

City of Long Beach Municipal Storm Water Permit Annual Report From



Date of Submittal: December 15, 2014



**CITY OF LONG BEACH
DEPARTMENT OF PUBLIC WORKS**



333 W. Ocean Blvd., 9th Floor | Long Beach, CA 90802 | (562) 570-6023 FAX: (562) 570-6501

STORM WATER/ENVIRONMENTAL COMPLIANCE DIVISION

December 15, 2014

Sam Unger, Executive Officer
Los Angeles Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Subject: Annual Storm Water Permit Report and Assessment for 2013-2014

Dear Mr. Unger:

The City of Long Beach is pleased to submit its "Annual Storm Water Permit Report and Assessment for 2013-2014" in compliance with Order No. 99-060 of the Municipal National Pollutant Discharge Elimination System (NPDES) Permit No. CAS004003, (CI8052). Included is an attachment summarizing actions taken pursuant to Order No. R4-2014-0024.

We have worked to produce a report that we believe contains extremely useful information for the City and the Los Angeles Regional Water Quality Control Board/State Water Resources Control Board.

Should you have questions regarding this report, please contact me at your convenience at 562-570-6023.

Sincerely,

A handwritten signature in blue ink, appearing to read "Anthony Arevalo".

Anthony Arevalo
Storm Water/Environmental Compliance Officer

Enclosure

Cc: Ara Maloyan, Director of Public Works



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STORM WATER/ENVIRONMENTAL COMPLIANCE DIVISION

CITY OF LONG BEACH MUNICIPAL STORM WATER PERMIT
ORDER NO. 99-060
and includes an attachment summarizing actions taken pursuant to
Order No. R4-2014-2004

Permit Annual Program Report Form
Permit Year 2013 - 2014

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluated the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility, of a fine and imprisonment for known violations.

Executed on the 15th day of December 2014 at Long Beach, California.

Anthony Arevalo
Storm Water/Environmental Compliance Officer

12/15/2014
Date

Cc: Ara Maloyan, Director of Public Works



TABLE OF CONTENTS

Executive Summary.....i

Annual Report Form.....1

Attachments

- A. BMPs
- B. City Ordinance No. ORD-13-0024
- C. Annual Report Additional Information
- D. SWPPP Sample
- E. 2013-2014 Summaries of Watershed Activities
 - E-1. Lower Los Angeles River
 - E-2. Los Cerritos Channel
 - E-3. Lower San Gabriel River

INTRODUCTION

The City of Long Beach Storm Water Management Program (LBSWMP), is in its 15th year of operation. The LBSWMP continues to be fully implemented in compliance with its National Pollutant Discharge Elimination System (NPDES) permit, the Federal Clean Water Act (CWA) and subsequent CWA amendments. The NPDES Permit, CWA and CWA Amendments were adopted to protect receiving waters such as rivers, lakes, and oceans from contamination by preventing pollutants from entering the City's municipal separate storm sewer systems (MS4s). The City of Long Beach (City) complies with CWA guidelines through its NPDES permit and is committed to preserving and maintaining the quality of our beaches and waterways while improving marine habitat and the quality of life for our residents.

The City is currently operating under the requirements of NPDES No. CAS004003, Order No. 99-060, issued by the Los Angeles Regional Water Quality Control Board (LARWQCB) on March 28, 2014.

The new NPDES Permit for the City of Long Beach MS4 was adopted on February 6, 2014, by the LARWQCB and became effective on March 28, 2014. As a requirement of the Permit, the City of Long Beach who will be referred to as the, "Permittee" is required to develop a Watershed Management Program (WMP) for the entire City of Long Beach. Currently Long Beach has been participating in the development of Watershed Management Programs (WMP) for the areas of the City within the Lower Los Angeles River (LLAR), the Los Cerritos Channel (LCC) and the Lower San Gabriel River (LSGR) Watersheds. In addition to these WMPs, the City is a regional participant with the Harbor Regional Monitoring Coalition Toxic Total Maximum Daily Load (TMDL) and the Dominguez Channel Toxic Sediment TMDL. The City will be integrating the WMPs of the watersheds mentioned above along with the two TMDLs also mention above with the remaining areas of the City to prepare one Master WMP (MWMP).

The Alamitos Bay, Shoreline Water Front, City Beaches/Outfalls/Pier to Breakwater (San Pedro Bay), and the Port of Long Beach are areas of Long Beach required to be included in the WMP in accordance with the recently adopted permit and are currently not covered by the WMPs mentioned above. The Master WMP will be developed to cover these areas.

PROGRAM MANAGEMENT

The Storm Water/Environmental Compliance Division (SWEC) manages the LBSWMP. Its management staff consists of the SWEC Officer, the Division Analyst and the Division Clerk Typist. The SWEC Officer also manages support provided by the following Divisions: 1) the Engineering Bureau provides Engineering support, 2) the Construction Services Division provides storm water related field inspections and compliance enforcement and 3) the Street Operations Division handles the operations and maintenance of all City stormwater facilities such as a) the City's Storm Drain Pump Stations, b) open channels and ditches, c) storm drain catch basins and d) outfalls. The Street Operations Division also inspects, maintains and operates stormwater related Best Management Practices Devices such as e) Low Flow Diversion systems, f) Vortex Separation System Devices, g) trash extruder screens at catch basins etc.

The SWEC's major responsibilities include and is not limited to continual development and implementation of the goals and objectives of the LBSWMP and ensuring compliance with the requirements of the City's MS4 NPDES Permit.

The Annual Storm Water Permit Report and Assessment details the City's storm water management accomplishments and expenditures for the period of October 1, 2013 through September 30, 2014.

Program Management major highlights for this reporting year include:

- The SWEC Officer participates as the Chair and active member for the following TMDL Regional Participation Groups and Watershed Groups
 - Harbor Toxic Sediment TMDL Regional Monitoring Committee - Chair
 - Los Cerritos Channel Watershed Group –Chair.
 - Lower Los Angeles River Watershed Group – Member
 - Lower San Gabriel River/Coyote Creek Watershed Group Member
- Capital Improvement Projects for the following work:
 - Appian Way Low Flow Diversion: The Project is being advertised for construction which is anticipated for the Spring/Summer of 2015.
 - Clean Beaches Initiative Grant Project for the Design and Construction of VSS BMPs and Low Flow Diversions of Storm Drains Discharging to San Pedro Bay Beaches and the LA River Estuary is underway. The City has retained the services of Harris and Associates for the design of the project. The goal of the project is to divert non-storm water flow from discharging into the City Beaches and L A River Estuary and to capture the 85% of the first flush of

a rain storm. The design work is underway and is scheduled to be completed by June 2015. Advertisement is scheduled for August 2015 with an award by November 2015 and construction to start in early 2016.

- Work continues with the monitoring of the Colorado Lagoon. Additional projects are underway to continue removal of contaminated sediment.

- The New NPDES Permit:
 - The City of Long Beach Submitted it's Notice of Intent on June 28, 2014, stating that is has chosen to go with a individual Watershed Management Program and an Individual Monitoring Plan.

 - In November 2014, a contract was awarded to retain the services of John Hunter and Associated to prepare the WMP.

 - The WMP is on scheduled to be completed and submitted to the LARWQCB by March 28, 2015.

- Future Project, LB-MUST:
 - City of Long Beach is embarking on a new project for the design and construction of an urban runoff and recycling facility. This facility will be know as the, "Long Beach Municipal Urban Stormwater Treatment" Facility, (LB MUST). LB-MUST would help the City meet our State and Federal stormwater compliance requirements. The location for the facility is adjacent and on the eastside the Los Angeles River, south of the Shoemaker Bridge (south of Anaheim Street).

 - LB MUST would be designed to diverted and treat runoff water that would otherwise discharge into the Los Angeles River. By diverting this stormwater before it enters recreational waters, LB MUST has the potential to improve Long Beach's recreational water quality and contribute significantly to compliance toward the Los Angeles River TMDLs

 - Treated stormwater water from this facility can be used to replace potable water, which the City has traditionally purchased to: 1) irrigate Long Beach parks and 2) meet operational needs such at the City's South East Resource Recovery Facility (SERRF). The treated water could potentially be used to meet other public and industrial uses. In summary, the LB-MUST project helps bring Long Beach into compliance with the Clean Water Requirements for the Los Angeles River and offers the City an opportunity to significantly reduce the use of potable water, which answers the Governor's call for projects that would reduce the use of potable water.

- The cost for the design and construction of the LB-MUST Facility is estimated to be \$20 – \$30 million. Currently the City is working with the US Bureau of Reclamation to acquire funding for the project. Funding is also being sought through potential State Grants and Regional Cost sharing plans with potential affected Stakeholders.

CHALLENGES

The City of Long Beach will be undertaking a new style of Permit that is based on three Watershed Management Areas (WMA) that covers the City. The Challenge will involve the preparation of a Watershed Management Plans (WMP) for the WMAs as well as Reasonable Assurance Assessment (RAA) Modeling and an Integrated Monitoring Plans. Funding is always an issue to support this work.

In addition the challenges above there remains the follow challenges that carry over to each new fiscal year:

- Uncertainty of cost associated with requirements for the new NPDES Permit.
- Workload and staffing shortages at local, state, and federal levels.
- Increasing SWEC Staff to accomplish additional work as required in the new MS4 NPDES Permit.
- Lack of General Fund dollars available for grants with matching fund requirements, Capital Improvement Program (CIP) projects, and special studies aimed at improving water quality.
- Surcharge cost for new Low-flow Diversion Devices to be installed with the CBI Grant mentioned above
- Continued maintenance cost for the structural BMPs at catch basins leading to the LA River as a result of the LA Gateway Cities Catch Basin Project.
- Cost replacement of AB-Tech sponges.
- Implementation cost for current and future TMDLs.
- Gateway Cities Council of Governments (GCCOG) participation fees as related to design and construction of BMPs that will be required to be constructed per the requirements of the new WMPs.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

This form summarizes the requirements in Order No. 99-060, and includes an attachment summarizing actions taken pursuant to Order No. R4-2014-0024. Only report activities that were performed during the previous fiscal year. Attachments should be included where necessary to provide sufficient information on program implementation.

The goals of this Report are to: 1) concisely document implementation of the NPDES Storm Water Program (SWP) during the past fiscal year; 2) evaluate program results for continuous improvement; 3) to determine compliance with Order 99-060 and Order R4-2014-0024; and 4) to share this information with other Permittees, municipal decision makers, and the public.

!	YOU MUST FILL OUT ALL THE INFORMATION REQUESTED <i>Do not leave any of the sections blank.</i>
N/A	If the question does not apply to your municipality, please indicate N/A in the space provided and provide a brief explanation
U	If the information requested is currently unavailable, please indicate U in the space provided and give a brief explanation.

This Report Form consists of the following sections:

SECTION	PAGE
I. Program Management	2
II. Receiving Water Limitations	5
III. SWP Implementation	5
IV. Special Provisions	8
IV.A. Public Information and Participation Program	8
IV.B. Development Planning Program	15
IV.C. Development Construction Program	17
IV.D. Public Agency Activities Program	19
IV.E. IC/ID Elimination Program	28
V. Monitoring	29
VI. Assessment of Program Effectiveness	29

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

I. Program Management

A. Permittee Name: City of Long Beach

B. Permittee Program Supervisor: Anthony Arevalo
 Title: Storm Water/Environmental Compliance Officer
 Address: 333 W. Ocean Blvd., 9th Floor
 City: Long Beach Zip Code: 90802
 Phone: 562 570-6023 Fax: 562 570-6012

C. In the space below, briefly describe how the storm water program is coordinated within your agency's departments and divisions. Include a description of any problems with coordination between departments. To facilitate this, complete the Table 1.

The NPDES Program is implemented through the Department of Public Works. Training is held on a regular basis for employees in order to educate them on NPDES issues and to help facilitate coordination of the different departments involved in program implementation. The SWP has been implemented and is available to all departments for review.

