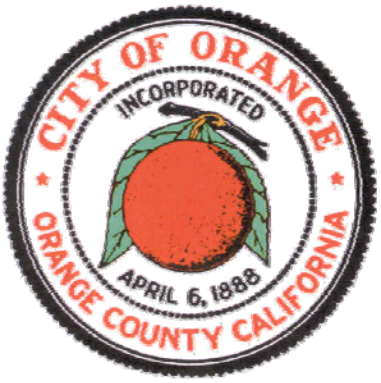


CITY OF ORANGE
LOCAL IMPLEMENTATION PLAN (LIP)

SECTION A-8
CONSTRUCTION

A-8.0 CONSTRUCTION

A-8.1 Introduction

The City has incorporated the model construction program described in DAMP Section 8 as the basis for this section of its LIP. This construction program presents requirements and guidelines for pollution prevention methods that must be used by construction site owners, developers, contractors, and other responsible parties , to prevent illicit discharges into the MS4; implement and maintain structural and non-structural BMPs to reduce pollutants in storm water runoff from construction sites to the MS4; reduce construction site discharges of storm water pollutants from the MS4 to the maximum extent practicable (MEP); and prevent construction site discharges from the MS4 from causing or contributing to a violation of water quality standards. Subsequent sections describe how the City implements the program.

A-8.1.1 Overall Program Management

The LIP has been developed to assist municipal staff in complying with Santa Ana Regional Board Orders. The key departments responsible for overseeing, implementing and enforcing the construction program element are identified in **Figure A-8.I.**

Figure A-8.I
City of Orange Construction Component
Program Management

A-8.1.2 Implementation

The responsibilities of the City departments for the implementation of the Construction Program element are shown below in **Table A-8.1**. Key staff names are shown in **Exhibit A-2.I**

Table A-8.1 – City of Orange Construction Program Implementation

Department	Activity	Responsibility Under the Permit/DAMP
Community Development/ Building; Public Works/ Engineering	Processes building/grading permits	Advises applicants of water quality requirements
Community Development/ Building;	Review construction plans	Verifies plan with water quality requirements, reports actions taken to LIP Management
Public Works/ Engineering	Review construction plans	Verifies plan and NOI compliance with water quality requirements, reports actions taken to LIP Management
Community Development/ Building; Public Works/ Engineering	Manages oversight of construction inspection inventory, prioritization and inspection program	Inventories and prioritizes construction sites
Community Development/ Building; Public Works/ Engineering	Inspect construction sites	Implements inspections, requires corrective actions to be taken, reports actions taken to LIP Management
Public Works/ Engineering	Manages Public works projects and Capital Improvement Project (CIP) projects	Verifies plan compliance with water quality requirements in public works projects and CIPs
Public Works/ Engineering	Review and inspect Public Works projects	Coordinates project tracking and inspection of water quality requirements in public works projects and CIPs, reports actions taken to LIP Management

A-8.2 Inventory of Construction Sites

The City maintains a comprehensive construction site inventory in its databases. For the purpose of complying with the DAMP and inspection requirements, the inventory includes those sites with activities such as soil movement, uncovered storage of materials and waste, exterior mixing or other activities meeting the definition of a construction project provided in DAMP Section 8.4 and includes sites covered by the State General Construction Storm Water Activity Permit (General Permit), local grading or building permit and municipal construction projects. The City's current construction inventory is included as **Exhibit A-8.I**. Updated inventories are included in each annual progress report.

The inventory will at a minimum be updated biannually; once in September prior to the start of each rainy season (October 1) and the second update in May. During the update process, projects for which building or grading permit(s) have expired or have been closed, and projects that have been completed, will be removed from the inventory. New projects that pose a threat to water quality will be added to the inventory as they are initiated. Projects excluded from the inventory include projects completed within one day or are short term in nature (days) with no threat to water quality which include; electrical, building and plumbing permits where the work is conducted indoors and there is no waste storage; permits for curb cuts, moving telephone poles, and other projects not deemed a threat to water quality. For these projects, City inspectors will ensure compliance with water quality regulations during their normal inspection process.

A-8.3 Prioritization of Construction Sites

Construction projects will be prioritized as High, Medium, or Low, based on their threat to water quality and the procedures set forth in the DAMP. Priorities will be updated during the update to the inventory. The latest inventory and prioritizations will be presented in each annual progress report.

A-8.4 BMPs for Construction Projects

All construction projects, regardless of size or priority, are required to implement BMPs to prevent discharges into the storm drain system or watercourses. DAMP Section 8.2.4.1 specifies minimum requirements for all projects and DAMP Section 8.2.4.2 specifies site management requirements for High and Medium priority projects.

All private and public works construction projects are required, at a minimum, to implement and be protected by an effective combination of erosion and sediment controls and waste and materials management BMPs. The minimum requirements are summarized in **Table A-8.2**. These minimum requirements are conveyed to construction contractors as part of the permit conditions and plan notes.

Table A-8.2
Minimum Requirements for All Construction Sites

CATEGORY	MINIMUM REQUIREMENTS
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	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.

Construction BMPs

The City has designated construction-specific BMPs as set forth in DAMP Section 8.2.4.3. The BMPs designated in **Table A-8.3** shall be implemented as appropriate for activities at any given construction site to reduce or eliminate discharges of pollutants from construction sites. The numbering system corresponds to the BMP number used by the California Stormwater Quality Association. However, equivalent fact sheets from other organizations may be used.

Table A-8.3
Designated Construction BMPs

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
	EC-12	Streambank Stabilization
	EC-13	*Reserved*
	EC-14	Compost Blanket
	EC-15	Soil Preparation/Roughening
	EC-16	Non-Vegetative Stabilization
t C o n t r	SE-1	Silt Fence

CATEGORY	BMP #	BMP NAME
	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
	SE-11	Active Treatment Systems
	SE-12	Temporary Silt Dike
	SE-13	Compost Socks and Berms
	SE-14	Biofilter Bags
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-Storm Water 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
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 BMPs are found in the City's Standard Plans, 2007 Edition. The following BMP standard plans are included in **Exhibit A-8.II**:

- Sandbag Velocity Reducer (No. 339)
- Temporary Drainage Inlet (No. 340)

A-8.5 Documentation Requirements

The City adopted the documentation requirements provided in DAMP Section 8.2.5. These requirements apply equally to private development and public works projects.

Requirements for General Permit Sites

Construction sites that are subject to the General Permit are required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) meeting the requirements of the state General Construction Permit Order 2009-0009 DWQ. The California Stormwater Quality Association's SWPPP template available at www.CASQA.org or similar template that meets the requirements of the General Permit may be used for public projects.

Private Construction Projects Covered by the General Permit

The following bullets describe the process followed by private construction projects:

- The project owner, developer or contractor is responsible for preparing the Permit Registration Documents (PRDs), which include the Notice of Intent (NOI), Risk Analysis and Storm Water Pollution Prevention Plan (SWPPP) that must be signed by the owner or person delegated authority and submitted to the State Water Resources Control Board (SWRCB) via the Storm Water Multi-Application, Reporting, and Tracking System (SMARTS). Before issuing a grading or building permit, the City will require proof of General Permit coverage (See conditions of approval **Section A-7.5.3**).
- Once the project owner, developer or contractor receives a grading or building permit (if applicable), it is the responsibility of the owner or delegated person to ensure a Qualified SWPPP Developer (QSD) develops the SWPPP and that it is implemented year-round throughout the duration of the project's construction. City staff is not responsible for reviewing, approving or enforcing the SWPPP; these are responsibilities of the Regional Board. Inspector(s) may choose to use the SWPPP as a tool for on-site inspections.
- The City will inspect and enforce local permit(s) and ordinances, and will notify the Regional Board of non-compliance within 24 hours when the non-compliance meets the criteria of posing a threat to human or environmental health as discussed in DAMP Section 8.2.6.7 or as part of its quarterly report to the Regional Board.

- Once project construction is completed and the site fully complies with the final stabilization requirements of the General Permit, the owner/developer will submit a Notice of Termination (NOT) via the SMARTS system to the SWRCB.

Public Agency Construction Projects Covered by the General Permit

The following bullets describe the process that is followed by a public works construction project:

- The City will submit all Permit Registration Documents required by the General Permit including the NOI, Risk Analysis and SWPPP electronically to the SWRCB via the state's Storm Water Multi-Application and Report Tracking System (SMARTS) system.
- The SWPPP will be prepared by a Qualified SWPPP Developer either by the City or its contractor but construction activities will not commence until approval has been obtained through the state's SMARTS system. The contractor will also be required to ensure an adequately trained person (SWPPP Practitioner) is responsible for implementation of the SWPPP as required by the General Permit. City inspectors will familiarize themselves with the SWPPP to ensure it is adequately implemented. However, compliance with the SWPPP will be the responsibility of the contractor.
- During construction, the City will inspect and enforce the contract documents and will notify the Regional Board within 24 hours when non-compliance meets the criteria of posing a threat to human or environmental health as discussed in Section 8.2.6.7 of the DAMP or through its quarterly reporting process.
- Once the project is completed, the City will file a Notice of Termination (NOT) through the state's SMARTS system.

Requirements for Other Sites

Private Construction Projects Not Covered by the General Permit

Private construction projects not covered by the General Permit, but covered under a grading permit, are required to develop Erosion and Sediment Control Plans (ESCPs). These ESCPs must show proposed locations of the erosion and sediment control BMPs that will be implemented during the construction project to comply with the minimum requirements listed in **Table A-8.2** as applicable.

Public Works Construction Projects Not Covered by the General Permit

Public agency construction projects not covered by the General Permit are required by DAMP Section 8.2.5.2 to comply with appropriate pollution prevention control practices in accordance with the current edition of the "Green Book" Standard Specifications for Public Works Construction and the provisions of Section A-8, and shall develop and implement ESCPs. Low

priority construction sites shall meet the minimum requirements listed in Table A-8.2 as applicable.

A-8.6 Municipal Inspection Requirements of Construction Sites and Reporting Requirements

Inspection Responsibilities

The City will perform inspections of construction sites to verify that the requirements in DAMP Section 8.2.6 are being implemented and maintained, that they comply with local permits and ordinances and the General Permit (for public works projects covered by the General Permit), and that they continue to protect water quality. Construction sites are inspected during the rainy season according to their established priority and As-needed during the non-rainy season until construction activity is complete.

