190	.79	C

(a) This ramp is forecast to operate deficiently in the AM and/or PM peak hour (i.e., the LOS is worse than the LOS E performance standard adopted by Caltrans for I-5 freeway ramps).

2025 Freeway Ramp LOS Summary
- B-9 Alternative (Committed Circulation System with La Pata and FTC-S)

Interchange	Ramp	Lanes	Peak Hour Capacity	AM Peak Hour			PM Peak Hour		
				Volume	V/C	LOS	Volume	V/C	LOS
I-5 at Oso	SB Direct On	1	1,080	470	.44	A	710	.66	B
	SB Loop On	1	1,080	680	.63	B	370	.34	A
	NB Direct On	1	1,500	1,230	.82	D	740	.49	A
	NB Loop On	1	1,500	280	.19	A	550	.37	A
	SB Off (a)	1	1,500	1,100	.73	C	1,670	1.11	F
	With Mitigation	2	2,250	1,080	.48	A	1,660	.74	C
	NB Off	1	1,500	770	.51	A	970	.65	B
I-5 at Crown Valley	SB On	1	1,800	670	.37	A	830	.46	A
	NB Direct On (a)	1	1,500	1,450	.97	E	1,610	1.07	F
	With Mitigation	1	1,500	1,140	.76	C	1,360	.91	E
	NB Loop On	1	1,080	950	.88	D	960	.89	D
	SB Off (a)	2	2,250	2,000	.89	D	2,990	1.33	F
	With Mitigation	2	3,000	1,670	.56	A	2,780	.93	E
	NB Off	1	1,500	1,280	.85	D	710	.47	A
I-5 at Avery	SB On	1	1,080	540	.50	A	670	.62	B
	NB On	1	1,500	500	.33	A	750	.50	A
	SB Off	1	1,500	760	.51	A	880	.59	A
	NB Off	1	1,500	680	.45	A	860	.57	A
I-5 at Junipero Serra	SB On	1	1,080	390	.36	A	500	.46	A
	NB On	1	1,080	1,030	.95	E	930	.86	D
	SB Off	1	1,500	840	.56	A	910	.61	B
	NB Off	1	1,500	370	.25	A	340	.23	A
I-5 at Ortega	SB On	1	1,500	440	.29	A	490	.33	A
	NB On (a)	1	1,500	2,060	1.37	F	2,000	1.33	F
	Mitigated with the reconstruction of the I-5/Ortega Highway interchange.								
	SB Off (a)	2	2,250	2,210	.98	E	2,350	1.04	F
	Mitigated with the reconstruction of the I-5/Ortega Highway interchange.								
	NB Off	1	1,500	830	.55	A	730	.49	A
I-5 at Cm Capistrano	SB On	1	1,500	640	.43	A	550	.37	A
	NB On	1	1,500	850	.57	A	490	.33	A
	SB Off	1	1,500	1,020	.68	B	1,480	.99	E
	NB Off	1	1,500	510	.34	A	770	.51	A
I-5 at Vista Hermosa	SB On	1	1,080	260	.24	A	200	.19	A
	NB Direct On	1	1,500	860	.57	A	1,040	.69	B
	NB Loop On	1	1,080	190	.18	A	210	.19	A
	SB Off	1	1,500	1,410	.94	E	1,100	.73	C
	NB Off	1	1,500	370	.25	A	380	.25	A
I-5 at Avd Pico	SB On	1	1,500	480	.32	A	970	.65	B
	NB On (a) (b)	1	1,500	1,130	.75	C	1,510	1.01	F
	SB Off	2	2,250	1,930	.86	D	1,150	.51	A
	NB Off	1	1,500	1,010	.67	B	740	.49	A
<p>(a) This ramp is forecast to operate deficiently in the AM and/or PM peak hour (i.e., the LOS is worse than the LOS E performance standard adopted by Caltrans for I-5 freeway ramps).</p> <p>(b) Because better levels of service are forecast at the Avenida Pico/I-5 northbound ramp intersection when the HCM analysis methodology is applied rather than the ICU methodology, the analysis of this ramp using the HCM methodology is expected to result in acceptable (non-deficient) levels of service, therefore no project mitigation is proposed.</p>									

2025 Intersection LOS Summary - B-9 Alternative (Committed Circulation System with La Pata)				
Intersection	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
City of Laguna Hills				
15. Cabot & Oso	.65	B	.84	D
City of Laguna Niguel				
16. Moulton & Crown Valley (a)	.79	C	.87	D
17. Greenfield & Crown Valley	.79	C	.76	C
18. Cabot & Crown Valley	.76	C	.78	C
19. Forbes & Crown Valley	.66	B	.76	C
20. Golden Lantern & Paseo de Colinas (b)	1.03	F	.87	D
No Mitigation Proposed				
21. Cabot & Paseo de Colinas	.51	A	.66	B
22. Camino Capistrano & Paseo de Colinas	.53	A	.57	A
23. Camino Capistrano & Avery	.51	A	.56	A
70. Greenfield & SR-73 SB Ramps	.56	A	.56	A
71. Greenfield & SR-73 NB Ramps	.67	B	.47	A
City of Mission Viejo				
1. Marguerite & La Paz	.62	B	.81	D
2. Olympiad & La Paz	.56	A	.59	A
3. Marguerite & Oso	.81	D	.79	C
4. Felipe & Oso (b)	.86	D	1.02	F
With Mitigation				
6. Marguerite & Felipe	.64	B	.86	D
7. Puerta Real & Crown Valley (a)	.75	C	.84	D
8. El Regateo/Medical Ctr & Crown Valley (a)	.65	B	.80	C
9. Los Altos & Crown Valley (a)	.73	C	.97	E
10. Bellogente & Crown Valley (a)	.72	C	.68	B
11. Marguerite & Crown Valley (a) (b)	1.23	F	1.07	F
With Mitigation				
24. Marguerite & Avery	.86	D	.86	D
44. I-5 SB Ramps & Oso	.64	B	.76	C
45. I-5 NB Ramps & Oso	.76	C	.86	D
46. I-5 SB Ramps & Crown Valley (a)	.72	C	.96	E
47. I-5 NB Ramps & Crown Valley (a)	.71	C	.88	D
48. I-5 SB Ramps & Avery	.70	B	.80	C
49. I-5 NB Ramps & Avery	.61	B	.74	C
City of Rancho Santa Margarita				
13. Banderas & Antonio	.69	B	.77	C
14. Empresa & Antonio	.62	B	.51	A
58. SR-241 SB Ramps & Antonio	.47	A	.69	B
59. SR-241 NB Ramps & Antonio (b)	1.39	F	.52	A
With Mitigation				
60. SR-241 SB Ramps & Oso	.61	B	.73	C
61. SR-241 NB Ramps & Oso	.83	D	.57	A
City of San Clemente				
37. La Pata & Vista Hermosa (b)	1.47	F	1.27	F
With Mitigation				
	.83	D	.83	D

2025 Intersection LOS Summary - B-9 Alternative (Committed Circulation System with La Pata)				
Intersection	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
City of San Clemente (cont)				
38. Talega & Vista Hermosa	.83	D	.85	D
39. Vera Cruz & Vista Hermosa (b)	1.12	F	1.24	F
With Mitigation	.82	D	.83	D
40. La Pata & Pico	.53	A	.82	D
41. Vista Hermosa & Pico	.34	A	.36	A
54. I-5 SB Ramps & Vista Hermosa	.53	A	.40	A
55. I-5 NB Ramps & Vista Hermosa	.71	C	.53	A
56. I-5 SB Ramps & Pico (b)	1.13	F	1.05	F
With Mitigation	.94	E	.87	D
57. I-5 NB Ramps & Pico (b) (c)	.96	E	.70	B
City of San Juan Capistrano				
25. Camino Capistrano & Ortega	.63	B	.63	B
26. Del Obispo & Ortega	.64	B	.73	C
27. Rancho Viejo & Ortega	.73	C	.90	D
With Mitigation	.72	C	.90	D
28. La Novia & Ortega (b)	.84	D	.92	E
With Mitigation	.67	B	.86	D
30. Camino Capistrano & Del Obispo (b)	1.05	F	1.13	F
With Mitigation	.94	E	.87	D
31. Camino Capistrano & San Juan Creek	.64	B	.74	C
32. Valle & San Juan Creek (b)	.91	E	.84	D
With Mitigation	.72	C	.77	C
33. La Novia & San Juan Creek	.86	D	.78	C
50. I-5 SB Ramps & Ortega (a)	.86	D	.86	D
51. I-5 NB Ramps & Ortega (a)	.79	C	.78	C
52. Camino Capistrano & I-5 SB Ramps	.83	D	.81	D
53. Valle & La Novia/I-5 NB Ramps	.79	C	.83	D
72. Camino Capistrano & Junipero Serra	.89	D	.88	D
73. I-5 SB Ramps & Junipero Serra	.72	C	.80	C
74. I-5 NB Ramps & Junipero Serra (b)	.82	D	1.03	F
With Mitigation	.63	B	.81	D
75. Rancho Viejo & Junipero Serra	.73	C	.75	C
Unincorporated (County of Orange)				
5. Antonio & Oso (b)	1.06	F	1.11	F
With Mitigation	.90	D	.90	D
12. Antonio & Crown Valley (b)	.92	E	1.25	F
With Mitigation	.68	B	.86	D
29. Antonio/La Pata & Ortega (b)	1.62	F	1.44	F
With Mitigation	.85	D	.85	D
43. Antonio & New Ortega (b)	.84	D	.99	E
With Mitigation	.73	C	.87	D
76. A St & Oso	.60	A	.61	B
78. A St & New Ortega	.56	A	.64	B
79. C St & New Ortega	.69	B	.71	C

2025 Intersection LOS Summary - B-9 Alternative (Committed Circulation System with La Pata)				
Intersection	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
Unincorporated (County of Orange) (cont)				
80. Ortega & New Ortega	.78	C	.69	B
81. C St & Talega	.23	A	.35	A
87. F St & C St	.71	C	.64	B
89. F St & New Ortega	.76	C	.82	D
<p>Abbreviations: ICU - intersection capacity utilization NB - northbound LOS - level of service SB - southbound</p> <p>(a) LOS E is acceptable at this location (Congestion Management Program (CMP) intersections and Crown Valley Parkway intersections between I-5 and Marguerite Parkway). LOS D is the adopted performance standard for all other intersection locations that are analyzed.</p> <p>(b) This location is forecast to operate deficiently in the AM and/or PM peak hour (i.e., the LOS is worse than the adopted LOS performance standard).</p> <p>(c) This intersection is not forecast to operate deficiently under conditions without the FTC(S) based on the HCM methodology, therefore no project mitigation is proposed.</p>				

2025 Intersection LOS Summary - B-9 Alternative (Committed Circulation System with La Pata and FTC-S)				
Intersection	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
City of Laguna Hills				
15. Cabot & Oso	.67	B	.85	D
City of Laguna Niguel				
16. Moulton & Crown Valley (a)	.78	C	.86	D
17. Greenfield & Crown Valley	.81	D	.74	C
18. Cabot & Crown Valley	.75	C	.78	C
19. Forbes & Crown Valley	.66	B	.73	C
20. Golden Lantern & Paseo de Colinas (b)	1.03	F	.86	D
No Mitigation Proposed				
21. Cabot & Paseo de Colinas	.51	A	.65	B
22. Camino Capistrano & Paseo de Colinas	.53	A	.55	A
23. Camino Capistrano & Avery	.52	A	.55	A
70. Greenfield & SR-73 SB Ramps	.57	A	.55	A
71. Greenfield & SR-73 NB Ramps	.70	B	.48	A
City of Mission Viejo				
1. Marguerite & La Paz	.61	B	.80	C
2. Olympiad & La Paz	.55	A	.57	A
3. Marguerite & Oso	.80	C	.78	C
4. Felipe & Oso (b)	.83	D	.98	E
With Mitigation				
6. Marguerite & Felipe	.63	B	.81	D
7. Puerta Real & Crown Valley (a)	.75	C	.83	D
8. El Regateo/Medical Ctr & Crown Valley (a)	.64	B	.79	C
9. Los Altos & Crown Valley (a)	.73	C	.98	E
10. Bellogente & Crown Valley (a)	.72	C	.67	B
11. Marguerite & Crown Valley (a) (b)	1.22	F	1.03	F
With Mitigation				
24. Marguerite & Avery	.85	D	.79	C
44. I-5 SB Ramps & Oso	.65	B	.76	C
45. I-5 NB Ramps & Oso	.75	C	.83	D
46. I-5 SB Ramps & Crown Valley (a)	.71	C	.93	E
47. I-5 NB Ramps & Crown Valley (a)	.72	C	.86	D
48. I-5 SB Ramps & Avery	.71	C	.78	C
49. I-5 NB Ramps & Avery	.61	B	.72	C
City of Rancho Santa Margarita				
13. Banderas & Antonio	.65	B	.68	B
14. Empresa & Antonio	.60	A	.47	A
58. SR-241 SB Ramps & Antonio	.46	A	.69	B
59. SR-241 NB Ramps & Antonio (b)	1.30	F	.52	A
With Mitigation				
60. SR-241 SB Ramps & Oso	.57	A	.47	A
61. SR-241 NB Ramps & Oso	.85	D	.57	A
City of San Clemente				
37. La Pata & Vista Hermosa	.84	D	.70	B
38. Talega & Vista Hermosa	.72	C	.62	B

2025 Intersection LOS Summary - B-9 Alternative (Committed Circulation System with La Pata and FTC-S)				
Intersection	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
City of San Clemente (cont)				
39. Vera Cruz & Vista Hermosa (b)	1.10	F	1.14	F
With Mitigation	.73	C	.73	C
40. La Pata & Pico	.48	A	.71	C
41. Vista Hermosa & Pico	.35	A	.33	A
54. I-5 SB Ramps & Vista Hermosa	.51	A	.36	A
55. I-5 NB Ramps & Vista Hermosa	.59	A	.44	A
56. I-5 SB Ramps & Pico	.90	D	.78	C
57. I-5 NB Ramps & Pico	.89	D	.61	B
City of San Juan Capistrano				
25. Camino Capistrano & Ortega	.56	A	.59	A
26. Del Obispo & Ortega	.64	B	.71	C
27. Rancho Viejo & Ortega	.73	C	.89	D
With Mitigation	.72	C	.89	D
28. La Novia & Ortega	.82	D	.90	D
30. Camino Capistrano & Del Obispo (b)	.98	E	1.03	F
With Mitigation	.89	D	.83	D
31. Camino Capistrano & San Juan Creek	.60	A	.69	B
32. Valle & San Juan Creek (b)	.91	E	.83	D
With Mitigation	.72	C	.77	C
33. La Novia & San Juan Creek	.84	D	.77	C
50. I-5 SB Ramps & Ortega (a)	.89	D	.93	E
51. I-5 NB Ramps & Ortega (a)	.82	D	.82	D
52. Camino Capistrano & I-5 SB Ramps	.79	C	.81	D
53. Valle & La Novia/I-5 NB Ramps	.77	C	.76	C
72. Camino Capistrano & Junipero Serra	.82	D	.79	C
73. I-5 SB Ramps & Junipero Serra	.68	B	.76	C
74. I-5 NB Ramps & Junipero Serra (b)	.77	C	.97	E
With Mitigation	.62	B	.78	C
75. Rancho Viejo & Junipero Serra	.69	B	.74	C
Unincorporated (County of Orange)				
5. Antonio & Oso (b)	1.20	F	1.09	F
With Mitigation	.87	D	.86	D
12. Antonio & Crown Valley (b)	1.01	F	1.29	F
With Mitigation	.72	C	.86	D
29. Antonio/La Pata & Ortega (b)	1.63	F	1.35	F
With Mitigation	.90	D	.83	D
43. Antonio & New Ortega	.84	D	.89	D
64. SR-241 SB Ramps & C St	.34	A	.40	A
65. SR-241 NB Ramps & C St	.44	A	.29	A
66. SR-241 SB Ramps & New Ortega	.50	A	.63	B
67. SR-241 NB Ramps & New Ortega (b)	.87	D	.84	D
68. SR-241 SB Ramps & Pico	.49	A	.51	A
69. SR-241 NB Ramps & Pico	.41	A	.52	A
76. A St & Oso	.47	A	.51	A

2025 Intersection LOS Summary - B-9 Alternative (Committed Circulation System with La Pata and FTC-S)				
Intersection	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
Unincorporated (County of Orange) (cont)				
78. A St & New Ortega	.61	B	.67	B
79. C St & New Ortega	.89	D	.85	D
80. Ortega & New Ortega	.82	D	.78	C
81. C St & Talega	.10	A	.12	A
<p>Abbreviations: ICU - intersection capacity utilization NB - northbound LOS - level of service SB - southbound</p> <p>(a) LOS E is acceptable at this location (Congestion Management Program (CMP) intersections and Crown Valley Parkway intersections between I-5 and Marguerite Parkway). LOS D is the adopted performance standard for all other intersection locations that are analyzed.</p> <p>(b) This location is forecast to operate deficiently in the AM and/or PM peak hour (i.e., the LOS is worse than the adopted LOS performance standard).</p>				

TRM10
SR-73 Ramp and Mainline Data

2025 Freeway Mainline and Freeway Ramp volumes are presented in the following tables for the portion of the SR-73 that is in the project study area. The mainline freeway segments are forecast to operate at level of service “D” or better. The SR-73 at Greenfield ramps are forecast to operate at level of service “E” or better.

2025 Freeway Mainline LOS Summary
- Proposed Project (Committed Circulation System)

Location	Direction	AM Peak Hour				PM Peak Hour			
		Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS
SR-73 n/o I-5	NB	8,000	5,580	.70	C	8,000	4,720	.59	C
	SB	8,000	3,460	.43	B	8,000	5,930	.74	D
SR-73 n/o	NB	8,000	6,410	.80	D	8,000	5,060	.63	C
Greenfield	SB	8,000	3,790	.47	B	8,000	6,620	.83	D

2025 Freeway Ramp LOS Summary - Proposed Project (Committed Circulation System)									
Interchange	Ramp	Lanes	Peak Hour	AM Peak Hour			PM Peak Hour		
				Volume	V/C	LOS	Volume	V/C	LOS
SR-73 at Greenfield	SB Direct On	1	1,500	370	.25	A	360	.24	A
	NB Direct On	1	1,500	1,360	.91	E	430	.29	A
	SB Off	1	1,500	540	.36	A	990	.66	B
	NB Off	1	1,500	390	.26	A	400	.27	A

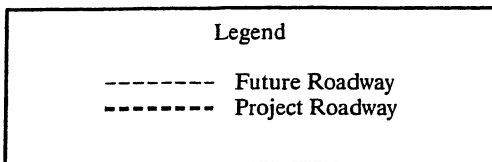
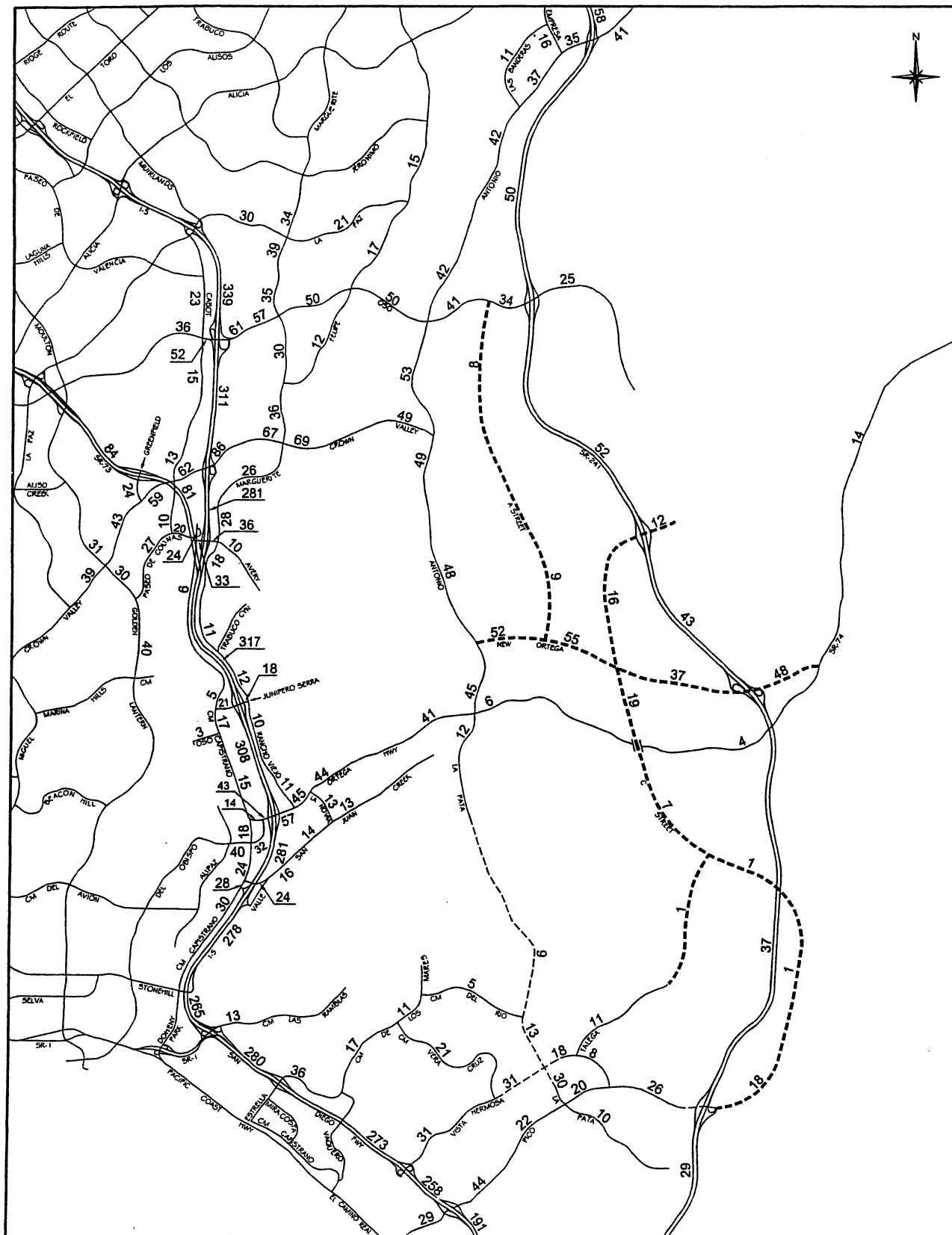


Figure 3
2025 ADT VOLUMES (000s)
- B-9 ALTERNATIVE
(COMMITTED CIRCULATION SYSTEM
PLUS LA PATA AND FTC-S)

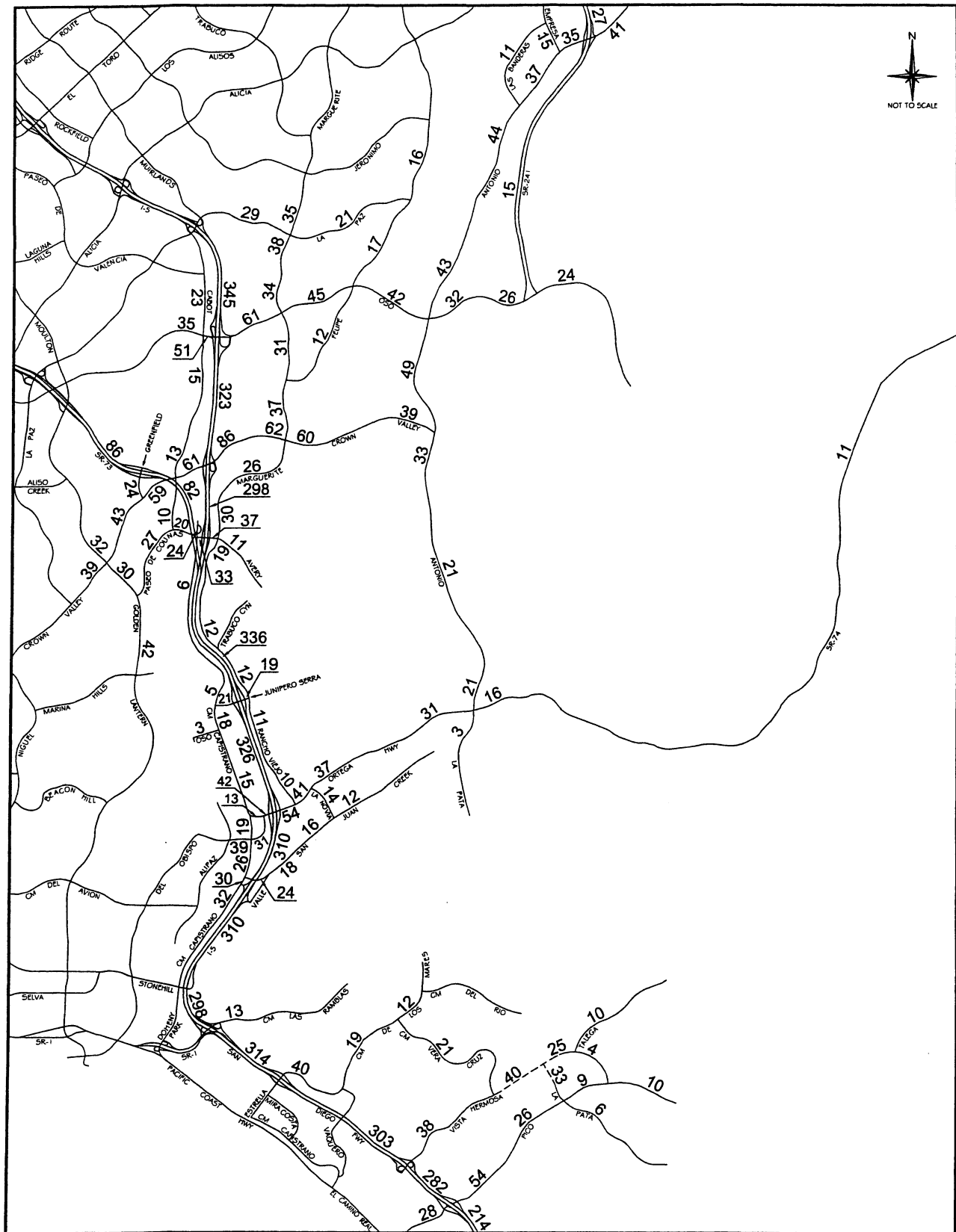
2025 Freeway Mainline LOS Summary
- B-9 Alternative (Committed Circulation System with La Pata)