TABLE 1 - Program Management

Storm Water Management Activity	Division/Department	# of Individuals Responsible for Implementing
1. Outreach & Education	Public Works	3
2. Industrial/Commercial Inspections	Public Works	2
3. Construction Permits/Inspections	Building/Planning	2
4. IC/ID Inspections	Public Works	2
5. Street sweeping	Public Works	30
6. Catch Basin Cleaning	Contractor	Contractor
7. Spill Response	Public Works	4
8. Development Planning (project/SUSMP review and approval)	Planning	2
9. Trash Collection	Public Works	132

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
 City of Long Beach Municipal Storm Water Permit
 Annual Report Form**

D. Staff and Training

Attach a summary of staff training over the last fiscal year. This shall include the staff name, department, type of training, and date of training.

See table below for employees training sessions. Training materials are found in Attachment A

Date of Training	# of Inspector I	# of Inspector II	# of Principle Inspector	# of Chief Inspector	# of Hours	Total Hours
10/07/13	1	5	1	1	.5/ea	4
01/13/14	1	5	1	1	.25/ea	2
03/10/14	2	2	1	1	.25/ea	1.5
06/30/14	2	2	1	1	.25/ea	1.5

E. Budget Summary

1. Does your municipality have a storm water utility? Yes No

If no, describe the funding source(s) used to implement the requirements of Order No. 99-060/R4-2014-0024.

All storm water activities are funded though the General Fund. Plan review fees are assessed for plans requiring SWPPP or SUSMP reviews.

2. Are the existing financial resources sufficient to accomplish all required activities? (Resources have been sufficient to date) Yes No

3. Complete Table 2 to the extent that accurate information is available (indicate U in the spaces where the information is unavailable), and report any supplemental dedicated budgets for the same categories on the lines below the table.

4. List any additional state/federally funded projects related to storm water.

The City was awarded funds from the Clean Beaches Grant Program March of 2014 to design and construct vortex separation system and low flow diversions systems.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
 City of Long Beach Municipal Storm Water Permit
 Annual Report Form**

TABLE 2

Program Element	Expenditures in Fiscal Year 2014	Estimated Amount Needed to implement Order R4-2014-0024*
i. Program management	\$4,234,306	TBD
ii. Illicit connections/illicit discharge	\$271,328	TBD
iii. Development planning/development construction	\$1,029,479	TBD
iv. Construction inspection activities	\$100,000	TBD
v. Public Agency Activities		TBD
a. Operations and Maintenance	\$33,407,841	
b. Municipal street sweeping	\$4,151,212	
c. Fleet and Public Agency Facilities		
d. Landscape and Recreational Facilities	\$835,245	
vi. Capital Cost	\$791,001	TBD
vii. Public Information and Participation	\$1,004,450	TBD
viii. Monitoring	\$620,364	TBD
ix. Other (TMDLs)	\$1,407,070	TBD
TOTAL	\$47,852,296	TBD

* Currently in the process of developing the City's WMP. Estimates will be determined after the completion and approval by the Regional Board of the WMP.

List any supplemental dedicated budgets for the above categories:

Dedicated funds for the following: Participation with the Lower LA River, Los Cerritos Channel and Lower San Gabriel River Watershed Management Programs, Harbor Regional Monitoring Coalition and the LB Beaches TMDL

List any activities that have been contracted out to consultants/other agencies:

Cleaning of the catch basins are handled by a contractor.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

II. Receiving Water Limitations

- A. Are you aware, or have you been notified, of any discharges from your MS4 that cause or contribute to a condition of nuisance or to the violation of any applicable water quality standards? Yes No
- B. Has the Regional Board notified you that discharges from your MS4 are causing or contributing to an exceedance of water quality standards? Yes No
- C. If you answered Yes to either of the above questions, you must attach a Receiving Water Limitations (RWL) Compliance Report. The Report must include the following:
1. A description of the pollutants that are in exceedance and an analysis of possible sources;
 2. A plan to comply with the RWL (Permit, Part 2);
 3. Changes to the SWP to eliminate water quality exceedances;
 4. Enhanced monitoring to demonstrate compliance; and
 5. Results of implementation.

III. SWP Implementation

- A. Has your agency implemented the SWP and any additional controls necessary to reduce the discharges of pollutants in storm water to the maximum extent practicable? Yes No
- B. If your agency has implemented additional or different controls than described in the countywide SWP, has your agency developed a local SWP that reflects the conditions in its jurisdiction and specifies activities being implemented under the appropriate elements described in the countywide SWP? Yes No
- C. Describe the status of developing a local SWP in the box below.

Using the countywide SWP as the basis for the NPDES program, the City has tailored individual items to better reflect the needs of the municipality. The SWP is available on the Public Works Department website for reference. The SWP is expected to be, in large part, superseded with the WMP.

- D. If applicable, describe an additional BMP, in addition to those in the countywide SWP, which your city has implemented to reduce pollutants in storm water to the maximum extent practicable.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

The City has previously installed Trash Capture Units (Fresh Creek Netting Systems) at Colorado Lagoon, and CPS and ARS trash capture systems in both County and City owned catch basins.

E. Watershed Management Committees (WMCs)

1. Which WMC are you in? Lower Los Angeles River, Los Cerritos Channel, Lower San Gabriel River, and the Dominguez Channel watershed
2. Who is your designated representative to the WMC?
Anthony Arevalo, Storm Water Officer
3. How many WMC meetings did you participate in last year?
Attended over 30 watershed meetings, as well as, meetings that covered Coordinated Integrated Monitoring Program (CIMP), Regional Monitoring Coalition (RMC), Storm Water Management Coalition (SMC), and various Regional Board workshops, monthly meetings and associated WMP and EWMP meetings.
4. Describe specific improvements to your storm water management program as a result of WMC meetings.

The Watershed Management Committee meetings offer a networking outlet for cities to exchange ideas, and offer new and unique perspectives in storm water management. As well as being instrumental in preparing the WMPs, responding to Regional Board comments, and brainstorming on improvements to storm water compliance, in particular BMPs.

5. Attach any comments or suggestions regarding your WMC.
None at this time.

F. Storm Water Ordinance

1. Have you adopted a storm water and urban runoff ordinance to enforce all requirements of Order 99-060? Yes No

If not, describe the status of adopting such an ordinance.

N/A

2. If yes, have you already submitted a copy of the ordinance to the Regional Board? Yes No
If not, please attach a copy to this Report.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

3. Were any amendments made to your storm water ordinance during the last fiscal year? Yes No

The storm water ordinance was amended to maintain adequate legal authority and include modifications to LID requirements to implement Order No. R4-2014-0024. See attachment B for a copy of the amended storm water ordinance.

G. Discharge Prohibitions

1. List any non-storm water discharges you feel should be further regulated:

None at this time

2. List any non-storm water discharges you feel should be exempt, and provide an explanation for each:

None at this time. Exemptions will be addressed in the WMP for the new Long Beach permit.

NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form

IV. Special Provisions

A. Public Information and Participation

In addition to answering the following questions, attach a summary of all storm water education activities that your agency conducted or participated in last year.

1. No Dumping Message

a) How many storm drain inlets does your agency own?

City owns 3,800 catch basins and is responsible for 1,875 County owned catch basins

b) How many storm drain inlets were marked with a no dumping message in the last fiscal year?

All catch basins are marked with "No Dumping" signs

c) What is the total number of storm drain inlets that are legibly marked with a no dumping message? 5,675

If this number is less than the number in question 1.b, describe why all inlets have not been marked, the process used to implement this requirement, and the expected completion date.

N/A

d) How many public access points to creeks, channels, and other water bodies within your jurisdiction have been posted with no dumping signage in the past year?

There has been no new development work or projects related to new water bodies that would trigger the posting of new "No Public Access" signs. All Public Access points to creeks, channels and other water bodies under jurisdiction of the City have "No Public Access" signs posted.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

2. Reporting Hotline

- a) Has your agency established its own hotline for reporting and for general storm water management information? Yes No
- b) If so, what is the number? 562-570-DUMP (3867)
- c) Is this information listed in the government pages of the telephone book? Posted on City website
- d) If no, is your agency coordinated with the countywide hotline? N/A
- e) Do you keep record of the number of calls received and how they were responded to? Yes No
- f) How many calls were received in the last fiscal year?
110
- g) Describe the process used to respond to hotline calls.

During work hours the Storm Water Management Staff fields calls and will acquire information on what is being reported. This information will then be directed various City Departments related to the reported problem. For example:

1. Storm water pollution, illegal dumping, flooding, and any other type of stormwater and non-stormwater related problems. – Street Operations Division
2. Sanitary Sewer or Water Main Problems – Long Beach Water Department
3. Gas leaks and other related problems – Gas and Oil Department.
4. Harbor Pollution – Port of Long Beach
5. Vector Containment – Long Beach Health Department
6. Street Sweeping and Refuse – Environmental Services Bureau

For emergencies and undeterminable problems, Street Operations is contacted and will send out a first responder to assess the problem and then direct action from there. After hours and on Holidays, callers are directed to contact the Street Operations Division who have a 24hour hotline to address problems. If the call is related to a life or death situation, the party is directed to call 911.

NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form

3. Outreach and Education

- a) Describe the strategy developed to provide outreach and bilingual materials to target ethnic communities. Include an explanation of why each community was chosen as a target, how program effectiveness will be determined, and status of implementation.

City staff attends community meetings/events in every district of the City to ensure that every ethnic community is reached and distributes educational material in several different languages. Staff is also available to answer questions in English and Spanish.

- b) Did the Principal Permittee organize quarterly Public Outreach Strategy meetings that you were aware of? Yes No
How many Public Outreach Strategy meetings did your agency participate in last year? All county quarterly meetings
Explain why your agency did not attend any or all of the organized meetings.

All were attended.

Identify specific improvements to your storm water education program as a result of these meetings:

The City received updates from the county and would consider those into making outreach planning in the upcoming fiscal year.

List suggestions to increase the usefulness of quarterly meetings:

No suggestions at this time.

If quarterly Public Outreach Strategy meetings were not organized, explain why not and when this requirement will be implemented (*Principal Permittee only*).

Although the City of Long Beach is the Principal Permittee of its' own permit, city staff participated in all the LA County quarterly public outreach meetings.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

- c) Approximately how many impressions were made last year on the general public about storm water quality via print, local TV, local radio, or other media?

Communicating information about storm water and urban runoff pollution to residents, school children, commercial and industrial establishments, and City employees is a priority for the City. In FY 14, the City made use of the Long Beach Press-telegram community newspaper that ran various articles, as well as communicating this information via the City's various social networks. Through these media events and programs such as Heal the Bay's Key to the Sea program, The Aquarium of the Pacific Stewardship program, Litter-Free Long Beach, Protect Our Watery World (POWW), and various community events, the City made well over the permit required 1.5 million impressions related to storm water pollution prevention issues and their solutions through the use of various media. New outreach materials and methods are constantly being explored while proven techniques are carried on.

- d) Describe efforts your agency made to educate local schools on storm water pollution.

See Attachment C

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

4. Pollutant-Specific Outreach

a) Did your agency distribute pollutant-specific materials in your city? Yes No

b) Describe how your agency has made outreach material available to the general public, community groups, contractors and developers, etc...

The Adopt-A-Beach program hosted by the El Dorado Nature Center continues to hold two special event cleanups in 2014. The first was the annual Earth Day Cleanup held on April 19, 2014. Over 185 volunteers came out to give back to the environment, and help remove over 420 pounds of trash from the beach. The second was the 30th Annual California Coastal Cleanup Day held on September 20th. This year in Long Beach, 1051 volunteers helped to remove over 3,300 pounds of debris from local shores and waterways.

During the 2014 year, El Dorado Nature Center continued to maintain and educate volunteers about the value of wetland habitats, and the dangers of storm water runoff to these fragile ecosystems. Through the monthly wetland cleanups held at Golden Shore Marine Reserve over 210 volunteers this year removed approximately 2,900 pounds of debris that flowed directly into the wetland via the Los Angeles River. Volunteers were also given first hand educational experience on the dangers of storm water runoff by helping to control the debris that entered the waterways during the rainy season.