Inspection Frequencies

The City will inspect construction sites based upon the priority of the project. The frequency of construction site inspections is shown in **Table A-8.4**:

Table A-8.4

Construction Site Priority	Rainy Season (October 1 - April 30)	Dry Season (May 1 - September 30)
HIGH • Any site 20 acres or larger • Any site 1 acre or larger tributary to Clean Water Act Section 303(d) waters listed for sediment or turbidity impairments	Once per month	As needed
MEDIUM All sites between 5 and 20 acres	Twice during the season	As needed
LOW	Once during the season	As needed
When BMPs or BMP maintenance is deemed inadequate or out of compliance, an inspection frequency of once every week will be maintained until BMPs are in compliance		

Inspection Documentation Procedures

The City's construction site inspection checklist is included in **Exhibit A-8.III**. Records of all inspections and non-compliance reporting will be retained for a period of at least three years.

Enforcement Actions

Enforcement of construction projects will be undertaken by the City's inspectors and/or other staff who possess internal enforcement authority through established policies and procedures. Threat to water quality will be assessed by inspectors for construction site runoff that is not reasonably controlled by the BMPs in place or if a failure of BMP results in the release of sediments or other pollutants. Violations observed will be documented by the inspectors.

If a significant and/or immediate threat to water quality is observed by an inspector, action will be taken to require the developer/contractor to immediately cease the discharge. **Table A-8.5** outlines the City's enforcement steps that will be taken by inspectors for private construction projects and for public works construction projects. Depending on the violation, the inspector may choose to utilize contract language, a local permit, the grading ordinance or the water quality ordinance as the basis for enforcement.

Table A-8.5

Enforcement Actions for Construction Projects

PRIVATE CONSTRUCTION PROJECTS	PUBLIC WORKS CONSTRUCTION PROJECTS
Verbal Warning	Verbal Warning
Written Warning ▪ Field Memo ▪ Work Correction ▪ Notice of Non-Compliance ▪ Administrative Compliance Order ▪ Stop Work Order	Written Warning ▪ Field Memo ▪ Notice of Non-Compliance
Stop Work Order	Enforcement of Contract ▪ Withholding of Payment ▪ Bond ▪ Fines ▪ Stop Work Order ▪ Revocation of Contract
Revocation of Permit(s) and/or Denial of Future Permits	
Grading Ordinance Enforcement	Grading Ordinance Enforcement
Water Quality Ordinance Enforcement	Water Quality Ordinance Enforcement
Civil and Criminal Court Actions	Civil and Criminal Court Actions

The City's approved enforcement form used by inspection staff is provided in **Exhibit A-8.IV**.

Non-Compliance Reporting

The City will consider a site non-compliant when one or more violations of local ordinances, permits, or plans exist on the site: Minor corrections receive verbal direction and are not considered violations. For the purpose of this document, violations shall also be considered a violation of the General Construction Permit for sites subject to those requirements and the Regional Board will be notified of non-compliant construction projects that pose a threat to human or environmental health.

Oral notification to the Regional Board of non-compliant construction sites that are determined to pose a threat to human or environmental health will be provided within 24-hours of the discovery of non-compliance. Such oral notification shall be followed up by a written report and submitted to the Regional Board within 5 days of the incidence of non-compliance. Written notification(s) will identify the type(s) of non-compliance, describe the actions necessary to achieve compliance, and include a time schedule, subject to the modifications by the Regional Board, indicating when compliance will be achieved. Noncompliant sites subject to the General Permit will also be reported to the Regional Board as part of the City's quarterly report to the Regional Board.

A form for evaluating the potential impacts to human or environmental health is provided in **Exhibit A-8.V.**

A-8.7 Education and Training

To assist responsible City staff and contract staff in understanding the DAMP's Model Construction Program, annual training sessions will be conducted. In addition to Permittee sponsored training, staff may also attend training seminars or workshops related to general water quality and stormwater management during construction, conducted by other organizations.

A-8.7.1 Training Modules

Two training modules have been prepared that cover different aspects of the Model New Development/Significant Redevelopment Program. These modules are provided in DAMP Appendix B, Section B-8. The modules will be substantially updated in 2010-11 to reflect the requirements of the Fourth Term Permit.

*Construction Program Management (**DAMP Appendix B, Exhibit B-8.I**)*

This training module is targeted to staff responsible for managing the NPDES program for construction and will address: the laws and regulations applicable to construction and grading

activities; the connection between construction activities and water quality; inventory and prioritization of construction sites; implementation of construction site BMPs; documentation and enforcement requirements; reporting procedures for non-compliance; program effectiveness assessment; and training.

*Inspecting Construction Site BMPs (**DAMP Appendix B, Exhibit B-8.II**)*

This training module is targeted to staff responsible for conducting inspections of both private and public construction sites and will address: the laws and regulations applicable to construction and grading activities; the connection between construction activities and water quality; inspection of construction site BMPs; documentation and enforcement procedures; and examples of what to look for in construction site BMPs.

A-8.7.2 City Training

On an annual basis, staff from the Surface Water Quality section will provide City inspectors supplementary training on construction site compliance that includes a review of erosion and sediment control practices, nonstorm water discharges and the General Permit to ensure City staff is aware of the latest regulatory requirements. A typical Training Module that is updated as needed is attached as **Exhibit A-8.VI**.

A-8.8 Program Effectiveness Assessment

The overall Program Effectiveness Assessment (PEA) serves as the foundation for the submittal of the annual progress report that is submitted to the Principal Permittee and subsequently to the Regional Boards and serves as the basis for evaluating the City's construction program.

The PEA allows the City to assess the effectiveness of its storm water program components including those focused on addressing storm water and non-storm water discharges associated with construction activity. The construction program effectiveness assessment enables the City to evaluate the effectiveness of its program by focusing on data collected from the inventorying, prioritization, inspection, and enforcement of construction projects as well as training records.

Exhibit A-8.I

Construction Site Inventory

Grading Permits

Encroachment Permits

Building Permits

GRADING PERMIT

INVENTORY

Active Grading Permit Inventory
2009-2010

PROJECT NO	COMPANY	PROJECT LOCATION	PROJECT ACREAGE	WDID NO	PERMIT NO	WATERSHED	NPDES PRIORITY
TR-16768	North Orange Del Rio,LLC	Del Rio, n/w Lincoln Ave. & Glassell St.	70.56	8 30C331584	1956	Lower Santa Ana River	High (20 Acres)
TR-16768	Lennar Homes	Del Rio, n/w of Lincoln & Glassell	8.89	8 30C331584	1982	Lower Santa Ana River	Medium (5 to <20 Ac)
SP-3680	CHOC	455 South Main St.	3.4	8 30C354881	2026	Lower Santa Ana River	Low (<5 acres)
SP-3702	St. Verna Coptic Orthodox Church	491 N. Hewes St. Orange 92869	0		2030	Lower Santa Ana River	Low (<5 acres)
SP-3606	D.J. Scheffler, Inc.	Belmont Estates common area. Within the limits of Roxbury St, Regency Ave, and Anaheim City Limit.	3.36	8 30C355985	2031	Lower Santa Ana River	Low (<5 acres)
SP-3705	Tiffany Dang	6505 Woodview Circle	0		2032	-	Low (<5 acres)
SP-3721	Courtyard Apartments LLC Const. Acct.	Highland and Monroe	0		2033	-	Low (<5 acres)
CITY							
	Santiago Creek Bike Trail North (aka Phase II-IV)	Collins Curve; Hewes Curve; Cannon and Santiago Canyon Road	10.7	n/a	0	Lower Santa Ana River	Medium (5 to <20 Ac)
	Santiago Creek Bike Trail South	Tustin-Chapman along Santiago Creek	5.72	n/a	0	Lower Santa Ana River	Medium (5 to <20 Ac)

ENCROACHMENT PERMIT

INVENTORY

Active Encroachment Permits
2009-2010

PROJECT NO	PROPOSED WORK	JOB LOCATION	PERMIT NO	WATERSHED	NPDES PRIORITY
SP-3701	Metrolink quiet zone railroad crossing improvements for 16 crossings (see SP-3701)	Various locations(grade crossings) 16 Metrolink railroad crossings.	13707	Lower Santa Ana River	Low (<5 acres)
	Construction new water lines per approved plan	445 S. Main St.	13881	Lower Santa Ana River	Low (<5 acres)

BUILDING PERMIT

INVENTORY

Building Permit Inventory
2009-2010

ID	Insp.Type	Type	SubType	SITE ADDRESS	AC	WATERSHED	PRIORITY
1	NPDES 1	BUILDING	ADD/ALTER	3524 E WHITE SPRINGS LN	0.02	Lower Santa Ana River	Low
2	NPDES 1	BUILDING	ADD/ALTER	2726 E RIDING WAY	0.002	Lower Santa Ana River	Low
3	NPDES 1	BUILDING	T.I.	2490 N TUSTIN ST	0	Lower Santa Ana River	Low
4	NPDES 1	BUILDING	T.I.	2490 N TUSTIN ST	0	Lower Santa Ana River	Low
5	NPDES 1	BUILDING	T.I.	2490 N TUSTIN ST	0	Lower Santa Ana River	Low
6	NPDES 1	BUILDING	T.I.	684 S GLASSELL ST	0	Lower Santa Ana River	Low
7	NPDES 1	BUILDING	RES GARAGE	720 E CULVER AVE	0.02	Lower Santa Ana River	Low
8	NPDES 1	BUILDING	ADD/ALTER	720 E CULVER AVE	0.008	Lower Santa Ana River	Low
9	NPDES 1	BUILDING	PATIOCVR	154 S SHAFFER ST	0.1	Lower Santa Ana River	Low
10	NPDES 1	BUILDING	BLOCK WAL	1333 N GLASSELL ST	0	Lower Santa Ana River	Low
11	NPDES 1	BUILDING	ADD/ALTER	804 E WASHINGTON AVE	0.01	Lower Santa Ana River	Low
12	NPDES 1	BUILDING	PATIOCVR	294 S DUNAS ST	0.009	Lower Santa Ana River	Low
13	NPDES 1	BUILDING	T.I.	1130 E WALNUT AVE	0.009	Lower Santa Ana River	Low
14	NPDES 1	BUILDING	T.I.	1130 E WALNUT AVE	0.009	Lower Santa Ana River	Low
15	NPDES 1	BUILDING	ADD/ALTER	2146 E JACARANDA AVE	0.002	Lower Santa Ana River	Low
16	NPDES 1	BUILDING	T.I.	2844 N SANTIAGO BLVD	0	Lower Santa Ana River	Low
17	NPDES 1	BUILDING	T.I.	2844 N SANTIAGO BLVD	0	Lower Santa Ana River	Low

