Erosion and Sediment Control Plans (ESCPs) Instruction Manual

December 2008

OC PLANNING

Erosion and Sediment Control Plans (ESCPs)

Background

All private and public construction projects within County jurisdiction, regardless of size or priority, are required to implement an effective combination of Best Management Practices (BMPs) to minimize pollutant discharges into the storm drain system or watercourses to the maximum extent practicable.

To ensure compliance, the County requires the submission of Erosion and Sediment Control Plans (ESCPs) with each set of grading and building plans. The review and approval of the ESCPs will occur during the plan check process. The ESCPs must show proposed locations of the erosion and sediment control BMPs that are to be installed and maintained throughout the construction period. These plans must be available at the project site at all times.

The requirement to submit ESCPs with each set of grading and building plans is effective October 1, 2003.

Content of ESCPs

The contents of ESCPs vary depending on the size of the project site.

The table below lists the minimum requirements for **All Construction Projects**:

TABLE 1

CATEGORY	MINIMUM REQUIREMENTS
Erosion and Sediment Control	Sediments discharged from areas disturbed by construction shall be minimized using an effective combination of erosion and sediment controls to the maximum extent practicable, and stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.
Waste and Materials Management Control	Construction-related materials, wastes, spills or residues shall be retained on site to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.

A) An Erosion and Sediment Control Plan for a project area of **less than 1 acre** shall contain the following NPDES Information:

- ESCP Title/Cover Page (see Attachment 1)
- Construction site area (including area of immediate construction, all off-site staging, storage and stockpile areas).
- Name of person assuming responsibility of full compliance with the submitted plans for NPDES requirements.
- Topo for entire project limits.
- NPDES Notes (see Attachment 2).
- "Erosion and Sediment Control" and "Waste and Materials Management Control" Notes as follows:

Erosion and Sediment Control - Sediments from areas disturbed by construction shall be retained on site using an effective combination of erosion and sediment controls to the maximum extent practicable, and stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.

Waste and Materials Management Control - Appropriate BMPs for construction-related materials, wastes, spills or residues shall be implemented and retained on site to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.

(Note: If a project area is less than 1 acre, the above required NPDES Information can be either submitted in an ESCP or included directly on the grading or building plans submitted for permitting.)

B) For a project area of **1 acre or greater** the Erosion and Sediment Control Plan shall contain the following NPDES Information:

- ESCP Title/Cover Page (see Attachment 1)
- Construction site area (including area of immediate construction, all off-site staging, storage and stockpile areas).
- Name of person assuming responsibility of full compliance with the submitted plans for NPDES requirements.
- Topo for entire project limits.
- Locations where discharge of stormwater from site are anticipated.
- Drainage patterns across the project and each on-site storm water inlet point or receiving water and offsite drainage area draining into construction areas.
- Designated areas for: storage of soil or waste; vehicle storage and service areas; construction material loading, unloading and access areas; equipment storage; cleaning and maintenance areas.
- Describe methods of on-site storage and disposal of construction material and construction waste.
- BMPs to control off-site sediment tracking.

- Proposed construction BMPs and non-stormwater BMP locations.
- NPDES Notes (see Attachment 2).
- "Erosion and Sediment Control" and "Waste and Materials Management Control" Notes as follows:

Erosion and Sediment Control - Sediments from areas disturbed by construction shall be retained on site using an effective combination of erosion and sediment controls to the maximum extent practicable, and stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.

Waste and Materials Management Control - Appropriate BMPs for construction-related materials, wastes, spills or residues shall be implemented and retained on site to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.

[Note: If the project is subject to the State's General Permit for Construction Activity, the requirement for the submittal of an ESCP can be met by submitting selected sheets containing the required information from the site's Storm Water Pollution Prevention Plan (SWPPP) with an ESCP Title/Cover Page (see Attachment 1).]

Project BMPs

A County Plan Checker will review the project file and determine the priority of the project. A project may be classified as low, medium or high priority. The priority determines what requirements must be addressed in an ESCP. See Table 2 below. There are 3 types of requirements to meet: Minimum Requirements, Site Management Requirements and Construction BMP Requirements.