Location	Direction	Lanes	AM Peak Hour				PM Peak Hour			
			Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS
I-5 n/o Oso (a)	NB	4+1H	9,600	10,090	1.05	F	9,600	9,660	1.01	F
	SB	4+1H	9,600	8,600	.90	E	9,600	9,740	1.01	F
I-5 n/o Crown Valley	NB	4+1H+1A	10,600	9,020	.85	D	9,600	9,200	.96	E
	SB	4+1H	9,600	8,700	.91	E	9,600	9,150	.95	E
I-5 n/o Avery	NB	4+1H+1A	9,600	7,080	.74	D	9,600	7,360	.77	D
	SB	4+1H+1A	9,600	7,100	.74	D	9,600	7,130	.74	D
I-5 n/o SR-73	NB	4+1H	9,600	7,030	.73	D	9,600	6,880	.72	D
	SB	4+1H	9,600	6,570	.68	C	9,600	6,700	.70	C
I-5 n/o Junipero Serra	NB	6+1H	13,600	12,480	.92	E	13,600	11,470	.84	D
	SB	6+1H	13,600	10,040	.74	D	13,600	12,510	.92	E
I-5 n/o Ortega (a)	NB	5+1H	11,600	11,520	.99	E	11,600	10,660	.92	E
	SB	5+1H	11,600	9,490	.82	D	11,600	11,730	1.01	F
I-5 n/o Camino Capistrano (a)	NB	4+1H	9,600	10,800	1.13	F	9,600	9,940	1.04	F
	SB	4+1H	9,600	8,600	.90	E	9,600	10,650	1.11	F
I-5 s/o Camino Capistrano (a)	NB	4+1H	9,600	10,590	1.10	F	9,600	10,120	1.05	F
	SB	4+1H	9,600	8,310	.87	D	9,600	10,480	1.09	F
I-5 n/o Hermosa (a)	NB	4	8,000	8,940	1.12	F	8,000	9,300	1.16	F
	SB	4	8,000	8,300	1.04	F	8,000	9,660	1.21	F
I-5 n/o Pico (a)	NB	4+1A	9,000	8,850	.98	E	9,000	9,050	1.01	F
	SB	4+1A	9,000	8,090	.90	E	9,000	9,600	1.07	F
I-5 s/o Pico (a)	NB	4	8,000	9,570	1.20	F	8,000	10,040	1.26	F
	SB	4	8,000	8,100	1.01	F	8,000	10,770	1.35	F

(a) This segment of I-5 is forecast to operate deficiently in the AM and/or PM peak hour in one or both directions (i.e., the LOS is worse than the LOS E performance standard adopted by Caltrans for the I-5 mainline).

TRM11
2025 No-Project ADT Volume Diagram

The 2025 No-Project ADT volumes are presented here for the committed network.



Legend

----- Future Roadway

2025 ADT VOLUMES (000s) - NO PROJECT
(COMMITTED CIRCULATION SYSTEM)

TRM12
ICU Worksheets for I-5/Saddleback Connector Ramps

The attached ICU worksheets summarize the ICU values for the I-5/Saddleback Connector Ramps for the two mitigation scenarios (2025 Proposed Project with Mitigation and without FTC-S and for 2025 Proposed Project with Mitigation and with FTC-S).

91. Marguerite & I-5 Ramps/Saddleback College

2025 Proposed Project w/Mitigation (without FTC-S)						
	LANES	CAPACITY	AM PK HOUR		PM PK HOUR	
			VOL	V/C	VOL	V/C
NBL	1	1700	30	.02*	140	.08*
NBT	2	3400	650	.20	980	.30
NBR	0	0	20		40	
SBL	1	1700	20	.01	60	.04
SBT	2	3400	670	.20*	1090	.32*
SBR	1	1700	470	.28	320	.19
EBL	1	1700	300	.18*	360	.21*
EBT	1	1700	370	.22	180	.11
EBR	1	1700	100	.06	80	.05
WBL	1	1700	30	.02	20	.01
WBT	2	3400	130	.06*	460	.16*
WBR	0	0	70		100	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.51		.82	

91. Marguerite & I-5 Ramps/Saddleback College

2025 Proposed Project w/Mitigation (with FTC-S)						
	LANES	CAPACITY	AM PK HOUR		PM PK HOUR	
			VOL	V/C	VOL	V/C
NBL	1	1700	30	.02*	130	.08*
NBT	2	3400	620	.19	960	.29
NBR	0	0	20		40	
SBL	1	1700	20	.01	60	.04
SBT	2	3400	630	.19*	1040	.31*
SBR	1	1700	480	.28	350	.21
EBL	1	1700	300	.18*	360	.21*
EBT	1	1700	370	.22	180	.11
EBR	1	1700	100	.06	80	.05
WBL	1	1700	30	.02	20	.01
WBT	2	3400	130	.06*	410	.15*
WBR	0	0	70		100	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.50		.80	

APPENDIX C

COASTAL SAGE SCRUB AND NEEDLEGRASS GRASSLAND RESTORATION AND CREATION IN SOUTHERN CALIFORNIA

COASTAL SAGE SCRUB
AND
NEEDLEGRASS GRASSLAND
RESTORATION & CREATION
IN SOUTHERN CALIFORNIA

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September 2004

INTRODUCTION

This white paper presents information regarding restoration of coastal sage scrub (CSS) and valley needlegrass grassland (also known as purple needlegrass grassland or southern coastal needlegrass grassland) (VGL). Both of these vegetation communities are recognized as special-status vegetation associations due to historic declines in southern California in conjunction with their support of a variety of special-status plants and animals.

In southern California, CSS has been subject to substantial restoration efforts due to the listing of the coastal California gnatcatcher as a federally listed threatened species and passage of the Natural Communities Conservation Program, both of which occurred in the early 1990s. The ability to successfully create or restore CSS has been well documented and a “track record” has been established as documented by a wide variety of sources as set forth below. Successful restoration of CSS has been accomplished through a variety of techniques including 1) use of salvaged topsoil and crushed or mulched CSS that is spread on sites subject to restoration; 2) use of seeding and container stock in combination; 3) use of seeding only; and 4) use of salvaged plants, both seedlings and mature shrubs.

In southern California, restoration of VGL has been largely driven by mitigation under the California Environmental Quality Act (CEQA), although it has been the subject of active applied research, primarily in northern and central California. As with CSS, a successful track record has been established with several examples of successful restoration of native grasslands.

While most CSS and VGL restoration projects exhibit high potential for success, a number of factors can lead to poor results. However, if these factors are addressed in the planning stages, successful restoration is likely. Factors that can lead to partial or total failure of CSS or VGL restoration include 1) degraded or otherwise unsuitable soil conditions (e.g., very sandy soils for needlegrass grassland, high nitrogen content for CSS); 2) inadequate site preparation; 3) over-reliance on artificial irrigation; and 4) lack of attention to maintenance, particularly control of invasive or non-native species.¹ Singly, any one of these factors can lead to some level of failure and in combination, would substantially increase the potential for failure.

COASTAL SAGE SCRUB

While potential for failure exists, there are numerous examples of highly successful CSS restoration/creation projects in southern California. Many of these projects have been undertaken specifically to compensate for impacts to CSS occupied by the California gnatcatcher pursuant to Section 7 of the federal Endangered Species Act, Section 4(d) of the federal Endangered Species Act or Section 10(a)(1)(B) of the federal Endangered Species Act. Other projects have been undertaken in State or county parks for conservation purposes. CSS creation or restoration projects vary in size from a few acres to 100+ acres. Below is a summary of selected CSS

¹ U.S. Army Corps of Engineers, Los Angeles District. April 2004. *Special Public Notice: Final Mitigation Guidelines and Monitoring Requirements*. Prepared by the Los Angeles District of the Corps for application within the boundaries of the Los Angeles District.

creation or restoration projects that vary in size and approach taken from both the scientific literature and consultant reports, or based on direct observations by GLA Biologists/Habitat Restoration Specialists.

Turtle Rock - Irvine

O'Connell and Erickson (1998) report that a 2.4-ha (5.7-acre) area of non-native grassland in Irvine, Orange County, was restored to CSS with the site preparation and seeding/planting occurring in 1991. By 1994, the habitat exhibited 70-percent cover with one pair of nesting gnatcatchers using the site in 1995 and two pairs successfully nesting in 1996, 1997 and 1998.² In 2002, Jeff Ahrens observed two pairs successfully nesting on the site.

Crystal Cove State Park

Miner et al. (1998) report that 20 ha (48 acres) of abandoned roads, trails, parking areas and disturbed areas in Crystal Cove State Park in Orange County were subject to CSS restoration between 1983 and 1987. A number of treatments were used for restoring the CSS including hand seeding, hydroseeding, use of salvaged topsoil and mulched CSS, and container stock. In 1995, biologists recorded a total of 42 California gnatcatcher nests within areas of restored CSS. Furthermore, the surveys showed that nests in restored areas and nests in existing areas exhibited the same likelihood of producing at least one offspring.³

UCI – Ecological Reserve

Bowler (2004) reports that two 3.5-acre sites on the UC Irvine Ecological Preserve in Orange, consisting entirely of black mustard and artichoke thistle were treated and revegetated with salvaged CSS species including California sagebrush, black sage, California encelia, and California buckwheat. The salvaged plants were planted into “pods” that exhibited very high density. These pods exhibited high diversity of invertebrates and avifauna including use by the California gnatcatcher for foraging.⁴

San Joaquin Marsh

Bowler (2004) reports highly successful CSS restoration along the margins of San Joaquin Marsh in Irvine in Orange County.⁵ Targeted slopes supported no native species with dense monocultures of artichoke thistle covering the slopes. Treatment to remove the artichoke thistle

² O'Connell, W.A. and R.A. Erickson. 1998. An example of the coastal California gnatcatcher nesting in restored coastal sage scrub. *Western Birds* 29:434-438.

³ Miner, K., A. Wolf, and R. Hirsch. 1998. Use of restored coastal sage scrub habitat by California gnatcatchers in a park setting. *Western Birds* 29:439-446.

⁴ Bowler, P. 2004. Largescale Salvage of Coastal Sage Scrub through Transplantation. UCI papers and Posters, Restoration Home Page.

⁵ Bowler, P. 2004. Coastal Sage Scrub Restoration in the San Joaquin Freshwater Marsh. <http://compphys.bio.uci.edu/sjfmr/restore1.htm>. See also: Bowler, P.A. et al 1994. Transplanting coastal sage scrub seedlings from natural stands (California). *Restoration and Management Notes*. Vol 12(1): 87-88, for an early description of the project.

was started in 1993 followed by transplantation of mature shrubs to the treated slopes. The translocated shrubs produced seed, which resulted in the site exhibiting high cover within a few years:

The results of this restoration project have been impressive. Despite some destructive activity of ground squirrels, which fed on the deerweed seedlings, a large majority of the plants have survived and have shown rapid growth at this site. Additionally, these original transplants have successfully produced seeds which have taken root in the vicinity, thereby expanding the sage scrub community. Because the community has been able to reproduce, expand and deter invasion of non-native plants, this restoration site has achieved the goals necessary to deem the project successful- it is a self- sustaining, productive coastal sage scrub ecosystem.⁶

Arroyo Trabuco Pipeline Project

Impacts to 0.70 acre of CSS associated with Arroyo Trabuco Pipeline project by the Santa Margarita Water District required CSS restoration of 1.4 acres in areas disturbed during construction. Planting was completed using a combination of seeding and container stock in Spring of 2001. Monitoring of the site has been conducted in fall of 2001, 2002, 2003, and 2004. The performance standards have been exceeded for each of the years that monitoring has been conducted. Excerpts from the Fourth Annual Monitoring Report⁷ are provided below to document that status of the restoration program.

4.0 RESULTS

The SMWD coastal sage scrub mitigation site has exceeded its fourth year success criteria.

4.1 Percent Cover

The success criteria require 70-percent coverage by container stock, seeded species or recruits. Percent cover by native species ranged from a high of 97-percent to a low of 57-percent. The coastal sage scrub mitigation site achieved on average a 78-percent native plant cover [Exhibit 3, Photographs 1 through 6]. This is a 10-percent increase from last year and exceeds the fourth year performance standards for coverage by native species. Table 1 below provides a summary of the cover for each transect [copies of the field datasheets are enclosed as Appendix A].

⁶ <http://compphys.bio.uci.edu/sjfmr/restore1.htm>

⁷ Glenn Lukos Associates. August 2004. Fourth Annual Monitoring Report for Coastal Sage Scrub Mitigation Associated with Santa Margarita Water District's Construction of Domestic Water Transmission Main, Sewer Forch Main and Nondomestic Water Transmission Main (C-1669A). Prepared for Santa Margarita Water District.

The success criteria requires less than 15-percent coverage by non-native annuals. Percent cover by non-native annuals ranged from a high of 9-percent to a low of 1-percent. The coastal sage scrub mitigation site achieved on average a 2-percent non-native annual cover. This meets the fourth year performance standards for non-native annuals cover. Table 1 below provides a summary of the cover for each transect [copies of the field datasheets are enclosed as Appendix A].

The success criteria requires less than 5-percent coverage by non-native shrubs. No non-native shrubs were detected during data collection. This meets the fifth year performance standards for non-native annuals cover.

4.2 Percent Composition

Six species were planted within the revegetation site. Thirty-three native species have been identified in the revegetation area indicating high recruitment rates resulting in an increase in species diversity. On average 96% of the cover in reference sites was provided by the five species listed below in Table 2. On average, 13 native species made up 90% of the cover in the revegetated sites. This exceeds the five year success criteria of 90-percent composition of container stock or seeded species. While this high diversity results from the early successional stage of the site, it also reflects high recruitment rates that should continue to keep diversity high. Species composition is summarized in Table 3 below.

5.0 CONCLUSIONS

The SMWD coastal sage scrub mitigation site is performing at or above the required fourth-year performance standards set forth in the mitigation plan. Maintenance is continuing per plan requirements. No remedial measures are required at this time. Monitoring will continue as set forth in the mitigation plan.

Tesoro High School

The Tesoro High School 1.83-acre CSS restoration site is located east of the City of Mission Viejo, in Orange County, on the slopes above the high school parking lot. Container stock was installed in May 2002. The site was hydroseeded in October after a grow-and-kill regime to kill germinating weedy species. The hydroseed mix germinated so successfully that thousands of California sagebrush cover the previously bare soil, ranging in height from two inches to two feet. The site is considered to be highly successful with California sagebrush and California buckwheat container stock reaching heights of four feet. Excerpts from the Second Annual Monitoring Report⁸ are provided below to document that status of the CSS restoration program.

⁸ Glenn Lukos Associates. February 8, 2004. Second Annual Monitoring Report for 1.83-Acre Coastal Sage Scrub Mitigation Associated with Tesoro (Chiquita Canyon) High School, Orange County, California..

Second Year Vegetative Cover Data

The percent cover data taken from the field monitoring transect data sheets is broken down into percent cover relative to native species, non-native-species, and unvegetated areas. The average percent vegetative cover for these categories for each transect are presented in Exhibit 4. Appendix C provides copies of the four field monitoring transect data sheets used to transcribe the transect data.

The second-year transect data indicates that overall percent coverage for native plant species 17 months after installation was 93-percent, well surpassing the first year coverage of 11-percent. Non-native cover comprises three-percent, a vast improvement over the first year coverage by non-native species of 60-percent, while four-percent of the overall planting area was unvegetated, also greatly improved over the first year unvegetated coverage of 29-percent.

The second-year transect data indicates that the overall percent cover by native herbs (0-3 feet in height) achieved 81-percent and percent cover by native shrubs (>3 feet to 8 feet in height) 12-percent.

Second Year Survival Data

Container stock percent survival was additionally used to evaluate project establishment. A tally of all one-gallon container stock was taken on January 13, 2003 in order to determine that all plantings have a minimum of 80-percent survival, by species, the first year and 100-percent survival, by species, thereafter. Replacement plants were installed February 8, 2003.

Surviving plant species survival requirements versus the performance standard for container stock installed are presented below in Table 1.

At the time of the second annual monitoring the average percent survival of container stock was 88-percent without plant replacement, more than satisfying the 80-percent survival performance criteria. Dead and/or declining plants will not be replaced during the third year as it was judged by the Project Monitor that natural recruitment will more than compensate for any limited container stock losses.

At the present time, the entire 1.83 acres of coastal sage scrub has now been installed on the mitigation site, in compliance with the NCCP 4(d) rule that requires 1.83 acres of coastal sage scrub restoration. The mitigation site is extremely successful, in large part due to the diligence of the maintenance contractor in minimizing the percent non-native weedy species.

TABLE 1
PERCENT SURVIVAL VERSUS PERFORMANCE STANDARDS

Plant Species	Initial Installation of One-Gallon Container Stock	No. Required for 80-percent Survival	Number of Dead Plants January 13, 2003	Number of Third Year Surviving Container Stock	Actual Percent Survival
<i>Artemisia californica</i>	84	67	17	67	80%
<i>Baccharis pilularis</i>	8	6	0	8	100%
<i>Eriogonum fasciculatum</i>	92	74	7	85	92%
<i>Malosma laurina</i>	46	37	5	41	89%
<i>Mimulus aurantiacus</i>	37	30	14	23	62%
<i>Opuntia littoralis</i>	280	224	4	276	99%
<i>Rhus integrifolia</i>	46	37	9	37	80%
<i>Sambucus mexicana</i>	4	3	0	4	100%
Average Percent Survival					88%

Tonner Hills

Pursuant to Biological Opinion FWS-OR-2347.5, the Tonner Hills project in northern Orange County was required to revegetate existing annual grasslands with approximately 116 acres of CSS. The revegetation is to occur in two phases with 87 acres installed during the initial phase of restoration and 29 acres in the second phase. This project has performance standards that require occupancy of CSS habitat by California gnatcatchers created during the initial phase before the subsequent phase of development can be initiated. A focused effort to establish mature CSS as rapidly as possible has been implemented, including plantings with large container stock at high densities plus use of smaller container stock to provide structural diversity of the habitat. Within two years of the initial plantings, the site achieved and exceeded performance standards and California gnatcatchers have been detected foraging in areas of created habitat.

Siphon Reservoir

CSS restoration adjacent to the Siphon Reservoir was undertaken by the Transportation Corridor Agencies beginning in 1994/95 through 1995/1996 to compensate for impacts to CSS occupied by the California gnatcatcher associated with construction of the Eastern Transportation Corridor (SR-241). The 214-acre restoration site consisted of an historic avocado orchard, planted on terraces. Of the 214-acre site, 112 acres were actively restored, while 102 acres of existing habitats were preserved. For the restored portion of the site multiple methods of restoration were used including salvage materials, container plants and seed. The site met performance standards in 2000 with 15 pairs of California gnatcatchers and at least 49 fledglings. In 2002, the site reached a new high of 19 pairs of gnatcatchers.

CSS - Conclusions

The above projects represent a limited set of examples of CSS restoration projects in Orange County that have exhibited success. These projects represent various stages in CSS restoration ranging from the 1980s to the present, as well as different approaches, with the common feature that all have been very successful. The art/science of CSS restoration is only about 20 years old; however, stringent standards associated with permit compliance have provided for detailed monitoring and data collection demonstrating that where sites are 1) subject to appropriate preparation; 2) subject to appropriate levels of monitoring and maintenance, and 3) sites are located in areas with other habitat values, very successful restoration of CSS is not only possible but essentially assured.

VALLEY NEEDLEGRASS GRASSLAND

VGL has not been subject to the intense monitoring associated with CSS over the last two decades because it does not exhibit potential for supporting listed animals such as the California gnatcatcher. Fewer examples exist for Orange County; however, where VGL restoration has been undertaken, it has proven to be very successful.

The notion of prairie-like native grasslands in southern California is the subject of considerable debate within the biological community.⁹ Historically, VGL has intergraded with CSS with both plant communities occupying the same land at different times over centuries. Some believe that VGL is a component of CSS and does not represent a stand along vegetation community while others believe VGL is a valid vegetation community. The dynamic between these two vegetation communities is due in part to a human disturbance regime that was initiated by Native Americans using fire to increase hunting areas prior to the arrival of European settlers. Subsequent land uses such as agriculture and grazing further obscure the true nature of VGL in the southern California landscape ecology. The introduction of annual European grasses has further confused the idea of VGL restoration because of the high rate of infestation where VGL might have historically occurred and the difficulty of eliminating these non-native populations.

Successful VGL restoration is highly dependent upon the presence of appropriate clay soils, control of annual European grasses, and may be dependent upon a fire regime. While VGL can be established in areas that are graded, thereby eliminating the non-native grass seed bank, VGL establishment in native undisturbed soils with an existing non-native annual grass population is more difficult to achieve.

The durability of VGL as a climax community is questionable based on the dynamics with CSS described above, and the appropriateness of VGL maintenance over time may

⁹ Heady H.F. 1977. Valley grasslands. Pages.491-514 in M.G. Barbour and J. Major, editors. Terrestrial Vegetation of California. John Wiley and Sons, New York.

be questioned on the basis of disarming the natural dynamic exhibited by this vegetation type.

As with CSS, the art/science of VGL restoration has become much more sophisticated over the past several years, thus greatly increasing the likelihood of success. Much of the current technology of native grassland restoration is summarized in a March 2004 workshop entitled “Techniques and Strategies for Using Native Grass and Graminoids in Revegetation and Restoration” jointly sponsored by the California Native Grass Association and Natural Resources Conservation Service.¹⁰ The workshop covered key elements for successful native grassland restoration, including 1) site evaluation; 2) site preparation; 3) planting techniques; and 4) management.

Site evaluation is key for VGL restoration and possibly the most critical factor for restoration success. Factors such as the appropriate soil mosaic is critically important for success, and includes seven components: 1) reference site selection; 2) slope stability; 3) infiltration and water; 4) soil organic matter pools; 5) non-N nutrients; 6) soil biology and microbial activity; and 7) site stabilization and temporary erosion control (Claassen 2004).¹¹

Site preparation also is key to VGL restoration success. Most revegetated sites have been selected because they typically support non-natural uses such as agricultural areas, non-native or weed infested areas, or temporary construction zones, often with compacted soils. Site preparation may include de-compaction, seed bed preparation, soil amendments (e.g., mulches, mycorrhizae, or fertilizer), weed control, and erosion control.

Several seeding techniques for revegetation sites are available, such as drill seeding, broadcast seeding, hydroseeding, and imprint seeding. There are several scientific and applied case studies of different seeding techniques, including Montalvo et al. (2002), Bainbridge (2000), Hujik 1999) and Wirka (2000).^{12,13,14,15} When mature bunchgrasses are available as salvage from a project site or from a nursery, transplant “plugs” also are an option, especially where an area needs rapid cover, such as erosion control. Plugs establish much more quickly and produce seed during their first growing season.

¹⁰ Techniques and Strategies for Using Native Grass and Graminoids in Revegetation and Restoration, A California Native Grass Association Training Course, March 24 & 25, 2004, Santa Ana, CA.

¹¹ Claassen, V. Soil resource evaluation for sustainable revegetation of drastically disturbed soils. Techniques and Strategies for Using Native Grass and Graminoids in Revegetation and Restoration, A California Native Grass Association Training Course, March 24 & 25, 2004, Santa Ana, CA.

¹² Montalvo, A.M., P.A. McMillan and E. Allen. 2002. The relative importance of seeding method, soil ripping, and soil variables on seedling success. Restoration Ecology pp. 52-67, March 2002.