Building Permit Inventory
2009-2010

ID	Insp.Type	Type	SubType	SITE ADDRESS	AC	WATERSHED	PRIORITY
18	NPDES 1	BUILDING	T.I.	200 N LEWIS ST	0	Westminster	Low
19	NPDES 1	BUILDING	T.I.	4201 W CHAPMAN AVE	0	Westminster	Low
20	NPDES 1	BUILDING	T.I.	4201 W CHAPMAN AVE	0	Westminster	Low
21	NPDES 1	BUILDING	T.I.	4201 W CHAPMAN AVE	0	Westminster	Low
22	NPDES 1	BUILDING	T.I.	4201 W CHAPMAN AVE	0	Westminster	Low
23	NPDES 1	BUILDING	ADD/ALTER	205 N PINE ST	0.005	Lower Santa Ana River	Low
24	NPDES 1	BUILDING	ADD/ALTER	205 N PINE ST	0.01	Lower Santa Ana River	Low
25	NPDES 1	BUILDING	ADD/ALTER	2703 E LAKESIDE AVE	0	Lower Santa Ana River	Low
26	NPDES 1	BUILDING	ADD/ALTER	1439 E MAYFAIR AVE	0	Lower Santa Ana River	Low
27	NPDES 1	BUILDING	ADD/ALTER	321 E EVERETT PL	0.01	Lower Santa Ana River	Low
28	NPDES 1	BUILDING	ADD/ALTER	215 N CAMBRIDGE ST	0	Lower Santa Ana River	Low
29	NPDES 1	BUILDING	ADD/ALTER	215 N CAMBRIDGE ST	0	Lower Santa Ana River	Low
30	NPDES 1	BUILDING	ADD/ALTER	1411 E BALDWIN AVE	0.02	Lower Santa Ana River	Low
31	NPDES 1	BUILDING	ADD/ALTER	1411 E BALDWIN AVE	0.03	Lower Santa Ana River	Low
32	NPDES 1	BUILDING	T.I.	5827 E CARVER LN	0	Lower Santa Ana River	Low
33	NPDES 1	BUILDING	ADD/ALTER	2540 E DELIA LN	0.005	Lower Santa Ana River	Low
34	NPDES 1	BUILDING	ADD/ALTER	2540 E DELIA LN	0.005	Lower Santa Ana River	Low
35	NPDES 1	BUILDING	ADD/ALTER	2540 E DELIA LN	0.005	Lower Santa Ana River	Low

Building Permit Inventory
2009-2010

ID	Insp.Type	Type	SubType	SITE ADDRESS	AC	WATERSHED	PRIORITY
36	NPDES 1	BUILDING	PATIOCVR	625 E GROVE AVE	0.01	Lower Santa Ana River	Low
37	NPDES 1	BUILDING	T.I.	180 S CYPRESS ST #BLDG B	0	Lower Santa Ana River	Low
38	NPDES 1	BUILDING	ADD/ALTER	1054 N ANTONIO CIR	0	Lower Santa Ana River	Low
39	NPDES 1	BUILDING	ADD/ALTER	373 S GRAND ST	0.03	Lower Santa Ana River	Low
40	NPDES 1	BUILDING	ADD/ALTER	1414 E TRENTON AVE	0.005	Lower Santa Ana River	Low
41	NPDES 1	BUILDING	T.I.	491 N HEWES ST	0	Lower Santa Ana River	Low
42	NPDES 1	BUILDING	T.I.	491 N HEWES ST	0	Lower Santa Ana River	Low
43	NPDES 1	BUILDING	ADD/ALTER	1920 E BARKLEY AVE	0.01	Lower Santa Ana River	Low
44	NPDES 1	BUILDING	PATIOCVR	390 S CREST RD	0.007	Lower Santa Ana River	Low
45	NPDES 1	BUILDING	ADD/ALTER	335 W PALMYRA AVE		Lower Santa Ana River	Low
46	NPDES 1	BUILDING	ADD/ALTER	6833 E MONACO PKWY	0.007	Lower Santa Ana River	Low
47	NPDES 1	BUILDING	ADD/ALTER	6833 E MONACO PKWY	0.007	Lower Santa Ana River	Low
48	NPDES 1	POOL	POOL/SPA	6314 E SMOKEY AVE	0.012	Lower Santa Ana River	Low
49	NPDES 1	BUILDING	PATIOCVR	237 S FELDNER RD	0.006	Lower Santa Ana River	Low
50	NPDES 1	BUILDING	PATIOCVR	6507 E SYCAMORE GLEN DR	0.009	Lower Santa Ana River	Low
51	NPDES 1	BUILDING	ADD/ALTER	7630 E SANTIAGO CANYON RD	0.07	Lower Santa Ana River	Low
52	NPDES 1	BUILDING	T.I.	2401 N GLASSELL ST	0.002	Lower Santa Ana River	Low
53	NPDES 1	BUILDING	ADD/ALTER	3545 E ALDERLY LN	0.002	Lower Santa Ana River	Low

Building Permit Inventory
2009-2010

ID	Insp.Type	Type	SubType	SITE ADDRESS	AC	WATERSHED	PRIORITY
54	NPDES 1	BUILDING	ADD/ALTER	3545 E ALDERLY LN	0.002	Lower Santa Ana River	Low
55	NPDES 1	BUILDING	ADD/ALTER	3545 E ALDERLY LN	0.002	Lower Santa Ana River	Low
56	NPDES 1	BUILDING	ADD/ALTER	3545 E ALDERLY LN	0.002	Lower Santa Ana River	Low
57	NPDES 1	BUILDING	T.I.	142 E RIVERDALE AVE	0	Lower Santa Ana River	Low
58	NPDES 1	BUILDING	T.I.	142 E RIVERDALE AVE	0	Lower Santa Ana River	Low
59	NPDES 1	BUILDING	ADD/ALTER	335 W PALMYRA AVE	0	Lower Santa Ana River	Low
60	NPDES 1	BUILDING	ADD/ALTER	528 E PALMYRA AVE	0	Lower Santa Ana River	Low
61	NPDES 1	BUILDING	ADD/ALTER	2025 E WALNUT AVE	0.01	Lower Santa Ana River	Low
62	NPDES 1	BUILDING	NEW SFR	1655 N HUNTERS WAY	0.01	Lower Santa Ana River	Low
63	NPDES 1	BUILDING	POOL/SPA	3544 E WOODBINE RD	0.02	Lower Santa Ana River	Low
64	NPDES 1	BUILDING	POOL/SPA	3544 E WOODBINE RD	0.02	Lower Santa Ana River	Low
65	NPDES 1	BUILDING	NEW SFR	3544 E WOODBINE RD	0.17	Lower Santa Ana River	Low
66	NPDES 1	BUILDING	NEW SFR	3544 E WOODBINE RD	0.17	Lower Santa Ana River	Low
67	NPDES 2	BUILDING	NEW SFR	3544 E WOODBINE RD	0.15	Lower Santa Ana River	Low
68	NPDES 2	BUILDING	POOL/SPA	3544 E WOODBINE RD	0.15	Lower Santa Ana River	Low
69	NPDES 2	BUILDING	NEW SFR	3544 E WOODBINE RD	0.15	Lower Santa Ana River	Low
70	NPDES 2	BUILDING	NEW SFR	3544 E WOODBINE RD	0.15	Lower Santa Ana River	Low
71	NPDES 1	BUILDING	ADD/ALTER	456 S CALIFORNIA ST	0	Lower Santa Ana River	Low

Building Permit Inventory
2009-2010

ID	Insp.Type	Type	SubType	SITE ADDRESS	AC	WATERSHED	PRIORITY
72	NPDES 1	BUILDING	ADD/ALTER	1987 N LASSEN BLVD	0.002	Lower Santa Ana River	Low
73	NPDES 1	BUILDING	ADD/ALTER	244 N BATAVIA ST	0.01	Lower Santa Ana River	Low
74	NPDES 1	BUILDING	ADD/ALTER	244 N BATAVIA ST	0.01	Lower Santa Ana River	Low
75	NPDES 1	BUILDING	ADD/ALTER	244 N BATAVIA ST	0.01	Lower Santa Ana River	Low
76	NPDES 1	BUILDING	ADD/ALTER	244 N BATAVIA ST	0.01	Lower Santa Ana River	Low
77	NPDES 1	BUILDING	ADD/ALTER	244 N BATAVIA ST	0.01	Lower Santa Ana River	Low
78	NPDES 1	BUILDING	PATIOCVR	1047 N ENCANTO ST	0.02	Lower Santa Ana River	Low
79	NPDES 1	POOL	POOL/SPA	1047 N ENCANTO ST	0.001	Lower Santa Ana River	Low
80	NPDES 1	BUILDING	PATIOCVR	265 N LIME ST	0.002	Lower Santa Ana River	Low
81	NPDES 1	BUILDING	T.I.	1350 N MAIN ST	0	Lower Santa Ana River	Low
82	NPDES 1	BUILDING	T.I.	1350 N MAIN ST	0	Lower Santa Ana River	Low
83	NPDES 1	BUILDING	T.I.	1350 N MAIN ST	0	Lower Santa Ana River	Low
84	NPDES 1	BUILDING	T.I.	1350 N MAIN ST	0	Lower Santa Ana River	Low
85	NPDES 1	BUILDING	ADD/ALTER	421 N MAIN ST	0.01	Lower Santa Ana River	Low
86	NPDES 1	BUILDING	ADD/ALTER	3226 N HEARTHSIDE ST	0	Lower Santa Ana River	Low
87	NPDES 1	BUILDING	T.I.	671 N POPLAR ST	0	Lower Santa Ana River	Low
88	NPDES 1	BUILDING	ADD/ALTER	2585 N FOUNTAIN ARBOR WAY	0.008	Lower Santa Ana River	Low
89	NPDES 1	BUILDING	ADD/ALTER	2585 N FOUNTAIN ARBOR WAY	0.008	Lower Santa Ana River	Low
90	NPDES 1	BUILDING	ADD/ALTER	2585 N FOUNTAIN ARBOR WAY	0.008	Lower Santa Ana River	Low