TABLE 2

PRIORITY	REQUIREMENTS
LOW	▪ Meet minimum requirements
MEDIUM & HIGH	▪ Meet minimum requirements ▪ Implement all appropriate Site Management Requirements ▪ Implement all appropriate Construction BMPs

For Medium and High Priority Projects the following are Site Management Requirements:

TABLE 3

CATEGORY	Site Management Requirements
Dry Season Requirements (May 1 through September 30)	A. Wind erosion BMPs (dust control) shall be implemented. B. Sediment control BMPs shall be installed and maintained at all operational storm drain inlets. C. BMPs to control off-site sediment tracking shall be implemented and maintained. D. Appropriate waste management and materials pollution control BMPs shall be implemented to prevent the contamination of storm water by wastes and construction materials. E. Appropriate non-storm water BMPs shall be implemented to prevent the contamination of storm water from construction activities. F. There shall be a "weather triggered" action plan and the ability to deploy standby sediment control BMPs as needed to completely protect the exposed portions of the site within 48 hours of a predicted storm event (a predicted storm event is defined as a forecasted, 50% chance of rain). G. Sufficient materials needed to install standby sediment control BMPs (at the site perimeter, site slopes and operational inlets within the site) necessary to prevent sediment discharges from exposed portions of the site shall be stored on site. Areas that have already been protected from erosion using physical stabilization or established vegetation stabilization BMPs as described in item H below are not considered to be "exposed" for purposes of this requirement. H. Deployment of permanent erosion control BMPs (physical or vegetation) should commence as soon as practical on slopes that are completed for any portion of the site. Standby BMP materials should not be relied upon to prevent erosion of slopes that have been completed

The third type of requirement for Medium and High Priority Projects are Construction BMPs. The County has designated construction-specific BMPs from the updated 2002 edition of the *California Storm Water Quality BMP Handbook - Construction Manual* for use with its construction program as set forth in Drainage Area Management Plan (DAMP**)** Section 8.4.4. Table 4 below lists the construction BMPs. While the County encourages the use of the designated BMPs, it is recognized that there are other types of construction BMPs available to the project proponent that may be used to achieve compliance with the requirements of this program. The following table lists Construction BMP requirements from the California Storm Water Quality BMP Handbook - Construction Manual.

TABLE 4

CATEGORY	BMP #	BMP NAME
Erosion Control BMPs	EC-1	Scheduling
	EC-2	Preservation of Existing Vegetation
	EC-3	Hydraulic Mulch
	EC-4	Hydroseeding
	EC-5	Soil Binders
	EC-6	Straw Mulch
	EC-7	Geotextiles, Plastic Covers & Erosion Control Blankets/ Mats
	EC-8	Wood Mulching
	EC-9	Earth Dikes/ Drainage Swales & Lined Ditches
	EC-10	Outlet Protection/ Velocity Dissipation Devices
	EC-11	Slope Drains
Sediment Control BMPs	SE-1	Silt Fence
	SE-2	Desilting Basin
	SE-3	Sediment Trap
	SE-4	Check Dam
	SE-5	Fiber Rolls
	SE-6	Gravel Bag Berm
	SE-7	Street Sweeping and Vacuuming
	SE-8	Sandbag Barrier
	SE-9	Straw Bale Barrier
	SE-10	Storm Drain Inlet Protection
Wind Erosion Control BMPs	WE-1	Wind Erosion Control
Tracking Control BMPs	TC-1	Stabilized Construction Entrance/ Exit
	TC-2	Stabilized Construction Roadway
	TC-3	Entrance/Outlet Tire Wash

Non-Stormwater Control BMPs	NS-1	Water Conservation Practices
	NS-2	Dewatering Operations
	NS-3	Paving and Grinding Operations
	NS-4	Temporary Stream Crossing
	NS-5	Clear Water Diversion
	NS-6	Illicit Connection/Illegal Discharge Detection and Reporting
	NS-7	Potable Water/Irrigation
	NS-8	Vehicle and Equipment Cleaning
	NS-9	Vehicle and Equipment Fueling
	NS-10	Vehicle and Equipment Maintenance
	NS-11	Pile Driving Operations
	NS-12	Concrete Curing
	NS-13	Concrete Finishing
	NS-14	Material and Equipment Use Over Water
	NS-15	Structure Demolition/Removal Over or Adjacent to Water
	NS-16	Temporary Batch Plants
	NS-17	Streambank Stabilization
Waste Management & Materials Pollution Control BMPs	WM-1	Material Delivery and Storage
	WM-2	Material Use
	WM-3	Stockpile Management
	WM-4	Spill Prevention and Control
	WM-5	Solid Waste Management
	WM-6	Hazardous Waste Management
	WM-7	Contaminated Soil Management
	WM-8	Concrete Waste Management
	WM-9	Sanitary/ Septic Waste Management
	WM-10	Liquid Waste Management