5. Businesses Program

a) Briefly describe the Corporate Outreach Program that has been developed to target commercial/industrial establishments.

The City's Department of Health and Human Services (DHHS) conducted educational site visits to distribute and discuss applicable BMP and educational materials to business owners/facility operators during FY 14. The visits include information about the City's Municipal NPDES permit and requirements regarding Notices of Intent (NOI) and Storm Water Pollution Prevention Plans (SWPPP). DHHS continues to use its enhanced database used to track visits and other information. Additionally, we have continued our outreach to local businesses, especially in areas where the potential for illicit discharge is greater, e.g. areas with a high concentration of restaurants and other food facilities.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

6. Did you encourage local radio stations and newspapers to use public service announcements? Yes No

How many media outlets were contacted?
Which newspapers or radio stations ran them?

The city website, the city local channel and the Long Beach Press Telegram.

Who was the audience?

City businesses, city residents, and city employees

7. Did you work with local business to place non-traditional advertising? Yes No

If so, describe the type of advertising.

The city has already successfully developed and sustained a Point-of-Purchase program through a partnership with local businesses, where materials such as brochures, have been distributed to its customers. The city also partnered with local community group to disseminate program information.

8. Did you establish local community partnerships to distribute educational storm water pollution prevention material? Yes No

Describe the materials that were distributed:

See Attachment C

Who were the key partners? See Attachment C

Who was the audience (businesses, schools, etc.)?

See Attachment C

9. Did you participate in or publicize workshops or community events to discuss storm water pollution? Yes No

How many events did you attend? See Attachment C

10. Does your agency have a website that provides storm water pollution prevention information? Yes No

If so, what is the address? <http://www.lbstormwater.org>

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

11. Has awareness increased in your community regarding storm water pollution? Yes No
Do you feel that behaviors have changed? Yes No

Explain the basis for your answers. Include a description of any evaluation methods that are used to determine the effectiveness of your agency's outreach.

Through interaction during event attendance, it has been determined that the community's awareness of storm water pollution continues to grow. Understanding of restrictions to promote clean water practices led to the movement and instigation of the plastic bag band, support of LID practices in residential and local business developments. The effectiveness of Public awareness can be measured by the increased number of phone calls and email messages requesting additional information for stormwater compliance and for guidelines/directions to comply with the City's NPDES Permit. These request are received from City residence, local business and Developers as well as from City Departments, Offices and Employees.

12. How would you modify the storm water public education program to improve it?

Develop individual educational lesson plans and brochures specifically for Schools, Residents, Local Businesses, Developers, City Employees and Visitors to the City. These lesson plans would be available through public (and by arranged) meetings, through the City's Website, distribution of flyers in utility billings, at the Storm Water Booth at City Events and Environmental events. We also looked into creating 1-minute TV Spots on the City's Local TV network and creating some Storm Water interactive Applications for social media. Some of the suggestions above have been implement or are in the process of being implemented.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

B. Development Planning Program

1. Scheduled date of significant rewrite of the Permittee's General Plan?

N/A

2. Provide description of the developer information program and assessment of it's effectiveness.

N/A

3. Number of development projects for which SUSMPs were completed in the past year?

Total Development Projects Issued: 5,183
Development Requiring a SUMP: 5

4. Has your agency develop storm water management guidelines for use in preparing/reviewing CEQA documents, and in linking storm water quality mitigation condition to local discretionary project approvals?

Yes No

Projects falling under the CEQA guidelines are reviewed and, where appropriate, incorporated into the city's SUSMP program.

5. Has your agency amended codes and/or ordinances to give legal effect to the SUSMP changes required in the Permit?

Yes No

6. Describe the process your agency uses to include SUSMP design standards in new development and redevelopment project approvals.

Developers or their representatives are directed to visit the City's Development Services Department regarding their application of SUSMP design standards. It is the responsibility of the Development Services Department, notably the Building Bureau to enforce the requirements of SUSMP on private developments. SUSMP requirements are flagged through the plan check process.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
 City of Long Beach Municipal Storm Water Permit
 Annual Report Form**

7. How many of each of the following projects did your agency review and condition to meet SUSMP requirements last year?

- a) Residential 1
- b) Commercial 2
- c) Industrial 5
- d) Automotive Service Facilities 0
- e) Retail Gasoline Outlets 0
- f) Restaurants 3
- g) Parking Lots 0
- h) Projects located in or directly adjacent to or discharging directly to an environmentally sensitive area 0
- i) Total number of permits issued to priority projects 0

8. What is the percentage of total development projects that were conditioned to meet SUSMP requirements? .002%

9. Has your agency modified its planning procedures for preparing and reviewing CEQA documents to consider potential storm water quality impacts and provide for appropriate mitigation? Yes No

If yes, provide an explanation and an expected date of completion.

N/A

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

C. Development Construction Program

1. Describe your agency's program to control runoff from construction activity at all construction sites within its jurisdiction.

Projects with disturbed areas of five (5) acres or greater shall prepare and submit to both the RWQCB and the city a SWPPP. The SWPPP shall include appropriate construction site BMPs. In addition, a notice of intent (NOI) to comply with the state construction activity storm water permit shall be filed with the RWQCB, and evidence of such filing shall be submitted to the city.

2. Does your agency require the preparation, submittal, and implementation of a Local Storm Water Pollution Prevention Plan (Local SWPPP) prior to the issuance of a grading permit for all sites that meet one or all of the following criteria?

- a) Will result in soil disturbance of five acres or greater Yes No
- b) Is within, directly adjacent to, or is discharging directly to an environmentally sensitive area Yes No
- c) Is located in a hillside area Yes No

3. Attach one example of a local SWPPP
See Attachment D

4. Describe the process your agency uses to require proof of filing a Notice of Intent for coverage under the State General Construction Activity Storm Water permit and a certification that a SWPPP has been prepared prior to issuing a grading permit?

Local Business and Developers are directed by Public Works Staff and the Development Services Department to access the State Water Resources Control Board Website and to access the online tool know as the, "Storm Water Multiple Application and Reporting System (SMARTS)" should their projects require compliance under the State General Construction Permit. They are also notified that the City's Storm Water Environmental Compliance Officer (SWECO) is the Legally Responsible Person (LPR) who is the only person authorized to certify the Notice of Intent and Notice of Termination. This ensures the proof of filing of the NOI/NOT and that a SWPPP has been prepared and submitted.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
 City of Long Beach Municipal Storm Water Permit
 Annual Report Form**

5. How many building/grading permits were issued to sites requiring Local SWPPPs last year? 3

6. Complete the table below.

Type of Violation	# of Violations	# of Follow-up Inspections	# of Enforcement Actions
Off-site discharge of sediment	1	1	0
Off-site discharge of other pollutants	0	0	0
No or inadequate SWPPP	0	0	0
Inadequate BMP/SWPPP implementation	0	0	0

7. Describe the process for taking enforcement actions against construction site violations, including the types of actions that are taken.

For minor incidents that require only a simple correction (i.e. picking up trash, keeping dumpster lids closed, replacing sandbags) a verbal warning is given and a follow-up inspection is completed. For significant violations, (i.e. concrete washing to storm drain, excess sediments and aggregates discharging to storm drain) a written notice of violation is sent with follow-up inspections conducted over the life of the project to ensure compliance. In addition, a Stop Work order is issued until erosion control requirements are met.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
 City of Long Beach Municipal Storm Water Permit
 Annual Report Form**

D. Public Agency Activities

1. Sewage System Maintenance, Overflow, and Spill Prevention

a) Has your agency developed and implemented a response plan for sanitary sewer overflows?

The City's Water Department is responsible for the Sewage System Maintenance, Overflow, and Spill Prevention. They have developed and implemented a response plan for sanitary sewer overflows

b) How many sanitary sewer overflows occurred within your jurisdiction?

There were 12 Sanitary Sewer Overflows (SSO), which were all category 3, which were all fully recovered and returned to the sanitary sewer system.

c) How many did your agency respond to?

The Long Beach Water Department (LBWD) responded to 12.

d) Did your agency investigate all complaints received?

Yes

e) How many complaints were received?

12

f) Upon notification, did your agency immediately respond to overflows by containment?

Yes

g) Does your agency notify appropriate sewer and public health agencies when a sewer overflows to the MS4?

Yes

h) Did your agency implement a program to prevent sewage spills or leaks from sewage facilities from entering the MS4?

Yes

If so, describe the program:

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

LBWD has a Sewer System Management Plan. It gives specific instructions for inspection, cleaning, and repair of the Sanitary Sewer System. The instructions were developed with the main intention of preventing SSOs. The Sewer System Management Plan is available from LBWD upon request.

- i) Did your agency implement a program to identify, repair, and remediate sanitary sewer blockages, exfiltration, overflow, and wet weather overflows from sanitary sewers to the MS4? Yes No

If so, describe the program:

See answer above in Section D.1.h.

2. Public Construction Activities Management

- a) What percentage of public construction sites 5 acres or greater in size did your agency obtain coverage under the State of California General Construction Activities Storm Water Discharge Permit? 100 %

- b) Give an explanation for any sites greater than 5 acres that were not covered:

All sites greater than 5 acres were covered

- c) What is the total number of active public construction sites? 5,183
How many were 5 acres or greater in size? 3

NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form

- d) (After March, 2003) Did your agency obtain coverage under the State of California General Construction Activities Storm Water Discharge Permit coverage for public construction sites for sites one acre or greater? Yes No

3. Vehicle Maintenance/Material Storage Facilities/Corporation Yards Management

- a) Did your agency implement pollution prevention plans for each public vehicle maintenance facility, material storage facility, and corporation yard? Yes No

Each vehicle maintenance yard maintains pollution prevention plans which include: covered bays, all materials (waste or otherwise) kept indoors, vehicle washing conducted in designated wash bays that drains to a clarifier and then to the sanitary sewer all in accordance with the NPDES permit.

- b) Briefly describe how your agency implements the following, and any additional, BMPs to minimize pollutant discharges in storm water:
- (1) Good housekeeping practices
 - (2) Material storage control
 - (3) Vehicle leaks and spill control
 - (4) Illicit discharge control

Inspections are conducted on a random basis to ensure that the good housekeeping practices covered in training sessions are being properly implemented. Vehicle repair is conducted in covered bays, and all materials (waste or otherwise) are kept indoors. All vehicle washing is conducted in a designated wash bay that drains to a clarifier and then to the sanitary sewer.

- c) Are all Permittee owned and/or operated vehicle/equipment wash areas self-contained, covered, equipped with a clarifier, and properly connected to the sanitary sewer? Yes No
If not, what is the status of implementing this requirement?

NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form

N/A

4. Landscape and Recreational Facilities Management

- a) Has your agency developed a standardized protocol for the routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers? Yes No

Briefly describe this protocol:

Both City staff and contractor staff are responsible for the management of pesticides, herbicides, and fertilizers. The Department has one Certified Pest Control Advisor (PCA) and two Qualified Applicators Certified (QAC) staff to ensure the appropriate procedures and policies for pesticide, herbicide and fertilizer management. Additionally, the department possesses a Restricted Material Permit for those herbicides and pesticides that are on the State Agricultural Commissioner's restricted list, and routinely passes annual state inspections. The QAC staff purchases, stores, and distributes pesticides and herbicides to staff that are either Pest Control Applicators, or staff that has received annual training in the proper use and handling of pesticides and fertilizers. The PCA follows required state law that incorporates best management practices (BMP) for the application of chemicals. This practice is called Integrated Pest Management (IPM). In addition, the QAC insures that the manufacturer's instructions are followed for storage and application. The PCA is required to keep accurate records of the quantities and use of specific chemicals that are required by the state and the County of Los Angeles and sends a monthly report to the Agricultural Commission of Los Angeles that documents chemical usage.

- b) How does your agency ensure that there is no application of pesticides or fertilizers immediately before, during, or immediately after a rain event or when water is flowing off the area to be applied?

Staff is trained annually in the laws governing the use of pesticides and herbicides, in the BMP related to the storage and use of such substances, such as restricted uses around lakes and waterways or prohibition of spraying when rain is forecasted.

NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form

- c) Are any banned pesticides, herbicides, fungicides, or rodenticides stored or applied in your agency's jurisdiction that you know of? Yes No

If so, list them:

N/A

- d) What percentage of your agency's staff that apply pesticides are certified by the California Department of Food and Agriculture, or are under the direct supervision of a certified pesticide applicator? 100%

- e) Describe procedures your agency has implemented to encourage retention and planting of native vegetation and to reduce water, fertilizer, and pesticide needs:

See Attachment C

5. Storm Drain Operation and Management

- a) Did your agency designate catch basin inlets within its jurisdiction as Priority A; Priority B; and Priority C? Yes No

All catch basins are cleaned on a regular schedule, as requested, and before a major storm is forecasted. Upon approval of the City's WMP, a priority system will be implemented.

- b) Is your city subject to a trash TMDL? Yes No

- c) If yes, describe the activities and/or implementation measures that your agency conducted pursuant to the TMDL and any other trash reduction efforts that occurred.

The City continues to work in conjunction with the County of Los Angeles on a regional trash BMPs. Together we will treat approximately 89% of the City's Los Angeles River drainage area.

NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form

- d) How much total waste was collected in tons from catch basin clean-outs last year?
225 Tons of waste was collected
- e) For all basins that are owned and operated by your agency, include dates that each was cleaned out over the past year.

All catch basins were cleaned between July 10, 2014 through October 3, 2014
- f) Did your agency place and maintain trash receptacles at all transit stops within its jurisdiction. Yes No
- g) How many new trash receptacles were installed last year? 358
- h) Did your agency place special conditions for events that generated substantial quantities of trash and litter including provisions that:
- (1) Provide for the proper management of trash and litter generated from the event? Yes No
 - (2) Arrange for temporary screens to be placed on catch basins? Yes No
 - (3) Or for catch basins in that area to be cleaned out subsequent to the event and prior to any rain? Yes No
- i) Did your agency inspect the legibility of the catch basin stencil or labels? Yes No
What percentage of stencils were legible?
Re-stenciling is automatically conducted as needed by the cleaning contractor. 100%

NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form

j) Were illegible stencils recorded and re-stenciled or re-labeled within 180 days of inspection?

Yes

k) Did your agency visually monitor Permittee-owned open channel storm drains and other drainage structures for debris at least annually and identify and prioritize problem areas of illicit discharge for regular inspection?

Yes

l) Did your agency review its maintenance activities to assure that appropriate storm water BMPs are being utilized to protect water quality?

Yes No

What changes have been made?

Appropriate BMP's are enacted for all activities conducted that may affect storm water quality.

m) Did your agency remove trash and debris from open channel storm drains a minimum of once per year before the storm season? Yes, a minimum of twice and as needed per year.

n) How did your agency minimize the discharge of contaminants during MS4 maintenance and clean outs?

The City has a yearly storm water maintenance contractor for maintenance of catch basin, storm water outfalls, and open channel systems that enacts proper BMPs when rendering their services.

o) Where is removed material disposed of?

The contractor is responsible for proper disposal of materials removed during catch basin cleaning.

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

6. Streets and Roads Maintenance

- a) Did your agency perform all street sweeping in compliance with the permit and according to the following schedule:

All Streets are swept on a weekly basis which exceeds the minimum requirement of the NPDES Permit.

- b) Did your agency require that saw cutting wastes be recovered and disposed of properly and that in no case shall waste be left on a roadway or allowed to enter the storm drain? Yes No

- c) Did your agency require that concrete and other street and road maintenance materials and wastes be managed to prevent pollutant discharges? Yes No

- d) Did your agency require that the washout of concrete trucks and chutes only occur in designated areas and never into storm drains, open ditches, streets, or catch basins leading to the storm drain system? Yes No

- e) Did your agency train its employees in targeted positions (whose interactions, jobs, and activities affect storm water quality) regarding the requirements of the storm water management program to:

- (1) Promote a clear understanding of the potential for maintenance activities to pollute storm water? and Yes No

- (2) Identify and select appropriate BMPs? Yes No

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

7. Parking Facilities Management

- a) Did your agency ensure that Permittee-owned parking lots be kept clear of debris and excessive oil buildup and cleaned no less than 2 times per month and/or inspected no less than 2 times per month to determine if cleaning is necessary. Yes No
- b) Were any Permittee-owned parking lots cleaned less than once a month? Yes No
How many? N/A

8. Public Industrial Activities Management

- a) Did your agency, for all municipal activity considered an industrial activity under USEPA Phase I storm water regulations, obtain separate coverage under the State of California General Industrial Activities Storm Water Discharge Permit no later than December 31, 2001?
The city does not operate any facilities that require coverage under the GIASP. Yes No
- b) Does your agency serve a population of less than 100,000 people? Yes No

9. Emergency Procedures

- a) In case of real emergencies, did your agency repair essential public services and infrastructure in a manner to minimize environmental damage? No
- b) Were BMPs implemented to the extent that measures did not compromise public health and safety? Yes

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
 City of Long Beach Municipal Storm Water Permit
 Annual Report Form**

E. Illicit Connections and Illicit Discharges (IC/ID) Elimination Program

1. Provide the reporting data for illicit connections as suggested in the following table (you may submit a spreadsheet from your database that contains the information).

Year	Total # reported/ identified	Total # investigated	# of illegal connections eliminated	# that resulted in enforcement action	Type of enforcement action
FY 14	0	0	0	N/A	N/A

2. Provide the reporting data for illicit discharges as suggested in the following table (you may submit a spreadsheet from you database that contains this information).

Year	Total # reported	Total # that were discontinued/ cleaned up voluntarily through enforcement and the source was identified	# that were cleaned up but the source could not be identified	# that resulted in enforcement action
FY 14	12	12	0	0

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

V. Monitoring

Briefly describe any storm water monitoring activities that are not required by Order No. 99-060/R4-2014-0024 that your municipality conducted, participated in, or received funding to conduct in the past fiscal year.

Mass emission monitoring has been conducted by L.A. County, and the City participates in the Los Angeles River Metals Coordinated Monitoring that is being conducted by the City of Los Angeles.

VI. Assessment of Program Effectiveness

A. Attach a summary of the effectiveness of your storm water management program. This summary should include, at a minimum, the following:

1. An assessment of your agency's compliance with permit requirements, based on your responses to the questions in this form;

The City of Long Beach Storm Water Management Program (LBSWMP), is in its 15th year of operation. The LBSWMP continues to be fully implemented in compliance with its National Pollutant Discharge Elimination System (NPDES) permit, the Federal Clean Water Act (CWA) and subsequent CWA amendments. The NPDES Permit, CWA and CWA Amendments were adopted to protect receiving waters such as rivers, lakes, and oceans from contamination by preventing pollutants from entering the City's municipal separate storm sewer systems (MS4s). The City of Long Beach (City) complies with CWA guidelines through its NPDES permit and is committed to preserving and maintaining the quality of our beaches and waterways while improving marine habitat and the quality of life for our residents.

The City is currently operating under the requirements of NPDES No. CAS004003, Order No. 99-060, issued by the Los Angeles Regional Water Quality Control Board (LARWQCB) on March 28, 2014.

2. Descriptions of any evaluation methods that your agency uses to determine the effectiveness of your storm water management program;

The overall effectiveness of the LBSWMP is determined during the preparation of this Annual NPDES Report. During the year the effectiveness of the LBSWMP is assessed through weekly meetings and briefings with the Storm Water Management (SWM) Division Staff, Project Managers and consultants working on stormwater compliance related issues covering current and new projects; NPDES Permit compliance and practices; compliance inspection work; work on the Master Watershed Management Program; public awareness/education; Employee Training of new NPDES Permit; stormwater related complaints, request, and

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

suggestions; MS4 infrastructure deficiencies and future tasks. These meetings and briefings provide an indication of the effectiveness of the LBSWMP.

3. A summary of the strengths and weaknesses of your agency's storm water management program;

The City maintains a proactive stance on implementing all elements required by the NPDES Permit as well as looking for improvements to its stormwater practices and innovated projects that will help to achieve Clean Water Act compliance. The City continues to participate in regional watershed programs, attend Stormwater meetings and workshops and works with the LARWQCB to achieve compliance.

The weakness experience with the LBSWMP is in available funding. SWECO is currently seeking funding through Federal and State Grants/Bonds; Regional Cost participation with neighboring/affected Cities and agencies; and trying to establish a stormwater related fee.

4. A list of specific program highlights and accomplishments;

- The City of Long Beach, in a joint venture with the City of Signal Hill, and the County of Los Angeles has implemented the Hamilton Bowl regional trash BMP project.
- The City has retain the Services of Harris & Associates to begin design work for the Clean Beaches Initiative Grant Project, VSS BMPs and Low Flow Diversions of Storm Drains Discharging to San Pedro Bay Beaches and the La River Estuary. Design is on schedule to be completed in June 2015. Advertisement for construction is schedule in August 2015 with a Council Award date in November 2015. Construction will be planned for Spring/Summer 2016.
- The City has retain the services of John Hunter and Associates to prepare the Watershed Management Program (WMP). Work has begun on the WMP and is on schedule to be completed by March 28, 2015.
- City of Long Beach has embark on a new project for the design and construction of an urban runoff and recycling facility. This facility will be know as the, "Long Beach Municipal Urban Stormwater Treatment" Facility (LB MUST). LB-MUST will help the City meet our State and Federal stormwater compliance requirements. LB MUST will diverted and treat runoff water that would otherwise discharge into the Los Angeles River. By diverting this stormwater before it enters recreational waters, LB MUST has the potential to improve Long Beach's recreational water quality and contribute significantly to compliance toward the Los Angeles River TMDLs

**NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form**

5. A description of water quality improvements or degradation in your watershed over the past fiscal year;

The ongoing improvement in the stormwater management program, including the installation of trash capture devices that treat approximately 89% of the City's drainage area to the Los Angeles River are expected to have significant improvements on water quality in the watershed. The upcoming Coordinated Integrated Monitoring Program will provide valuable data on watershed health.

6. Interagency coordination between cities to improve the storm water management program;

The City continues to work with Cities/Agencies within the Los Angeles County to maintain a high level of regional cooperation in regards to stormwater quality solutions, including the development of the Lower Los Angeles River, Los Cerritos Channel and Lower San Gabriel River WMPS.

The City has the position of Chair for the Los Cerritos Channel Watershed Group and is an active member with the Lower Los Angeles River, Reach 1 and the Lower San Gabriel River Watershed Groups..

7. Future plans to improve your agency's storm water management program;

The SWECO continues to lobby for additional staff that will be needed to implement the new NPDES Permit through the approved WMP. Work has begun to improve the Storm Water Management Website to provide online training for understanding of the NPDES Permit, public awareness for stormwater pollution prevention practices and interactive screen for reporting of potential violation or problems related to stormwater events. The Storm Water Management Division will be modified to adjust to the approved WMP in order to ensure implementation of the WMP.

8. Suggestions to improve the effectiveness of your program or the County model programs.

No suggestions at this time.

- B. On a scale of 1 to 10 (10 being full implementation of requirements by their deadlines), rate your municipality's level of compliance with Order No. 99-060.

10+

NPDES No. CAS004003 City of Long Beach 2013-2014 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
Annual Report Form

- C. List any suggestions your agency has for improving program reporting and assessment.

None at this time

ATTACHMENTS

Water Conservation Practices

NS-1



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

Targeted Constituents

Sediment	✓
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None

Description and Purpose

Water conservation practices are activities that use water during the construction of a project in a manner that avoids causing erosion and the transport of pollutants offsite. These practices can reduce or eliminate non-stormwater discharges.

Suitable Applications

Water conservation practices are suitable for all construction sites where water is used, including piped water, metered water, trucked water, and water from a reservoir.

Limitations

- None identified.

Implementation

- Keep water equipment in good working condition.
- Stabilize water truck filling area.
- Repair water leaks promptly.
- Washing of vehicles and equipment on the construction site is discouraged.
- Avoid using water to clean construction areas. If water must be used for cleaning or surface preparation, surface should be swept and vacuumed first to remove dirt. This will minimize amount of water required.