¹³ Bainbridge, D. 2000. Soil shaping to improve native grass establishment. Grasslands, Vol. X, Fall 2000.

¹⁴ Hujik, P. 1999. Low-tech seeding technique for perennial bunchgrasses yields promising results in Lassen foothills (California). Ecological Restoration, 17:1&2 Spring/Summer 1999.

¹⁵ Wirka, J. 2000. The Nature Conservancy pioneers new seeding technique at Dye Creek Preserve. Grassland, Summer 2000.

Finally, long-term management is essential to the success of native grassland restoration. Each restoration program should prepare a long-term management plan that specifies in precise detail the goals and measurable objectives of the program, the types of management practices that will be used (e.g., hand labor, mechanical practices [mowing, haying], managed grazing, prescribed burning), and a monitoring strategy allowing for adaptive management. For example, appropriate grazing has been shown to be an effective management technique, as reviewed by Edwards (1992).¹⁶

The foregoing discussion demonstrates that the technology of native grassland restoration is well developed for California native grasslands. In fact, scientific research on native grassland restoration and management in California dates back to the 1940s (Love 1944; Green and Bentley 1957).^{17,18}

Published case studies demonstrate the success of native grassland restoration programs. For example, Hujik (1999) describes an experimental restoration effort undertaken by The Nature Conservancy in the Mount Lassen foothills. Hujik and his colleagues successfully used a “hay-bale” technique to seed 0.25-acre plots on Dye Creek Ranch with purple needlegrass (*Nasella pulchra*) with 93 percent of the plots showing seedling germination the first year and continued success into the second year on the plots was demonstrated (Wirka 2000).

In southern California, native grassland enhancement/restoration is in progress and appears promising on sites such as Chino Hills State Park and National Audubon Society Starr Ranch Sanctuary (DiSimone 2002).¹⁹ In San Diego County, the Soil Ecology Restoration Group (SERG) of San Diego State University has successfully restored VGL in a Cuyamaca Mountain oak savanna on a Caltrans ecological preserve.²⁰ In 1996 1,000 seedlings were planted in the ecological preserve in different plot sizes and were subjected to different nutrient and/or organic matter regimes, including control plots, for viability comparison purposes. Irrigation was not used. After 5 months average survival on plots was 82 percent and after 19 months survival was 41 percent and all surviving plants were producing seeds and considered mature (interestingly, it is estimated that only 1 percent of purple needlegrass seeds typically survive to a mature plant so the 41 percent survival of seedlings is impressive).

¹⁶ Edwards, S.W. 1992. Observations of the prehistory and ecology of grazing in California. *Fremontia* 20:3-11.

¹⁷ Love, R.M. 1944. Preliminary trials on the effects of management on the establishment of perennial grasses and legumes at Davis, California. *Journal of the American Society of Agronomy*. 36:699-703.

¹⁸ Green, L.R. and J.R. Bentley. 1957. Seeding and grazing trials of *Stipa* on foothill ranges. *Forest Research Notes*, No. 128, California Forest and Range Experiment Station, USFA – Forest Service.

¹⁹ DiSimone, S. 2002. Invasive species control and habitat restoration at Starr Ranch Sanctuary., Audubon California.

²⁰ SERG, Revegetation of *Nassella pulchra* in a Cuyamaca Mountain oak savanna.
<http://www/serg.sdsu.edu/SERG/restorationproj/woodlandgrassland/cuyamaca.html>

It is difficult to compile data on private, development-related native grassland restoration projects in southern California that are not part of the peer-reviewed scientific literature or public agency or non-profit organization reports (e.g., The Nature Conservancy and Audubon Society) because they typically would be included in mitigation/monitoring report for a given project with a limited circulation and not widely available to the public (i.e., so-called “gray” literature). However, the Arroyo Trabuco Golf Course project on Rancho Mission Viejo incorporated VGL restoration and initial monitoring indicates that it has been quite successful. In addition the Ocean Trails Golf Course in Rancho Palos Verdes incorporated native grassland seeds in the overall CSS restoration program with success. Both of these private projects are discussed below.

Arroyo Trabuco Golf Course

As part of mitigation for the Arroyo Trabuco Golf Course, RMV was required to provide for 13.3 acres of VGL creation and 4.9 acres of VGL enhancement.²¹ Site preparation was started in fall of 2002 with seeding and plantings of container stock initiated in fall 2003 and plantings were generally completed in early 2004. The 13.3-acre creation areas were all on areas graded during golf course construction, which provided for the removal of non-native seed bank prior to application of seed in 2003/2004. The 13.3 acres have been irrigated in a manner that mimics southern California rainfall patterns with only very limited irrigation during the summer.

Data collected along transects, conducted in early September 2004 as part of the first annual quantitative monitoring indicate an average cover by native purple needlegrass, foothill needlegrass and coast range melic, exceeding 80-percent with some areas achieving greater than 90-percent cover of native perennial grasses and forbs. Non-native cover is generally under five percent. The 4.9-acre enhancement area is still subject to intensive weeding due to the high densities of non-native grasses and forbs that dominate the enhancement area. Plantings in this area have just been accomplished and transects will be performed later in the season so no data is available at this time for the enhancement area.

Ocean Trails Golf Course

Although creating VGL was not a goal of the Ocean Trails restoration project, several VGL constituents such as *Nassella* sp, *Melica*. sp., and annual forbs have been successfully integrated into the CSS restoration program. These species were introduced via seed onto 20 acres of habitat restoration areas in 1998-99. All areas were irrigated for the first two years after installation. *Nassella* grasses were observed to produce seed in the first season after installation suggesting that these grasses could quickly become self sustaining when installed at an appropriate density without a shrub component. Native grasses continue to be represented within the restored CSS habitat after the fourth year of monitoring.

²¹ Dudek & Associates, Inc. August 2110. Draft Arroyo Trabuco Golf Course Valley Needlegrass Grassland and Coastal Sage Scrub Habitat Revegetation Plan. Prepared for DMB San Juan Golf Associates, LLC.

VGL - Conclusion

The research and projects described above indicate that VGL restoration, like CSS restoration, can be quite successful as long as well-documented restoration procedures and techniques are used, including 1) site selection and evaluation; 2) site preparation; 3) planting techniques; and 4) management.

APPENDIX D
NORTHROP GRUMMAN CORPORATION CORRESPONDENCE

NORTHROP GRUMMAN

Northrop Grumman Corporation
1840 Century Park East
Los Angeles, California 90067-2199

August 30, 2004

Jeffrey Brinton, Esq.
Morgan, Lewis & Bockius, LLP
1 Ada, Suite 250
Irvine, CA 92618

**RE: NORTHROP GRUMMAN SPACE TECHNOLOGY
CAPISTRANO TEST SITE, SAN CLEMENTE, CA**

Dear Mr. Brinton:

Northrop Grumman Corporation, Space Technology sector, ("NGST") hereby submits its response to the comments, dated August 4, 2004, by Soil/Water/Air Protection Enterprises ("SWAPE") to the Draft Environmental Impact Report produced on behalf of Rancho Mission Viejo. NGST disagrees with the characterization of the operations of its Space Technology facility, the Capistrano Test Site ("CTS"), as stated in the comments. As described herein, the comparisons made in the SWAPE letter between the CTS facility, the Boeing Santa Susana Laboratory, and the NASA White Sands Missile Range are inaccurate and overstate the risks presented by the current and historical operations of the CTS facility. Further, NGST has operated and continues to operate the CTS facility in compliance with all applicable environmental requirements. While certain issues were raised during an inspection by the U.S. Environmental Protection Agency in 2002, it is NGST's position that the identified issues presented a minor aberration to its usual exemplary compliance record at the CTS facility.

DISCUSSION

NGST has operated the CTS since 1963. The facility consists of a 2,770 acre research and development facility that currently employs approximately 60 people. Less than 10% of the total acreage is developed and the remainder is untouched open land. During the 1960's and 1970's the facility was utilized for development and testing of the Lunar Module Descent Engine and the Thor Delta rocket. Other past research activities included chemical laser development in the 1970's; development of advanced techniques for burning coal in the 1990's; and testing of components for advanced space communications systems. The facility currently performs rocket engine, high energy laser, and space communication systems testing.

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Inspection By U.S. Environmental Protection Agency – October 24, 2002

The SWAPE letter discusses the findings by the U.S. EPA resulting from its inspection of the CTS in October 2002. While this inspection was the first conducted by the U.S. EPA at the CTS, the facility is subject to regular inspection by State of California agencies such as the Department of Health Services, the Department of Toxic Substances Control, the Regional Water Quality Control Board, and the South Coast Air Quality Management District. Further the facility is subject to regular inspections by local agencies such as Orange County Fire Authority, Hazardous Materials Disclosure Office, and the County Of Orange Health Care Agency, Environmental Health Division.

NGST acted immediately to address the concerns raised by the U.S. EPA and was able to demonstrate compliance measures to the agency for all of the issues raised in the inspection. It is NGST'S position that none of the issues identified presented a risk to the public or the environment.

Chemical Usage At The CTS

It is NGST'S position that the SWAPE letter inaccurately compares operations at the CTS to the Boeing Santa Susanna Laboratory and the NASA White Sands facility. As demonstrated by the picture on page 5 of the SWAPE letter, large missile systems are tested at the Boeing and NASA facilities that may utilize very large quantities of chemical propellants and generate thrusts during test firings ranging from hundreds of thousands to millions of pounds.

The vast majority of propulsion tests at the CTS are performed during the development and qualification of satellite positioning rocket thrusters, which typically generate thrust in the range of 5 to 200 pounds. Upon review of CTS test history since commencement of operations in 1963, over 49% of the 3.4 million seconds of test firings stated in the SWAPE report have been conducted on a single test stand with a capability of handling a maximum of 30 pounds of thrust. An additional 21% of the propulsion test seconds have been performed on another test stand capable of handling a maximum of 500 pounds of thrust. To date less than 14% of the test firing seconds, conducted since 1963, have been performed in larger capability test stands. These operations have never exceeded 50,000 pounds of thrust.

NGST has longstanding Environmental, Health and Safety programs in operation at the CTS facility. As stated in the SWAPE letter, closure activities have occurred at the facility regarding sumps, impoundments and other areas. These activities were performed under the oversight of the Regional Water Quality Control Board and other agencies. None of these investigations revealed conditions requiring remediation under federal or

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State of California requirements. In January 1990 a leak was discovered in a 1½ inch diameter underground diesel fuel pipeline at the Fossil Energy Test Stand that required remediation activities. Approximately 3,350 tons of soil were removed in an investigation subject to oversight and clean up objectives established by the San Diego Regional Water Quality Control Board. A Final Report regarding such remediation was prepared and submitted to the SDRWQCB. No other soil or groundwater contamination issues requiring remediation under federal or State of California law have occurred or are known to exist at the CTS facility.

As indicated in the SWAPE letter, in November 1999 the U.S. Air Force produced a report, entitled "Environmental Baseline Survey for Three Sites at Capistrano Test Site, CA" regarding a Phase I Baseline Survey conducted at the CTS. The Baseline Survey involved an assessment of approximately 75% of all developed areas at the CTS. These areas were operated on behalf of the Air Force for a project known as the Space Based Laser. The Baseline Survey involved a records search, interviews, and a visual inspection of the property. The records reviewed included environmental restoration and compliance reports, audits, surveys, inspection reports, real estate records and aerial photographs. The conclusion reached by the Air Force was that the CTS areas surveyed should be listed as "Category 1," which is defined in the Baseline Survey as meaning "Areas where no release or disposal of hazardous substances or petroleum substances have occurred (including no migration of these substances from adjacent areas)."

While no sampling was performed during the 1999 Air Force Phase I Baseline Survey (and such sampling would not have been expected to be performed in a Phase I assessment), the Air Force subsequently performed soil sampling of Space Based Laser test areas at the CTS in June 2002. A contractor, Equipose, working on behalf of the Air Force obtained fifty-three (53) soil samples from fourteen (14) locations within the area of the CTS utilized for the Space Based Laser project. Borings were conducted down to twenty (20) feet below grade surface. Groundwater was not detected in any of the borings and was not sampled.

The samples collected by the Air Force were analyzed for the following substances: volatile organic compounds (VOCs); semi-volatile organic compounds (SVOCs); polynuclear aromatic hydrocarbons (PAHs); polychlorinated byphenyls (PCBs); priority pollutant metals; hydrocarbons; volatile fuel hydrocarbons, including benzene, toluene, ethylbenzene, xylenes, and methyl-tert-butyl ether; and hydrazines, including hydrazine, methylhydrazine, and 1,1-methylhydrazine. The report concluded that most of the VOCs and SVOCs, and all of the PAHs, PCBs, hydrazines, volatile fuel hydrocarbons, BTEX, MTBE, selenium and silver tested for were not detected above their respective analytical method detection limits in any of the analyzed samples. Certain VOCs, SVOCs, and metals were detected above analytical method detection limits. However, the report

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concluded that none of the constituents of concern were detected above the Preliminary Remediation Guidelines established by the U.S. EPA. While the report indicated that "chemical-like" odors were detected in PID samples, the report concluded that the odor was the result of the presence of water vapor or some interference other than the presence of chemicals. The report further concluded that the Space Based Laser operations had not adversely impacted soil at the CTS facility.

The Air Force 1999 and 2002 studies involved investigation of approximately 75% of the developed areas at the CTS. Of the remaining 25% of developed property, there are only two operational areas that have or would have utilized hazardous substances. These areas are the Chemical Laboratory and the Fossil Energy Test Stand. While small quantities of propellants and other chemicals have been utilized in testing conducted in the Laboratory, there have been no known releases or spills of hazardous substances at the Laboratory. No chemicals or propellants referenced in the SWAPE letter would have been utilized at the FETS.

While specific testing for either 1,1-dimethylhydrazine (UDMH) or nitrosodimethylamine (NDMA), was apparently not conducted in the above-referenced soil sampling activity, it is NGST's position that the presence of such chemicals is highly unlikely based upon the test results from the 2002 Air Force investigation. Further, based upon review of historical information, there has been only very limited storage and use of Aerozine 50 at the CTS. Current chemical records indicate that a partially full 55-gallon drum of Aerozine 50 is in the inventory at the CTS.

Wastewater Management and Discharge at the CTS

The SWAPE letter specifically compares the CTS with the Boeing and NASA facilities in regard to the need for a NPDES permit. The CTS does operate several different systems for the control of process or cooling water; sanitary sewage; and stormwater. However, as described below, none of these activities require an NPDES permit.

The CTS operates multiple process and/or cooling water systems at the facility. These systems replaced seven surface impoundments closed under Regional Water Quality Control Board oversight in 1988. The process and cooling water systems at the CTS are semi-closed loop systems in which cooling water is recycled by placement into holding tanks until it is required for further use related to testing. When water levels exceed holding capacity, the excess water is transported to a local Publicly Owned Treatment Works for disposal. Any sludge produced in the system is properly disposed offsite at permitted Treatment, Storage and Disposal facilities.

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Domestic or sanitary wastewater is handled through a variety of methods. The RWQCB has issued Waste Discharge Requirements For the Disposal of Treated Domestic Sewage (surface irrigation) for one secondary treatment pond operated at the facility. This pond collects overflow from a septic tank serving several buildings at the CTS and is limited to discharging no more than 3,000 gallons per day. Monitoring and reporting activities are performed regarding the pond pursuant to requirements imposed by the RWQCB. Discharges from the pond occur primarily during the rainy season. The system has had an average discharge of less than 100 gallons per day over the last three years and is regularly inspected by the RWQCB. Other domestic or sanitary wastewater systems in operation at the CTS include nine septic systems, seven leach fields, and one collection tank. The septic tanks and the collection tank are periodically pumped out and solids/sludge are transported to a POTW.

Stormwater at the CTS is managed pursuant to a Stormwater Best Management Practices Plan developed in June 1992 under the oversight of the County of Orange Health Care Agency, Environmental Health Division and the Water Quality Management Plan developed as a condition to the Conditional Use Permit issued by the Orange County Planning Commission in 1993.

With the exception of the limited sanitary water discharge discussed above, there are no surface water discharges from operations at the CTS. The CTS therefore comes within the SIC Code 8734 (Research and Development Laboratories) exclusion from the NPDES permit requirement under 40 Code of Federal Regulations Section 122.3(c). Contrary to the statements by SWAPE, there is no requirement for the CTS to obtain an NPDES permit.

Conclusions

It is the opinion of NGST that the SWAPE letter, dated August 4, 2004, regarding the Draft Environmental Impact Report produced on behalf of Rancho Mission Viejo mischaracterizes operations at the NGST Capistrano Test Site facility. A summary of the points addressed in this letter is as follows:

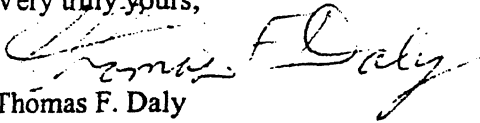
- 1) The CTS does not discharge process cooling water through the septic system to the leach fields.
- 2) The CTS has historically not tested or operated large (greater than 50,000 pounds of thrust) solid rocket or liquid rocket engines.

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- 3) All tank, surface impoundment closeout, and remediation activities have been conducted under the review of the applicable regulatory agency. Associated documentation should be available from the agency.
- 4) The majority of CTS testing is performed on very small 5 to 200 pounds of thrust satellite positioning rocket engines.
- 5) The CTS is committed to performing all site activities in compliance with federal, state and local regulations. As changes to the regulations occur CTS will amend operations or obtain all applicable permit for continuing operations.
- 6) Other than the remediation issues discussed herein, NGST is not aware of any soil and/or ground water contamination at the CTS facility.

Please contact the undersigned if you have any questions in regard to this matter.

Very truly yours,


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Chuck Shoemaker
Project Manager
County of Orange
Planning & Development Services
Environmental Planning Services
300 N. Flower Street, Room 356
Santa Ana, CA 92703

APPENDIX E
METROPOLITAN WATER DISTRICT DATA



MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Executive Office

September 13, 2004

Mr. Chuck Shoemaker
County of Orange
Planning and Development Services Department
Environmental Planning Services Division
300 North Flower Street
Santa Ana, CA 92702-4048

Dear Mr. Shoemaker:

Draft Program Environmental Impact Report No. 589 – The Ranch Plan

The Metropolitan Water District of Southern California ("Metropolitan") has not commented on Draft Program Environmental Impact Report No. 589 – The Ranch Plan ("DEIR") for the proposed Ranch Plan project. However, it has come to our attention that several commentators on the DEIR have questioned Metropolitan's ability to supply water for the proposed project so we offer the following information for your consideration. As stated correctly by the DEIR, Metropolitan is a wholesale water agency that provides water supplies to the Santa Margarita area via our member agency, the Municipal Water District of Orange County ("MWDOC"). Metropolitan has reviewed the DEIR and the underlying Water Supply Assessment ("WSA") and agrees with the conclusions in those documents that, based on substantial evidence already in the record, sufficient supplies for the proposed project will be available.

Comments on the DEIR suggest that the water supply analysis is inadequate because of uncertainties in Metropolitan's water supplies, inappropriate reliance on "paper" water, inappropriate reliance on future improvements, insufficient proof of water rights, and other alleged inadequacies. These comments reflect fundamental misunderstandings of Metropolitan's water supply planning process, the reliability of our supplies, and the relationship between Metropolitan and its member agencies.

With regard to the availability of Metropolitan supplies to Southern California and the Santa Margarita Water District ("SMWD"), there is a continuing series of studies and reports produced by Metropolitan that detail the long-term plan for its service area. Although all of the reports serve different purposes, the analytical methodology is similar. Demographic projections from the Southern California Association of Governments and the San Diego Association of Governments, the recognized agencies responsible for producing regional growth forecasts, are

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used to estimate regional retail demand forecasts. Projections of locally produced water are then incorporated to develop the demand for regionally supplied water from Metropolitan.

Southern California's Integrated Water Resources Plan, March 1996, ("IRP") (see enclosed report) describes a long-term water resources development plan that the Southern California region set out to develop and implement. To date, the region has achieved a highly successful record of implementing the various components of the IRP. In looking at Metropolitan's diverse water supplies, Metropolitan's core supplies consist of its contractual rights to water supplies from the Colorado River and the State Water Project. Metropolitan then identifies and pursues a variety of programs to supplement these core supplies. This water portfolio approach to planning ensures that a sufficient supply is available from different sources to meet demands under varying hydrological conditions. Since the 1996 IRP, the region has developed nearly 3 million acre-feet in storage capacity in a variety of groundwater and surface storage programs throughout the state. As of January 2004, approximately 1.3 million acre-feet of dry-year water management actions, including this stored water, are available for use by the region as needed. In addition, Southern California has developed and implemented approximately 900,000 acre-feet of conservation, water recycling, and groundwater recovery programs. It is important to note that the emphasis on funding water conservation measures in Southern California has resulted in the region becoming one of the most water efficient urban areas in the arid Southwest. Water conservation efforts are essential because they provide real savings under all conditions, all year round. Future identified measures include the development of ocean desalination and the identification of a supply-planning buffer, which will enable the implementation of alternate projects, should there be impediments to implementation of current or planned projects.

This long term planning philosophy is documented in a continuing series of studies and reports produced by Metropolitan indicating that sufficient water supplies will be available to satisfy the demands of the region. The first report, mentioned above, is the 1996 IRP (see enclosed report). This report details the process and resource plan that the region underwent between 1992 and 1996 to develop a sound resource plan through 2020. Perhaps most importantly, the 1996 IRP shows that, with implementation of the resources identified, the region would be able to meet 100 percent of the firm, non-interruptible water demands under all foreseeable hydrologic conditions. The second report is the 1999 Water Supply and Drought Management Plan (see enclosed report). This plan provides the operational framework for the use of Metropolitan's resources in both managing surplus supply and drought conditions, and shows that Metropolitan can operate its resources to meet its 100 percent reliability goal set in the 1996 IRP. The third report is the 2000 Regional Urban Water Management Plan (see enclosed report). This plan, required by the State of California to be submitted every five years, contains descriptions of the resources and programs that Metropolitan is pursuing through its IRP. The California Water Code provides a number of tests and examples on single year and multi-year drought conditions

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that urban water suppliers must address in order for their Urban Water Management Plan to be compliant. Using these tests and guidelines, Metropolitan's 2000 Urban Water Management Plan shows that it has sufficient supplies through the required timeframe (2020). The fourth report is the Report on Metropolitan's Water Supplies, released initially in February 2002 and updated in March 2003. This report was prepared in order to provide "sufficient evidence" of Metropolitan's Water Supplies, called for by the California Water Code as a result of land-use legislation that became effective 2002 (SB221/SB610). The Report on Metropolitan's Water Supplies shows the availability of water supplies for Metropolitan's service area, and details through the discussion of funding, contracts, water rights, and implementation status, why there is sufficient evidence that its water supply assumptions are valid. The fifth report is the 2003 IRP Update (see enclosed report). This report is the result of a planning process to review and update the 1996 IRP. This report contains updated long-term planning targets and implementation strategies that will continue to be pursued to ensure the region's reliability goal through 2025.

An important point regarding all of these reports pertains to the water demand estimates used for the supporting analysis. All of these reports have service area retail demands that are directly based on demographic growth projections provided by the Southern California Association of Governments. SMWD is part of the area boundaries covered by SCAG, and as such its projections of growth are included in the EIR-supported official growth forecasts.

Comments suggesting that the DEIR and WSA need additional detailed information regarding future water supplies and water rights beyond that already provided are unfounded. Under SB 610, a WSA is sufficient "[i]f the projected water demand associated with the Proposed Project was accounted for in the most recently adopted urban water management plan." (Wat. Code, § 10910, subd. (c)(2).) In such cases, the public water system may simply incorporate the requested information from the urban water management plan. (Wat. Code, § 10910, subd. (c)(2).) Even if the projected water demand is not accounted for in the most recent Urban Water Management Plan, all that is required under SB 610 is an "*identification*" of "water supply entitlements, water rights, or water service contracts ...". (Wat. Code, § 10910, subd. (d), emphasis added.)

Further, the WSA contains an "identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the Proposed Project, and a description of the quantities of water received in prior years" from those sources (Wat. Code, § 10910, subd. (d).). Although neither SMWD nor the Municipal Water District of Orange County holds "water rights" to Metropolitan supplies per se, they have a right to purchase water supplied by Metropolitan by virtue of being part of Metropolitan and within Metropolitan's service area. Comments that each area within Metropolitan must show guaranteed rights to water misunderstand the structure of Southern California's regional planning

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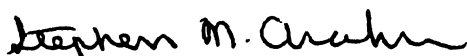
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effort with Metropolitan being a regional wholesaler of water supplying water as needed to each area.

In conclusion, Southern California's and Metropolitan's water supply and water planning has been extensively documented. This documentation meets all legal requirements under California law for projects within Metropolitan's service area to indicate in their planning documents the reliability of imported water for the region.