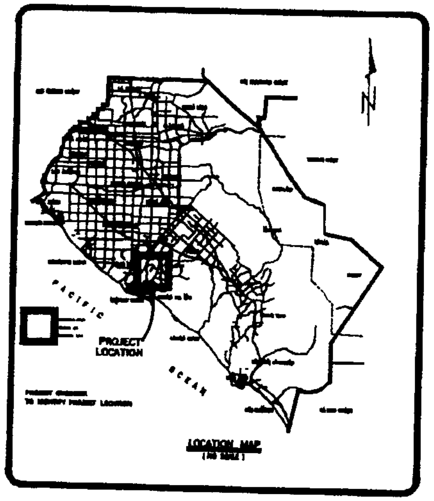
BMP Standard Plans

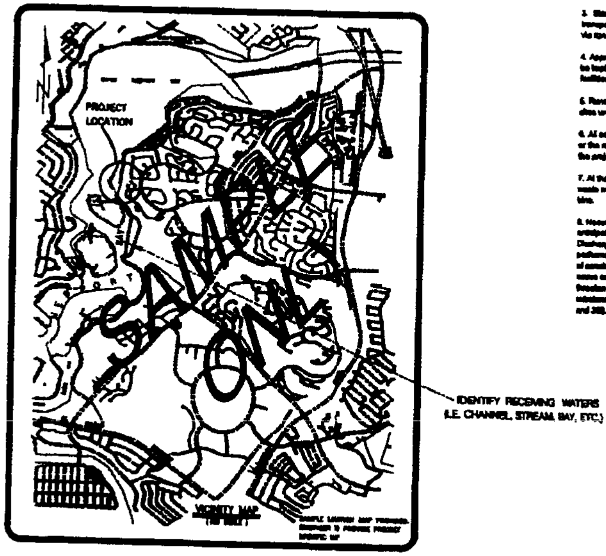
Accepted standard plans for construction containing BMPs are found in the Orange County Environmental Management Agency (now PFRD) Standard Plans, 1996 Edition, including the following:

- Sandbag Velocity Reducer (No. 1328) (see Attachment 3)
- Temporary Drainage Inlet (No. 1330) (see Attachment 4)

Submittal Requirements

Provide the County with six copies of Erosion and Sediment Control Plans (ESCP) including back-up information and data. If the project is less than one acre, the NPDES information may be included directly on the grading or building plans submitted for permitting.





EROSION AND SEDIMENT CONTROL PLAN

FOR

(PROJECT NAME HERE)

NPDES NOTES

[illegible]

1. In the case of emergency, call [illegible] at Work Phone # or Home Phone #

2. [illegible]

3. [illegible]

4. [illegible]

5. [illegible]

6. [illegible]

7. [illegible]

8. [illegible] 40 CFR Parts 117 and 302.

9. [illegible]

[illegible]

10. [illegible]

11. [illegible]

12. [illegible]

13. [illegible]

14. [illegible]

15. [illegible]

16. [illegible]

INDEX OF SHEETS

DATA:

* [illegible] ___________
* [illegible] ___________

RESPONSIBILITY TO ENSURE FULL COMPLIANCE AND IMPLEMENTATION ALL ITS ELEMENTS, INCLUDING ELIMINATION OF ALL UNAUTHORIZED DISCHARGES, RESTS WITH:

NAME ____________________ TELEPHONE #

RESPONSIBILITY FOR PRESTORM, POST STORM AND STORM EVENT BMP INSPECTIONS RESTS WITH:

NAME ____________________ TELEPHONE #

NO.	DESCRIPTION	SHT.	APPROVED	DATE

REVISIONS

SHEET 1 OF X

NPDES NOTES

Notes must be shown as worded, on the title sheet of the plan.

1. In the case of emergency, call _____
   at Work Phone # _____
   or Home Phone # _____.

2. Sediment from areas disturbed by construction shall be retained on site using structural controls to the maximum extent practicable.

3. Stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tacking, or wind.

4. Appropriate BMP's for construction-related materials, wastes, spills shall be implemented to minimize transport from the site to streets, drainage facilities, or adjoining properties by wind or runoff.

5. Runoff from equipment and vehicle washing shall be contained at construction sites unless treated to reduce or remove sediment and other pollutants.

6. All construction contractor and subcontractor personnel are to be made aware or the required best management practices and good housekeeping measures for the project site and any associated construction staging areas.

7. At the end of each day of construction activity all construction debris and waste materials shall be collected and properly disposed in trash or recycle bins.

8. Construction sites shall be maintained in such a condition that an anticipated storm does not carry wastes or pollutants off the site. Discharges of material other than stormwater only when necessary for performance and completion of construction practices and where they do not: cause or contribute to a violation of any water quality standard; cause or threaten to cause pollution, contamination, or nuisance; or contain a hazardous substance in a quantity reportable under Federal Regulations 40 CFR Parts 117 and 302.