Building Permit Inventory
2009-2010

ID	Insp.Type	Type	SubType	SITE ADDRESS	AC	WATERSHED	PRIORITY
91	NPDES 1	BUILDING	SIGNS	1620 N MAIN ST	0	Lower Santa Ana River	Low
92	NPDES 1	BUILDING	T.I.	2143 N TUSTIN ST #1	0	Lower Santa Ana River	Low
93	NPDES 1	BUILDING	ADD/ALTER	525 S ARLINGTON RD	0	Lower Santa Ana River	Low
94	NPDES 1	BUILDING	ADD/ALTER	1619 N SILVERWOOD ST	0.012	Lower Santa Ana River	Low
95	NPDES 1	BUILDING	ADD/ALTER	705 E HOOVER AVE	0.01	Lower Santa Ana River	Low
96	NPDES 1	BUILDING	ADD/ALTER	705 E HOOVER AVE	0.01	Lower Santa Ana River	Low
97	NPDES 1	BUILDING	ADD/ALTER	1021 E ROSE AVE	0.004	Lower Santa Ana River	Low
98	NPDES 1	BUILDING	BLOCK WALL	4039 E GREEN CLOVER CIR	0.005	Lower Santa Ana River	Low
99	NPDES 1	BUILDING	T.I.	2050 N GLASSELL ST	0	Lower Santa Ana River	Low
100	NPDES 1	BUILDING	T.I.	2050 N GLASSELL ST	0	Lower Santa Ana River	Low
101	NPDES 1	BUILDING	ADD/ALTER	4536 E WASHINGTON AVE	0.006	El Modena-Irvine Channel	Low
102	NPDES 1	BUILDING	ADD/ALTER	4536 E WASHINGTON AVE	0.006	El Modena-Irvine Channel	Low
103	NPDES 1	BUILDING	ADD/ALTER	2926 E MADISON AVE	0.007	Lower Santa Ana River	Low
104	NPDES 1	BUILDING	BLOCK WALL	1600 N MAPLEWOOD ST	0	Lower Santa Ana River	Low
105	NPDES 1	BUILDING	ADD/ALTER	928 E PALMYRA AVE	0.02	Lower Santa Ana River	Low
106	NPDES 1	BUILDING	T.I.	1491 N GLASSELL	0.004	Lower Santa Ana River	Low
107	NPDES 1	BUILDING	PATIOCVR	1249 E CHALYNN AVE	0.005	Lower Santa Ana River	Low
108	NPDES 1	BUILDING	ADD/ALTER	2117 E BRENTFORD AVE	0.008	Lower Santa Ana River	Low
109	NPDES 1	BUILDING	ADD/ALTER	2117 E BRENTFORD AVE	0.008	Lower Santa Ana River	Low
110	NPDES 1	BUILDING	T.I.	555 S HEWES ST	0	El Modena-Irvine Channel	Low
111	NPDES 1	BUILDING	T.I.	555 S HEWES ST	0	El Modena-Irvine Channel	Low

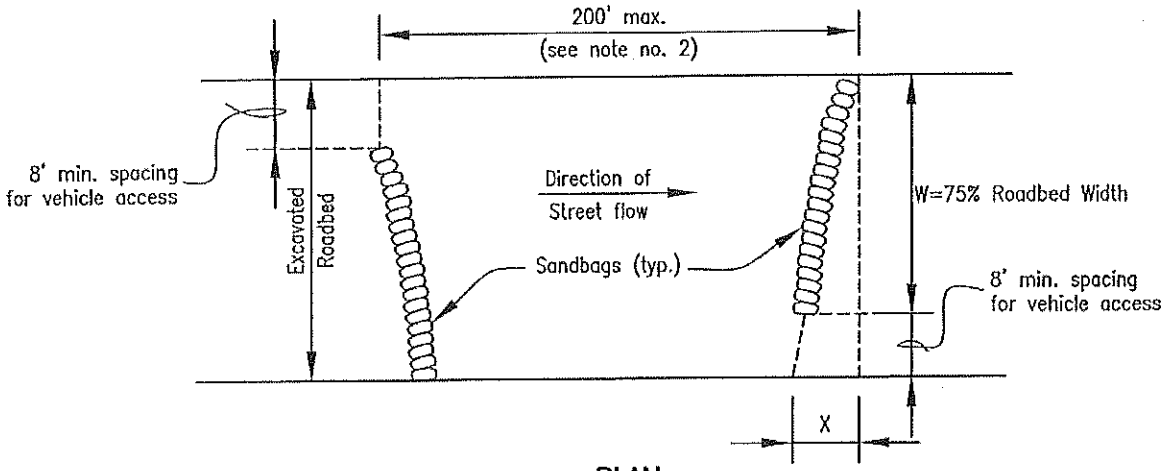
Building Permit Inventory
2009-2010

ID	Insp.Type	Type	SubType	SITE ADDRESS	AC	WATERSHED	PRIORITY
112	NPDES 1	BUILDING	PATIOCVR	2034 N DIAMOND ST	0.015	Lower Santa Ana River	Low
113	NPDES 1	BUILDING	PATIOCVR	2034 N DIAMOND ST	0.015	Lower Santa Ana River	Low
114	NPDES 1	BUILDING	ADD/ALTER	1132 E MAPLE AVE	0.01	Lower Santa Ana River	Low
115	NPDES 1	BUILDING	PATIOCVR	443 S EARLHAM ST	0.003	El Modena-Irvine Channel	Low
116	NPDES 1	BUILDING	ADD/ALTER	1341 E JACARANDA AVE	0.02	Lower Santa Ana River	Low
117	NPDES 1	BUILDING	T.I.	227 E MEATS AVE	0	Lower Santa Ana River	Low
118	NPDES 1	BUILDING	T.I.	227 E MEATS AVE	0	Lower Santa Ana River	Low
119	NPDES 1	BUILDING	SIGNS	2164 N BATAVIA ST	0	Lower Santa Ana River	Low
120	NPDES 1	BUILDING	ADD/ALTER	582 S NUTWOOD ST	0	Lower Santa Ana River	Low
121	NPDES 1	BUILDING	RET. WALL	1065 N RANCHO SANTIAGO BLVD	0.005	Lower Santa Ana River	Low
122	NPDES 1	BUILDING	RET. WALL	1065 N RANCHO SANTIAGO BLVD	0.005	Lower Santa Ana River	Low
123	NPDES 1	BUILDING	PATIOCVR	793 N ELMWOOD ST	0.006	Lower Santa Ana River	Low
124	NPDES 1	BUILDING	PATIOCVR	1323 E ROSE AVE	0.01	Lower Santa Ana River	Low
125	NPDES 1	BUILDING	PATIOCVR	3032 N SPICEWOOD ST	0.004	Lower Santa Ana River	Low
126	NPDES 1	BUILDING	ADD/ALTER	333 E CULVER AVE	0	Lower Santa Ana River	Low
127	NPDES 1	BUILDING	BLOCK WALL	2846 N NOHL CANYON RD	0.004	Lower Santa Ana River	Low
128	NPDES 2	POOL	POOL/SPA	3224 E WOODBINE RD	0	Lower Santa Ana River	Low

Exhibit A-8.II

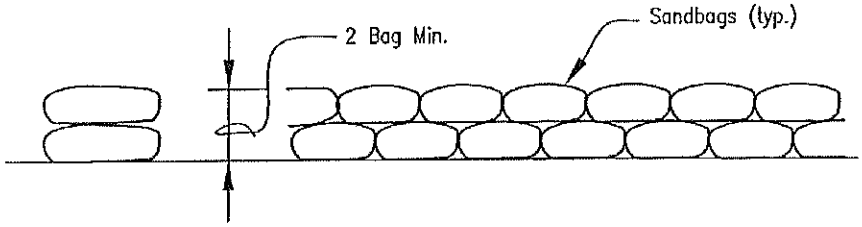
City of Orange Standard Plans

For Construction Site BMPs



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 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.

REGISTERED PROFESSIONAL ENGINEER
HARRY W. THOMAS
No. 18542
Exp. 6-30-05
CIVIL
STATE OF CALIFORNIA

4-15-04
DATE APPROVED

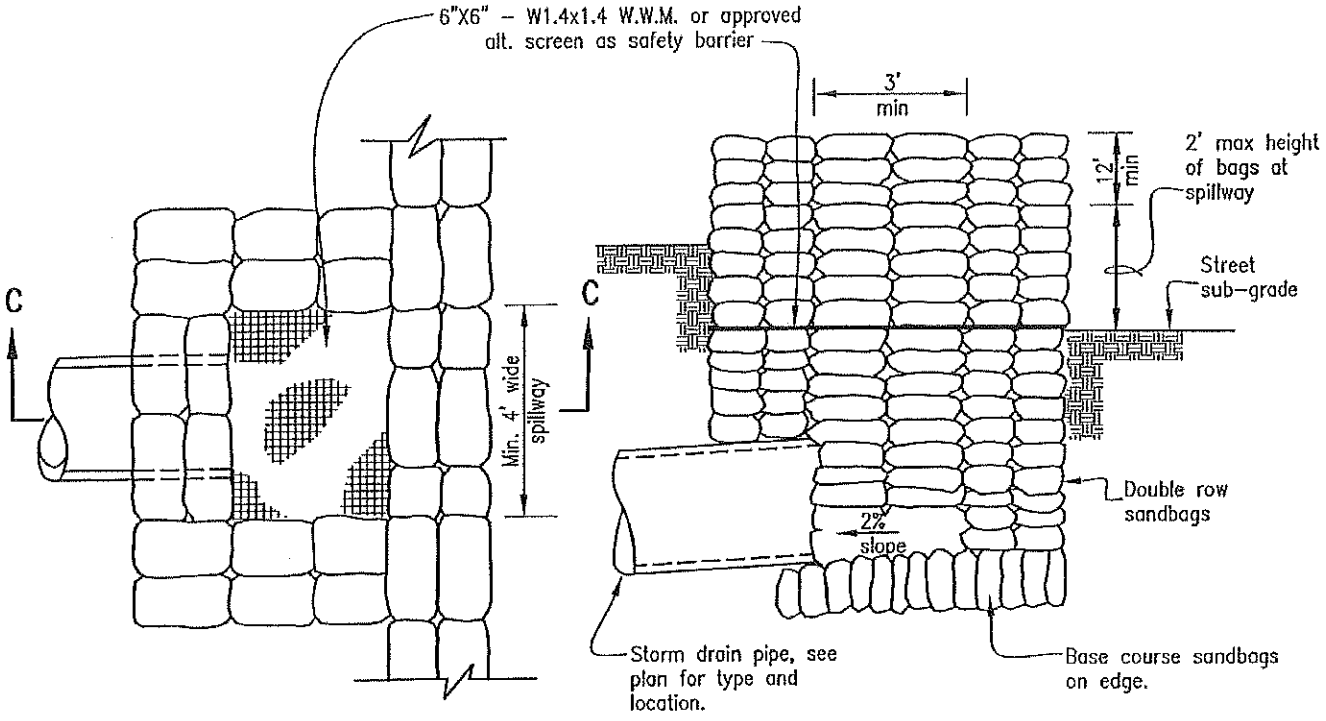
PUBLIC WORKS DIRECTOR/C.E.