If you require more information, please contact me.

Sincerely,



Stephen N. Arakawa
Manager, Water Resource Management

GLC:adminwrm

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Enclosures

cc: Mr. John Schatz
General Manager
Santa Margarita Water District
P.O. Box 7005
Mission Viejo, CA 92690-7005

Mr. Karl Seckel
Assistant General Manager
Municipal Water District of Orange County
10500 Ellis Avenue
Fountain Valley, CA 92708

369.00

**Memorandum of Understanding
Between MWDOC and IEUA
For Exchange of MWD Drought Allocation**

WHEREAS, Inland Empire Utilities Agency (IEUA) and Municipal Water District of Orange County (MWDOC) are member public agencies of the Metropolitan Water District of Southern California (MWD); and

WHEREAS, Cucamonga County Water District (CCWD) is a retail agency member of IEUA, and Santa Margarita Water District (SMWD) is a retail agency member of MWDOC; and

WHEREAS, SMWD and CCWD have entered into an option agreement enabling the parties to enter into a water supply contract (CCWD/SMWD Agreement) whereby CCWD will voluntarily reduce its imported water use during a shortage period at times when MWD does not have sufficient firm water to serve all firm water demands if SMWD exercises its right to call the water; and

WHEREAS, in consideration for payment under the terms of the CCWD/SMWD Agreement, CCWD intends to make excess shortage allocation created through this reduction in imported water demand available to SMWD through an exchange arrangement involving IEUA and MWDOC; and

WHEREAS, IEUA, CCWD and Orange County Water District (OCWD), among other parties, have entered into "Santa Ana River And Chino Basin Water Right Accord" dated September 15, 2000, which includes, among other things, an acknowledgement of rights by OCWD that certain parties, including CCWD, have rights to use, re-use, recycle, store, recapture and/or export non-native water which Chino Basin parties have imported, and contract with third parties to exercise such rights; and

WHEREAS, the Metropolitan Water District of Southern California (MWD) is the regional supplier of supplemental imported water to both IEUA and MWDOC; and

WHEREAS, during shortage situations in the past, MWD has established allocation targets to effect the reduction of firm water deliveries to its agencies; and

THEREFORE, the IEUA and MWDOC agree to the following Memorandum of Understanding for the exchange of whatever water allocation may be accorded by MWD during an MWD shortage condition.

IEUA and MWDOC agree to exchange water called under the CCWD/SMWD agreement subject to the following principles:

1. Exchange would occur in a year when MWD is in a shortage allocation mode of operation in which IEUA and MWDOC receive less than the full amount of requested water.
2. IEUA and MWDOC will confer with SMWD and CCWD to determine the amount of water called under the CCWD/SMWD Agreement as well as the actual amount of reduction in imported water use by CCWD below its individual MWD firm water allocation from IEUA. The lower of these two quantities of water (if different) shall be termed the "IEUA/MWDOC Allocation Exchange Amount".
3. IEUA and MWDOC will report this "IEUA/MWDOC Allocation Exchange Amount" to MWD and will request that MWD deliver this Allocation Exchange Amount to MWDOC instead of IEUA.
4. MWDOC and IEUA will work together to secure MWD recognition of this drought allocation exchange between IEUA and MWDOC,
5. If MWD fails to recognize the exchange of drought allocation, or in some way reduces the quantity of water exchanged in its allocation methodology, then MWDOC and IEUA shall each hold the other harmless.
6. Exchange of water pursuant to the CCWD/SMWD Agreement shall not result in reduced water reliability for other MWDOC or IEUA member agencies, however, the other member agencies are not third-party beneficiaries to the CCWD/SMWD Agreement to the extent they have not invested in or otherwise compensated CCWD and SMWD with respect to the CCWD/SMWD Agreement.
7. Exchange of water pursuant to the CCWD/CCWD Agreement may be subject to MWDOC/IEUA charges for the purpose of revenue neutrality, with the amount of any charge to be determined at such time as SMWD may call for the exchange of water.
8. The understandings herein are for purposes of MWDOC and IEUA recognizing and implementing the exchange of water pursuant to the CCWD/SMWD Agreement to the extent of the amount of imported water that may be allocated to each by MWD at such time as SMWD may call for the exchange of water, however, MWDOC and IEUA make no warranties with respect to MWD's water shortage allocation policies or procedures.
9. The commitments of the Parties under this MOU shall be subject to SMWD and CCWD agreeing to hold MWDOC and IEUA harmless from any claims arising from failure to make the exchange contemplated herein due to refusal of Metropolitan to agree to the reallocation of water between MWDOC and IEUA in accordance with the CCWD/SMWD Agreement.


Page 3 of 3

MUNICIPAL WATER DISTRICT OF
ORANGE COUNTY

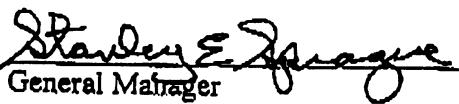


President

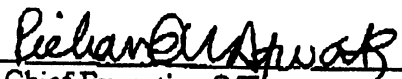
INLAND EMPIRE UTILITIES AGENCY



President



General Manager



Chief Executive Officer

November 19, 2003

APPENDIX F
ENERGY DATA



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Planning for tomorrow.*



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About Us

San Diego Gas & Electric is a regulated public utility providing electric service to 3 million consumers through 1.3 million electric meters and 800,000 natural gas meters in San Diego and southern Orange counties. SDG&E's service area encompasses 4,100 square miles, covering two counties and 25 cities.

SDG&E employs over 3,000 people throughout its service area whose main job is to provide safe, reliable energy and exceptional customer service to residences and businesses throughout San Diego and South Orange County. We are committed to enhancing the quality of life in the area and developing energy solutions for a competitive regional economy.

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Rulemaking No: R.01-10-024
Exhibit No.: _____
Witness: Robert B. Anderson

Order Instituting Rulemaking to Establish Policies)
and Cost Recovery Mechanisms for Generation)
Procurement and Renewable Resource Development.)

R.01-10-024

DIRECT TESTIMONY
OF
ROBERT B. ANDERSON

SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA
April 15, 2003

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**DIRECT TESTIMONY OF
ROBERT B. ANDERSON
SAN DIEGO GAS & ELECTRIC COMPANY**

I. Introduction

The purpose of this testimony is to present SDG&E's long-term resource plan. First, a detailed description of the resource portfolios that were considered is presented. Second, a detailed discussion of the analytical results is presented, including a discussion of the major assumptions and differences among the portfolios. Lastly, SDG&E's recommended reserve margin is explained along with a discussion of results.

II. Description of SDG&E Service Area

SDG&E provides electric service to approximately 1.3 million customers in San Diego County and the Southern portion of the Orange County area. SDG&E also provides natural gas service to approximately 775,000 gas customers. The electric customer base is made up of 89% residential and 11% commercial and industrial customers. The relatively low percentage of commercial and industrial load is unique among California's IOUs, and has implications on key elements of a resource plan, such as load shape, cogeneration potential, and amount of energy efficiency and demand response available to reduce resource needs. Direct access suppliers serve about 17% of SDG&E's load, a percentage that is modeled as remaining flat over this time frame, thereby decreasing as a percentage of total load.¹

¹ This modeling convention was adopted in view of the Commission's present moratorium on new direct access; it does not represent a point of view on whether this policy should, or will be modified in the future.

SDG&E's service area has two major electric generation plants; the Encina plant owned by Dynegy and NRG, and the South Bay plant owned by the San Diego Port District and operated by Duke Energy with a total capacity of approximately 1,635 MW. In addition, there are approximately 525 MW of combustion turbine, 30 MW of renewable power plants, and 170 MW of Cogeneration facilities that provide supply to the grid. Only about 350 MW of this generation is under contract to SDG&E. SDG&E has historically relied on significant quantities of imported power to meet its remaining regional needs. Currently, SDG&E's transmission system has a simultaneous import capability limitation of 2,850 MWs. This limited import capability is a critical factor when analyzing and determining grid reliability, siting of future generation resources and/or expanding SDG&E's transmission system to receive future imported electricity from both conventional and renewable resources. This is explained further in the testimony of Mr. Korinek.

III. General Overview of Resource Planning Portfolios

The objective of SDG&E's long-term planning process is to provide reliable electric supply to customers at the lowest possible cost, consistent with the customer's willingness to accept the risk of price and supply volatility. In order to accomplish this result, the long-term plan addressed not only demand and supply side resources, but also major transmission lines and other projects needed to meet grid reliability criteria. SDG&E's long-term plan addresses both supply adequacy and the ability of the SDG&E system to meet customer loads during outages of critical elements.

In this submittal, SDG&E provides four different resource portfolios that could, as a policy matter, be selected by the Commission to address SDG&E's projected

resource needs. Each portfolio was designed to illustrate a particular resource strategy. Two bookend portfolios were modeled to illustrate differences between portfolios that rely on either on-system generation or on transmission additions for the majority of SDG&E's resource additions. The third portfolio was designed to illustrate the value of fuel diversity. The fourth is a balanced portfolio combining the best of the other portfolios.

In designing portfolios, SDG&E attempted to accomplish a number of objectives common to each. First, each plan was designed to ensure it would meet the ISO's grid reliability criteria as explained in the testimony of Mr. Korinek. Second, each portfolio was designed to meet a planning reserve margin of 15% each year (except 2004 which will be addressed in the 2004 procurement plan). The amount of reserves assumes that the utility will acquire reserves for Direct Access customers as well as for SDG&E's bundled customers, and was calculated by multiplying 15% times the total annual peak load that SDG&E will serve plus Direct Access load. Due to the fixed size of individual resources, reserve margins will fluctuate around a target as a resource is added, and not exactly meet the 15% reserve each year. Third, SDG&E tailored resource additions to approximate load shapes, thereby adding more intermediate to peaking resources than base loaded resources.

While these portfolios serve to illustrate significantly different choices for resource addition strategies, they have not been fully optimized to the level that would be required to justify specific resource additions. Once a resource addition strategy is adopted, the exact mix of intermediate (i.e., simple cycle or steam units) and base loaded (i.e., combined cycle technologies) resources will likely evolve as detailed analysis is

done during the procurement process. Likewise, resources added for the full year may vary compared to resources added only to meet summer peaks. Finally, the results were designed to be impacted only by actions SDG&E could commit to in the next five to ten years, and not to be influenced by potential actions that will be determined in subsequent planning cycles. For example, the amount of combined cycle resources was held constant between cases (except the case where one was replaced by a coal plant) since there was no basis to vary this resource between portfolios. Fuel diversity resources did vary since strategies such as the transmission addition portfolio option resulted in greater import opportunities for fuel diverse resources.

Each portfolio was modeled under load, fuel and market price uncertainty, which was allowed to vary, based on historical volatility. This allowed for portfolio comparisons both in terms of expected value but also to show the potential range given load and price uncertainty. Each portfolio was then evaluated by assessing a number of value measures, including total costs to customers, air emissions, and risks of implementing. This type of analysis will provide the Commission with information needed to determine the balance between lowest cost and reduced exposure to price volatility inherent in choosing a resource strategy.

IV. Detailed Description of Portfolios

SDG&E has developed various portfolios illustrating differences in overall policy for the Commission's consideration. These portfolios were targeted at highlighting issues SDG&E believes the Commission needs to address now in order for SDG&E to meet its load for the next five year period and beyond.

SDG&E has developed four portfolios in order to demonstrate key resource planning issues facing SDG&E in the next five years.

SDG&E's portfolios include:

- **On-System Generation Portfolio:** In this portfolio, the vast majority of SDG&E's future resource needs are met by generation built within SDG&E's service area. Since San Diego has limited fuel source options, the generation constructed in San Diego is exclusively natural gas fired. (Some renewable power is assumed to develop in the area, but this assumption is common in all portfolios.) This scenario assumes no new transmission capacity is added to allow for increased imports or improve grid reliability.
- **Transmission Addition Portfolio:** Under this portfolio new transmission import capability is added in 2008 and 2012. Transmission additions are described in the testimony of Mr. Korinek. Most of SDG&E's resources in this case are acquired outside SDG&E's service area in order to make use of such transmission import capability.
- **Transmission Addition with Fuel Diversity Portfolio:** This portfolio is the same as the Transmission Addition portfolio but models the impact of adding a non-natural gas fired resource added to the mix. A coal-fueled resource of about 500 MW was used to provide fuel diversity.
- **Balanced Portfolio:** This portfolio includes increased transmission capability in 2008, additional on-system generation both prior to and after the transmission addition, and off-system resources including the fuel diversity represented by a coal-fueled resource.

V. Portfolio Modeling Results

Each of the above portfolios was modeled utilizing Henwood Energy's RiskSym model in order to determine resource production costs. Fixed costs were added into the modeling process for resource additions in order to obtain total resource costs. Not all fixed costs have been included since these would be the same in each case. For each case, emission data was collected except from market purchases obtained from the overall market, as it was not possible to assign an emission rate to them. Table 1 in Mr. Lauckhart's testimony provides a scorecard summary of each resource plan results. The scorecard for each portfolio shows the present value of costs for fixed, variable, and spot market purchases and sales, along with emissions data. In addition, a distribution of the present value of total costs for all the portfolios is presented. The results are shown for 2004–2012 and 2004–2023 periods.

In reviewing the results of each portfolio, it is important not only to review numeric results but also to understand and analyze the drivers that result in different resource values. Major drivers and observations/conclusions are described below.

On-System Generation Portfolio: This portfolio was modeled by adding new generation in the San Diego region to meet SDG&E's resource needs. By assuming it was all built new it would mathematically allow for the retirement of the existing older stream units and SDG&E would still be able to meet grid reliability criteria in the service territory. With new units, the service area would benefit from lower production costs associated with the new plant's increased efficiency, better air quality from improved emission rates, and likely better reliability than if the existing units are relied upon for the extended future. If the existing generation were retired as new generation was built, in

order to continue to meet grid reliability criteria from 2013-on, there would be the need to continue to add on-system generation every year to meet load growth.

There are two major risks with pursuing such a portfolio. First, currently, it is unclear where the necessary emission offsets would come from in order to support this level of on-system generation. There are currently very few offsets available. It may require the retirement of the existing units in order to create the needed emission offsets for the new plants. If such a level of building generation could not be sustained, transmission additions would be needed in the outer years to meet grid reliability. A second key risk of this plan is the financial risk. This plan would require a substantial capital investment in on-system generation, since it would require the building of more on-system generation in a ten-year period than has been built on-system in the last 100 years.

The second risk is the extent this portfolio's total cost was lowered by making off-system sales. The addition of on-system generation did lower the market price slightly, as compared to SDG&E's base case, but it still remained relatively high. The market price represented a spark spread² in excess of 10,000 BTU/Kwhr, which is greater than the heat rate of the added plants. Thus, this portfolio made about one-third more off-system market sales than the other portfolios reducing the portfolio's total cost. However, relying on market sales creates higher risks since these potential sales and profits are by no means certain.

² The implied heat rate between the market electric price and the natural gas price.

Transmission Addition Portfolio: Transmission additions are added in 2008 and in 2012. The 2008 date was selected as the earliest possible date new transmission could be added given required lead times. The addition in 2012 was timed to meet the grid reliability needs. The 2012 transmission addition would provide sufficient capacity to allow for about 1,000 MWs of the existing generation to be retired in that year. However, if that generation were retired it would need to be replaced with new generation or transmission additions as load growth occurred in later years, just like in the on-system portfolio. The lack of new on-system generation, except that needed in the early years to meet grid reliability criteria, does not allow for any early retirements of on-system units.

This portfolio showed slightly higher costs than in the On-System Generation portfolio. There are three factors driving the higher costs. The first is driven by the policy regarding which customers pay for transmission expansions. The addition of transmission resulted in a decrease to the market prices at the border of the San Diego region of approximately 10% in the early years, increasing to 20% in the outer years. This lower price results from eliminating transmission congestion and improving the overall economic use of resources. SDG&E's customers benefit from this infrastructure improvement as do other consumers throughout California. However, the benefit to other California consumers is not fully captured by the analysis presented in this testimony, thereby under estimating the total value of a transmission addition. We attempted to at least partially account for this through the allocation of the transmission line costs in this analysis. If transmission expansion costs are allocated to the parties that benefit from them, then SDG&E's customers will pay a portion of the total costs. In this analysis, we

have assumed that SDG&E would receive a conservative allocation of roughly 50% of the benefits, thus its customers would pay 50% of the costs. Other methods being discussed are to allocate costs of improving the transmission grid equally to all users. If this methodology was adopted, then SDG&E's customers would pay about 10% of the total cost and the total PVRR of this case would be reduced by approximately \$78 million for the 2003-2012 period and \$264 million for the 2004-2023 period. The method for allocating transmission costs is currently part of an ongoing ISO proceeding at FERC (ER00-2019).

Secondly, there are differences in costs tied to maintaining grid reliability between this portfolio and the On-System Generation portfolio. Due to the amount and timing of the resource additions in this case, there is a greater need to maintain on-system units to meet grid reliability. These units are referred to as Reliability Must Run (RMR) units. (A more detailed explanation of RMR units and cost is presented later in this testimony.) The RMR costs in this case are approximately \$53 million higher than the On-System Generation portfolio.

The last major factor driving the cost differences between the Transmission Addition portfolio and the On-System Generation portfolio is the impact of off-system sales. As was mentioned previously, new transmission projects improve the overall economic dispatch of the grid, resulting in a lower market price. One impact of a lower market price is that the Transmission Addition portfolio will generate less off-system sales and associated sales revenues. If the profit from off-system sales were equalized, the difference in costs between these two cases would be reduced by approximately \$53 million.

Since the On-System Generation and Transmission Addition portfolios represent the two bookends, they are compared and contrasted in the table below.

Table 1
Portfolio Comparison between On-system and Transmission Addition Portfolio

	On-system Generation	Transmission Addition
Transmission	Needed transmission corridor in last ten years may not be available due to increased area development and limited corridors.	Locks in corridor. New Transmission backbone system can be expanded to accommodate load growth.
Natural Gas infrastructure	Additional gas infrastructure would likely be needed to serve high electric generation demand.	Existing gas infrastructure appears adequate to meet electric generation needs.
Fuel Diversity	Minimal fuel diversity. Increasing reliance on on-system natural gas fired generation.	Increases ability to procure a diverse competitive fuel mix (hydro, coal, renewable). Less dependence on single source fuel generation.
Retirement of Existing Plants	Potential to retire roughly 2,000 MWs of existing on-system generation in the next ten years may require retirement of existing generation to generate emission offsets.	Potential retirement of 1,000 MW of existing units.
Financial Risk	Requires substantial capital commitment within the region. Total generation investment of approximately \$1.7 billion required in the San Diego area.	Reduced financial risk since more supply could be purchased from generation across the WSCC.
Competitive Market	Limited to those willing to build locally.	Access to all supplies in all areas of WSCC.
Market Price	High marginal market price at the border of the service area.	Has lowest marginal market price at service area border.
Air Emissions	On-system air emissions twice as high as the transmission case. Unclear if offsets can be obtained to build all required generation.	On-system air emission half of on-system case.

Transmission Addition with Fuel Diversity Portfolio: This portfolio illustrates the potential value of diversifying the fuel mix. The portfolio incorporates all the assumptions and inputs of the Transmission Addition portfolio with the exception of substituting off-system coal-based power for one 480MW natural gas fired plant. The plant is assumed to be a pulverized coal plant with emission reduction technology. Other technologies are available that would have lower emission rates at a higher capital cost. The results of this portfolio show lower expected costs and less exposure to cost volatility by adding a resource with a stable fuel price. Adding a coal resource could have less value if long-run natural gas prices are lower than expected.

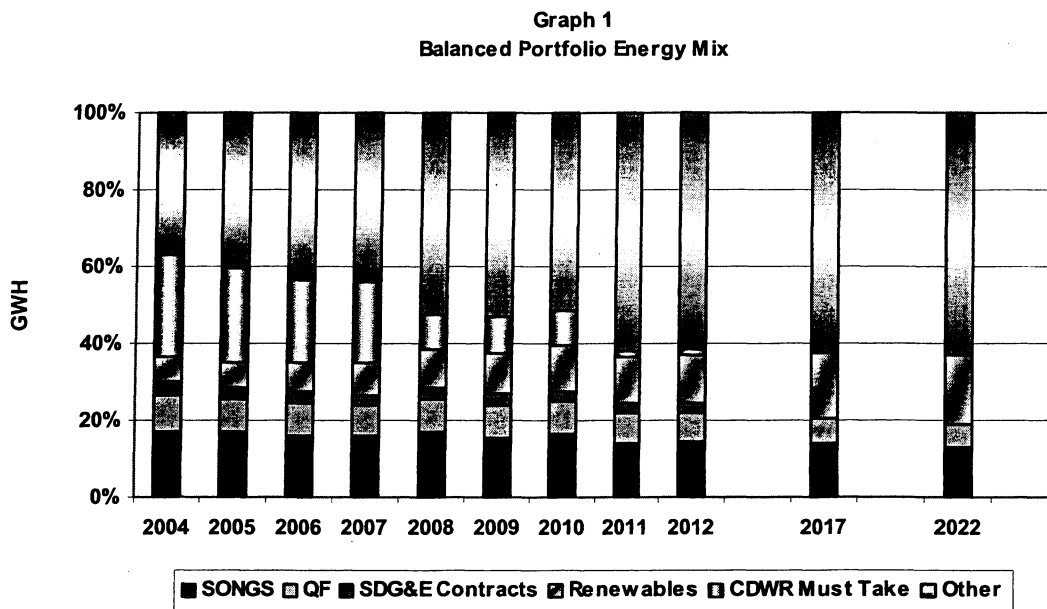
Balanced Portfolio: This portfolio incorporates a transmission addition in 2008, a coal based resource, and a split of remaining generation between plants located inside and outside of San Diego. Generation additions in this portfolio allow for more retirements than in the transmission portfolio but not as many as in On-System Generation portfolio.

This portfolio reflects slightly higher cost in the 2004-2012 period but lower costs for the 2004-2023 period. Policies regarding who will pay for transmission expansions will impact this case along with sharing of benefits. If transmission expansion costs were allocated across all consumers, total PVRR of this case would be reduced by about \$62 million for the 2004-2012 period and \$133 million for the 2004-2023 period.

This portfolio's cost was also impacted by differences in off-system sales and RMR costs. The impact of eliminating the off-system sales differential would be to reduce the difference by \$43 Million. The RMR differential was much smaller with the balanced portfolio costs being higher by \$9 million.

VI. Summary of the Resource Planning Analysis

In selecting a preferred resource portfolio, one must weigh all factors, including the numeric analysis, the implementation risks, and the relative flexibility provided. In weighing these, SDG&E's preferred resource portfolio is the Balanced Portfolio. It is the lowest risk plan, with costs equal to or better than any other portfolio. Graph 1 below shows the energy mix resulting from the plan.



The development of the portfolios and the results of the analysis lead to a number of findings. In the near term (2004-2007) all of the portfolios are the same. This is because SDG&E will need some on-system generation in order to meet grid reliability and a limited amount of other sources to meet its total capacity needs in this time period, and given lead times, there are no viable options or alternatives across portfolios. However, beginning in 2008, we reach a fork in the road. Beginning in this year,

SDG&E can begin to implement plans that lead to a very different future for its customers. A resource plan that relies on on-system generation without additional transmission capability leads to a plan with substantial implementation risks and even if successful, leaves the service territory still on the edge of grid reliability criteria. Likewise, sole reliance on transmission additions to meet needs has almost the same impact. It is only once we combine on-system generation with expanded transmission capability that we see a plan that provides both options and flexibility.

In reviewing the numeric analysis, there is little difference in the total expected cost (the net present value of the total revenue requirements) across portfolios. The On-System Generation portfolio is slightly less costly than the Balanced Portfolio for the 2004-2012 period but the Balanced Portfolio is lower over the longer 2004-2023 period. However, any adjustment for the off-system sales impact moves the Balanced Portfolio to the lead position for both periods. If transmission costs are allocated equally across the grid, the Balanced Portfolio's cost advantage is improved even further.

Numerically, we also see that fuel diversity can provide customers some protection from upward swings in fuel prices. SDG&E is already planning to add renewable resources to meet the Renewable Portfolio Standard (RPS), and these will provide some fuel diversity and price stability. Additional diversity can come from off-system renewables, or from an off-system coal plant such as the one included in this analysis. Tighter emission standards may require larger fixed costs payments, resulting in higher expected costs, but may be worth it to provide price stability.

The On-System Generation portfolio appears better only under the assumption that substantial amounts of generation can truly be built within SDG&E's service area

and the costs of that generation to customers can be offset through selling substantial amounts of power into the off-system market. Even if this is successful for the first ten years, there is likely to be no option in the last ten other than to build transmission, assuming transmission paths can still be found.

By embarking on a Balanced Portfolio now, SDG&E's customers are positioned to capitalize on resource options as they present themselves. If off-system resources are available at a lower cost, then the transmission will be available to access them. The addition of some new on-system generation will help with grid reliability.