NS-1 Water Conservation Practices

- Direct construction water runoff to areas where it can soak into the ground or be collected and reused.
- Authorized non-stormwater discharges to the storm drain system, channels, or receiving waters are acceptable with the implementation of appropriate BMPs.
- Lock water tank valves to prevent unauthorized use.

Costs

The cost is small to none compared to the benefits of conserving water.

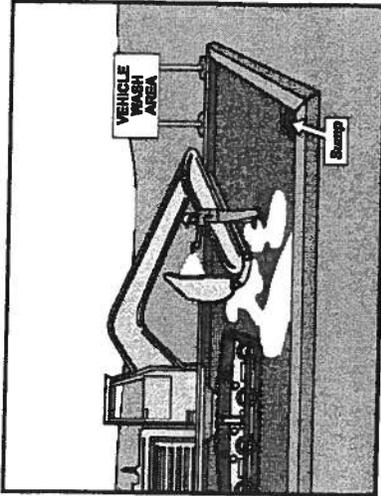
Inspection and Maintenance

- Inspect and verify that activity based BMPs are in place prior to the commencement of authorized non-stormwater discharges.
- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges are occurring.
- Repair water equipment as needed to prevent unintended discharges.
 - Water trucks
 - Water reservoirs (water buffalos)
 - Irrigation systems
 - Hydrant connections

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Vehicle and Equipment Cleaning NS-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

Targeted Constituents	
Sediment	✓
Nutrients	✓
Trash	
Metals	
Bacteria	✓
Oil and Grease	✓
Organics	

Potential Alternatives	
None	



Description and Purpose

Vehicle and equipment cleaning procedures and practices prevent or reduce the discharge of pollutants to stormwater from vehicle and equipment cleaning by using offsite facilities; washing in designated, contained areas only; eliminating discharges to the storm drain by infiltrating the wash water; and training employees and subcontractors.

Suitable Applications

These procedures are suitable on all construction sites where vehicle and equipment cleaning is performed.

Limitations

Even phosphate-free, biodegradable soaps have been shown to be toxic to fish before the soap degrades. Sending vehicles/equipment offsite should be done in conjunction with TC-1, Stabilized Construction Entrance/ Exit.

Implementation

Use an offsite commercial washing business as much as possible. These businesses are better equipped to handle and dispose of the wash waters properly. Performing this work offsite can also be economical by eliminating the need for a separate washing operation onsite.

- Use phosphate-free, biodegradable soaps.
- Educate employees and subcontractors on pollution prevention measures.

NS-8 Vehicle and Equipment Cleaning

- Do not permit steam cleaning onsite. Steam cleaning can generate significant pollutant concentrates.
- Cleaning of vehicles and equipment with soap, solvents or steam should not occur on the project site unless resulting wastes are fully contained and disposed of. Resulting wastes should not be discharged or buried, and must be captured and recycled or disposed according to the requirements of WM-10, Liquid Waste Management or WM-6, Hazardous Waste Management, depending on the waste characteristics. Minimize use of solvents. Use of diesel for vehicle and equipment cleaning is prohibited.
- All vehicles and equipment that regularly enter and leave the construction site must be cleaned offsite.
- When vehicle and equipment washing and cleaning must occur onsite, and the operation cannot be located within a structure or building equipped with appropriate disposal facilities, the outside cleaning area should have the following characteristics:
 - Located away from storm drain inlets, drainage facilities, or watercourses
 - Paved with concrete or asphalt and bermed to contain wash waters and to prevent runoff and runoff
 - Configured with a sump to allow collection and disposal of wash water
 - No discharge of wash waters to storm drains or watercourses
 - Used only when necessary
- When cleaning vehicles and equipment with water:
 - Use as little water as possible. High-pressure sprayers may use less water than a hose and should be considered
 - Use positive shutoff valve to minimize water usage
 - Facility wash racks should discharge to a sanitary sewer, recycle system or other approved discharge system and should not discharge to the storm drainage system, watercourses, or to groundwater

Costs

Cleaning vehicles and equipment at an offsite facility may reduce overall costs for vehicle and equipment cleaning by eliminating the need to provide similar services onsite. When onsite cleaning is needed, the cost to establish appropriate facilities is relatively low on larger, long-duration projects, and moderate to high on small, short-duration projects.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and at two-week intervals in the non-rainy season to verify continued BMP implementation.

Vehicle and Equipment Cleaning NS-8

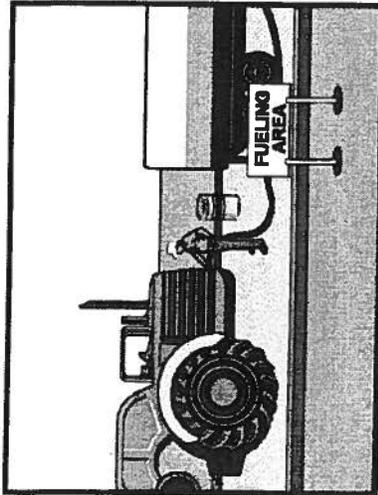
- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.
- Inspection and maintenance is minimal, although some berm repair may be necessary.
- Monitor employees and subcontractors throughout the duration of the construction project to ensure appropriate practices are being implemented.
- Inspect sump regularly and remove liquids and sediment as needed.
- Prohibit employees and subcontractors from washing personal vehicles and equipment on the construction site.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.
Swisher, R.D. Surfactant Biodegradation, Marcal Decker Corporation, 1987.

Vehicle and Equipment Fueling

NS-9



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

Targeted Constituents

Sediment	
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	✓

Potential Alternatives

None

Description and Purpose

Vehicle equipment fueling procedures and practices are designed to prevent fuel spills and leaks, and reduce or eliminate contamination of stormwater. This can be accomplished by using offsite facilities, fueling in designated areas only, enclosing or covering stored fuel, implementing spill controls, and training employees and subcontractors in proper fueling procedures.

Suitable Applications

These procedures are suitable on all construction sites where vehicle and equipment fueling takes place.

Limitations

Onsite vehicle and equipment fueling should only be used where it is impractical to send vehicles and equipment offsite for fueling. Sending vehicles and equipment offsite should be done in conjunction with TC-1, Stabilized Construction Entrance/Exit.

Implementation

- Use offsite fueling stations as much as possible. These businesses are better equipped to handle fuel and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate fueling area at a site.
- Discourage "topping-off" of fuel tanks.



NS-9 Vehicle and Equipment Fueling

- Absorbent spill cleanup materials and spill kits should be available in fueling areas and on fueling trucks, and should be disposed of properly after use.
- Drip pans or absorbent pads should be used during vehicle and equipment fueling, unless the fueling is performed over an impermeable surface in a dedicated fueling area.
- Use absorbent materials on small spills. Do not hose down or bury the spill. Remove the absorbent materials promptly and dispose of properly.
- Avoid mobile fueling of mobile construction equipment around the site; rather, transport the equipment to designated fueling areas. With the exception of tracked equipment such as bulldozers and large excavators, most vehicles should be able to travel to a designated area with little lost time.
- Train employees and subcontractors in proper fueling and cleanup procedures.
- When fueling must take place onsite, designate an area away from drainage courses to be used. Fueling areas should be identified in the SWPPP.
- Dedicated fueling areas should be protected from stormwater runoff and runoff, and should be located at least 50 ft away from downstream drainage facilities and watercourses. Fueling must be performed on level-grade areas.
- Protect fueling areas with berms and dikes to prevent runoff, and to contain spills.
- Nozzles used in vehicle and equipment fueling should be equipped with an automatic shutoff to control drips. Fueling operations should not be left unattended.
- Use vapor recovery nozzles to help control drips as well as air pollution where required by Air Quality Management Districts (AQMD).
- Federal, state, and local requirements should be observed for any stationary above ground storage tanks.

Costs

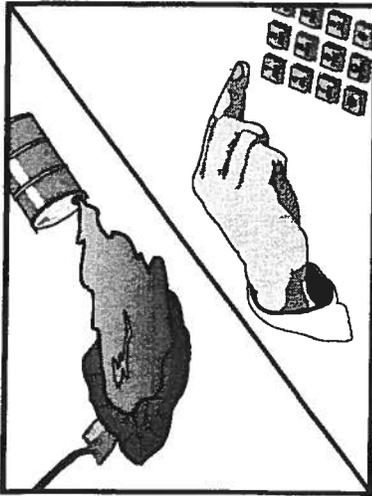
- All of the above measures are low cost except for the capital costs of above ground tanks that meet all local environmental, zoning, and fire codes.

Inspection and Maintenance

- Vehicles and equipment should be inspected each day of use for leaks. Leaks should be repaired immediately or problem vehicles or equipment should be removed from the project site.
- Keep ample supplies of spill cleanup materials onsite.
- Immediately clean up spills and properly dispose of contaminated soil and cleanup materials.

Spill Prevention and Control

WM-4



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

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Potential Alternatives

None

Description and Purpose

Prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

This best management practice covers only spill prevention and control. However, WM-1, Materials Delivery and Storage, and WM-2, Material Use, also contain useful information, particularly on spill prevention. For information on wastes, see the waste management BMPs in this section.

Suitable Applications

This BMP is suitable for all construction projects. Spill control procedures are implemented anytime chemicals or hazardous substances are stored on the construction site, including the following materials:

- Soil stabilizers/binders
- Dust palliatives
- Herbicides
- Growth inhibitors
- Fertilizers
- Degrading/anti-icing chemicals



Spill Prevention and Control

WM-4

- Fuels
 - Lubricants
 - Other petroleum distillates
- #### Limitations
- In some cases it may be necessary to use a private spill cleanup company.
 - This BMP applies to spills caused by the contractor and subcontractors.
 - Procedures and practices presented in this BMP are general. Contractor should identify appropriate practices for the specific materials used or stored onsite

Implementation

The following steps will help reduce the stormwater impacts of leaks and spills:

Education

- Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills.
- Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- Establish a continuing education program to indoctrinate new employees.
- Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

- To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110.117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- Store hazardous materials and wastes in covered containers and protect from vandalism.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Train employees in spill prevention and cleanup.
- Designate responsible individuals to oversee and enforce control measures.
- Spills should be covered and protected from stormwater runoff during rainfall to the extent that it doesn't compromise clean up activities.
- Do not bury or wash spills with water.

Spill Prevention and Control

WM-4

- Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with WM-10, Liquid Waste Management.
- Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- Place proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

- Clean up leaks and spills immediately.
- Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to either a certified laundry (rags) or disposed of as hazardous waste.
- Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

- Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
- Use absorbent materials on small spills rather than hosing down or burying the spill.
- Absorbent materials should be promptly removed and disposed of properly.
- Follow the practice below for a minor spill:
 - Contain the spread of the spill.
 - Recover spilled materials.
 - Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

- Semi-significant spills skill can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Spill Prevention and Control

WM-4

- Spills should be cleaned up immediately:
 - Contain spread of the spill.
 - Notify the project foreman immediately.
 - If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
 - If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
 - If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

- For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, the following steps should be taken:
 - Notify the local emergency response by dialing 911. In addition to 911, the contractor will notify the proper county officials. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
 - Notify the Governor's Office of Emergency Services Warning Center, (916) 845-8911.
 - For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
 - Notification should first be made by telephone and followed up with a written report.
 - The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
 - Other agencies which may need to be consulted include, but are not limited to, the Fire Department, the Public Works Department, the Coast Guard, the Highway Patrol, the City/County Police Department, Department of Toxic Substances, California Division of Oil and Gas, Cal/OSHA, etc.

Reporting

- Report significant spills to local agencies, such as the Fire Department; they can assist in cleanup.
- Federal regulations require that any significant oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hours).

Use the following measures related to specific activities:

Spill Prevention and Control

WM-4

Vehicle and Equipment Maintenance

- If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.
- Regularly inspect onsite vehicles and equipment for leaks and repair immediately.
- Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Place drip pans or absorbent materials under paving equipment when not in use.
- Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
- Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
- Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

- If fueling must occur onsite, use designate areas, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.
- Discourage "topping off" of fuel tanks.
- Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

Conts

Prevention of leaks and spills is inexpensive. Treatment and/ or disposal of contaminated soil or water can be quite expensive.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur.