ASSISTANT CITY ENGINEER

CITY OF ORANGE PUBLIC WORKS DEPARTMENT

SANDBAG VELOCITY REDUCER

STANDARD PLAN No. 339



PLAN

SECTION C–C

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.

REGISTERED PROFESSIONAL ENGINEER
HARRY W. THOMAS
No. 18542
Exp. 6-30-05
CIVIL
STATE OF CALIFORNIA

4-16-04
DATE APPROVED

PUBLIC WORKS DIRECTOR/C.E.

ASSISTANT CITY ENGINEER

CITY OF ORANGE PUBLIC WORKS DEPARTMENT

TEMPORARY DRAINAGE INLET

STANDARD PLAN No. 340

Exhibit A-8.III

Construction Inspection Checklist

CITY OF ORANGE MUNICIPAL STORMWATER PROGRAM
CONSTRUCTION SITE INSPECTION FORM

FOR INSPECTION OF PRIVATE PROJECTS ISSUED GRADING PERMITS

SECTION I - GENERAL

PERMIT NO/WDID: _____ INSPECTOR(S): _____

ADDRESS/TRACT: _____

ARRIVAL TIME: _____ DEPARTURE TIME: _____ PHOTOGRAPHS TAKEN: ❒ Y ❒ N

WEATHER CONDITION: _____ INSPECTION DATE: _____

SITE PRIORITY (Check Applicable)
❒ HIGH PRIORITY ❒ MEDIUM PRIORITY
❒ LOW PRIORITY ❒ PRIORITY UNKNOWN

SEASON (Check Applicable)
❒ WET (OCTOBER 1 THROUGH APRIL 30) ❒ DRY (MAY 1 THROUGH SEPTEMBER 30)

NAME OF SITE REPRESENTATIVE PRESENT DURING INSPECTION: _____ PHONE No: _____

DEVELOPMENT SIZE: _____ ESTIMATED % OF DISTURBED AREA: _____ THOMAS BROS. MAP/PG GRID _____

_____ _____
DEVELOPER/CONTRACTOR NAME OWNER NAME

TYPE OF CONSTRUCTION:
❒ RESIDENTIAL ❒ COMMERCIAL ❒ INDUSTRIAL ❒ INFRASTRUCTURE
❒ RECONSTRUCTION ❒ TRANSPORTATION ❒ OTHER

SECTION II - RESULTS OF INSPECTION

Erosion Control Practices	Y	N	N/A	COMMENTS
1. Are erosion controls being implemented and maintained on inactive and active disturbed soil areas (sheeting, mulch, hay, soil stabilizers, etc.), in accordance with Erosion and Sediment Control Plans (ESCPs) and provisions of the Grading Ordinance?				
2. Erosion observed? *If YES, describe the evidence of the erosion and whether it is major or minor.*				
Sediment Control Practices	**Y**	**N**	**N/A**	**COMMENTS**
3. Are sediment controls being implemented and maintained on all significant slopes (silt fences, fiber rolls, etc. at the base of slopes) and the downstream perimeter, in accordance with Erosion and Sediment Control Plans (ESCPs) and provisions of the Grading Ordinance?				
4. Sediment discharge observed? *If YES, describe the evidence of the discharge and whether it is major or minor. (If the discharge could impact wildlife, sensitive habitat/endangered species go to the "Evaluation of Potential Impacts to Human or Environmental Health" form.)*				

Tracking Controls	Y	N	N/A	COMMENTS
5. Are the entrances and exits to the construction site adequately protected (tire washout, stabilized entrances, rumble strips)?				
6. Are roads free of sediment?				
Nonstorm Water Discharges/ Waste and Disposal Management	**Y**	**N**	**N/A**	**COMMENTS**
7. Are activities such as concrete/plastering, painting and fueling resulting in a discharge to the storm drain in violation of provisions of the Water Quality Ordinance? *If YES, describe the evidence of the discharge and whether it is major or minor.*				
8. Are containers for construction waste and debris being utilized and are they adequate?				
9. Are there potential water quality problems that have been identified on the site, which may be in violation of provisions of the Water Quality Ordinance and may require further inspection by an Authorized Water Quality Ordinance Inspector?				
10. Are there any discharges or spills of sewage, oil, or toxic/hazardous materials, which may be in violation of provisions of the Water Quality Ordinance? *If YES, go to the "Evaluation of Potential Impacts to Human or Environmental Health"* form.				

PRIVATE CONSTRUCTION PROJECTS

- ☐ Issued a Notice of Non-compliance
- ☐ Issued an Administrative Compliance Order
- ☐ Issued a Cease and Desist Order
- ☐ Issued a Stop Work Order
- ☐ No Action Required
- ☐ Request Inspection by an Authorized Water Quality Ordinance Inspector
- ☐ Other (Please Explain): _____

OTHER/COMMENTS _____

REPORT PREPARED BY: _____ _____ DATE: _____
NAME SIGNATURE

CITY OF ORANGE MUNICIPAL STORMWATER PROGRAM
CONSTRUCTION SITE INSPECTION FORM

FOR INSPECTION OF PROJECTS ISSUED BUILDING PERMITS

SECTION I - GENERAL

PROJECT ID: _____ INSPECTOR(S): _____

ADDRESS/TRACT: _____

ARRIVAL TIME: _____ DEPARTURE TIME: _____ PHOTOGRAPHS TAKEN: ☐ Y ☐ N

WEATHER CONDITION: _____ INSPECTION DATE: _____

SITE PRIORITY (Check Applicable)
☐ HIGH PRIORITY ☐ MEDIUM PRIORITY
☐ LOW PRIORITY ☐ PRIORITY UNKNOWN

SEASON (Check Applicable)
☐ WET (OCTOBER 1 THROUGH APRIL 30) ☐ DRY (MAY 1 THROUGH SEPTEMBER 30)

INSPECTION REQUIRED ☐ YES ☐ NO (SEE EXPLANATION COMMENT SECTION)

NAME OF SITE REPRESENTATIVE PRESENT DURING INSPECTION: _____ PHONE No: _____

DEVELOPMENT SIZE: _____ ESTIMATED % OF DISTURBED AREA: _____ THOMAS BROS. MAP/PG GRID _____

_____ _____

DEVELOPER/CONTRACTOR NAME OWNER NAME

TYPE OF CONSTRUCTION:
☐ RESIDENTIAL ☐ COMMERCIAL ☐ INDUSTRIAL ☐ INFRASTRUCTURE
☐ RECONSTRUCTION ☐ TRANSPORTATION ☐ OTHER

SECTION II - RESULTS OF INSPECTION

Sediment and Erosion Control Practices	Y	N	N/A	COMMENTS
1. Are effective sediment and erosion controls being implemented and maintained around the site perimeter? Are the entrances and exits to the construction site adequately protected (tire washout, stabilized entrances, rumble strips) and roads free of sediment? If not, if grading permit issued has the grading inspector been notified?				
Waste and Disposal Management	**Y**	**N**	**N/A**	**COMMENTS**
1. Are good housekeeping procedures being followed and enforced in appropriate locations? Are the outside areas kept neat and clean? Exposed materials covered? Area free of excessive dust?				

2. Are containers for construction waste and debris being utilized and are they adequate?				
3. Are activities such as concrete/plastering, painting and fueling resulting in a discharge to the storm drain in violation of provisions of the Water Quality Ordinance? *If YES, describe the evidence of the discharge and whether it is major or minor.*				
4. Are vehicle fueling/maintenance activities indoors or contained in a designated area to prevent accidental discharges?				
5. Is there evidence of leaking fluid from equipment and is it contained and cannot be discharged off site?				
6. Are waste discharges, containers for chemical substances/temporary storage of wastes or storage tanks bermed, provided with secondary containment or covered to prevent discharges into the public right-of-way and the storm drain system?				
7. Is vehicle/equipment washing done in designated area so wash water is discharged to an appropriate area or bermed to contain wash water from going off site?				
8 . Are there potential water quality problems that have been identified on the site, which may be in violation of provisions of the Water Quality Ordinance and may require further inspection by an Authorized Water Quality Ordinance Inspector?				
9. Are there any discharges or spills of sewage, oil, or toxic/hazardous materials, which may be in violation of provisions of the Water Quality Ordinance? *If YES, go to the "Evaluation of Potential Impacts to Human or Environmental Health"* form.				

PRIVATE CONSTRUCTION PROJECTS

- ☐ Issued a Notice of Non-compliance
- ☐ Issued a Stop Work Order
- ☐ No Action Required
- ☐ Request Inspection by an Authorized Water Quality Ordinance Inspector
- ☐ Other (Please Explain): _____

OTHER/COMMENTS

CITY OF ORANGE MUNICIPAL STORMWATER PROGRAM
CONSTRUCTION SITE INSPECTION FORM
FOR INSPECTION OF PUBLIC PROJECTS ISSUED

SECTION I - GENERAL

PROJECT WORK ORDER NO/WDID _____ INSPECTOR(S): _____

PROJECT LOCATION _____

CONTRACTOR: _____ CONTRACTOR ONSITE REPRESENTATIVE: _____

ARRIVAL TIME: _____ DEPARTURE TIME: _____ PHOTOGRAPHS TAKEN: ☐ Y ☐ N

WEATHER CONDITION: _____ INSPECTION DATE: _____

SITE PRIORITY (Check Applicable)
☐ HIGH PRIORITY ☐ MEDIUM PRIORITY
☐ LOW PRIORITY ☐ PRIORITY UNKNOWN

SEASON (Check Applicable)
☐ WET (OCTOBER 1 THROUGH APRIL 30) ☐ DRY (MAY 1 THROUGH SEPTEMBER 30)

PROJECT AREA _____ ESTIMATED % OF DISTURBED AREA: _____ THOMAS BROS. MAP/PG GRID _____

TYPE OF CONSTRUCTION:
☐ ROAD ☐ WATER ☐ PARKS ☐ OTHER

SECTION II - RESULTS OF INSPECTION

Erosion Control Practices	Y	N	N/A	COMMENTS
1. Are erosion controls being implemented and maintained on inactive and active disturbed soil areas (sheeting, mulch, hay, soil stabilizers, etc.), in accordance with Erosion and Sediment Control Plans (ESCPs) and provisions of the Grading Ordinance?				
2. Erosion observed? *If YES, describe the evidence of the erosion and whether it is major or minor.*				
Sediment Control Practices	**Y**	**N**	**N/A**	**COMMENTS**
3. Are sediment controls being implemented and maintained on all significant slopes (silt fences, fiber rolls, etc. at the base of slopes) and the downstream perimeter, in accordance with Erosion and Sediment Control Plans (ESCPs) and provisions of the Grading Ordinance?				
4. Sediment discharge observed? *If YES, describe the evidence of the discharge and whether it is major or minor. Proceed to Section III with enforcement if necessary*				
Tracking Controls	**Y**	**N**	**N/A**	**COMMENTS**
5. Are the entrances and exits to the construction site adequately protected (tire washout, stabilized entrances, rumble strips)?				