9. Potential pollutants include but are not limited to: solid or liquid chemical spills; wastes from paints, stains, sealants, glues, limes, pesticides, herbicides, wood preservatives and solvents; asbestos fibers, paint flakes or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator or battery fluids; fertilizers, vehicle/equipment wash water and concrete wash water; concrete, detergent or floatable wastes; wastes from any engine/equipment steam cleaning or chemical degreasing and superchlorinated potable water line flushing.

During construction, permittee shall dispose of such materials in a specified and controlled temporary area on-site, physically separated from potential stormwater runoff, with ultimate disposal in accordance with local, state and federal requirements.

10. Dewatering of contaminated groundwater, or discharging contaminated soils via surface erosion is prohibited. Dewatering of non-contaminated groundwater requires a National Pollutant Discharge Elimination System Permit from the respective State Regional Water Quality Control Board.

11. Graded areas on the permitted area perimeter must drain away from the face of slopes at the conclusion of each working day. Drainage is to be directed toward desilting facilities.

12. The permittee and contractor shall be responsible and shall take necessary precautions to prevent public trespass onto areas where impounded water creates a, hazardous condition.

13. The permittee and contractor shall inspect the erosion control work and insure that the work is in accordance with the approved plans.

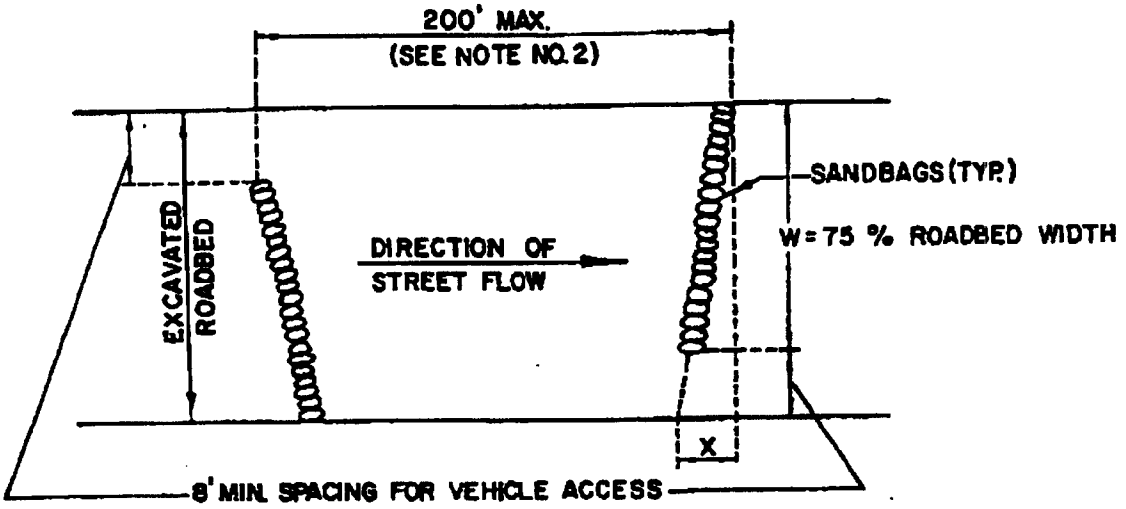
14. The permittee shall notify all general contractors, subcontractors, material suppliers, lessees, and property owners: that dumping of chemicals into the storm drain system or the watershed is prohibited.

15. Equipment and workers for emergency work shall be made available at all times during the rainy season. Necessary materials shall be available on site and stockpiled at convenient locations to facilitate rapid construction of temporary devices when rain is imminent.

16. All removable erosion protective devices shall be in place at the end of each working day when the 5-Day Rain Probability Forecast exceeds 40%.

17. Sediments from areas disturbed by construction shall be retained on site using an effective combination of erosion and sediment controls to the maximum extent practicable, and stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.

18. Appropriate BMPs for construction-related materials, wastes, spills or residues shall be implemented and retained on site to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.



PLAN

W	X
20'-30'	5'
31'-40'	7'
41'-50'	9'
51'-60'	10.5'
61'-70'	12'

TYPICAL SECTION

TYPICAL ELEVATION

NOTES:

1. Gravel bags are encouraged over the use of sandbags and may be required in areas which are particularly sensitive to sediment deposition.
2. Requirements for and spacing of velocity reducers for streets with grades of less than 4% shall be as shown on the approved Erosion Control Plan.
3. This standard detail shall be used as shown on the approved Erosion Control Plan.