Spill Prevention and Control

WM-4

- Keep ample supplies of spill control and cleanup materials onsite, near storage, unloading, and maintenance areas.
- Update your spill prevention and control plan and stock cleanup materials as changes occur in the types of chemicals onsite.

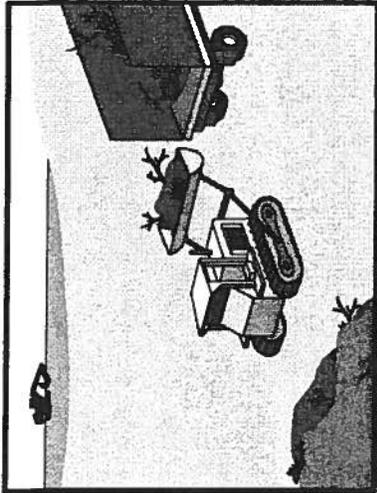
References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92006; USEPA, April 1992.

Solid Waste Management



Description and Purpose

Solid waste management procedures and practices are designed to prevent or reduce the discharge of pollutants to stormwater from solid or construction waste by providing designated waste collection areas and containers, arranging for regular disposal, and training employees and subcontractors.

Suitable Applications

This BMP is suitable for construction sites where the following wastes are generated or stored:

- Solid waste generated from trees and shrubs removed during land clearing, demolition of existing structures (rubble), and building construction
- Packaging materials including wood, paper, and plastic
- Scrap or surplus building materials including scrap metals, rubber, plastic, glass pieces and masonry products
- Domestic wastes including food containers such as beverage cans, coffee cups, paper bags, plastic wrappers, and cigarettes
- Construction wastes including brick, mortar, timber, steel and metal scraps, pipe and electrical cuttings, non-hazardous equipment parts, styrofoam and other materials used to transport and package construction materials

WM-5

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

Targeted Constituents	
Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Potential Alternatives	
	None



WM-5 Solid Waste Management

- Highway planting wastes, including vegetative material, plant containers, and packaging materials

Limitations

Temporary stockpiling of certain construction wastes may not necessitate stringent drainage related controls during the non-rainy season or in desert areas with low rainfall.

Implementation

The following steps will help keep a clean site and reduce stormwater pollution:

- Select designated waste collection areas onsite.
 - Inform trash-hauling contractors that you will accept only watertight dumpsters for onsite use. Inspect dumpsters for leaks and repair any dumpster that is not watertight.
 - Locate containers in a covered area or in a secondary containment.
 - Provide an adequate number of containers with lids or covers that can be placed over the container to keep rain out or to prevent loss of wastes when it is windy.
 - Plan for additional containers and more frequent pickup during the demolition phase of construction.
 - Collect site trash daily, especially during rainy and windy conditions.
 - Remove this solid waste promptly since erosion and sediment control devices tend to collect litter.
 - Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
 - Do not hose out dumpsters on the construction site. Leave dumpster cleaning to the trash hauling contractor.
 - Arrange for regular waste collection before containers overflow.
 - Clean up immediately if a container does spill.
 - Make sure that construction waste is collected, removed, and disposed of only at authorized disposal areas.
- Education**
- Have the contractor's superintendent or representative oversee and enforce proper solid waste management procedures and practices.
 - Instruct employees and subcontractors on identification of solid waste and hazardous waste.
 - Educate employees and subcontractors on solid waste storage and disposal procedures.

Solid Waste Management

WM-5

- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).
- Require that employees and subcontractors follow solid waste handling and storage procedures.
- Prohibit littering by employees, subcontractors, and visitors.
- Minimize production of solid waste materials whenever possible.

Collection, Storage, and Disposal

- Littering on the project site should be prohibited.
- To prevent clogging of the storm drainage system, litter and debris removal from drainage grates, trash racks, and ditch lines should be a priority.
- Trash receptacles should be provided in the contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods.
- Litter from work areas within the construction limits of the project site should be collected and placed in watertight dumpsters at least weekly, regardless of whether the litter was generated by the contractor, the public, or others. Collected litter and debris should not be placed in or next to drain inlets, stormwater drainage systems, or watercourses.
- Dumpsters of sufficient size and number should be provided to contain the solid waste generated by the project.
- Full dumpsters should be removed from the project site and the contents should be disposed of by the trash hauling contractor.
- Construction debris and waste should be removed from the site biweekly or more frequently as needed.
- Construction material visible to the public should be stored or stacked in an orderly manner.
- Stormwater runoff should be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures or through the use of measures to elevate waste from site surfaces.
- Solid waste storage areas should be located at least 50 ft from drainage facilities and watercourses and should not be located in areas prone to flooding or ponding.
- Except during fair weather, construction and highway planting waste not stored in watertight dumpsters should be securely covered from wind and rain by covering the waste with tarps or plastic.
- Segregate potentially hazardous waste from non-hazardous construction site waste.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.

WM-5 Solid Waste Management

- For disposal of hazardous waste, see WM-6, Hazardous Waste Management. Have hazardous waste hauled to an appropriate disposal and/or recycling facility.
- Salvage or recycle useful vegetation debris, packaging and surplus building materials when practical. For example, trees and shrubs from land clearing can be used as a brush barrier, or converted into wood chips, then used as mulch on graded areas. Wood pallets, cardboard boxes, and construction scraps can also be recycled.

Costs

All of the above are low cost measures.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur.
- Inspect construction waste area regularly.
- Arrange for regular waste collection.

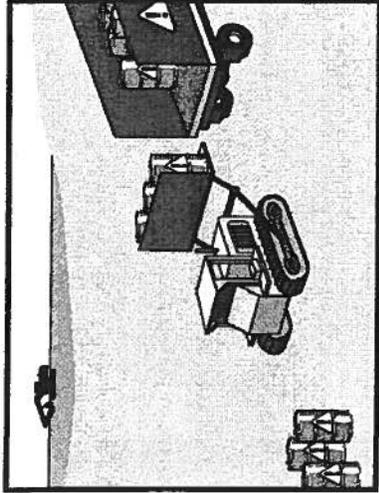
References

Processes, Procedures and Methods to Control Pollution Resulting from All Construction Activity, 430/9-73-007, USEPA, 1973.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.

Hazardous Waste Management WM-6



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

Targeted Constituents

Sediment	✓
Nutrients	✓
Traffic	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Potential Alternatives

None



Hazardous Waste Management WM-6

In addition, sites with existing structures may contain wastes, which must be disposed of in accordance with federal, state, and local regulations. These wastes include:

- Sandblasting grit mixed with lead-, cadmium-, or chromium-based paints
- Asbestos
- PCBs (particularly in older transformers)

Limitations

- Hazardous waste that cannot be reused or recycled must be disposed of by a licensed hazardous waste hauler.
- Nothing in this BMP relieves the contractor from responsibility for compliance with federal, state, and local laws regarding storage, handling, transportation, and disposal of hazardous wastes.
- This BMP does not cover aerially deposited lead (ADL) soils. For ADL soils refer to WM-7, Contaminated Soil Management.

Implementation

The following steps will help reduce stormwater pollution from hazardous wastes:

Material Use

- Wastes should be stored in sealed containers constructed of a suitable material and should be labeled as required by Title 22 CCR, Division 4.5 and 49 CFR Parts 172, 173, 178, and 179.
- All hazardous waste should be stored, transported, and disposed as required in Title 22 CCR, Division 4.5 and 49 CFR 261-263.
- Waste containers should be stored in temporary containment facilities that should comply with the following requirements:
 - Temporary containment facility should provide for a spill containment volume equal to 1.5 times the volume of all containers able to contain precipitation from a 25 year storm event, plus the greater of 10% of the aggregate volume of all containers or 100% of the capacity of the largest tank within its boundary, whichever is greater.
 - Temporary containment facility should be impervious to the materials stored there for a minimum contact time of 72 hours.
 - Temporary containment facilities should be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills should be placed into drums after each rainfall. These liquids should be handled as a hazardous waste unless testing determines them to be non-hazardous. Non-hazardous liquids should be sent to an approved disposal site.
- Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.

Description and Purpose

Prevent or reduce the discharge of pollutants to stormwater from hazardous waste through proper material use, waste disposal, and training of employees and subcontractors.

Suitable Applications

This best management practice (BMP) applies to all construction projects. Hazardous waste management practices are implemented on construction projects that generate waste from the use of:

- Petroleum Products
- Concrete Curing Compounds
- Palliatives
- Septic Wastes
- Stains
- Wood Preservatives
- Asphalt Products
- Pesticides
- Acids
- Paints
- Solvents
- Roofing Tar
- Any materials deemed a hazardous waste in California, Title 22 Division 4.5, or listed in 40 CFR Parts 110, 117, 261, or 302

Hazardous Waste Management WM-6

- Incompatible materials, such as chlorine and ammonia, should not be stored in the same temporary containment facility.
- Throughout the rainy season, temporary containment facilities should be covered during non-working days, and prior to rain events. Covered facilities may include use of plastic tarps for small facilities or constructed roofs with overhangs.
- Drums should not be overfilled and wastes should not be mixed.
- Unless watertight, containers of dry waste should be stored on pallets.
- Do not over-apply herbicides and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over application is expensive and environmentally harmful. Apply surface dressings in several smaller applications, as opposed to one large application. Allow time for infiltration and avoid excess material being carried offsite by runoff. Do not apply these chemicals just before it rains. People applying pesticides must be certified in accordance with federal and state regulations.
- Paint brushes and equipment for water and oil based paints should be cleaned within a contained area and should not be allowed to contaminate site soils, watercourses, or drainage systems. Waste paints, thinners, solvents, residues, and sludges that cannot be recycled or reused should be disposed of as hazardous waste. When thoroughly dry, latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths should be disposed of as solid waste.
- Do not clean out brushes or rinse paint containers into the dirt, street, gutter, storm drain, or stream. "Paint out" brushes as much as possible. Rinse water-based paints to the sanitary sewer. Filter and reuse thinners and solvents. Dispose of excess oil-based paints and sludge as hazardous waste.
- The following actions should be taken with respect to temporary containment:
 - Ensure that adequate hazardous waste storage volume is available.
 - Ensure that hazardous waste collection containers are conveniently located.
 - Designate hazardous waste storage areas onsite away from storm drains or watercourses and away from moving vehicles and equipment to prevent accidental spills.
 - Minimize production or generation of hazardous materials and hazardous waste on the job site.
 - Use containment berms in fueling and maintenance areas and where the potential for spills is high.
 - Segregate potentially hazardous waste from non-hazardous construction site debris.
 - Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.

Hazardous Waste Management WM-6

- Clearly label all hazardous waste containers with the waste being stored and the date of accumulation.
- Place hazardous waste containers in secondary containment.
- Do not allow potentially hazardous waste materials to accumulate on the ground.
- Do not mix wastes.
- Use all of the product before disposing of the container.
- Do not remove the original product label, it contains important safety and disposal information.

Waste Recycling Disposal

- Select designated hazardous waste collection areas onsite.
- Hazardous materials and wastes should be stored in covered containers and protected from vandalism.
- Place hazardous waste containers in secondary containment.
- Do not mix wastes, this can cause chemical reactions, making recycling impossible and complicating disposal.
- Recycle any useful materials such as used oil or water-based paint.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Arrange for regular waste collection before containers overflow.
- Make sure that hazardous waste (e.g., excess oil-based paint and sludge) is collected, removed, and disposed of only at authorized disposal areas.

Disposal Procedures

- Waste should be disposed of by a licensed hazardous waste transporter at an authorized and licensed disposal facility or recycling facility utilizing properly completed Uniform Hazardous Waste Manifest forms.
- A Department of Health Services certified laboratory should sample waste to determine the appropriate disposal facility.
- Properly dispose of rainwater in secondary containment that may have mixed with hazardous waste.
- Attention is directed to "Hazardous Material", "Contaminated Material", and "Aerially Deposited Lead" of the contract documents regarding the handling and disposal of hazardous materials.