6. Are roads free of sediment?				
Nonstorm Water Discharges/ Waste and Disposal Management	**Y**	**N**	**N/A**	**COMMENTS**
7. Are activities such as concrete/plastering, painting and fueling resulting in a discharge to the storm drain in violation of provisions of the Water Quality Ordinance? *If YES, describe the evidence of the discharge and whether it is major or minor.*				
8. Are containers for construction waste and debris being utilized and are they adequate?				
9. Are there potential water quality problems that have been identified on the site, which may be in violation of provisions of the Water Quality Ordinance and may require further inspection by an Authorized Water Quality Ordinance Inspector?				
10. Are there any discharges or spills of sewage, oil, or toxic/hazardous materials, which may be in violation of provisions of the Water Quality Ordinance? *If YES, go to the "Evaluation of Potential Impacts to Human or Environmental Health"* form.				

SECTION III ENFORCEMENT

- ☐ Issued a Notice of Non-compliance
- ☐ Enforce Contract
- ☐ Withhold Payment
- ☐ Issued a Stop Work Order
- ☐ No Action Required
- ☐ Request Inspection by an Authorized Water Quality Ordinance Inspector
- ☐ Other (Please Explain): _____

EXPLAIN ANY RESPONSES TO PREVIOUS QUESTIONS
OTHER/COMMENTS

REPORT PREPARED BY: _____ _____ DATE: _____
NAME SIGNATURE

Exhibit A-8.IV

Field Memo

Enforcement Forms

Notice of Noncompliance (see Exhibit A-10-II)

CITY OF ORANGE
PUBLIC WORKS DEPARTMENT
300 E. CHAPMAN AVE.
ORANGE, CA 92866

FIELD MEMO

PROJECT:	DATE:
CONTRACTOR:	PROJ. NO.:
LOCATION:	

MEMO WRITTEN BY:	TITLE:	PHONE:
MEMO GIVEN TO:	DATE:	AT (TIME) ☐ AM ☐ PM

PREVIOUS MEMOS:

RECEIPT ACKNOWLEDGED:

RESPONSE (OPTIONAL)

RECEIPT ACKNOWLEDGED:

DATE:	TIME: ☐ AM ☐ PM
REFERRED TO:	DATE:

PLEASE REFER TO PREVIOUS MEMO(S) DATED:

WHITE-Inspector YELLOW-Contractor's Representative PINK-Project Manager

☐WORK CORRECTION
☐STOP WORK NOTICE

Per City of Orange Ordinance ☐ 12.64.090 ☐ 12.64.020

☐ Per Standard Specifications for Public Works Construction "GREENBOOK" Section 6-3.1 and 7-2.1

CITY OF ORANGE
PUBLIC WORKS DEPARTMENT
300 E. CHAPMAN AVE.
ORANGE, CA 92866
Tel. (714) 744-5525 Fax. (714) 744-5573
Inspection: (714) 744-5526

DATE_____ **TIME**_____
JOB/PERMIT NO._____
JOB ADDRESS / LOCATION_____
_____
CONTRACTOR / OWNER_____
_____

Inspector_____

Exhibit A-8.V

Forms for Evaluating Threat to Human or

Environmental Health

CITY OF ORANGE STORMWATER PROGRAM

Evaluation of Potential Impacts to Human or Environmental Health

PROJECT ID: _____ INSPECTOR(S): _____

ADDRESS/TRACT: _____

ARRIVAL TIME: _____ DEPARTURE TIME: _____ PHOTOGRAPHS TAKEN: ❒ Y ❒ N

WEATHER CONDITION: _____ INSPECTION DATE: _____

SITE PRIORITY (Check Applicable)
❒ HIGH PRIORITY ❒ MEDIUM PRIORITY
❒ LOW PRIORITY ❒ PRIORITY UNKNOWN

SEASON (Check Applicable)
❒ RAINY (OCTOBER 1 THROUGH APRIL 30) ❒ NON-RAINY (MAY 1 THROUGH SEPTEMBER 30)

NAME OF SITE REPRESENTATIVE PRESENT DURING INSPECTION: _____ PHONE No: _____

DEVELOPMENT SIZE: _____ ESTIMATED % OF DISTURBED AREA: _____ THOMAS BROS. MAP/PG GRID _____

_____ _____
DEVELOPER/CONTRACTOR NAME OWNER NAME

TYPE OF CONSTRUCTION:
❒ RESIDENTIAL ❒ COMMERCIAL ❒ INDUSTRIAL ❒ INFRASTRUCTURE
❒ RECONSTRUCTION ❒ TRANSPORTATION ❒ OTHER

Section I

CRITERIA	Y	N	N/A	COMMENTS
Sediment discharge observed that could impact wildlife, sensitive habitat/endangered species, an impaired water body (303d listed), an ESA or an ASBS area? *If YES, describe the evidence of the discharge (turbidity, TSS), and estimate the sediment load discharged from the site.*				
Sewer spill discharge observed (to a storm drain or water body) that could impact recreational water contact? *If YES, describe the evidence of the sewer spill and estimate the quantity discharged from the site.*				
Oil spill discharge observed (to a storm drain or water body) that could impact wildlife? *If YES, describe the evidence of the oil spill and estimate the quantity discharged from the site.*				
Toxic materials or hazardous substances discharged from the site and evacuation of residents was necessary? *If YES, describe the evidence of the discharge, estimate the volume discharged from the site and the number of residents that were evacuated.*				

Evaluation Form for
Potential Impacts to Human or Environmental Health

Section I				
CRITERIA	**Y**	**N**	**N/A**	**COMMENTS**
Is the site near a public water supply (well head, monitoring wells) and could the discharge affect the water supply?				

IF THE ANSWER IS YES TO ANY OF THE QUESTIONS IN SECTION I, FOLLOW THE STEPS BELOW.

1. Issued a Notice of Non-compliance

Signed: _____ Date: _____
Authorized Inspector

Section II
FOR NPDES PROGRAM MANAGER/COORDINATOR ONLY

1. Contact the RWQCB by telephone within 24-hours of the discovery of non-compliance
2. Fax a copy of this form to the RWQCB within 5 days of the discovery of non-compliance
   Santa Ana Regional Water Quality Control Board Fax Number: (909)781-6288
   San Diego Regional Water Quality Control Board Fax Number: (858)571-6972

Date Notice of Non-compliance Issued _____

Date when RWQCB Contacted by Phone _____

Name and Telephone Number of RWQCB Contact _____

Date when written report faxed to RWQCB _____

Signed: _____ Date: _____
NPDES Program Manager/Coordinator or Designated Representative

City/County Contact Information Here

Exhibit A-8.VI

City of Orange Construction Training

SEDIMENT CONTROL ON BUILDING SITES

GENE ESTRADA
March 9, 2011

Purpose

- To provide basic understanding of sediment control and clarification and distinction between sediment and erosion control practices and when each should be used

DEFINITIONS

Erosion Control

- Prevention of dislodging of sediment particles on exposed soil during rain and wind (Rainy season October 1 through April 30)

- Typical BMPs

  Vegetation, fiber blankets, soil binders,

  anything to prevent rain from hitting soil particles

Sediment Control

- Containment of sediment particles after erosion has occurred

- Typical BMPs

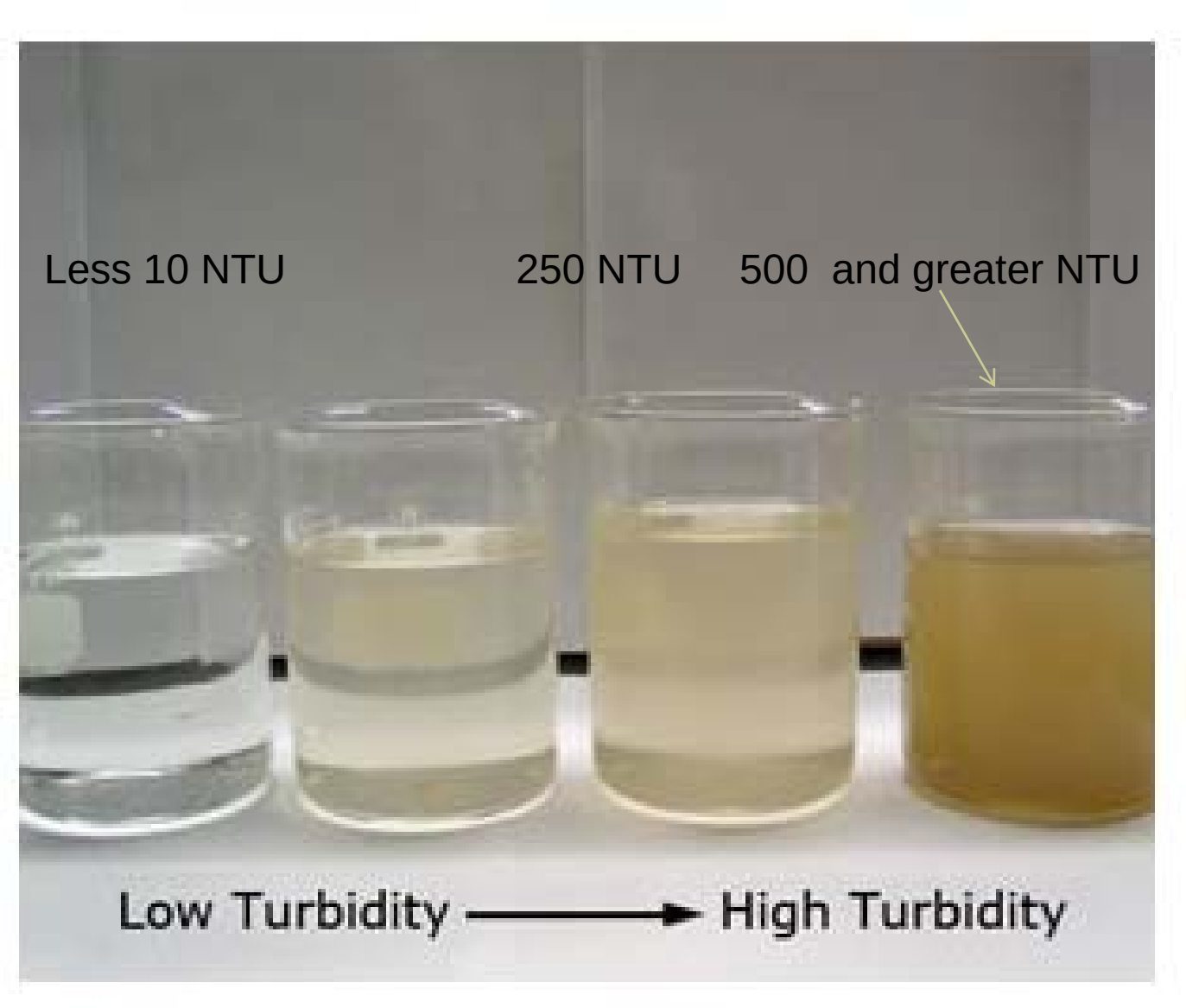
  Sandbags, fiber rolls, silt fence, straw bales, sediment traps and basins,

  anything that keeps sediment onsite or removes it from runoff

SEDIMENT CONTROL

Sediment Control

- To control sediment onsite
- Only clean water leaves site
- If it’s turbid it is not clean