VII. Description of Resource Types

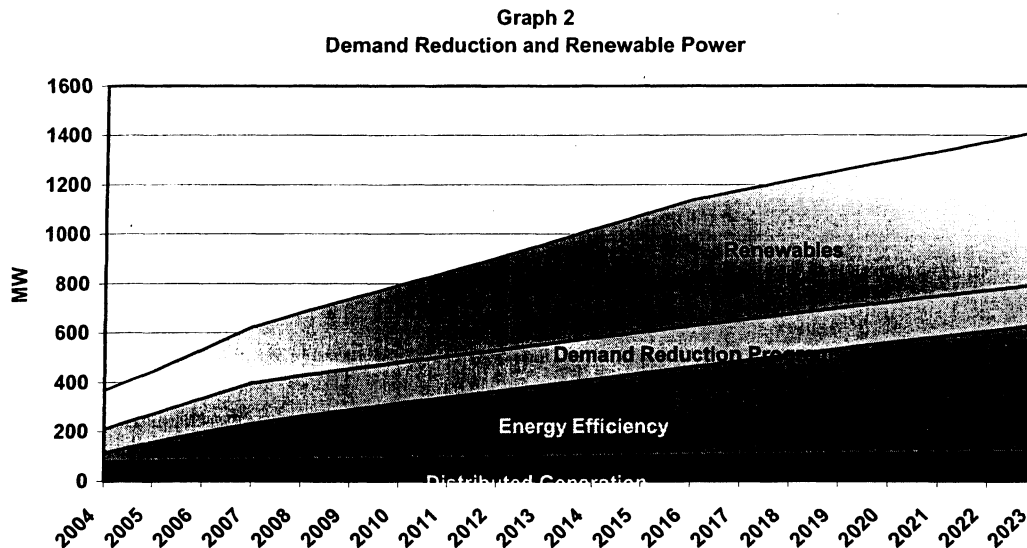
SDG&E's portfolios were developed with a combination of demand side and supply side resources. The following sections describe the resource types that were added to the portfolios.

Demand Side Programs and Impacts: Prior to adding supply side resources, SDG&E's resource need was reduced by demand side resources/programs. These include distributed generation, energy efficiency programs and demand response programs. Graph 2 shows the reduction to SDG&E's load from such programs and from renewable power.

Distributed generation includes impacts of various generation options, which have been installed by customers that result in reduction to the load SDG&E must serve. The total amount of distributed generation was 78 MW in 2004, and is forecasted to grow to 115 MW by 2023. Currently, distributed generation consists mostly of cogeneration applications with distributed small solar applications now appearing.

SDG&E's forecasted loads have been further reduced by the expected impact of SDG&E's proposed energy efficiency programs. SDG&E's energy efficiency policy and proposed programs are described in the testimony of Ms. Smith and Ms. Besa. The impact of these programs is to reduce the need for supply side resources by 176 MW by 2008.

In addition, SDG&E has reduced its forecasted load by about 170 MWs over the next five years by the impacts of SDG&E's proposed demand response programs (DRP), which are described in the testimony of Ms. Sides. It has been suggested that some DRP should be specifically targeted at meeting the utility's reserves. SDG&E strongly discourages the Commission from creating such a distinction because it might compromise the ability to fully develop the most cost effective programs. Some DRP, such as time of use metering programs, will result in reductions in the peak demand forecast and not directly appear in the utilities' resource plans. Other programs will continue to be shown as resources that SDG&E can call on when needed for reliability or when they are cost effective to dispatch. Additional confusion could result as to whether the program needs to meet ISO operating reserve criteria if it was required to be treated as part of the reserve margin. There is no reason to designate resources to a specific category, such as "a resource needed to meet load" or "a resource needed to meet reserves."



Renewable Power: All of SDG&E's long-term resource portfolios show SDG&E meeting its RPS target by (1) adding new renewable resources each year equal to 1% of SDG&E's energy requirements and (2) replacing existing renewable contracts with like resources when current contracts expire. SDG&E has not attempted to forecast the exact mix of renewable technologies that will be procured. Implementation details of meeting the RPS target are subject to separate hearings.

By 2017, SDG&E assumes a renewable portfolio energy mix consisting of approximately 20% wind and 80% of base loaded technologies, such as geothermal, biogas, biomass or solar storage. (Note that distributed solar is accounted for as a distributed generation technology.) SDG&E's portfolios also assume that 40 MW of wind and 55 MW of base loaded technologies sourced from renewable technologies located within SDG&E's service territory are included within them. SDG&E does not have knowledge of specific renewable projects under development in its service territory,

however it is reasonable to assume new projects will be developed over time, and SDG&E is planning to undertake a study of this issue to improve its ability to forecast this potential in future planning cycles, as well as to help identify and remove roadblocks to renewable project development in San Diego. During actual solicitations, SDG&E will procure the lowest cost resources and may procure a mix of renewable resource technologies that is different than what was assumed for modeling purposes. Given the potential fluctuation in the pace of project development, SDG&E's actual renewable procurement for any individual year may be higher or lower than the annual average 1% Commission requirement modeled in its resource portfolios provided that the goal of reaching 20% of renewable resources by 2017 is met.

Common Supply Side Resource Additions: SDG&E has provided several portfolios in order to show the potential ranges of outcomes for various policy strategies and has incorporated a few common resources to all of its portfolios. Common resources represent existing commitments that are assumed to run through their existing term and resources added in the later years of the plan. Holding resources added in the later years constant would allow for resources to be driven solely by the resource choices made in the early years.

Common supply side resources assume:

- SDG&E's existing contracts with Qualified Facilities (QFs) continue for their current term and will be renewed for a term continuing through 2023.

SDG&E does not anticipate an influx of new QFs due to the limited amount of commercial and industrial load remaining that appears to be candidates for

additional cogeneration applications. It is assumed that the amount of QF power will remain constant for the entire planning horizon.

- SONGS will continue to operate until 2022 when its current operating license expires.³
- SDG&E's existing purchase power contracts will last for their current remaining term without renegotiation.
- Incremental resources needed to meet load growth in the last ten years (2014-2023) are met by market-based resources priced at the expected market price for the portfolio. Common size resources were included in portfolios in order not to prejudice the type of resource that may ultimately be selected.
- For years 2012 – 2023, 145 MW of combustion turbines located in SDG&E service area are added. These additions are timed to start when current CDWR contracts with the same amount of capacity expires. Even though this assumption was made for this submittal, it does not prejudice the actual decision, which will not be made for many years.
- Existing CDWR contracts that are allocated to customers in San Diego will remain allocated to these customers and will run through their current term without any modification. SDG&E modeled the variable costs of these units and did not make assumptions regarding actual cost to customers in San Diego based on a future CDWR remittance rate.

³ This assumption does not prejudice any decision regarding the need and cost effectiveness of replacing the steam generators or the possible extension of the license.

- 200 MWs of 6 x 16 purchases are added for summer months in 2004. This placeholder adds capacity in 2004 to meet operating reserves. Actual procurement strategies for 2004 will be discussed in SDG&E's short-term procurement plan to be submitted separately on May 15 and may or may not include a purchase of this size.

Supply Side Resource Options: SDG&E's remaining unfilled resource needs were filled by resource options described below. These options were selected to illustrate general characteristics of resources. No position is assumed in the analysis on issues such as whether such resources are to be owned by SDG&E or secured as power purchase contracts, or whether such resources provide for tolling agreements. Modeling a combustion turbine does not reflect that SDG&E would necessarily be obtaining power from a specific combustion turbine. Such a resource represents any natural gas fired generation with a heat rate of approximately 10,000 BTU/KWHR. This could be a combustion turbine, an existing steam unit, or a supply contract priced in a similar manner regardless of the actual unit behind it.

The resources types added include:

- Market purchase: This assumes a dispatchable 6 x 16 purchase available during the summer months of July – September to address summer needs.
- In-San Diego Combustion Turbine: This assumes to be a combustion unit located within San Diego's service territory with a heat rate 10,000 BTU/KWHR. The capacity costs for an in-San Diego unit is assumed to be 5% higher than an out of San Diego unit due to higher costs associated with land, air emissions, etc.

- **In-San Diego Combined Cycle:** This assumes a new combined cycle plant at a full load heat rate of 7,000 BTU/KWHR. The capacity cost for an in-San Diego unit is assumed to be 5% higher than an out of San Diego unit due to higher costs associated with land, air emissions, etc.
- **Out of San Diego Combustion Turbine:** This assumes a unit located outside of San Diego's service territory or outside of California with a heat rate of 10,000 BTU/KWHR.
- **Out of San Diego Combined Cycle power plant:** This is a combined cycle unit located outside of San Diego's service territory or outside of California with an assumed heat rate of 7,000 BTU/KWHR.
- **Out of San Diego Coal Plant:** Assumes procurement from updated coal technology plants located in the Southwest utilizing either new or existing coal resources.

Reliability Must Run Units: In order to maintain grid reliability, SDG&E modeled Reliability Must Run (RMR) units to the extent they would continue to be required. These units are under contract with the California ISO in order to maintain on-system grid reliability. The ISO determines which units in transmission-constrained areas (like San Diego's Service territory) that are needed to maintain local grid reliability. The ISO contracts with these units on an annual basis. SDG&E does not have output rights from RMR units since they are contracts with the ISO and therefore are not included as resources in SDG&E's resource plan. However, it was necessary to model RMR units in order to provide reliable power to serve the area. SDG&E modeled RMR costs for the first ten years in all portfolios. After ten years, SDG&E has added sufficient

on-system generation under its control or expanded the transmission system to eliminate most of the RMR needs. It is also unclear how long RMR contracts will remain since numerous proposals to restructure the market would replace RMR units with some other mechanism to achieve the same objective. It is assumed in these cases that SDG&E pays the actual production cost of power generated by the RMR units when they are operated to meet local grid reliability. The fixed costs for RMR were based on the current RMR contracts assuming all units are under the option that requires the utility to pay the full revenue requirements of the facility.

Currently there are approximately 1,650 MWs from RMR units in SDG&E's service territory. This is made up of all the units at the Encina Power Plant, all but one unit at the South Bay Power Plant and 200 MW of combustion turbines. All customers in San Diego's service territory, including those being served by direct access providers, cover the cost of RMR. RMR capacity required in San Diego will continue to grow as load grows, unless offset by generation or transmission. In each of the portfolios, the amount of RMR generation is reduced as transmission or new generation is added.

VIII. Reserve Margin Analysis

In D.02-10-062, the Commission adopted an interim planning reserve margin of 15% but also noted that there are various ways to count reserves. Furthermore, in D.02-12-074, the Commission granted a request from Office of Ratepayer Advocates (ORA) that the long-term resource plans provide data sufficient to determine what level of planning reserves would lead to a loss of load probability of one day in ten years, as well as supporting testimony recommending a level of planning reserves. SDG&E performed

this analysis. A description of the analysis and calculation results is presented in the testimony of Mr. Lauckhart. SDG&E believes the Commission should consider other factors such as the total amount of expected unserved energy (EUE) and the costs of adding reserves, not just the results of the loss-of-load analysis before adopting a reserve margin for SDG&E.

In this work to determine the amount of reserves SDG&E counted all resources at the full capacity of the resource with the exception of wind resources which we counted at 25% of the full capacity. Resources that are temperature sensitive, such as combustion turbine technologies, we have rated at their summer rating. SDG&E does not have any hydro resource and thus did not need to make any assumptions regarding water conditions. Outage rates were included in the computer simulation.

Loss of Load Analysis: In reviewing the results, we see that the reserves needed to obtain a LOL of "1 in 10" can vary from 15% to 20% depending on the methodology and location of reserves. But this single measure does not fully address the impacts on the customer, and should not govern the Commission's final decision on reserve margin.

Total Expected Unserved Energy: The table below shows the EUE for all three cases at a 15% reserve margin.

Table 2
Reserve Margin Analysis - EUE

Case	Expected Unserved Energy (MWHR)	Percent of Total Annual Energy Needs (%)
Out of Area Reserves	1031	.0047
In Area Reserves	853	.0039
In Area Reserves with Deterministic Load	394	.0018

Note that in all scenarios, SDG&E's supply reliability would be in excess of 99.995%. To help put this into perspective, SDG&E's system on average experiences about 2,500 MWHR of unserved energy each year due to transmission and distribution outages caused by weather, physical damage, and equipment failure. At a 15% reserve margin, customers would be almost 2.5 times more likely to be impacted by a transmission and distribution outage than by a supply shortage in the case with the largest EUE. This puts the question of the need, cost effectiveness, and local impacts of additional capacity for increased reserve margins squarely on the table. A balance will need to be struck.

Cost Impacts: A final and very important consideration in setting a reserve margin must be the cost of reserves. These costs can be viewed in terms of the total cost of carrying reserves and in terms of the incremental costs as reliability is improved through higher margins. In terms of total cost, each percentage of reserves that SDG&E is required to carry adds about \$2.8 million to customers' costs. Thus, moving from a

15% reserve to a value such as 18%, adds \$8.4 million of additional costs with only marginal improvements in energy not served. The incremental cost of improved reliability associated with increasing levels of reserves is illustrated in Graph 3 in Mr. Lauckhart's testimony. The graph shows that at 15% reserves in all three scenarios, consumers are paying in excess of \$10,000/MWHR for the additional energy served. In addition to these direct costs, the impacts of added reserve capacity on land, water, transportation, emissions, fuel supply infrastructure and other related issues must be balanced against the added value of incremental reductions in EUE.

IX. Recommended Reserve Margin

SDG&E recommends that the Commission initially adopt a target of 15%, and indicate that a "deadband" of +/- 2% around this target is reasonable. The "deadband," which for SDG&E is about 80 MW, is needed to allow for the inevitable variation in specific year-by-year outcomes, which occur due to the lumpiness of individual reserve additions, as well as variations in loads. SDG&E further recommends that the Commission re-visit and refine this initial target as more experience is gained, and as the results of other parallel inquiries into this topic are known in its next resource planning update.

Analytical results do not point to a single value, but rather illustrate the continuum that results from adding reserves at various levels. Thus, the decision to select the correct reserve margin is one of elimination of extremes. On the low side, it is generally accepted that reserve margins of 10% or more are required. At such levels, a utility has sufficient reserves to cover its expected load plus meet the ISO operating reserve requirements of 7%. This also would provide a cushion to cover generation units' forced

Anderson/SDG&E
R.01-10-024
April 15, 2003

outage rates and load uncertainty. On the high side, the analysis points out that as the reserve margin approaches 20%, reserves are being added to eliminate negligible amounts of EUE and customers are being asked to pay a substantial cost for what is likely to be an immeasurable improvement.

#125162 v1 – ANDERSONTEST – 4.15.03

Qualifications

My name is Robert B. Anderson. My business address is 8330 Century Park Court, San Diego, California, 92123.

I am employed by San Diego Gas & Electric Company as Director - Resource Planning. My responsibilities mainly include electric resource planning. I have been employed by SDG&E since 1980, and have held a variety of positions in resource planning, corporate planning, power plant management, and gas planning and operations.

I have a BS in Mechanical Engineering and a MBA - Finance. I am a registered professional engineer in Mechanical Engineering in California.

I have previously testified before this Commission.

State regulators approve SDG&E's regional energy reliability plan

Six local resource projects approved

Media Ed Van
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SAN DIEGO, June 9, 2004 – The California Public Utilities Commission (CPUC) today approved San Diego Gas & Electric's (SDG&E) comprehensive plan that will enable the utility to meet the growing energy needs of its customers. In addition to demand-response programs and new renewable resources the CPUC approved the first new large-scale power plants in the San Diego region in more than 25 years.

"We are pleased that the Commission has recognized the need for new energy infrastructure in the San Diego region and has taken this important step to approve clean, efficient energy resources that are the least cost and best fit to meet our customers' growing energy and reliability needs," said Edwin A. Guiles, chairman and chief executive officer, SDG&E. "Without new energy resources our customers would face an energy shortage as soon as next year. Today's decision will go a long way toward meeting those needs," he added.

In January 2003, the state legislature returned SDG&E to its role of planning for and procuring energy resources on behalf of its customers. To meet this new role SDG&E conducted an open and competitive solicitation in May 2003.

SDG&E received 13 competitive bids that met this goal. -The proposal put forward by SDG&E addressed needs highlighted by SDG&E's long-term resource plan. In recommending that the projects be approved, the CPUC praised SDG&E's efforts. The decision states: "We find that the process was open, competitive, and adequately subscribed. Moreover, we find that SDG&E's process was consistent with Pub. Util. Code §454.5(c)(1), and that the contracts and turnkey projects resulting from this RFP process, and their cost recovery and ratemaking mechanisms, will allow SDG&E to serve the needs of its customers at just and reasonable rates, will benefit consumers, and are in the public interest."

The projects approved today include:

Demand Response: A contract with Converge to install devices on air-conditioning systems of small and medium-sized commercial customers to cycle power during peak-use periods. The amount of load reduction will be more than 30 megawatts (MW) by 2007 with about 9 MW in 2005 and 19.5 MW by 2006. A contract with Celerity to upgrade customer-owned backup generation and install devices so that this generation can be operated remotely by the utility. The amount of load reduction from this program will be approximately 25 MW by 2006.

Renewable Supply Resource: A 15-year contract with Envirepel to provide 40 MW of firm capacity generated from biomass or "green waste" materials

such as wood, paper and agricultural by-products. In addition to producing electricity, this technology helps reduce the volume of solid waste entering the landfill.

Intermediate-Load Unit: Purchase of an intermediate-load, combustion turbine unit from Ramco that can generate 45 MW. This unit, which will be ready by summer 2005, can be started up quickly to help SDG&E meet electricity demand.

Base-Load, Combined-Cycle Power Plant: Turn-key purchase of the combined-cycle Palomar Energy plant in Escondido that will produce about 550 MW and will be available by summer 2006. This technologically advanced and highly efficient facility will produce 45 percent more energy using the same amount of natural gas fuel as existing power plants and will feature the latest air emissions control technology.

10-Year Purchase-Power Agreement: Contract to buy up to 570 MW of electricity over 10 years, starting in 2008. The bidder, Calpine Corp., will finish building the power plant on its Otay Mesa site, which already has received all required approvals and permits.

SDG&E is a regulated public utility that provides safe and reliable energy service to three million consumers through 1.3 million electric meters and more than 800,000 natural gas meters in San Diego and southern Orange counties. Exceptional customer service is a priority of SDG&E as it seeks to enhance the region's quality of life. SDG&E is a regulated subsidiary of Sempra Energy (NYSE:SRE). Sempra Energy, based in San Diego, is a Fortune 500 energy services holding company. To learn more, go to www.sdge.com.

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Our History

Southern California Gas Company (The Gas Company®) has been delivering clean, safe and reliable natural gas to its customers for over 100 years.

Our commitment to provide customers with world-class service has been the key to our longevity and success. Our motto, Glad to be of service reflects this spirit.

The Gas Company's roots trace back to the 1800s when new settlers arrived in Los Angeles in search of a new frontier. Back then, the city (with its burgeoning population of 5,000 people) became a refuge for villains and gamblers.

In 1867, Los Angeles Gas Company, the forerunner of today's Southern California Gas Company, installed 43 new gas lamps along Main Street, making the city safer at night and renewing hopes for the city's future.

The gas lighting business was run by five entrepreneurs who manufactured the gas from asphalt, a tar-like substance, and later from oil.

The Company was enjoying modest success until Thomas Edison introduced his new electric light in 1879. With the future of the gas lamp business uncertain, the Company began looking for other uses for gas and Los Angeles soon had its first gas stove and heater.

Meanwhile, Pacific Enterprises, a predecessor of our parent company, Sempra Energy, was looking to expand its gas business.

Founded in San Francisco in 1886 as Pacific Lighting, the Company bought several small gas manufacturing and distribution companies in the area, including the Los Angeles Gas Company in 1890. These companies ultimately became Southern California Gas Company.

By the early 20th century, natural gas -- a colorless, odorless gas found in association with oil underground -- was starting to gain attention. The breakthrough came when a huge field of natural gas was discovered near Taft, CA, in 1909.

Since natural gas had twice the heating value of manufactured gas, the Company took the bold step to convert its system to natural gas and build pipelines throughout the state.

Natural gas was soon found throughout the country, and demand for the fuel was rapidly growing. To meet customer demand, the Company began storing gas in large

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holding tanks. In 1941, the Company introduced a new system to the Southwest -- Underground Storage of natural gas.

And, as Southern California's population grew, so too, did the Company, eventually becoming the largest natural gas utility in the nation.

Today, we are the nation's largest natural gas distribution utility, serving 19 million people through 5.4 million gas meters in more than 530 communities. Headquartered in Los Angeles, we are a subsidiary of Sempra Energy (NYSE:SRE), a Fortune 500 company based in San Diego.

Our service area encompasses 23,000 square miles of diverse terrain throughout most of Central and Southern California, from Visalia to the Mexican border.

Our expertise and experience, as well as our size, scope and resources, make us a leader in the natural gas industry. We fuel about half of all the energy use in our service area (non-transportation-related). In total, we deliver nearly 1 trillion cubic feet of gas annually, or about 5% of all the natural gas delivered in the U.S.



Each year...

- Our Field Technicians complete approximately 4 million service orders;
- Our Call Center representatives answer 10 million phone calls in multiple languages;
- And our Meter Readers walk over 933,000 miles.

Everyday we work to improve our systems, develop gas technologies, add convenience, and share useful information to help make it easier for our customers use energy safely and wisely.

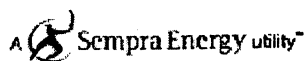
Our commitment goes beyond providing natural gas service to our customers. It includes maintaining a diverse workforce and working with suppliers that represent and reflect the communities we serve.

It also means improving the quality of life in our communities through volunteering and charitable contributions. The Gas Company is committed to the communities we serve.

Community programs make good business sense, as our success depends on

thriving and growing neighborhoods and local businesses.

Like other investor-owned utilities in the state, Southern California Gas Company's operations are regulated by organizations such as the California Public Utilities Commission. (See Regulatory Agencies.)





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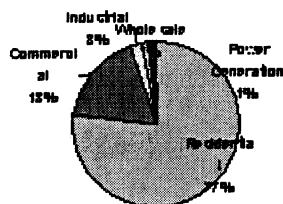
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Our Customers

The Gas Company serves a variety of customers ranging from individual homes, restaurants, hotels, schools and hospitals to large industrial facilities, manufacturers and power plants.

We buy natural gas on the open market for approximately 5.4 million residential and small commercial and industrial customers, which make up the "Core" group. Our No. 1 goal is to ensure the reliability of gas service to these customers.



Although they use about 33% of our annual gas deliveries, Core customers account for 89% of our operating profits. Within our residential market, we provide the fuel for 95% of water heaters, 92% of heaters, 76% of cooking appliances and 72% of clothes dryers.

Our "Non-core" customers are very large consumers of gas, such as electric power plants and industrial and manufacturing facilities, who use 250,000 therms¹ of natural gas or more annually.

These nearly 1,500 customers buy their own gas supplies and arrange to have the gas delivered to our system. We then use our pipelines to transport the gas to their facilities.

¹ A "therm" of natural gas is equivalent to 100,000 British Thermal Units (BTUs). A BTU is the quantity of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

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How We Buy Natural Gas

Many people believe that The Gas Company actually produces natural gas, but we don't. We buy natural gas for our residential and small commercial and industrial customers on the open market. This natural gas originates in one of several major gas producing areas in North America, including New Mexico, Texas, Wyoming.

We buy natural gas from various producers who set prices based on market supply and demand. We charge our customers the same price we pay for gas -- there is no mark-up in the price.

The cost of natural gas is recalculated every month, based on existing prices in the marketplace. See our [Gas Prices](#) and [Bill Q&A](#) sections for more information regarding current gas prices, and how prices vary monthly.

We make money through our natural gas delivery rates. Our profits are included in our delivery rates, which are approved by the California Public Utilities Commission (CPUC), the state agency responsible for ensuring just and reasonable utility rates.

The delivery rate we charge for bringing gas to our customers includes costs related to maintaining our pipeline system, safety and inspection programs, customer service, metering and billing.

By shopping for the best deals and buying from many suppliers across the country -- more than 50 -- we're able to offer gas at costs that are among the lowest in the state.

In addition, we help protect customers from price swings in the market through long-term contracts that reserve space on interstate pipelines -- about a billion cubic feet per day -- and by using our vast gas underground storage fields.

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How We Store Natural Gas

While The Gas Company brings natural gas supplies into our system at a fairly steady rate, the amount of gas used by customers fluctuates greatly, depending on the season, day and even hour.

To balance gas supplies with customer demands, some of the gas flowing through our extensive 48,000-mile pipeline network is diverted into four underground natural gas storage fields.