Hazardous Waste Management WM-6

Education

- Educate employees and subcontractors on hazardous waste storage and disposal procedures.
- Educate employees and subcontractors on potential dangers to humans and the environment from hazardous wastes.
- Instruct employees and subcontractors on safety procedures for common construction site hazardous wastes.
- Instruct employees and subcontractors in identification of hazardous and solid waste.
- Hold regular meetings to discuss and reinforce hazardous waste management procedures (incorporate into regular safety meetings).
- The contractor's superintendent or representative should oversee and enforce proper hazardous waste management procedures and practices.
- Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.
- Warning signs should be placed in areas recently treated with chemicals.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- If a container does spill, clean up immediately.

Costs

All of the above are low cost measures.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and of two week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur.
- Hazardous waste should be regularly collected.
- A foreman or construction supervisor should monitor onsite hazardous waste storage and disposal procedures.
- Waste storage areas should be kept clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored.
- Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.
- Hazardous spills should be cleaned up and reported in conformance with the applicable Material Safety Data Sheet (MSDS) and the instructions posted at the project site.

Hazardous Waste Management WM-6

- The National Response Center, at (800) 424-8802, should be notified of spills of federal reportable quantities in conformance with the requirements in 40 CFR parts 110, 117, and 302. Also notify the Governors Office of Emergency Services Warning Center at (916) 845-8911.

- A copy of the hazardous waste manifests should be provided.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1996.

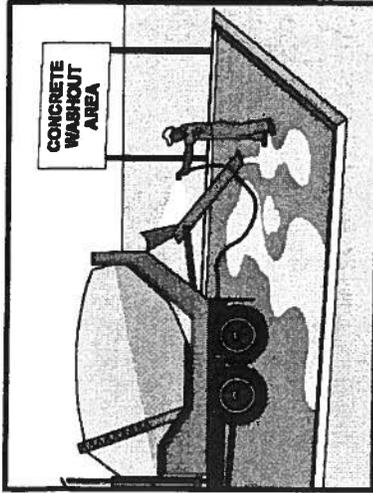
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Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

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

Targeted Constituents

Sediment	✓
Nutrients	
Tresh	
Metals	✓
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None

Description and Purpose

Prevent or reduce the discharge of pollutants to stormwater from concrete waste by conducting washout onsite, performing onsite washout in a designated area, and training employee and subcontractors.

Suitable Applications

Concrete waste management procedures and practices are implemented on construction projects where:

- Concrete is used as a construction material or where concrete dust and debris result from demolition activities
- Slurries containing portland cement concrete (PCC) or asphalt concrete (AC) are generated, such as from saw cutting, coring, grinding, grooving, and hydro-concrete demolition
- Concrete trucks and other concrete-coated equipment are washed onsite
- Mortar-mixing stations exist
- See also NS-8, Vehicle and Equipment Cleaning

Limitations

- Offsite washout of concrete wastes may not always be possible.



WM-8 Concrete Waste Management

Implementation

The following steps will help reduce stormwater pollution from concrete wastes:

- Discuss the concrete management techniques described in this BMP (such as handling of concrete waste and washout) with the ready-mix concrete supplier before any deliveries are made.
- Incorporate requirements for concrete waste management into material supplier and subcontractor agreements.
- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete.
- Perform washout of concrete trucks offsite or in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped onsite, except in designated areas.
- For onsite washout:
 - Locate washout area at least 50 feet from storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
 - Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.
- Avoid creating runoff by draining water to a bermed or level area when washing concrete to remove fine particles and expose the aggregate.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile or dispose in the trash.

Education

- Educate employees, subcontractors, and suppliers on the concrete waste management techniques described herein.
- Arrange for contractor's superintendent or representative to oversee and enforce concrete waste management procedures.

Concrete Slurry Wastes

- PCC and AC waste should not be allowed to enter storm drains or watercourses.
- PCC and AC waste should be collected and disposed of or placed in a temporary concrete washout facility.
- A sign should be installed adjacent to each temporary concrete washout facility to inform concrete equipment operators to utilize the proper facilities.

Concrete Waste Management

WM-8

- Below grade concrete washout facilities are typical. Above grade facilities are used if excavation is not practical.
- A foreman or construction supervisor should monitor onsite concrete working tasks, such as saw cutting, coring, grinding and grooving to ensure proper methods are implemented.
- Saw-cut PCC slurry should not be allowed to enter storm drains or watercourses. Residue from grinding operations should be picked up by means of a vacuum attachment to the grinding machine. Saw cutting residue should not be allowed to flow across the pavement and should not be left on the surface of the pavement. See also NS-3, Paving and Grinding Operations; and WM-10, Liquid Waste Management.
- Slurry residue should be vacuumed and disposed in a temporary pit (as described in OnSite Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures, below) and allowed to dry. Dispose of dry slurry residue in accordance with WM-5, Solid Waste Management.

Onsite Temporary Concrete Washout Facility, Transit Truck Washout Procedures

- Temporary concrete washout facilities should be located a minimum of 50 ft from storm drain inlets, open drainage facilities, and watercourses. Each facility should be located away from construction traffic or access areas to prevent disturbance or tracking.
- A sign should be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.
- Temporary concrete washout facilities should be constructed above grade or below grade at the option of the contractor. Temporary concrete washout facilities should be constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.
- Temporary washout facilities should have a temporary pit or bermed areas of sufficient volume to completely contain all liquid and waste concrete materials generated during washout procedures.
- Washout of concrete trucks should be performed in designated areas only.
- Only concrete from mixer truck chutes should be washed into concrete wash out.
- Concrete washout from concrete pumper bins can be washed into concrete pumper trucks and discharged into designated washout area or properly disposed of offsite.
- Once concrete wastes are washed into the designated area and allowed to harden, the concrete should be broken up, removed, and disposed of per WM-5, Solid Waste Management. Dispose of hardened concrete on a regular basis.
- Temporary Concrete Washout Facility (Type Above Grade)
 - Temporary concrete washout facility (type above grade) should be constructed as shown on the details at the end of this BMP, with a recommended minimum length and

WM-8 Concrete Waste Management

- minimum width of 10 ft, but with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations.
- Straw bales, wood stakes, and sandbag materials should conform to the provisions in SE-9, Straw Bale Barrier.
- Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.
- Temporary Concrete Washout Facility (Type Below Grade)
 - Temporary concrete washout facilities (type below grade) should be constructed as shown on the details at the end of this BMP, with a recommended minimum length and minimum width of 10 ft. The quantity and volume should be sufficient to contain all liquid and concrete waste generated by washout operations.
 - Lath and flagging should be commercial type.
 - Plastic lining material should be a minimum of 10 mil polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.

Removal of Temporary Concrete Washout Facilities

- When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of.
- Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

Costs

All of the above are low cost measures.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Temporary concrete washout facilities should be maintained to provide adequate holding capacity with a minimum freeboard of 4 in. for above grade facilities and 12 in. for below grade facilities. Maintaining temporary concrete washout facilities should include removing and disposing of hardened concrete and returning the facilities to a functional condition. Hardened concrete materials should be removed and disposed of.
- Washout facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75% full.

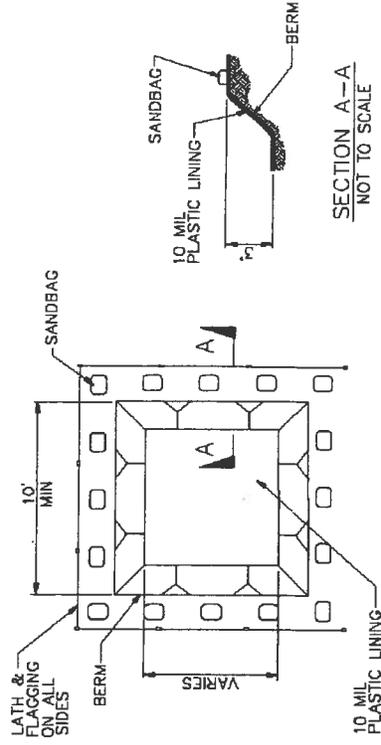
Concrete Waste Management

WM-8

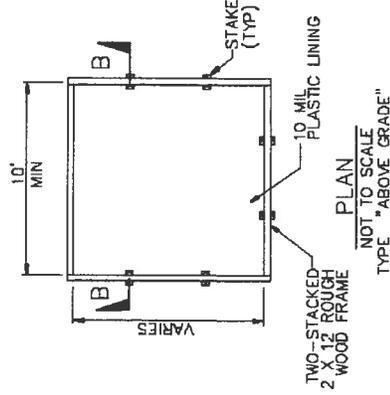
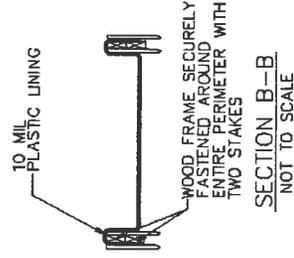
References

- Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.
- Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.
- Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

WM-8 Concrete Waste Management



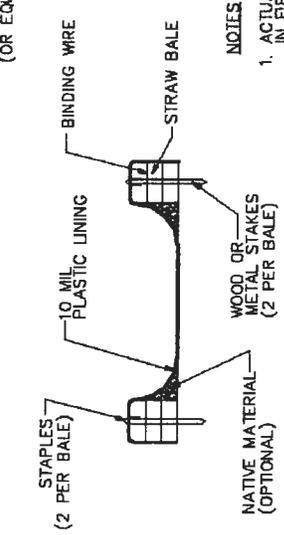
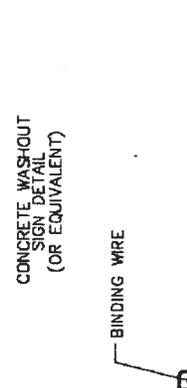
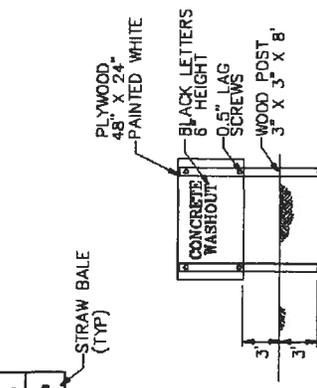
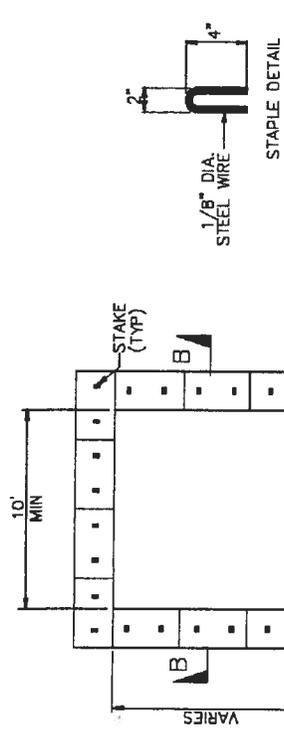
PLAN
NOT TO SCALE
TYPE "BELOW GRADE"



NOTES

- ACTUAL LAYOUT DETERMINED IN FIELD.
- THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

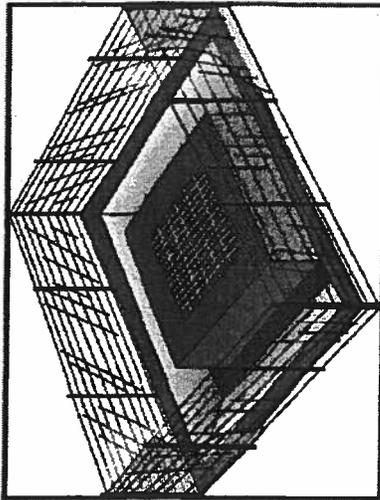
Concrete Waste Management WM-8



- NOTES
1. ACTUAL LAYOUT DETERMINED IN FIELD.
 2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

Storm Drain Inlet Protection

SE-10



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

Description and Purpose

Storm drain inlet protection consists of a sediment filter or an impounding area around or upstream of a storm drain, drop inlet, or curb inlet. Storm drain inlet protection measures temporarily pond runoff before it enters the storm drain, allowing sediment to settle. Some filter configurations also remove sediment by filtering, but usually the ponding action results in the greatest sediment reduction.