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY

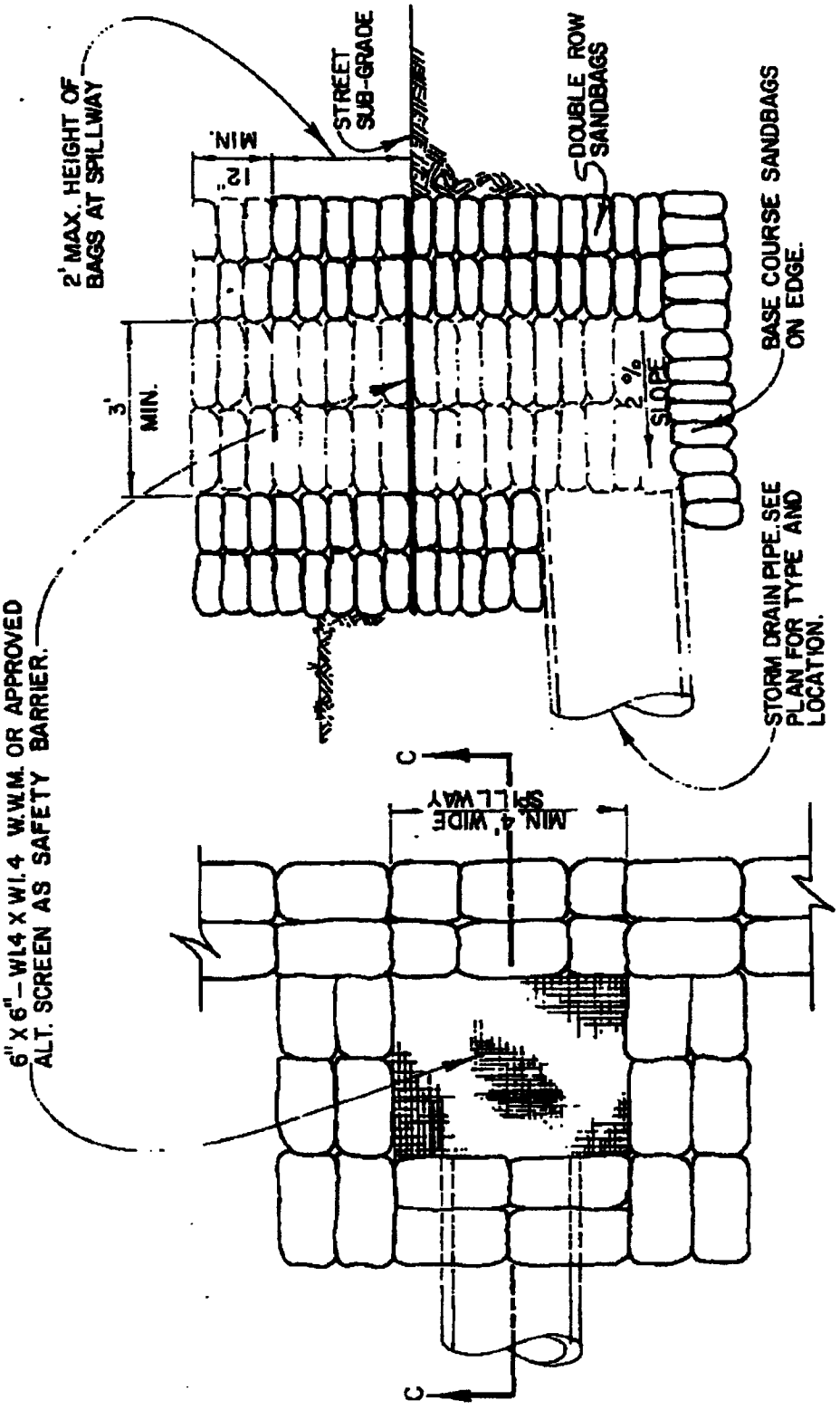
APPROVED _____
H. J. KRIZAN DIRECTOR OF REGULATION

Adopted: Res. 82-718

STD. PLAN
1328

SANDBAG VELOCITY REDUCER

SHEET 1 OF 1



SECTION C-C

PLAN

NOTES:

1. Gravel bags are encouraged over the use of sandbags and may be required in areas which are particularly sensitive to sediment deposition.
2. A portion of catch basin may be constructed in place of sandbags.
3. This standard detail shall be used as shown on the approved erosion control plan.

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY

APPROVED H.J. KRIZAN DIRECTOR OF REGULATION

Adopted: Res. 82-718

STD. PLAN

1330

SHT. 1 OF 1

TEMPORARY DRAINAGE INLET