In operation since 1942, our storage fields are made of porous rock formations, located up to two miles beneath the earth's surface, which once were natural reservoirs of oil and gas and are now used to store gas. These subterranean rock formations, which are natural underground traps, can be repeatedly refilled and drawn from to meet the changing needs of customers.

For example, when suppliers can't deliver enough natural gas to meet heavy demand (usually during the winter) we withdraw gas from our underground storage fields to supplement supplies. When gas usage drops (typically during the summer) we inject the surplus gas into underground reservoirs.

Of our total 122.1 billion cubic feet (Bcf) of storage capacity, 70 Bcf is used by our Core residential, small industrial and commercial customers. About 5 Bcf of space is used for system balancing. The remaining capacity is available for use by our large industrial customers to help balance and meet their gas supply requirements.

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Gas Company Facts

- The Gas Company is an energy delivery company. We make money on the delivery of natural gas through our pipeline system, not on the actual commodity of natural gas. Our commodity rates reflect the price we pay for natural gas on the open market.
- We serve more customers than any other gas utility in North America, delivering natural gas to 5.4 million residential and business customers.
- We operate the largest natural gas pipeline system in the U.S., with approximately 49,000 miles of transmission and distribution pipelines, and 46,000 miles of service pipelines.
- The cost of our gas service ranks among the lowest of 76 utilities across the nation.
- We buy natural gas only for our residential and small commercial and industrial customers (Core customers). Our gas purchases account for 30-40% of all the gas flowing through our system. The remaining 60-70% is purchased and owned by gas marketers and very large users, such as power plants and large manufacturing facilities.
- We operate under approximately 600 regulatory agencies. These include state, federal and local agencies.
- On average, our Call Center handles 30,000 phone calls per day. Our customer database is updated with each customer call.
- Our Field Service personnel complete an average of 4 million service visits to homes and businesses each year.
- With 5.4 million meters to read each month, our Meter Readers walk about 933,000 miles annually.
- Our total storage capacity is 122.1 billion cubic feet of gas. That's enough to meet the needs of our core residential and business customers for about 20 weeks during the non-winter months, or 13 weeks during the winter, before being depleted.

Facts About Natural Gas

The unique characteristics of natural gas are what make it such an inherently safe and convenient fuel for millions of homes and businesses across North America.'

- Like other fossil fuels, natural gas was formed millions of years ago as a result of decomposition of plant and animal matter. It is often found in association with oil.
- Natural gas, comprised primarily of methane (CH₄), is colorless and

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odorless. The Gas Company adds a distinctive "rotten egg" smell as a safety precaution prior to distributing the gas through its pipeline system.

- Natural gas is lighter than air. Natural gas, if allowed to escape freely into the atmosphere, will rise and dissipate quickly with no harm to the environment.
- Natural gas is the cleanest-burning fossil fuel. It will burn only at very specific concentrations of natural gas and air, and only when it come in contact with an ignition source.
- Natural gas fuels approximately 25% of the United States' energy needs.
- 55 million American households and more than one-third of the country's industrial energy needs are met by natural gas.



2004
California
Gas
Report

SOUTHERN CALIFORNIA

INTRODUCTION

Southern California Gas Company (SoCalGas) is the principal distributor of natural gas in southern California, providing retail and wholesale customers with procurement, transportation, exchange and storage services. SoCalGas is a gas-only utility and, in addition to serving the residential, commercial, and industrial markets, provides gas for enhanced oil recovery (EOR) and electric generation (EG) in southern California. San Diego Gas & Electric (SDG&E), Southwest Gas Corporation, and the City of Long Beach Energy Department are SoCalGas' three wholesale utility customers. Gas service at wholesale is expected to begin to the City of Vernon during the forecast period.

This report covers a 22-year forecast period, from 2004 through 2025; only the consecutive years 2004 through 2008 and the point years 2010, 2013, 2016, 2022 and 2025, however, are shown in the tabular data in the next sections. The single point forecasts are subject to uncertainty, but represents best estimates for the future, based upon the most current information available.

The Southern California section of the 2004 California Gas Report (CGR) begins with a discussion of the economic conditions and regulatory issues facing the utilities, followed by a discussion of the factors affecting gas demand in various market sectors. The outlook on gas supply availability, which continues to be favorable, is presented followed by a review of the peak day demand forecast. Summary tables and figures underlying the forecast are provided.

THE SOUTHERN CALIFORNIA ENVIRONMENT

Economics and Demographics

The gas demand projections are partly determined by the long-term economic outlook for the SoCalGas service territory. Southern California's economy enjoyed strong growth in the late 1990s before slowing from 2001 through 2003. After strong 2.7% growth in 2000, the area's non-farm jobs grew by a more modest 1.2% in 2001, then fell by 0.1% in 2002. After increasing by a slight 0.2% in 2003, the area's total non-farm employment should grow 1.1% in 2004 and surpass 7.8 million. Local industrial employment (manufacturing and mining) dropped by 4.8% in 2003 (about the same as the national average) and is expected to drop 0.1% in 2004—less severe than the expected drop of 1.6% across the U.S. However, after many years of declines, southern California's industrial jobs now stand nearly 30% below their 1989 peak of 1.3 million. Southern California's non-industrial employment is faring relatively better. In 2003, local commercial jobs (all jobs except industrial) saw 1.0% growth – slow, but much better than the anemic 0.3% national growth rate. In 2004, we expect local commercial jobs to grow by 1.3% – faster than the forecasted 1.1% U.S. growth rate.

From 2003 through 2008, service-area non-farm jobs should see 1.4% average annual growth. Beyond 2008, we expect the service area population's average age to gradually increase, part of a national demographic trend of aging "baby boomers". As the population ages and as more people retire, we expect employment to grow at slower rates. From 2008 through 2025, local non-farm job growth should average approximately 1.1% per year—with annual growth gradually slowing from 1.2% in 2008 to 1.0% by 2025. Area industrial jobs should grow very slowly, averaging about 0.6% per year from 2003 through 2025. We expect the industrial share of non-farm employment to fall from 11.9% in 2003 to 10.4% by 2025. Commercial jobs should average nearly 1.3% annual growth from 2003 through 2025.

Mainly as a result of growing numbers of residents, SoCalGas expects its active meters to increase an average of about 1.3% per year from 2003 to 2025 – nearly the same as the current growth rate in 2004.

Regulatory Environment

The past year witnessed numerous developments at both the California Public Utilities Commission (CPUC) and Federal Energy Regulatory Commission (FERC) designed to make the natural gas industry more responsive to the changing needs of the marketplace.

State Regulatory Matters

In April 2004, the Commission issued D.04-04-015 adopting tariffs implementing D.01-12-018, which adopted a comprehensive settlement agreement that modified the market and regulatory framework for regulating the transportation and storage of natural gas on SoCalGas' system. Once fully implemented, D.01-12-018 would provide new unbundled service offerings for transportation, storage, and balancing, while creating firm tradable rights for SoCalGas' 3875 MMcf/day of firm backbone transmission capacity. After a set aside for core customers, receipt point rights would be awarded through an open season ensuring customer access and preventing market concentration. However, while the Commission adopted D.04-04-015, it stayed the order pending the issuance of a decision in Phase I of Order Instituting Rulemaking (OIR) (R.) 04-01-025.

R.04-01-025 was issued in January 2004 to establish policies and rules to ensure reliable, long-term supplies of natural gas to California. This Gas Market OIR was predicated by recent reports, FERC orders, and ongoing changes in the natural gas market, which indicated that in the long-term, there may not be sufficient natural gas supplies and/or infrastructure to meet the requirements of all California residential and business consumers. The Gas Market OIR further seeks to address a broad range of supply issues to increase demand reduction efforts, ensure sufficient interstate pipeline capacity to serve California, maximize the utilization and benefits of storage facilities, and enable access of imported liquefied natural gas (LNG) supplies.

Each of the California natural gas public utilities are respondents to R.04-01-025, which was bifurcated into two phase; Phase 1 to address proposals regarding interstate capacity and LNG access. Phase 2 will address issues including emergency reserves, utility backstopping, and ratemaking policies. A decision in Phase 1 is expected by the Summer 2004, while a Phase 2 decision is expected by the end of the year. In opening R.04-01-025, the Commission concurrently noted that in R.01-08-028, it was addressing natural gas energy efficiency programs and how best to increase demand reduction efforts.

Federal Regulatory Matters

Over the past few years, SoCalGas has been actively participating in numerous FERC proceedings relative to interstate capacity serving California, including Docket No. RP00-336, which is reviewing the basis for assigning capacity and receipt point rights on the El Paso Natural Gas Company pipeline system. SoCalGas has been actively advocating the need for the El Paso system to be fully pathed to ensure that contract demand shippers receive a level of firm transportation service consistent with their costs and with the 1996 El Paso global settlement. The changes proposed by SoCalGas for the El Paso system are similar to those advocated by the California Public Utilities Commission and would increase the reliability and certainty of supply deliveries to California from El Paso.

In May 2002, the FERC found El Paso to be in violation of Section 5 of the Natural Gas Act and ordered El Paso to change its current capacity allocation system because Contract Demand shippers, including SoCalGas, SDG&E and other California shippers, have not been getting the level of firm gas transportation service that they have been paying for since the 1996 El Paso global settlement. The FERC further ordered El Paso to convert Full Requirement contracts to Contract Demand contracts by November 1, 2002. The November 1, 2002 deadline was later delayed until May 1, 2003.

GAS DEMAND (REQUIREMENTS)

Overview

SoCalGas expects continued growth in the residential market, as well as, in associated service-oriented businesses in the commercial market. These markets, along with small- and medium-sized industrial customers, comprise the core market. The remaining large customers make up the noncore market.

The following table compares the composition of SoCalGas' throughput for recorded year 2003 and forecast year 2025.

**Composition of SoCalGas Throughput – Bcf
(Average Temperature Year)**

	2003	2025	Change
Residential	249	303	22%
Core Non-Residential	100	123	23%
Noncore C&I	150	127	-15%
EOR-Steaming	15	7	-53%
Electric Generation	288	189	-34%
Wholesale	135	173	28%
Other	21	24	14%
TOTAL	958	946	-1%

Notes:

- 1) "Core Non-Residential includes Natural Gas Vehicle (NGV) throughput.
- 2) "Other" includes International (Mexicali) throughput and Lost and Unaccounted for Gas (L&UAF) + Company-Use gas.

Residential, core non-residential, and wholesale requirements are expected to increase as southern California's economy continues through a gradual economic expansion. Requirements for EOR steaming operations, which have declined since the Kern/Mojave pipeline began offering direct service to California customers in 1992, are expected to continue to decline. The EG market is also expected to continue to decline from the unusually high level witnessed in 2001. Lastly, noncore commercial/industrial markets are expected to decline offsetting the expected growth from the core and wholesale markets.

MARKET SENSITIVITY

Temperature

Core demand forecasts are prepared for two design temperature conditions – average and cold – to quantify changes in space heating demand due to weather. Temperature variations can cause significant changes in winter gas demand due to space heating in the residential, core commercial and industrial markets. The largest demand variations due to temperature occur in the month of December. Degree-day differences between the three conditions are developed from a six-zone temperature monitoring procedure within SoCalGas' service territory. The cold design temperature conditions are based on a statistical recurrence factor of 1-in-35 years.

Pipeline Bypass

In 1992 Kern/Mojave Pipeline began California operations, which resulted in the bypass of local gas distribution systems. Aggregate bypass volumes were at 182 Bcf in 2003, and bypass to the Kern/Mojave mainline is expected to grow gradually to 342 Bcf per year by 2008, and crest at 373 Bcf in 2013, before a gradual decline.

By 2009, several long-term EOR customer transportation contracts will expire and bypass is expected to increase to 167 Bcf by the year 2016. Beyond 2016, bypass load is anticipated to decline slowly as total gas usage in the EOR market declines.

The California market continues to attract natural gas pipeline projects and expansions. Kern River Pipeline's 282 MMcfd High Desert Lateral was placed into service in 2002, and the 906 MMcfd mainline expansion to California was completed in 2003. Questar placed the Southern Trails Pipeline eastern segment into service in 2002, bringing 80 MMcfd of interstate transportation to California. The western leg of the Southern Trails Pipeline, within California, is not in service to date. In 2003, the FERC extended Southern Trail's construction certificate until mid-2005. However, Questar Corporation's 2003 Annual Report states Southern Trails still hopes to either sign transportation contracts, or sell the pipeline in 2004. Customer usage of the Southern Trails Pipeline is assumed to begin in 2006 and is forecast at 11 Bcf, increasing to 21 Bcf through the forecast period.

There are electric generating plants in operation within SoCalGas' service territory that take their gas transportation service from other providers. These off-system plants, which have never been serviced by SoCalGas, have a forecasted demand of 147 Bcf in 2004, gradually increasing to 179 Bcf by 2013, after which a slow decline is anticipated.

Market Sectors

Residential

Residential demand adjusted for temperature increased to 249.0 Bcf in 2003 from 245.0 Bcf in 2002. Unadjusted residential demand was 245.3 Bcf in 2003, 1.5% less than temperature adjusted demand primarily because of warmer than normal weather conditions in southern California.

Active residential meters averaged 4.99 million in 2003, an increase of 61,356 (or 1.3%) from the 2002 average. From 2003 through 2025, active residential meters are expected to grow at an average annual rate of 1.3%, reaching 6.71 million by 2025.

Residential demand is projected to grow from 249.0 Bcf in 2003 to 303.5 Bcf in 2025, an increase of 2.5 Bcf per year. This forecast reflects the savings from SoCalGas' Energy Efficiency program.

Commercial

On a temperature-adjusted basis, core commercial market demand in 2003 totaled 73.4 Bcf, up 0.1 Bcf (about 0.1%) from 2002. This increase is largely the result of slowly improving economic conditions in southern California. On average, core commercial market demand is forecast to increase about 0.7% per year, over the next 21 years, reaching 84.5 Bcf in 2025.

Noncore Commercial demand is forecast to be 21.3 Bcf in 2004, a slight decrease of about 0.9 Bcf from 2003 usage. After year 2004, noncore commercial demand is expected to decrease to 20.4 Bcf in 2007 primarily due to the Vernon retail load switching to wholesale service. After 2007, the noncore commercial demand is expected to grow gradually to 22.3 Bcf in 2025. The growth is primarily due to the increase in the commercial economic activity.

Industrial

In 2003, temperature-adjusted core industrial demand was 21.0 Bcf, an increase of 0.5 Bcf (about 2%) over 2002 deliveries. Core industrial market demand is projected to increase by approximately 0.7% per year from 21.1 Bcf in 2004 to about 24.3 Bcf in 2025. This increase in gas demand results from a combination of a slightly higher forecasted growth in industrial production and lower growth in marginal gas rates, tempered by the use of more energy-efficient gas equipment in the industrial sector.

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Retail noncore industrial deliveries are forecast to decline to 60.4 Bcf in 2004 compared to 61.8 Bcf in 2003. The forecast demand is expected to continue its decrease from 60.4 Bcf in 2004 to 56.6 Bcf in 2007. The decrease is primarily due to the reclassification of Vernon retail load to wholesale service starting April 2005 and the expected noncore to core customer migration. After 2007, noncore industrial demand is forecast to increase slightly to 58.4 Bcf in 2025 due to an expected increase in service area industrial employment forecast.

Refinery industrial demand is comprised of gas consumption by petroleum refining customers, hydrogen producers and petroleum refined product transporters. Refinery gas demand is forecast to decline 1.0% per year, from 64 Bcf in 2003 to 49 Bcf in 2025. This decrease is mainly due to refiners' using alternate fuels such as pentane and butane during summer months where natural gas prices are forecasted to be less competitive than the alternate fuel prices. The forecast increase of pentane fuel switching is caused by new gasoline quality regulations that require refineries to replace MTBE gasoline additives with ethanol. To accommodate ethanol blending, refineries will need to remove volatile gasoline components, such as pentanes, from the refining process. This change in process will make more pentane available to refineries for internal use thereby displacing natural gas usage in the refinery processes.

Migration of Commercial and Industrial Load: Noncore to Core

As a result of continuing natural gas price volatility, and continuing financial weakness in the contracted gas procurement marketplace, some noncore (G-30) commercial and industrial demand has been migrating to core (G-10) commercial and industrial service. SoCalGas also eliminated its core subscription program in 2003 as reflected in D.01-12-018 and most of these customers have transferred to core service in 2003. For calendar year 2005 and 2006 this transfer from noncore to core service is forecast to be 1.0 Bcf and 1.3 Bcf, respectively.

Electric Generation

This sector includes the following markets: all commercial/industrial cogeneration, EOR-related cogeneration, and non-cogeneration EG. It should be noted that the forecasts of EG-related load are subject to a higher degree of uncertainty associated with the continued operation of existing generation facilities, the timing and location of construction of new facilities in the Western United States, and regulatory and market decisions that impact the operation of existing qualifying facilities (QF) facilities and other EG plants, including the construction of additional electric transmission transfer capacity.

Industrial/Commercial/Cogeneration <20MW

The commercial/industrial cogeneration segment is generally made up of customers generating less than 20 MW of electric power. Most of the cogeneration units in this segment are installed primarily to generate electricity for internal customer consumption rather than for the sale of power to electric utilities. In 2003, recorded gas deliveries to this market were 16.7 Bcf, an increase of 2.9 Bcf from 2002 deliveries of 13.7 Bcf. Commercial/industrial cogeneration demand is projected to hold steady at around 16.7 Bcf annually for the next 20 years.

Industrial/Commercial Cogeneration (>20 MW)

Commercial/industrial cogeneration greater than 20 MW gas demand is forecast to decline 43%, from 54 Bcf in 2004 to 31 Bcf in 2007. The forecast is based on a power market simulation for the period to 2025 and thus reflects the anticipated dispatch of these resources under the forecast market conditions, in addition to receiving contract capacity payments. In addition, some customers are expected to select alternate service providers. The forecast remains at 31 Bcf per year from 2007 to 2025.

Refinery-Related Cogeneration

Refinery cogeneration units are installed primarily to generate electricity for internal use. Refinery-related cogeneration is forecast to decline 1.5% per year, from 18 Bcf in 2003 to 13 Bcf in 2025. This gas demand decrease is mainly due to the increased use of alternative fuels, such as pentane and butane, during summer months when gas prices are less competitive with alternate fuels.

EOR-Related Cogeneration

In 2003, recorded gas deliveries to the EOR-related cogeneration market were 17.7 Bcf, a decrease of 5.4 Bcf from 2002. This decrease was mainly due to increased bypass to the Kern River/Mojave Pipeline and increased usage of customer owned field gas. EOR-related cogeneration demand is expected to further decrease to 14.6 Bcf in 2004 and will remain at that level until 2008 when usage will start to drop due to the expiration of several EOR long-term gas transportation contracts. Demand is forecast to level off in 2010 at 3.7 Bcf and remain at that level for the remainder of the forecast period.

Non-Cogeneration Electric Generation

SoCalGas forecasts a decline in retail non-cogeneration EG gas requirements of 23%, from 113 Bcf in 2004 to 87 Bcf in 2005. The 2004 forecast is based on below normal hydro conditions and the derating due to planned maintenance of the Pacific DC-Intertie, a transmission line from Oregon to southern California. The decline in gas use in 2005 is a result of average hydro conditions and normal operation of the Pacific DC-Intertie. SoCalGas forecasts an increase in retail non-cogeneration EG gas requirements of 1.6% per year, from 87 Bcf in 2005 to 124 Bcf in 2025. The forecast for SoCalGas' EG customers is based on a power market simulation.

SoCalGas' forecast includes the construction of approximately 26,500 MW from 2003 to 2008 of new thermal resources' capacity. Of that total, 17,800 MW are currently in operation, and 8,600 MW are under construction. Only 3,000 MW are to be served directly by SoCalGas. Throughout the entire planning period, SoCalGas assumes that market participants construct additional generation resources such that the WECC maintains a minimum planning reserve margin of 15%. For electric demand within California, SoCalGas used the California Energy Commission's (CEC) end-use electric demand forecast. Based on the CEC Staff's recommendation, the aggressive Demand Side Reduction scenario from CEC's 2003 Integrated Energy Policy report was used. Since natural gas is generally the marginal fuel, EG demand could be significantly higher should actual electric demand be higher than this forecast. For electric end-use demand outside of California, SoCalGas used Henwood Energy's electric demand forecast.

SoCalGas performed two special hydro sensitivities. Due to the displacement of generation by off-system resources, the impact of significant hydro conditions had little impact on gas demand. A dry hydro year, as defined by the CEC, increased demand on average for the forecast period by 26 Bcf. A wet hydro year, as defined by the CEC, decreased demand on average for the forecast period by 8 Bcf.

Enhanced Oil Recovery – Steam

Recorded deliveries to the EOR steaming market in 2003 were 15.2 Bcf, an increase of 0.9 Bcf from 2002. This increase was due to more production as a result of higher crude oil prices. SoCalGas' EOR steaming demand is expected to remain stable at 11.8 Bcf from 2004 until 2008 when SoCalGas' EOR long-term gas transportation contracts terminate in late 2008. From 2009 through the end of the forecast period, usage is expected to be approximately 6.7 Bcf. These figures include gas delivered to PG&E's EOR customers through interutility exchange. In 2003, 0.01 Bcf of gas was delivered to PG&E through such arrangements. No change in demand is expected in that market. The EOR-related cogeneration demand is discussed in the Electric Generation sector.

Crude oil prices are not expected to reach a level that would initiate any major expansion in EOR operations during the forecast period. As a result, EOR production is expected to gradually decline by approximately 1.5% percent per year. In addition, oil producers will rely increasingly on the interstate pipelines in California to supplant traditional supply sources, such as own source gas and SoCalGas' transportation system.

Mexicali

SoCalGas used the forecast prepared by Ecogas, Mexicali, for this report. Mexicali's use is expected to increase from 4 Bcf at an average rate of 2.2% per year to 6.6 Bcf in 2025.

Wholesale

The forecast of wholesale gas demand includes transportation to SDG&E, the City of Long Beach Electric and Gas Department (Long Beach), Southwest Gas Corporation (SWG), and the City of Vernon (Vernon).

The non-electric generation (EG) gas demand forecast for SDG&E incorporates the long-term gas demand forecast prepared by SDG&E for this report. Under average temperature conditions, total non-EG requirements for SDG&E are expected to increase from 53 Bcf in 2004 at an average growth rate of 1.2% per year to 69 Bcf in 2025.

The forecast of the large EG loads in SDG&E's area is based on the power market simulation as noted in the Electric Generation chapter for "non-cogeneration EG" demand. EG-related load is subject to a higher degree of uncertainty associated with the continued operation of existing generation facilities and the construction of new facilities. SDG&E's cogeneration and non-cogeneration EG requirements are expected to decrease from 61 Bcf in 2004 to 38 Bcf in 2005. The 2004 forecast is based on below normal hydro conditions and the derating due to planned maintenance of the Pacific DC-Intertie, a transmission line from Oregon to southern California. The decline in gas use in 2005 is a result of average hydro conditions and normal operation of the Pacific DC-Intertie. SoCalGas forecasts an increase in SDG&E's cogeneration and non-cogeneration EG gas requirements of 3% per year, from 38 Bcf in 2005 to 74 Bcf in 2025 driven primarily by the addition of new resources. The cogeneration EG demand forecast is based on the long-term demand forecast prepared by SDG&E for this report. The same assumptions used for the retail non-cogeneration EG demand were used for the wholesale non-cogeneration EG demand.

SoCalGas performed two special hydro sensitivity analyses. Due to the displacement of generation by off-system resources, the impact of significant hydro conditions had little impact on gas demand. A dry hydro year, as defined by the CEC, increased demand on average for the forecast period by 26 Bcf. A wet year, as defined by the CEC, decreased demand on average for the forecast period by 8 Bcf.

For the City of Long Beach, SoCalGas used the forecast prepared by Long Beach for this report. Long Beach's usage is expected to decrease gradually from 12.3 Bcf in 2004 to 12.2 Bcf in 2025. Long Beach's local deliveries are expected to stay steady at 1.2 Bcf/year. SoCalGas' transportation to Long Beach is expected to decrease from 11.1 Bcf to 11 Bcf in 2025.

The demand forecast for SWG is based on a long-term demand forecast prepared by Southwest Gas. In 2004, SoCalGas will serve approximately 6.5 Bcf directly, with another 3.8 Bcf being served by PG&E under exchange arrangements with SoCalGas. The direct service load is expected to grow by 1.5% per year from 6.5 Bcf in 2004 to approximately 8.9 Bcf in 2025.

The wholesale forecast assumes Vernon initiates municipal gas service to a portion of the existing SoCalGas retail customers within the City's jurisdiction in April, 2005. The forecasted throughput starts at 5 Bcf in 2005 and grows to 10 Bcf by 2025. The throughput forecast for the EG customers is based on a power market simulation.