Less 10 NTU
250 NTU
500 and greater NTU
Low Turbidity
High Turbidity

PROJECT PLANS

Sediment Control Plans

- Large building projects (tracts) will have a grading permit that includes an erosion and sediment control plan
- Smaller projects do not have grading permit (Focus of this presentation because of reliance on building inspectors)
- All projects must have appropriate sediment control plans

What Must be on Plans

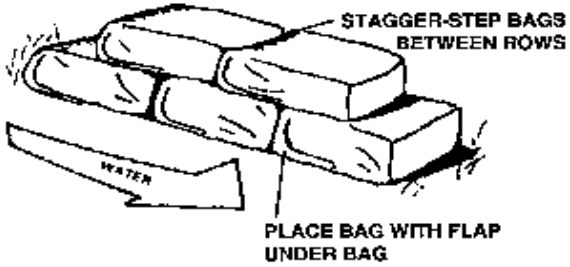
- How to contain sediment on site
- Sediment control required around site perimeter
- Only clean water leaves the site

Most Common BMPs

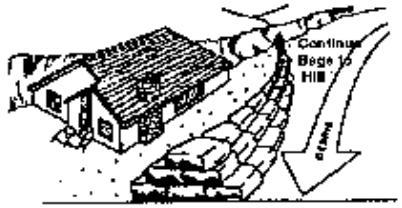
Sandbags

- Two types – sand or gravel
- Sand will prevent flow of water through bag
- Gravel acts as filter but generally prevents flow through
- When to use
  - To contain flow onsite
  - To pond water
  - To protect inlets

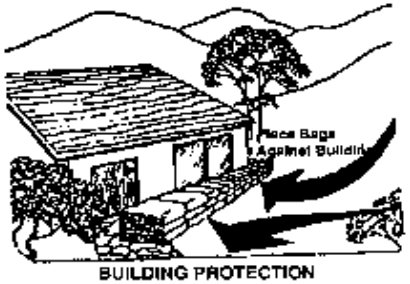
SANDBAG FILLING AND PLACEMENT



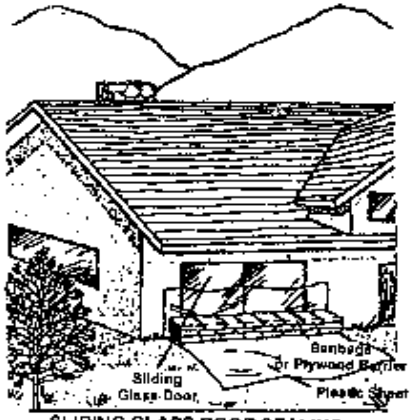
DIRECTING FLOWS BETWEEN BUILDINGS



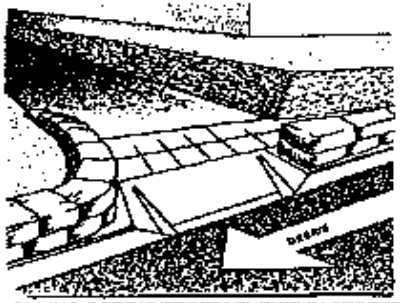
DIRECTING DEBRIS AWAY FROM BUILDINGS



BUILDING PROTECTION



SLIDING GLASS DOOR SEALING
Control of Flows to prevent seeping into sliding glass door



CONTROLLING DEBRIS/STORM FLOWS IN STREETS


Sandbag Failure

FIBER ROLL

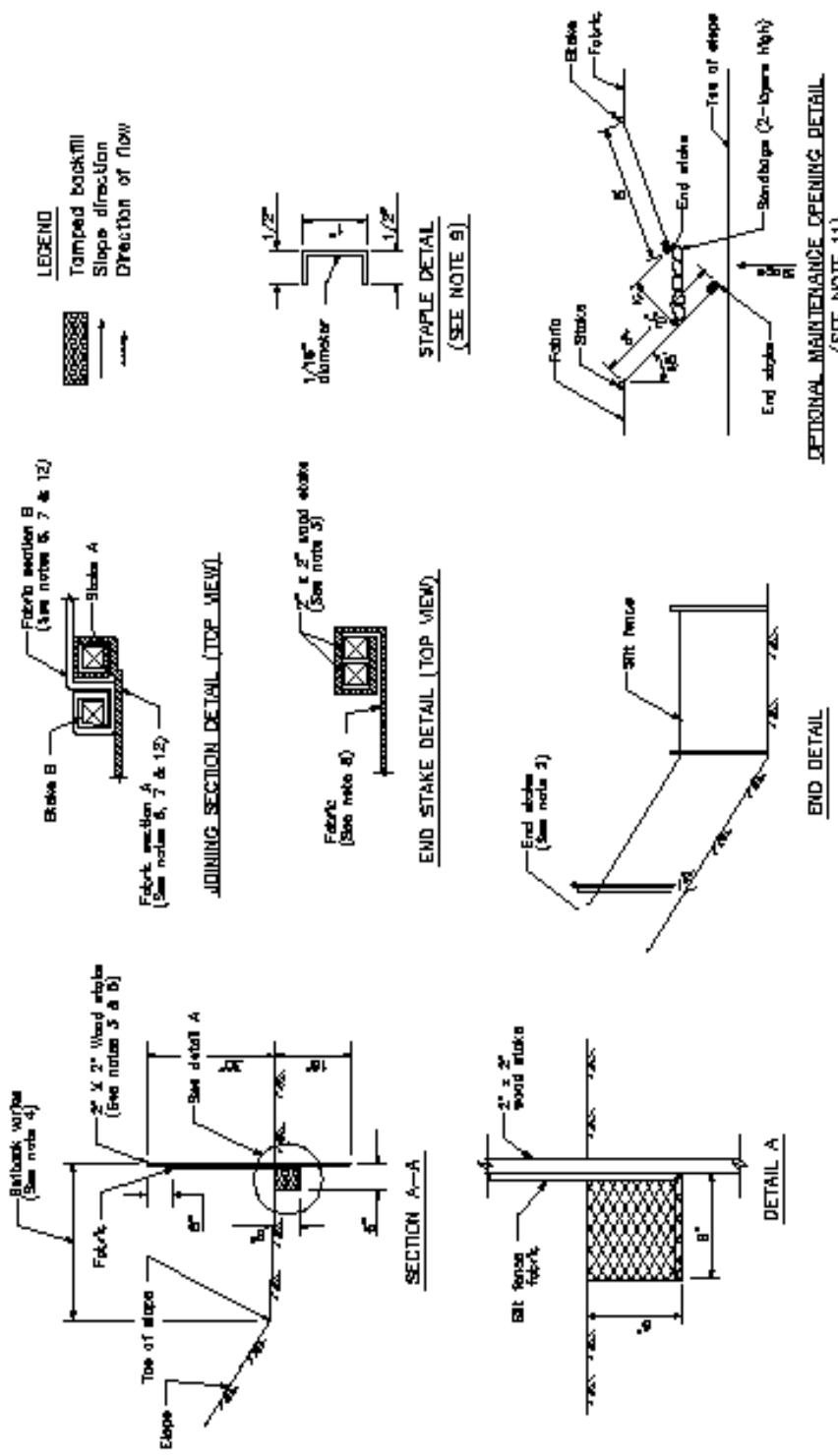
- Used to contain sediment
- Also called straw wattle (or waddle)
- Intended to slow water runoff
- Provides filtering mechanism but mostly redirects flow

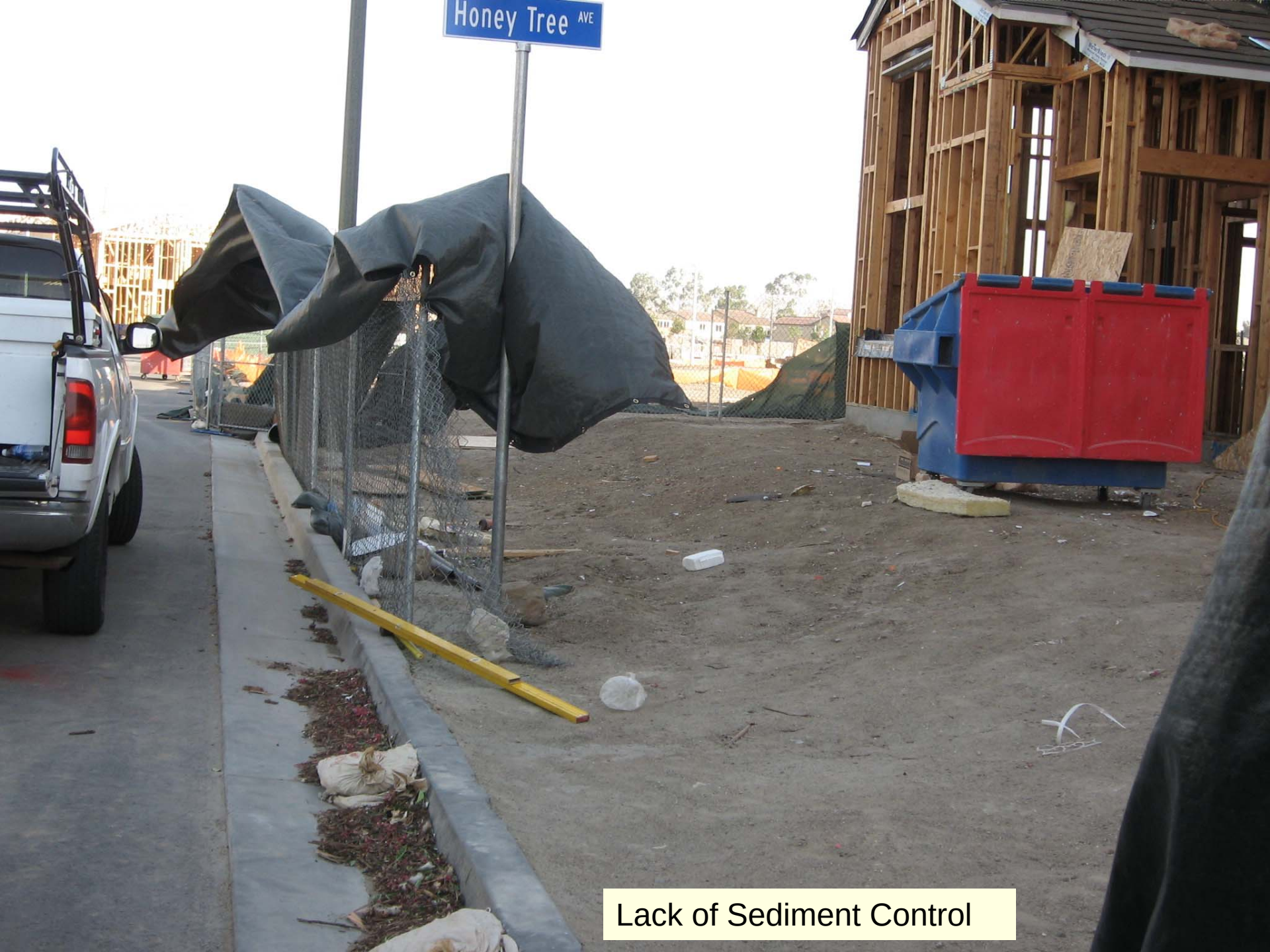
Unprotected Lot - No Erosion/Sediment Control