Natural Gas Vehicles (NGV)

At the end of 2003, there were 179 fueling stations serving approximately 13,400 vehicles that consumed 5.9 Bcf of compressed natural gas (CNG) for the year. SoCalGas remains optimistic about the NGV market growth, forecasting an increase in demand to 10.8 Bcf in 2015 and 14.1 Bcf in 2025. The growth is being propelled by the private and public sectors, with customer support from SoCalGas' LEV program.

ENERGY EFFICIENCY PROGRAMS

The cumulative net Energy Efficiency load impact forecast for selected years is provided in **Table 1**. The net load impact includes all Energy Efficiency programs that SoCalGas forecasted to implement in the years 2004 through 2025. Savings and goals for these programs are based on the program goals authorized by the Commission in D.03-12-060 and D.04-02-059.

Conservation and energy efficiency activities encourage customers to install energy efficient equipment and weatherization measures and adopt energy saving practices that result in reduced gas usage for a comparable level of service. Conservation and energy efficiency load impacts are shown as positive numbers. The "total net load impact" is the natural gas throughput reduction resulting from SoCalGas' Energy Efficiency programs.

Savings reported are for measures installed under SoCalGas' Energy Efficiency programs. Credit is only taken for measures that are installed as a result of SoCalGas' Energy Efficiency programs, and only for the measure lives of the measures installed. Measures with lives less than the forecast planning period fall out of the forecast when their expected life is reached. This means, for example, that a measure installed in 2004 with a lifetime of 10 years is only included in the forecast through 2013. Naturally occurring conservation that is not attributable to SoCalGas' Energy Efficiency activities is not included in the Energy Efficiency forecast.

Table 1. Energy Efficiency Load Impact Forecast for Selected Years (MMcf)

	2004	2005	2006	2007	2008	2010	2013	2016	2020	2025
Core Commercial	771	1,037	1,303	1,569	1,375	1,372	1,364	1,103	797	285
Core Industrial	340	455	569	684	617	522	421	355	327	97
Core Residential	456	650	845	1,040	1,030	1,011	983	596	230	47
Total Net Load Impacts	1,566	2,142	2,717	3,293	3,022	2,904	2,767	2,054	1,354	429

Notes:

1. Energy Efficiency load impacts include 2003 program savings, but do not include pre-2003 program savings.
2. "Hard" impacts include measures requiring a physical equipment modification or replacement.
3. SoCalGas did not include "soft" impacts, e.g., energy management services type measures, consistent with its Program Year 2004-2005 Program Application filed on September 23, 2003.

CAPACITY, SOURCES, AND STORAGE

Interstate Pipeline Capacity

Southern California continues to operate in an environment of interstate pipeline capacity in excess of anticipated demand. Interstate pipeline delivery capability into southern California is over 4,000 MMcf/day, with approximately 3,230 MMcf/day available directly to SoCalGas customers (the remaining interstate capacity serves local distribution company bypass customers). These pipeline systems provide access to several large supply basins, located in: New Mexico (San Juan Basin), West Texas (Permian Basin), Rocky Mountains and Western Canada. The interstate pipeline systems, along with local California gas supplies, deliver gas to most southern California customers through SoCalGas.

SoCalGas currently has firm receipt capacity at the following locations for its customers to access supply and interstate pipelines.

Interstate and Local Volumes MMcf/day

Current Firm Capacity	
El Paso at Blythe	1,210
El Paso at Topock	540
North Needles (Transwestern, Questar Southern Trails)	800
Hector Road (Mojave)	50
Wheeler Ridge (PG&E, Kern/Mojave, CA Production)	765
Line 85 (CA Production)	190
North Coastal (CA Production)	120
Kramer Junction (Kern/Mojave)	200
Total Firm Supply Access	3,875

Gas Supply Sources

Southern California receives gas supplies from several sedimentary basins in the western United States and Canada.

California Gas

Gas supply available to SoCalGas from California sources (state onshore plus state/federal offshore supplies) was about 400 MMcf/day in 2003.

Southwestern U.S. Gas

Traditional Southwestern U.S. sources of natural gas, especially from the San Juan Basin, will continue to supply most of southern California's natural gas demand. This gas is delivered via the El Paso Natural Gas Company and Transwestern Pipeline Company pipelines. The San Juan Basin's conventionally produced gas supplies have increased since 1991 and are expected to meet southern California's gas demand. Permian basin gas also provides an additional source of supply into California.

Rocky Mountain Gas

Rocky Mountain supply presents a viable alternative to traditional Southwestern U.S. gas sources for Southern California. This gas is delivered to southern California primarily on the Kern River Gas Transmission Company's pipeline, although there is also access through the San Juan Basin. In recent years, Rocky Mountain gas has increasingly flowed to Midwestern and Pacific Northwest Markets.

Canadian Gas

SoCalGas anticipates that the role of Canadian gas in meeting southern California's demand during the forecast period will decline. New pipeline capacity out of western Canada to the Midwest and eastern United States are likely to move Canadian gas away from California. Increased gas deliveries from the Permian Basin to California are expected to replace these supplies.

Liquefied Natural Gas (LNG)

SoCalGas anticipates that LNG may be a significant source of gas supply to the U.S. by 2008. Although there is substantial uncertainty associated with the successful citing of the regasification facilities to deliver LNG, approximately 800 MMcf/day of such capacity is included in our forecast tables.

RETAIL CORE PEAK DAY DEMAND

SoCalGas plans and designs its system to provide continuous service to its core customers under an extreme peak day event. The extreme peak day design criteria is defined as in a 1-in-35 year event; this correlates to a system average temperature of 38 degrees Fahrenheit. Demand on an extreme peak day is met through a combination of withdrawals from underground storage facilities and flowing pipeline supplies. The following table provides an illustration of how storage and flowing supplies can meet the growth in forecasted retail core peak day demand.

Retail Core Peak Day Demand and Supply Requirements (MMCF/day)

	2004	2005	2010	2015
Retail Core Demand	3,119	3,137	3,244	3,392
Firm Storage Withdrawal	1,935	1,935	2,001	2,092
Required Flowing Supplies	1,184	1,202	1,243	1,299

Notes:

Firm withdrawal and flowing supply requirements are shown to increase proportionally with demand growth beginning in 2006 and afterwards. Firm withdrawal plus firm pipeline supplies must be sufficient to meet peak day operating requirements.

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Report

***SOUTHERN CALIFORNIA GAS COMPANY
TABULAR DATA***

SOUTHERN CALIFORNIA GAS COMPANY

ANNUAL GAS SUPPLY AND SENDOUT - MMCF/DAY RECORDED YEARS 1999 TO 2003

Line	CAPACITY AVAILABLE	1999	2000	2001	2002	2003
1	California Source Gas					
	Out-of-State Gas					
2	California Offshore -POPCO / PIOC					
3	El Paso Natural Gas Co.					
4	Transwestern Pipeline Co.					
5	Kern / Mojave					
6	PGT / PG&E					
7	Other					
8	Total Out-of-State Gas					
9	TOTAL CAPACITY AVAILABLE					
	GAS SUPPLY TAKEN					
10	California Source Gas	271	386	388	300	241
	Out-of-State Gas					
11	Pacific Interstate Companies	111	0	0	0	0
12	Other Out-of-State	2,412	2,689	2,907	2,488	2,378
13	Total Out-of-State Gas	2,523	2,689	2,907	2,488	2,378
14	TOTAL SUPPLY TAKEN	2,794	3,075	3,295	2,788	2,619
15	Net Underground Storage Withdrawal	6	78	(70)	11	(11)
16	TOTAL THROUGHPUT (1)(2)	2,800	3,153	3,225	2,799	2,608
	ACTUAL DELIVERIES BY END-USE (3)					
17	Core Residential	761	694	724	707	666
18	Commercial	197	199	205	205	200
19	Industrial	54	56	57	57	57
20	NGV	6	9	12	15	15
21	Subtotal	1,018	957	998	984	938
22	Noncore Commercial	71	71	61	65	65
23	Industrial	377	392	338	368	346
24	EOR Steaming	25	33	29	39	42
25	Electric Generation	856	1,199	1,257	869	789
26	Subtotal	1,329	1,695	1,685	1,342	1,242
27	Wholesale Residential	134	120	116	106	113
28	Com/Ind & Others	87	84	77	75	84
29	Electric Generation	181	231	276	234	172
30	Subtotal	402	435	469	415	369
31	International DGN	11	11	6	10	8
32	Co. Use & LUAF	40	55	66	48	51
33	SYSTEM TOTAL-THROUGHPUT (1)	2,800	3,153	3,225	2,799	2,608
	TRANSPORTATION AND EXCHANGE					
34	Core All End Uses	42	42	26	14	10
35	Noncore Commercial/Industrial	439	457	393	427	403
36	EOR Steaming	25	33	29	39	42
37	Electric Generation	855	1,197	1,255	869	788
38	Subtotal-Retail	1,361	1,729	1,703	1,348	1,243
39	Wholesale All End Uses	402	435	469	415	369
40	International DGN	11	11	6	10	8
41	TOTAL TRANSPORTATION & EXCHANGE	1,774	2,175	2,178	1,773	1,620
	CURTAILMENT (RETAIL & WHOLESALE)					
42	Core	0	0	0	0	0
43	Noncore	0	0	0	0	0
44	TOTAL - Curtailment	0	0	0	0	0
45	REFUSAL	0	0	0	0	0

NOTES:

(1) Figures exclude pipeline bypass load losses due to non-jurisdictional gas suppliers.

(2) Exclude own-source gas supply of procurement by City of Long Beach.

(3) Actual deliveries by end-use includes sales, transportation, and exchange volumes.

SOUTHERN CALIFORNIA GAS COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY ESTIMATED YEARS 2004 THRU 2008

AVERAGE TEMPERATURE YEAR

LINE	FIRM CAPACITY AVAILABLE	2004	2005	2006	2007	2008	LINE
1	California Source Gas	310	310	310	310	310	1
	Out-of-State Gas						
2	Mojave (Hector Road)	50	50	50	50	50	2
3	El Paso Natural Gas Co. (Blythe)	1,210	1,210	1,210	1,210	1,210	3
4	El Paso Natural Gas Co. (Topock)	540	540	540	540	540	4
5	Transwestern Pipeline Co. (No. Needles)	800	800	800	800	800	5
6	Kern-Mojave, PG&E, Oxy (Wheeler Ridge)	765	765	765	765	765	6
7	Kern-Mojave (Kramer Junction)	200	200	200	200	200	7
8	LNG Capacity 4/	0	0	0	0	800	8
9	Total Out-of-State Gas	3,565	3,565	3,565	3,565	4,365	9
10	TOTAL CAPACITY AVAILABLE /1	3,875	3,875	3,875	3,875	4,675	10
	GAS SUPPLY TAKEN						
11	California Source Gas	310	310	310	310	310	11
12	Out-of-State	2,046	1,912	1,980	1,996	2,041	12
13	TOTAL SUPPLY TAKEN	2,356	2,222	2,290	2,306	2,351	13
14	Net Underground Storage Withdrawal	0	0	0	0	0	14
15	TOTAL THROUGHPUT 1/, 2/	2,356	2,222	2,290	2,306	2,351	15
	REQUIREMENTS FORECAST BY END-USE 3/						
16	CORE Residential	687	693	697	697	702	16
17	Commercial	200	202	204	204	206	17
18	Industrial	58	59	59	59	59	18
19	NGV	18	20	22	24	24	19
20	Subtotal-CORE	963	974	982	984	991	20
21	NONCORE Commercial	57	55	55	55	55	21
22	Industrial	302	282	280	280	280	22
23	EOR Steaming	33	33	33	33	28	23
24	Electric Generation (EG)	577	500	517	506	508	24
25	Subtotal-NONCORE	969	870	885	874	871	25
26	WHOLESALE Core	175	179	184	186	180	26
27	Noncore Excl. EG	27	36	42	42	42	27
28	Electric Generation (EG)	167	109	142	164	209	28
29	Subtotal-WHOLESALE	369	324	368	392	431	29
30	INTERNATIONAL DGN (Mexicali)	11	12	12	13	14	30
31	Co. Use & LUAF	44	42	43	43	44	31
32	SYSTEM TOTAL THROUGHPUT /1	2,356	2,222	2,290	2,306	2,351	32
	TRANSPORTATION AND EXCHANGE						
33	CORE All End Uses	9	9	9	9	9	33
34	NONCORE Commercial/Industrial	358	338	334	335	335	34
35	EOR Steaming	33	33	33	33	28	35
36	Electric Generation (EG)	577	500	517	506	508	36
37	Subtotal-RETAIL	977	880	893	883	880	37
38	WHOLESALE All End Uses	369	324	368	392	431	38
39	INTERNATIONAL All End Uses	11	12	12	13	14	39
40	TOTAL TRANSPORTATION & EXCHANGE	1,357	1,216	1,273	1,288	1,325	40
	CURTAILMENT (RETAIL & WHOLESALE)						
41	Core	0	0	0	0	0	41
42	Noncore	0	0	0	0	0	42
43	TOTAL - Curtailment	0	0	0	0	0	43

NOTES:

1/ Figures exclude pipeline bypass load losses of to non-jurisdictional gas suppliers.

2/ Excludes own-source gas supply of gas procurement by the City of Long Beach

3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.

4/ Liquefied Natural Gas delivery capacity assumed to be available in 2008.

SOUTHERN CALIFORNIA GAS COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY ESTIMATED YEARS 2010 THRU 2025

AVERAGE TEMPERATURE YEAR

LINE	FIRM CAPACITY AVAILABLE	2010	2013	2016	2020	2025	LINE
1	California Source Gas	310	310	310	310	310	1
	<u>Out-of-State Gas</u>						
2	Mojave (Hector Road)	50	50	50	50	50	2
3	El Paso Natural Gas Co. (Blythe)	1,210	1,210	1,210	1,210	1,210	3
4	El Paso Natural Gas Co. (Topock)	540	540	540	540	540	4
5	Transwestern Pipeline Co. (No. Needles)	800	800	800	800	800	5
6	Kern-Mojave, PG&E, Oxy (Wheeler Ridge)	765	765	765	765	765	6
7	Kern-Mojave (Kramer Junction)	200	200	200	200	200	7
8	LNG Capacity 4/	800	800	800	800	800	8
9	Total Out-of-State Gas	4,365	4,365	4,365	4,365	4,365	9
10	TOTAL CAPACITY AVAILABLE 1/	4,675	4,675	4,675	4,675	4,675	10
	<u>GAS SUPPLY TAKEN</u>						
11	California Source Gas	310	310	310	310	310	11
12	Out-of-State	1,963	2,027	2,055	2,136	2,284	12
13	TOTAL SUPPLY TAKEN	2,273	2,337	2,365	2,446	2,594	13
14	Net Underground Storage Withdrawal	0	0	0	0	0	14
15	TOTAL THROUGHPUT 1/, 2/	2,273	2,337	2,365	2,446	2,594	15
	<u>REQUIREMENTS FORECAST BY END-USE 3/</u>						
16	CORE Residential	718	741	760	790	830	16
17	Commercial	209	213	217	223	231	17
18	Industrial	60	61	62	63	67	18
19	NGV	26	28	30	33	38	19
20	Subtotal-CORE	1,013	1,043	1,069	1,109	1,166	20
21	NONCORE Commercial	56	57	57	58	59	21
22	Industrial	282	285	285	287	290	22
23	EOR Steaming	19	19	19	19	19	23
24	Electric Generation (EG)	413	433	431	458	519	24
25	Subtotal-NONCORE	770	794	792	822	887	25
26	WHOLESALE Core	182	188	195	204	217	26
27	Noncore Excl. EG	42	42	43	43	44	27
28	Electric Generation (EG)	209	211	206	205	213	28
29	Subtotal-WHOLESALE	433	441	444	452	474	29
30	INTERNATIONAL DGN (Mexcall)	14	15	16	17	18	30
31	Co. Use & LUAF	43	44	44	46	49	31
32	SYSTEM TOTAL THROUGHPUT 1/	2,273	2,337	2,365	2,446	2,594	32
	<u>TRANSPORTATION AND EXCHANGE</u>						
33	CORE All End Uses	9	9	9	10	10	33
34	NONCORE Commercial/Industrial	338	341	342	345	350	34
35	EOR Steaming	19	19	19	19	19	35
36	Electric Generation (EG)	413	433	431	458	519	36
37	Subtotal-RETAIL	779	802	801	832	898	37
38	WHOLESALE All End Uses	433	441	444	452	474	38
39	INTERNATIONAL All End Uses	14	15	16	17	18	39
40	TOTAL TRANSPORTATION & EXCHANGE	1,226	1,258	1,261	1,301	1,390	40
	<u>CURTAILMENT (RETAIL & WHOLESALE)</u>						
41	Core	0	0	0	0	0	41
42	Noncore	0	0	0	0	0	42
43	TOTAL - Curtailment	0	0	0	0	0	43

NOTES:

1/ Figures exclude pipeline bypass load losses of to non-jurisdictional gas suppliers.

2/ Excludes own-source gas supply of gas procurement by the City of Long Beach

3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.

4/ Liquefied Natural Gas delivery capacity assumed to be available in 2008.

SOUTHERN CALIFORNIA GAS COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY ESTIMATED YEARS 2004 THRU 2008

COLD TEMPERATURE YEAR

LINE	FIRM CAPACITY AVAILABLE	2004	2005	2006	2007	2008	LINE
1	California Source Gas	310	310	310	310	310	1
	Out-of-State Gas						
2	Mojave (Hector Road)	50	50	50	50	50	2
3	El Paso Natural Gas Co. (Blythe)	1,210	1,210	1,210	1,210	1,210	3
4	El Paso Natural Gas Co. (Topock)	540	540	540	540	540	4
5	Transwestern Pipeline Co. (No. Needles)	800	800	800	800	800	5
6	Kern-Mojave, PG&E, Oxy (Wheeler Ridge)	765	765	765	765	765	6
7	Kern-Mojave (Kramer Junction)	200	200	200	200	200	7
8	LNG Capacity 4/	0	0	0	0	800	8
9	Total Out-of-State Gas	3,565	3,565	3,565	3,565	4,365	9
10	TOTAL CAPACITY AVAILABLE 1/	3,875	3,875	3,875	3,875	4,675	10
	GAS SUPPLY TAKEN						
11	California Source Gas	310	310	310	310	310	11
12	Out-of-State	2,143	2,011	2,079	2,098	2,141	12
13	TOTAL SUPPLY TAKEN	2,453	2,321	2,389	2,408	2,451	13
14	Net Underground Storage Withdrawal	0	0	0	0	0	14
15	TOTAL THROUGHPUT 1/, 2/	2,453	2,321	2,389	2,408	2,451	15
	REQUIREMENTS FORECAST BY END-USE 3/						
16	CORE Residential	756	762	767	768	773	16
17	Commercial	210	213	214	215	216	17
18	Industrial	59	60	60	60	60	18
19	NGV	18	20	22	24	24	19
20	Subtotal-CORE	1,043	1,055	1,063	1,067	1,073	20
21	NONCORE Commercial	57	55	55	55	55	21
22	Industrial	302	282	280	280	280	22
23	EOR Steaming	33	33	33	33	28	23
24	Electric Generation (EG)	577	500	517	506	508	24
25	Subtotal-NONCORE	969	870	885	874	871	25
26	WHOLESALE Core	190	195	200	203	196	26
27	Noncore Excl. EG	27	36	42	42	42	27
28	Electric Generation (EG)	167	109	142	164	209	28
29	Subtotal-WHOLESALE	384	340	384	409	447	29
30	INTERNATIONAL DGN (Mexicali)	11	12	12	13	14	30
31	Co. Use & LUAF	46	44	45	45	46	31
32	SYSTEM TOTAL THROUGHPUT 1/	2,453	2,321	2,389	2,408	2,451	32
	TRANSPORTATION AND EXCHANGE						
33	CORE All End Uses	9	9	9	9	9	33
34	NONCORE Commercial/Industrial	358	338	334	335	335	34
35	EOR Steaming	33	33	33	33	28	35
36	Electric Generation (EG)	577	500	517	506	508	36
37	Subtotal-RETAIL	977	880	893	883	880	37
38	WHOLESALE All End Uses	384	340	384	409	447	38
39	INTERNATIONAL All End Uses	11	12	12	13	14	39
40	TOTAL TRANSPORTATION & EXCHANGE	1,372	1,232	1,289	1,305	1,341	40
	CURTAILMENT (RETAIL & WHOLESALE)						
41	Core	0	0	0	0	0	41
42	Noncore	0	0	0	0	0	42
43	TOTAL - Curtailment	0	0	0	0	0	43

NOTES:

1/ Figures exclude pipeline bypass load losses of to non-jurisdictional gas suppliers.

2/ Excludes own-source gas supply of gas procurement by the City of Long Beach

3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.

4/ Liquefied Natural Gas delivery capacity assumed to be available in 2008.

SOUTHERN CALIFORNIA GAS COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY ESTIMATED YEARS 2010 THRU 2025

COLD TEMPERATURE YEAR

LINE	FIRM CAPACITY AVAILABLE	2010	2013	2016	2020	2025	LINE
1	California Source Gas	310	310	310	310	310	1
	<u>Out-of-State Gas</u>						
2	Mojave (Hector Road)	50	50	50	50	50	2
3	El Paso Natural Gas Co. (Blythe)	1,210	1,210	1,210	1,210	1,210	3
4	El Paso Natural Gas Co. (Topock)	540	540	540	540	540	4
5	Transwestern Pipeline Co. (No. Needles)	800	800	800	800	800	5
6	Kern-Mojave, PG&E, Oxy (Wheeler Ridge)	765	765	765	765	765	6
7	Kern-Mojave (Kramer Junction)	200	200	200	200	200	7
8	LNG Capacity 4/	800	800	800	800	800	8
9	Total Out-of-State Gas	4,365	4,365	4,365	4,365	4,365	9
10	TOTAL CAPACITY AVAILABLE /1	4,675	4,675	4,675	4,675	4,675	10
	<u>GAS SUPPLY TAKEN</u>						
11	California Source Gas	310	310	310	310	310	11
12	Out-of-State	2,063	2,132	2,161	2,247	2,401	12
13	TOTAL SUPPLY TAKEN	2,373	2,442	2,471	2,557	2,711	13
14	Net Underground Storage Withdrawal	0	0	0	0	0	14
15	TOTAL THROUGHPUT 1/, 2/	2,373	2,442	2,471	2,557	2,711	15
	<u>REQUIREMENTS FORECAST BY END-USE 3/</u>						
16	CORE Residential	790	815	836	869	913	16
17	Commercial	219	223	227	233	242	17
18	Industrial	61	63	63	65	68	18
19	NGV	26	28	30	33	38	19
20	Subtotal-CORE	1,096	1,129	1,156	1,200	1,261	20
21	NONCORE Commercial	56	57	57	58	59	21
22	Industrial	282	285	285	287	290	22
23	EOR Steaming	19	19	19	19	19	23
24	Electric Generation (EG)	413	433	431	458	519	24
25	Subtotal-NONCORE	770	794	792	822	887	25
26	WHOLESALE Core	197	205	212	222	237	26
27	Noncore Excl. EG	42	42	43	43	44	27
28	Electric Generation (EG)	209	211	206	205	213	28
29	Subtotal-WHOLESALE	448	458	461	470	494	29
30	INTERNATIONAL DGN (Mexicali)	14	15	16	17	18	30
31	Co. Use & LUAF	45	46	46	48	51	31
32	SYSTEM TOTAL THROUGHPUT /1	2,373	2,442	2,471	2,557	2,711	32
	<u>TRANSPORTATION AND EXCHANGE</u>						
33	CORE All End Uses	9	10	10	10	11	33
34	NONCORE Commercial/Industrial	338	341	342	345	350	34
35	EOR Steaming	19	19	19	19	19	35
36	Electric Generation (EG)	413	433	431	458	519	36
37	Subtotal-RETAIL	779	803	802	832	899	37
38	WHOLESALE All End Uses	448	458	461	470	494	38
39	INTERNATIONAL All End Uses	14	15	16	17	18	39
40	TOTAL TRANSPORTATION & EXCHANGE	1,241	1,276	1,279	1,319	1,411	40
	<u>CURTAILMENT (RETAIL & WHOLESALE)</u>						
41	Core	0	0	0	0	0	41
42	Noncore	0	0	0	0	0	42
43	TOTAL - Curtailment	0	0	0	0	0	43

NOTES:

1/ Figures exclude pipeline bypass load losses of to non-jurisdictional gas suppliers.

2/ Excludes own-source gas supply of gas procurement by the City of Long Beach

3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.

4/ Liquefied Natural Gas delivery capacity assumed to be available in 2008.

APPENDIX G

**WETLAND/RIPARIAN RESTORATION AND CREATION
IN SOUTHERN CALIFORNIA**

WETLAND/RIPARIAN RESTORATION & CREATION
IN SOUTHERN CALIFORNIA
AS
COMPENSATION FOR LOSS OF
WETLANDS AND RIPARIAN AREAS
REGULATED UNDER SECTION 404 OF CLEAN WATER ACT
AND
SECTION 1600 OF THE CALIFORNIA FISH AND GAME CODE

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INTRODUCTION

In order to compensate for unavoidable losses to wetlands and other waters of the United States, the U.S. Army Corps of Engineers requires compensatory mitigation that includes restoration or creation of wetlands or other waters or enhancement of degraded wetlands/waters to replace those lost through project implementation. Similarly, the California Department of Fish and Game also requires compensation through restoration and/or creation of wetland or non-wetland riparian habitats to offset losses due to implementation of projects. CDFG also recognizes the benefit or enhancement of degraded wetlands/riparian areas as compensation for impacts to jurisdictional areas. In most instances, enhancement is accomplished through removal of non-native invasive species that substantially degrade wetlands and riparian habitats. This White Paper addresses both habitat creation/restoration as well as enhancement through removal of invasive exotics. The first section of the White Paper addresses habitat creation/restoration and the second section addresses invasives eradication as a means to offset impacts to wetland/riparian areas.

WETLAND/RIPARIAN HABITAT CREATION RESTORATION

While habitat creation and/or restoration have been an accepted method for offsetting losses, the success of habitat creation/restoration has been less than 100-percent effective. A recent study by the Committee on Mitigating Wetland Losses (Committee), established by the National Research Council¹ suggests that the goal of no net loss of wetlands subject to regulation under Section 404 of the Clean Water Act is not being met for wetland functions, despite 20 years of progress. The Committee did find that the science of restoration has advanced sufficiently relative to certain types of wetlands (e.g., cattail marshes, some wet prairies, some salt marshes and ponds) such that creation or restoration can be successful.² The purpose of this White Paper is to address the current state of wetland/riparian restoration in southern California with substantial data developed during the previous decade from wetland/riparian restoration sites in southern California including sites on Rancho Mission Viejo (RMV).

In evaluating the current state of wetland/riparian restoration in southern California the following points will be considered:

- Reasons for failures during the previous decades;
- Responses by the regulatory agencies to address past failures;
- Examples of successful wetland/riparian habitat creation/restoration in southern California; and

¹ National Research Council :Committee on Mitigating Wetland Losses. 2001. *Compensating for Wetland Losses Under the Clean Water Act*. National Academy Press, Washington D.C.

² Zedler, Joy and Leonard Shabman. 2001. "Compensatory Mitigation Needs Improvement, Panel Says. *Ecological Restoration* Volume 19, Number 4.

- Evaluation of wetland/riparian restoration activities on RMV using “Operational Guidelines to Improve Ecological Success” developed by the Committee.

Reasons for Failure

A number of reasons have been documented relative to partial or total failure of wetland/riparian restoration sites in the past, including 1) poor site selection, 2) inadequate hydrology, 3) over-reliance on artificial irrigation, and 4) lack of attention to soil characteristics.³ Singly, any of these factors can lead to some level of failure and in combination, essentially ensures that mitigation sites will not achieve the goal of no-net-loss of wetlands in terms of areal extent and the target wetland/riparian functions. Factors 1 and 2 are often closely related as sites that are not located in the appropriate geomorphic setting (e.g., in proximity to streams or their floodplains or other appropriate water sources) are difficult to establish and even more difficult to maintain as self-sustaining sites. Such sites often require long-term or even permanent irrigation either via artificial flooding or over-head spray, both of which tend to flush naturally accumulated organics and other nutrients from the system severely limiting both biogeochemical and habitat functions. Lack of attention to soil characteristics can lead to high levels of plant mortality where soils are highly saline or alkaline relative to proposed plant palettes. Furthermore, the lack of hydrology over the long-term does not allow for development of wetland soils as required under permit conditions often associated with impact authorizations.

Another reason for low-functioning or failed sites is due to the inadequacy of methods used during the long-term monitoring to assess wetland functions. In the past, mitigation requirements were determined on an acre-for-acre basis without assessment of functions provided by the sites. The Committee, using Corps data, reports that from 1993 to 2000 Corps permits authorized impacts to 24,000 acres with associated compensatory mitigation of 42,000 acres, or a 1.8:1 ratio. However, the lack of monitoring for both pre-project conditions relative to lost wetland/riparian function in combination with a lack of monitoring of function at the mitigation sites, led the Committee to conclude “...the committee is not convinced that the goal of no net loss for permitted wetlands is being met for wetland functions. The magnitude of the shortfall is not precisely known and cannot be determined from current data.”⁴

Agency Responses

In order to address the potential for failure identified by the Committee, the Corps has addressed the potential issues in a number of ways through official guidance, through updated and expanded mitigation guidelines, both at the local level⁵ and at the national level (it should be noted that many of measures adopted by the Corps to address these issues were accomplished

³ U.S. Army Corps of Engineers, Los Angeles District. April 2004. *Special Public Notice: Final Mitigation Guidelines and Monitoring Requirements*. Prepared by the Los Angeles District of the Corps for application within the boundaries of the Los Angeles District.

⁴ National Research Council :Committee on Mitigating Wetland Losses. 2001. *Compensating for Wetland Losses Under the Clean Water Act*. National Academy Press, Washington D.C., Page 3.

⁵ U.S. Army Corps of Engineers, Los Angeles District. April 2004. *Special Public Notice: Final Mitigation Guidelines and Monitoring Requirements*. Prepared by the Los Angeles District of the Corps for application within the boundaries of the Los Angeles District.

prior to the Committee's report).⁶ First, relative to loss of wetland/riparian function at sites proposed for impacts, the Corps now requires evaluation of the impact site using accepted methodologies for measuring wetland functions, such as the Corps' hydrogeomorphic approach.⁷ This approach provides for assessment of a suite of wetland functions divided into three classes: hydrologic functions, biogeochemical functions and habitat functions. Identification of functions that would be impacted allows development of appropriate site-specific goals aimed at replacing the lost function. This is accomplished following construction of mitigation sites, as the sites are then subject to the same monitoring procedures such that comparison of pre- and post-project wetland functions can be ensured.

The Corps has addressed the potential failures associated with site selection, inadequate hydrology, over-reliance on artificial irrigation, lack of attention to soil characteristics and related aspects of proposed mitigation programs. In particular, the guidance provided by the Los Angeles District includes detailed requirements to be followed by preparers of proposed mitigation plans relative to mitigation site selection, mitigation site design, mitigation site construction and approaches to be used for long-term maintenance and monitoring.

Guidance on site selection establishes a priority on the following: 1) provision of sites with natural hydrology that are not dependent on long-term artificial irrigation, 2) placement of mitigation sites such that they promote wildlife movement and connectivity, and 3) development of suitable soils within the mitigation site, which is generally closely related to adequate hydrology.

The Los Angeles District provides even more detailed requirements related to design of the mitigation project once the site is determined to be appropriate. The following components of mitigation plans are specifically addressed by the Corps and need to be addressed in all proposed plans:

- Purpose of the mitigation project, including discussions of the proposed impacts and the manner whereby the target habitats would provide for adequate replacement, including the functions expected at the mitigation site.
- Development of a comprehensive hydrology component (i.e., water budget) that demonstrates that the proposed mitigation site would be capable of supporting the target hydrologic, biogeochemical and habitat functions with no artificial irrigation and be self-sustaining.
- Development of detailed grading plans that incorporate the hydrology data collected for the above-mentioned task. Grading should be accomplished to maximize function and

⁶ U.S. Army Corps of Engineers. 2002. Regulatory Guidance Letter 01-1, Subject: Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts under the Corps Regulatory Program pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899.

⁷ Brinson, M.M, F.R. Hauer, L.C. Lee, W.L. Nutter, R.D. Rheinhardt, R.D. Smith, and D. Whigham. 1995. A Guidebook for Application of Hydrogeomorphic Assessments to Riverine Wetlands. U.S. Army Corps of Engineers, WES Technical Report WRP-DE-11. 112 pp.

should be provided at scales appropriate to the site (e.g., vernal pools would have 0.5-foot contours).

- Soils testing to ensure proper texture and drainage class while also testing for chemical components of the soils that could require amendments or specialized plant palettes.
- Development of site-appropriate plant palettes that account for specific soil characteristics as well site hydrology.
- Development of realistic success criteria based on the purpose outlined for the mitigation project that takes into consideration the proposed functions expected to occur within the site.
- Use of the HGM approach for establishing success criteria as a useful tool to ensure that functions are being achieved.
- Development of detailed site specific monitoring and maintenance procedures that also include contingency measures.

These measures, clearly set forth by the Corps and required in all compensatory mitigation plans, provide for substantially reduced risk of mitigation site failure while also ensuring much higher levels of function for mitigation sites.

Similarly, the Committee developed specific guidelines based on their study:

Operational Guidelines to Improve Ecological Success

1. Consider the hydrogeomorphic and ecological landscape and climate. Because landscapes have natural patterns that maximize the value and function of individual wetlands, permittees should locate mitigation sites in the comparable hydrogeomorphic class and the appropriate landscape setting.
2. Adopt a dynamic landscape perspective. Mitigation site locations should be made resilient to disturbances that occur in the surrounding landscapes by, for example, preserving large buffers and connectivity to other wetlands, and tapping into surrounding natural processes and energies.
3. Restore or develop naturally variable hydrological conditions. The hydrology of naturally occurring wetlands often fluctuates in water level, flow duration, and frequency, and this variability should translate to mitigation sites. Preferably, hydrology should be restored without reliance on engineered structures that require continual maintenance.
4. Whenever possible, choose wetland restoration over creation. Restoration generally is more feasible and sustainable than creation.
5. Avoid over-engineered structures in the wetland's design. Mitigation sites should be designed to require minimum maintenance. Sites with nearby wetlands will have natural recruitment sources for plants and animals, resulting in more resilience.

6. Pay particular attention to appropriate planting elevation, depth, soil type, and seasonal timing.
7. Provide appropriately heterogeneous topography. Microtopography and topographic variation are needed to promote appropriate hydroperiods that wetland plants and animals depend on for survival. Use adjacent or close-by natural systems as models wetland elevations and flooding regimes.
8. Pay attention to subsurface conditions, including soil and sediment geochemistry and physics, groundwater quantity and quality, and infaunal communities. An understanding of soil permeability, texture, and stratigraphy is needed before mitigation takes place. Also, the chemical structure of soils, surface water, groundwater, and tides will affect the long-term outcome of a mitigation site.
9. Consider complications associated with wetland creation or restoration in seriously degraded or disturbed sites. Disturbances associated with degraded wetlands in developed landscapes can promote extensive invasion by exotic species, and may require active management to support native species and maintain natural processes.
10. Conduct early monitoring as part of adaptive management. Mitigation should incorporate a monitoring program that provides early indication of problems, integrated within an adaptive management process that provides corrective actions.

The recent guidelines developed by the Corps as well as those developed by the Committee indicate the advances in the science of wetland restoration/restoration ecology over the last few decades. Implementation of projects consistent with these guidelines ensures a high probability of success.

Examples of Successful Wetland/Riparian Habitat Creation/Restoration in Southern California

Numerous examples of successful mitigation sites could be included for the southern California region. The following brief list provides an example of the sizes and types of sites that GLA has designed and implemented and for which data are readily available.

ALKALI MARSH AND MEADOW:

Talega

Talega is located in San Clemente, southern Orange County. Wetland restoration, consisting of expansion of existing wetlands associated with Segunda Deshecha was started in 2001. Prior to grading, detailed hydrological monitoring using shallow groundwater wells, combined with observations of surface flow and wetland vegetation was used to identify the best locations for expansion of existing wetlands. Representatives from the Corps reviewed the proposed plans and supporting data before approving the sites. The sites are being established in phases with the early phases meeting five-year performance standards by the end of year two due to optimal hydrology. The wettest areas are densely vegetated by alkali bulrush, southern cattail, creeping spikerush, salt marsh fleabane, Olney's bulrush, and yerba mansa. The slightly drier margins are vegetated with saltgrass and pickleweed. Upon completion, the restoration areas will cover just under 4 acres.

Shelley Ranch

Shelley Ranch is located in Carlsbad in northern San Diego County, within the Encinitas Creek Corridor. Approximately 5.4 acres of alkali marsh and meadow were installed adjacent to and contiguous with Encinitas Creek between January and March 2002. The site, which formerly supported cattle grazing, met fifth year percent coverage goals of 90-percent in the second year due to location of the site in the optimal geomorphic setting. This site was expected to perform well due to results of hydrological monitoring during the design phase. The central region of the site is densely vegetated by California bulrush, southern cattail, spiny rush, salt marsh fleabane, Olney's bulrush, and yerba mansa. Saltgrass and pickleweed cover large portions of the previously bare alkali flats. The mitigation has performed extremely well in terms of growth of installed container stock, germination of seed, and natural recruitment of native species.

San Miguel Ranch

San Miguel Ranch alkali marsh and meadow mitigation site is located in Chula Vista, in southern San Diego County, within an existing drainage. After site grading to maximize site hydrology, the installation of 1.4 acres of alkali marsh and meadow was completed in April 2002. The plantings far exceeded expectations for the second year, meeting fifth year percent coverage goals of 90 percent. The container stock has spread throughout the basin filling in bare areas between the plantings. Spikerush, yerba mansa, and alkali rush have colonized the wettest areas while creeping wild rye, saltgrass, alkali heath, San Diego marsh elder grow vigorously in the alkali meadow portions of the site. The mitigation has surpassed the wetland hydrology, soils, and vegetation criteria set forth in the mitigation plan.

RIPARIAN HABITAT:**Dos Vientos Ranch**

The mitigation areas associated with Dos Vientos Ranch are located in Newbury Park, Ventura County, within or adjacent to an existing drainage course, Conejo Mountain Creek. After minimal site grading, plantings were installed in March 2000. Arroyo willow and sandbar willow were not planted within the basins, yet have naturalized in the lower, damp areas, averaging between 15 and 20 feet in height. Black and Fremont cottonwoods, California walnut, and coast live oak are also successful plantings within the basins. The mitigation site endured two winters of drought yet the overall percent cover exceeds the fifth year target coverage of 90-percent.

Sunny Creek

The riparian plantings of Sunny Creek were installed in a natural overflow channel of the Agua Hedionda in Carlsbad in northern San Diego County. After excavation to bring the site elevation closer to the groundwater table the plantings were installed in March 2001. At the time of the last annual monitoring arroyo willow grew between 15 and 20 feet in height, while Fremont cottonwood averaged between 20 and 30 feet in height. The mitigation site surpassed the 90-percent fifth-year approved success criteria for vegetation cover, achieving 99-percent cover.

Del Mar Highlands

The Del Mar Highlands mitigation site is located within Gonzalez Canyon in San Diego. Approximately 2.4 acres of sycamore forest were installed in July 1998. The site has met all success criteria in the five years; fourth-year data indicate that the riparian plantings achieved 94-percent coverage. Grouping or clumping plantings to create locally dense stands of the target species accomplished creation of habitat heterogeneity. Design of the site in a manner that would ensure for recruitment of native hydrophytes was accomplished by locating the mitigation site adjacent to an existing drainage that provides a substantial source of propagules, resulting in high numbers of native hydrophyte recruits. Hydrological performance standards were achieved the first winter with the presence of debris rack, sediment deposits, watermarks, and drainage patterns within the created wetlands.

Wetland/Riparian Habitat Creation/Restoration on RMV

RMV has an established track record in the area of wetland/riparian restoration beginning in the late 1980s in the Gobernadora Ecological Restoration Area (GERA). Between the late 1980s and 2000, RMV created approximately 90 acres of wetland and riparian habitats within GERA, including southern willow riparian forest, mulefat scrub, southern sycamore riparian forest, alkali marsh, and alkali meadow.

All of the 90 acres achieved performance standards set forth in agency permits and exhibit high levels of habitat function for both native faunal and floristic elements. During the last five years, the southern willow riparian forest has been documented to support up to six pairs of least Bell's vireo, at least one pair of nesting southwestern willow flycatcher, more than ten pairs of yellow-breasted chats, and an undetermined number of pairs of yellow warblers. In early 2004 both the GERA and Chiquita sites exhibited use by tricolored black birds. Floristically, both the GERA and Chiquita wetland mitigation sites support populations of southern tarplant that exceed 10,000 individuals.

Beginning in 1998, as mitigation for impacts associated with Ladera Ranch, RMV created wetland mosaic of 30.6 acres that included alkali meadow, alkali marsh and southern willow scrub. At the same time RMV created an additional 7.65 acres of alkali meadow, alkali marsh and southern willow scrub in Chiquita Canyon as mitigation for Tesoro High School plus 2.4 acres of alkali marsh and meadow for Ladera Ranch. Finally, another three acres of alkali marsh and two areas of southern riparian scrub were created in the Arroyo Trabuco for a total of about 44 acres of wetland habitat. In early 2004 representatives of the Corps and CDFG conducted site visits to review the mitigation sites and determined that all 44 acres created in 1998 and 1999 had achieved final performance standards. In designing these mitigation sites, RMV incorporated the HGM methodology into the wetland design and construction in a manner that addressed all of the concepts in the 2004 Corps mitigation guidelines as well as the 2002 findings of the Commission.

Site selection and design factors that likely have contributed to the success of the wetland/riparian restoration on RMV included:

- Siting each mitigation area adjacent to and contiguous with existing riparian corridors. Each site was selected based on optimal hydrogeomorphic setting. In each case, establishment of the mitigation area would enhance wildlife movement potential.
- Siting each mitigation area within larger tracts of undeveloped land that allowed for dynamic natural processes to occur (e.g., substantial recruitment from adjacent wetland/riparian areas).
- Nearly two years of monitoring of hydrological conditions prior to construction, including use of shallow groundwater wells and direct observations of surface hydrology.
- Monitoring of reference wetlands including hydrological monitoring using groundwater monitoring wells and observations of surface flows plus monitoring of reference wetland relative to species composition and distribution according to wetness.
- Creation of grading plans that provided for establishment of connections to floodplains and grading of substantial areas with significant topographic relief to provide short- and long-term storage of surface water, subsurface storage of water and areas of groundwater discharge.
- Grading of sites performed in such a manner so as to establish elevations within each site within 12 to 18 inches of shallow ground water.
- Annual monitoring designed to measure HGM variables such that specific performance standards associated with the hydrologic, biogeochemical and habitat functions were developed and provided quantitative assessment of function measured against high functioning reference wetlands in the same geomorphic setting.

Conclusions

On RMV, over 100 acres of highly successful wetland/riparian restoration has been implemented during the last 15 years and has been “in the ground” and functioning for sufficient periods to allow clear conclusions regarding the success of the projects. In summary the success has been due to RMV’s careful planning and implementation that was consistent with the guidance that has been developed and promulgated only recently. While many of these sites have already been subject to various levels of monitoring, prior to implementation of future restoration efforts, additional detailed studies will be conducted relative to site specific hydrology and soils along with detailed grading plans. Given the past successes of RMV in the area of wetland/riparian restoration and the continuing advancement of knowledge in this discipline, highly successful mitigation can be expected.

INVASIVES CONTROL IN WETLAND AND RIPARIAN AREAS

The threat of non-native invasive species to wetlands and riparian areas in southern California is well documented and well understood. Groups such as the California Exotic Pest Plant Council (CalEPPC) have documented the most troublesome invasive for both uplands and wetlands. RMV has developed a detailed invasive exotic control program as a component of the Adaptive Management Plan that targets giant reed, tamarisk (salt cedar), pampas grass, castor bean, tree tobacco, and Spanish sunflower. Of these, giant reed and tamarisk are considered “Priority 1” species and the others as “Priority 2” species as they are less invasive, less disruptive to the ecosystem and generally less widespread than the giant reed and tamarisk.

Substantial research and resources have been expended on giant reed and tamarisk and the focus of this Whitepaper is on the Priority 1 species; however, the principles and past success on the giant reed and tamarisk apply to the Priority 2 species.

In southern California, various agencies and organizations have combined efforts to eradicate giant reed from the Santa Ana River watershed. These agencies, collectively called “Team Arundo”, include the Santa Ana Watershed Association (SAWA), the Nature Conservancy, the Regional Water Quality Control Board, Riverside County Parks, U.S. Fish and Wildlife, the U.S. Army Corps of Engineers, and Monsanto⁸. Monsanto, the manufacturer of the glyphosate-based herbicide Roundup, developed a derivative product called Rodeo which was used for the giant reed “cleanup” of the Santa Ana River⁹. Members of Team Arundo have contributed to a list of protocols which are currently used on a Statewide level for giant reed eradication. The goals of giant reed eradication, as well as tamarisk eradication include water conservation, creation of open space for native plant establishment, flood control, and wildfire prevention.

A variety of methods are utilized to remove giant reed depending on the size and density of the target population. Mechanical removal using a tractor-powered flail mower, hydro-axe, or chipper is used to cut larger stands of giant reed. Chain saws and hand tools are used for smaller patches. Typically, the stalks are cut and then sprayed with herbicide. The ideal stalk height to be sprayed is between 2-4 feet when the plant is in its active growth stage and will metabolize herbicide most readily¹⁰. Full foliar spray is used on fully mature giant reed up to 30 to 40 feet tall. The cut-stump method requires mechanical cutting, followed by immediate application of concentrated glyphosate to the cut. Cut giant reed may be removed from treatment areas by chipping, burning, or vehicular transportation. Chipped giant reed must be between ¼ to 1 inch in size as larger pieces may regenerate.

Numerous projects aimed at eradicating giant reed are underway in southern California, many which have exhibited significant success. A few selected examples are provided below.

⁸ Dudley, Tom H., *Invasive Plants of California's Wildlands*. University of California Press 2000. Page 53-58.

⁹ Lovich, Jeffery. *Invasive Plants of California's Wildlands*. University of California Press 2000. Pages 312-316.

¹⁰ Rahe, Michael, Biologist, Santa Ana Watershed Association. September 16, 2004. personal communication with S. Asgari of GLA.

San Timoteo Creek

In 1997, SAWA began removal of giant reed in San Timoteo Creek, a tributary to the Santa Ana River located in San Bernardino and Riverside counties. A 25-acre plot associated with San Timoteo Canyon was established on the outskirts of the City of Redlands for a study of giant reed (and tamarisk) removal effectiveness between 1997 and 2001¹¹. The study area contained a cottonwood/mule fat community as well as a disturbed upland component. Giant reed and tamarisk were the most notable exotic species present at the beginning of the study in 1997. Transect data collected at the end of the study revealed less than one-percent cover by giant reed and no measurable cover by tamarisk, establishing the high potential for eliminating giant reed from areas of riparian habitat.

3M Willow Revegetation

The 3M Corona Industrial Mineral Products Plant is located in western Riverside County in the community of El Cerrito, immediately south of the City of Corona. The mitigation project aimed to eradicate a homogenous stand of giant reed and scattered tamarisk and create 2.24 acres of willow riparian habitat within Temescal Wash. Mechanical and herbicide application methods were used in conjunction to eradicate giant reed and tamarisk from the mitigation area in Temescal Wash in spring 1998. A hydro-axe was used to grind the giant reed into a fine mulch which was left in place. Follow-up herbicide applications were conducted to control re-sprouting roots and stems on a weekly basis initially, then as needed to suppress re-growth. In spring 2002, no re-sprouts of giant reed or tamarisk were noted within the mitigation site¹².

Arroyo Trabuco Pipeline Project

In order to compensate for impacts to limited areas of Corps and CDFG jurisdiction associated with construction of a water pipeline project, the Santa Margarita Water District implemented a program to eradicate giant reed and pampas grass from portions of Arroyo Trabuco Creek between Oso Parkway and Crown Valley Parkway in southern Orange County. The program was implemented in 2001. By the end of the third year of the program, less than one-percent re-growth of giant reed was observed and no re-growth of pampas grass was observed.¹³ This program will continue through the fifth year and based on the current status will achieve 100-percent eradication/success.

¹¹ Ares, Jennifer, Santa Ana Watershed Association. *A Winter Bird Census and Vegetative Analysis of San Timoteo Canyon, Redlands, California 2003-2004*.

¹² Glenn Lukos Associates, Inc. 2002. Fifth Annual Monitoring Report for Willow Revegetation at the 3M Corona Plant.

¹³ Glenn Lukos Associates. December 2003. Third Annual Monitoring Report for Invasive Weed Removal Program. Monitoring associated with Santa Margarita Water District's Construction of Domestic Water Transmission Main, Sewer Forch Main and Nondomestic Water Transmission Main (C-1669A). Prepared for Santa Margarita Water District.

Conclusions

Because of the recognized threat that invasive exotic plants pose to wetland and riparian habitats, substantial efforts are ongoing to control or eliminate these invaders. Projects such as those noted above indicate that high success rates for programs that are properly designed and implemented according to the latest science. The potential for substantial restoration of portions of the aquatic ecosystem on RMV that exhibit moderate to high densities of giant reed and other invasive plants is high. The proposed invasive exotic control program presents an opportunity for benefiting a number of special-status species such as the arroyo toad, Least Bell's vireo, southwestern willow flycatcher and others.