10
US MAIL
Sediment Control

Silt Fence

- Intended to filter water as it leaves site
- Used on slopes and flat areas
- Can become clogged if too much soil accumulates in base of fence
- Can fall down if not properly installed


LEGEND
Tamped backfill
Slope direction
Direction of flow
1/2"
1"
1/2"
1/16" diameter
STAPLE DETAIL
(SEE NOTE 9)
Fabric overlap
Stake
Fabric
End stake
Toe of slope
Sandbags (2-layers high)
End stake
OPTIONAL MAINTENANCE OPENING DETAIL
(SEE NOTE 11)
Fabric section B
(See notes 6, 7 & 12)
Stake A
Stake B
Fabric section A
(See notes 6, 7 & 12)
JOINING SECTION DETAIL (TOP VIEW)
2" x 2" wood stake
(See note 3)
Fabric
(See note 6)
END STAKE DETAIL (TOP VIEW)
Silt fence
End stake
(See note 3)
END DETAIL
Backhoe vertical
(See note 4)
2" X 2" Wood stake
(See notes 3 & 5)
See detail A
Fabric
Toe of slope
Slope
SECTION A-A
2" x 2"
wood stake
Silt fence
fabric
8"
DETAIL A



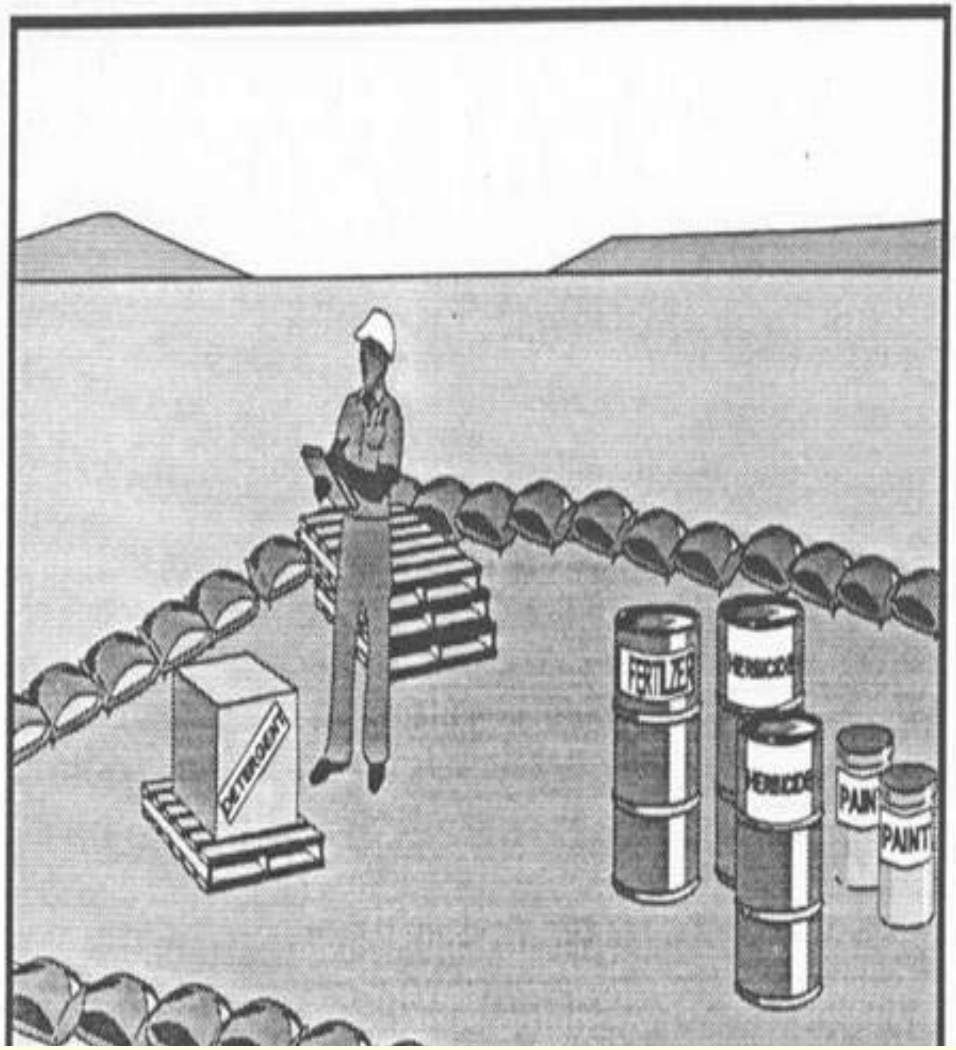
Lack of Sediment Control

Water Quality BMPs


SoCal
800-850-8871
SoCal
800-850-8871
No secondary containment

Material Handling and Storage

Material Use

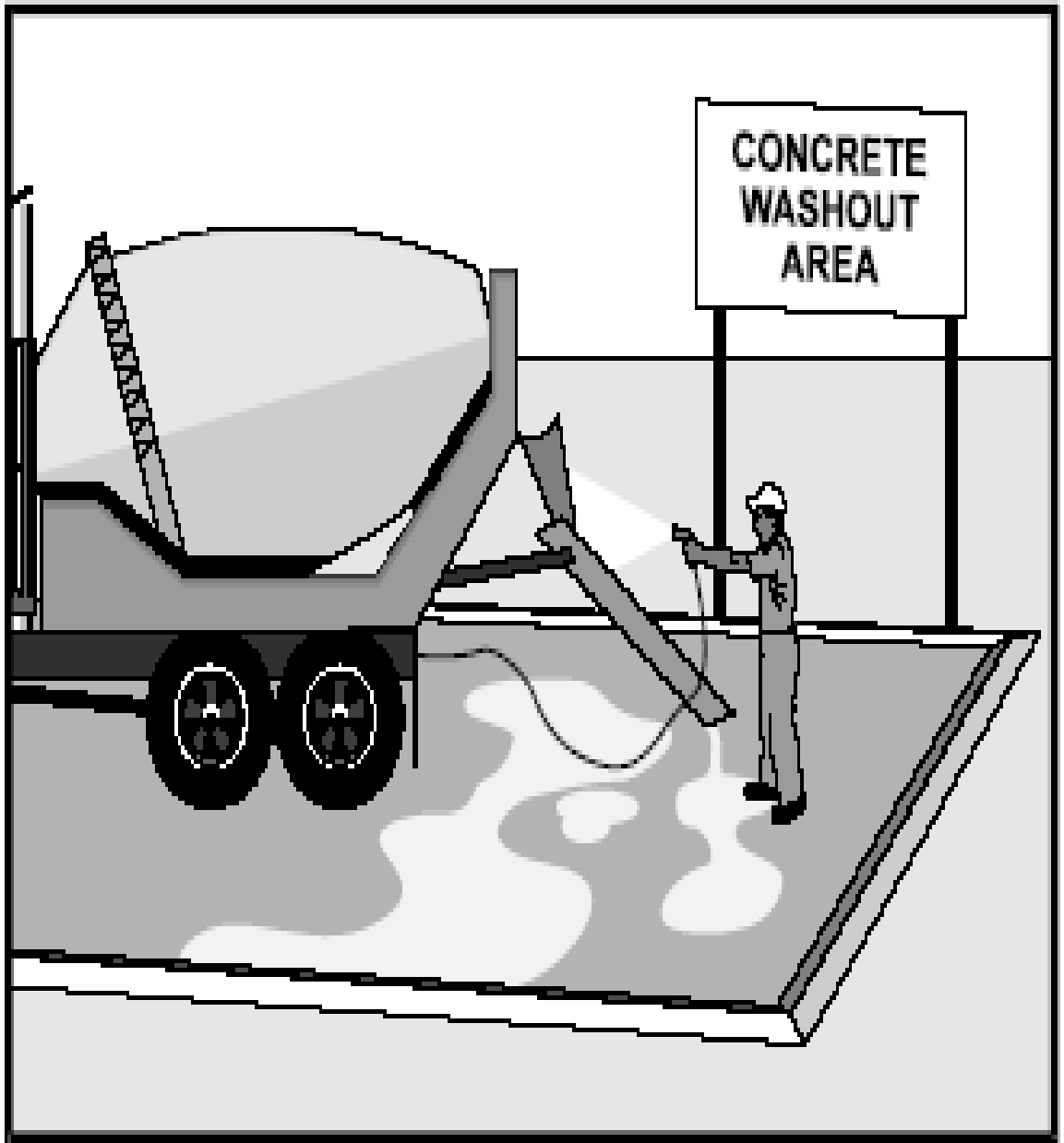


MU

GMP Objectives

- O Erosion and Sediment Control
- O Sediment Treatment Control
- O Tracking Control

Concrete Waste Management WM-8



Objectives

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ Primary Objective

☒ Secondary Objective

Inspection Requirements

Rainy Season October 1 thru April 30

High – Monthly between Oct. 1 and April 30

Medium – Twice between Oct. 1 and April 30

Low – Once between Oct. 1 and April 30