Suitable Applications

Every storm drain inlet receiving sediment-laden runoff should be protected.

Limitations

- Drainage area should not exceed 1 acre.
- Straw bales, while potentially effective, have not produced in practice satisfactory results, primarily due to improper installation.
- Requires an adequate area for water to pond without encroaching into portions of the roadway subject to traffic.
- Inlet protection usually requires other methods of temporary protection to prevent sediment-laden stormwater and non-stormwater discharges from entering the storm drain system.
- Sediment removal may be difficult in high flow conditions or if runoff is heavily sediment laden. If high flow conditions are



SE-10 Storm Drain Inlet Protection

expected, use other onsite sediment trapping techniques in conjunction with inlet protection.

- Frequent maintenance is required.
- For drainage areas larger than 1 acre, runoff should be routed to a sediment-trapping device designed for larger flows. See BMPs SE-2, Sediment Basin, and SE-3, Sediment Traps.
- Excavated drop inlet sediment traps are appropriate where relatively heavy flows are expected, and overflow capability is needed.

Implementation

General

Large amounts of sediment may enter the storm drain system when storm drains are installed before the upslope drainage area is stabilized, or where construction is adjacent to an existing storm drain. In cases of extreme sediment loading, the storm drain itself may clog and lose a major portion of its capacity. To avoid these problems, it is necessary to prevent sediment from entering the system at the inlets.

Inlet control measures presented in this handbook should not be used for inlets draining more than one acre. Runoff from larger disturbed areas should be first routed through SE-2, Sediment Basin or SE-3, Sediment Trap. Different types of inlet protection are appropriate for different applications depending on site conditions and the type of inlet. Inlet protection methods not presented in this handbook should be approved by the local stormwater management agency.

Design and Layout

Identify existing and planned storm drain inlets that have the potential to receive sediment-laden surface runoff. Determine if storm drain inlet protection is needed and which method to use.

- Limit upstream drainage area to 1 acre maximum. For larger drainage areas, use SE-2, Sediment Basin, or SE-3, Sediment Trap, upstream of the inlet protection device.
- The key to successful and safe use of storm drain inlet protection devices is to know where runoff will pond or be diverted.
 - Determine the acceptable location and extent of ponding in the vicinity of the drain inlet.
 - The acceptable location and extent of ponding will influence the type and design of the storm drain inlet protection device.
 - Determine the extent of potential runoff diversion caused by the storm drain inlet protection device. Runoff ponded by inlet protection devices may flow around the device and towards the next downstream inlet. In some cases, this is acceptable; in other cases, serious erosion or downstream property damage can be caused by these diversions. The possibility of runoff diversions will influence whether or not storm drain inlet protection is suitable; and, if suitable, the type and design of the device.
- The location and extent of ponding, and the extent of diversion, can usually be controlled through appropriate placement of the inlet protection device. In some cases, moving the

Storm Drain Inlet Protection SE-10

inlet protection device a short distance upstream of the actual inlet can provide more efficient sediment control, limit ponding to desired areas, and prevent or control diversions.

- Four types of inlet protection are presented below. However, it is recognized that other effective methods and proprietary devices exist and may be selected.
 - Filter Fabric Fence: Appropriate for drainage basins with less than a 5% slope, sheet flows, and flows under 0.5 cfs.
 - Excavated Drop Inlet Sediment Trap: An excavated area around the inlet to trap sediment (SE-3).
 - Gravel bag barrier: Used to create a small sediment trap upstream of inlets on sloped, paved streets. Appropriate for sheet flow or when concentrated flow may exceed 0.5 cfs, and where overtopping is required to prevent flooding.
 - Block and Gravel Filter: Appropriate for flows greater than 0.5 cfs.
- Select the appropriate type of inlet protection and design as referred to or as described in this fact sheet.
- Provide area around the inlet for water to pond without flooding structures and property.
- Grates and spaces around all inlets should be sealed to prevent seepage of sediment-laden water.
- Excavate sediment sumps (where needed) 1 to 2 ft with 2:1 side slopes around the inlet.

Installation

- **DI Protection Type 1 - Filter Fabric Fence** - The filter fabric fence (Type 1) protection is shown in the attached figure. Similar to constructing a silt fence; see BMP SE-1, Silt Fence. Do not place filter fabric underneath the inlet grate since the collected sediment may fall into the drain inlet when the fabric is removed or replaced.
 1. Excavate a trench approximately 6 in. wide and 6 in. deep along the line of the silt fence inlet protection device.
 2. Place 2 in. by 2 in. wooden stakes around the perimeter of the inlet a maximum of 3 ft apart and drive them at least 18 in. into the ground or 12 in. below the bottom of the trench. The stakes must be at least 48 in.
 3. Lay fabric along bottom of trench, up side of trench, and then up stakes. See SE-1, Silt Fence, for details. The maximum silt fence height around the inlet is 24 in.
 4. Staple the filter fabric (for materials and specifications, see SE-1, Silt Fence) to wooden stakes. Use heavy-duty wire staples at least 1 in. in length.
 5. Backfill the trench with gravel or compacted earth all the way around.
- **DI Protection Type 2 - Excavated Drop Inlet Sediment Trap** - The excavated drop inlet sediment trap (Type 2) is shown in the attached figures. Install filter fabric fence in

SE-10 Storm Drain Inlet Protection

accordance with DI Protection Type 1. Size excavated trap to provide a minimum storage capacity calculated at the rate 67 yds³/acre of drainage area.

- **DI Protection Type 3 - Gravel Bag** - The gravel bag barrier (Type 3) is shown in the figures. Flow from a severe storm should not overtop the curb. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Construct gravel bags in accordance with SE-6, Gravel Bag Berm. Gravel bags should be used due to their high permeability.
 1. Use sand bag made of geotextile fabric (not burlap) and fill with 0.75 in. rock or 0.25 in. pea gravel.
 2. Construct on gently sloping street.
 3. Leave room upstream of barrier for water to pond and sediment to settle.
 4. Place several layers of sand bags – overlapping the bags and packing them tightly together.
 5. Leave gap of one bag on the top row to serve as a spillway. Flow from a severe storm (e.g., 10 year storm) should not overtop the curb.
- **DI Protection Type 4 - Block and Gravel Filter** - The block and gravel filter (Type 4) is shown in the figures. Block and gravel filters are suitable for curb inlets commonly used in residential, commercial, and industrial construction.
 1. Place hardware cloth or comparable wire mesh with 0.5 in. openings over the drop inlet so that the wire extends a minimum of 1 ft beyond each side of the inlet structure. If more than one strip is necessary, overlap the strips. Place filter fabric over the wire mesh.
 2. Place concrete blocks lengthwise on their sides in a single row around the perimeter of the inlet, so that the open ends face outward, not upward. The ends of adjacent blocks should abut. The height of the barrier can be varied, depending on design needs, by stacking combinations of blocks that are 4 in., 8 in., and 12 in. wide. The row of blocks should be at least 12 in. but no greater than 24 in. high.
 3. Place wire mesh over the outside vertical face (open end) of the concrete blocks to prevent stone from being washed through the blocks. Use hardware cloth or comparable wire mesh with 0.5 in. opening.
 4. Pile washed stone against the wire mesh to the top of the blocks. Use 0.75 to 3 in.

Costs

- Average annual cost for installation and maintenance (one year useful life) is \$200 per inlet.

Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.

Storm Drain Inlet Protection SE-10

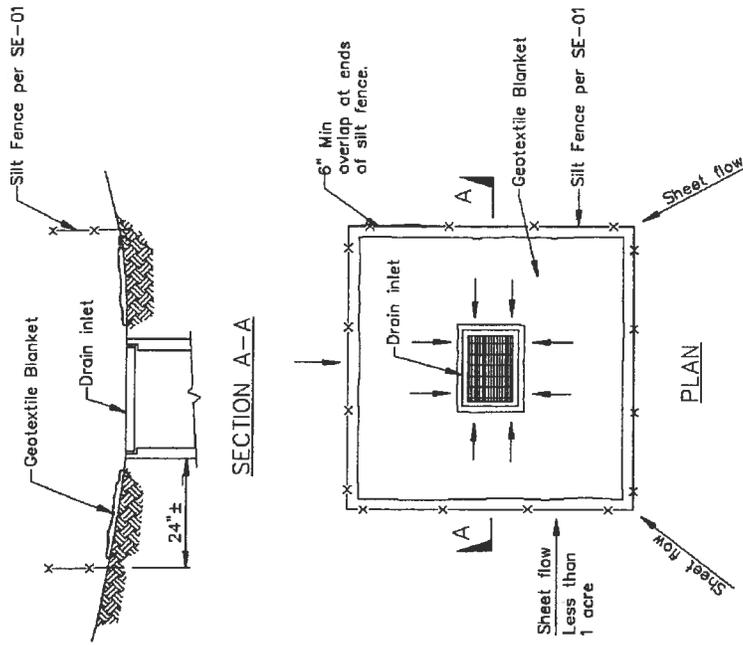
- Filter Fabric Fences. If the fabric becomes clogged, torn, or degraded, it should be replaced. Make sure the stakes are securely driven in the ground and are in good shape (i.e., not bent, cracked, or splintered, and are reasonably perpendicular to the ground). Replace damaged stakes.
- Gravel Filters. If the gravel becomes clogged with sediment, it must be carefully removed from the inlet and either cleaned or replaced. Since cleaning gravel at a construction site may be difficult, consider using the sediment-laden stone as fill material and put fresh stone around the inlet. Inspect bags for holes, gashes, and snags, and replace bags as needed. Check gravel bags for proper arrangement and displacement.
- Sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed at an appropriate location.
- Remove storm drain inlet protection once the drainage area is stabilized.
 - Clean and regrade area around the inlet and clean the inside of the storm drain inlet as it must be free of sediment and debris at the time of final inspection.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management Manual for The Puget Sound Basin, Washington State Department of Ecology, Public Review Draft, 1991.

SE-10 Storm Drain Inlet Protection



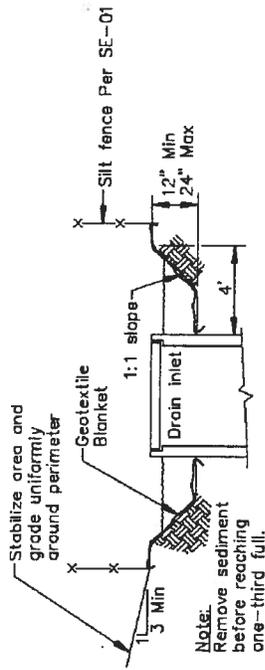
DI PROTECTION TYPE 1
NOT TO SCALE

NOTES:

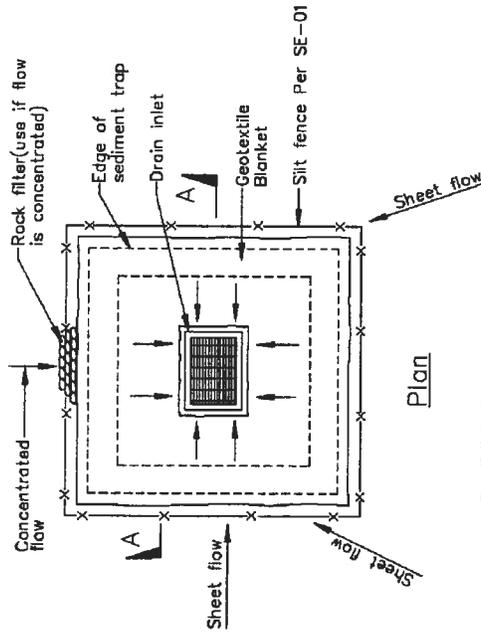
- For use in areas where grading has been completed and final soil stabilization and seeding are pending.
- Not applicable in paved areas.
- Not applicable with concentrated flows.

Storm Drain Inlet Protection

SE-10



Section A-A



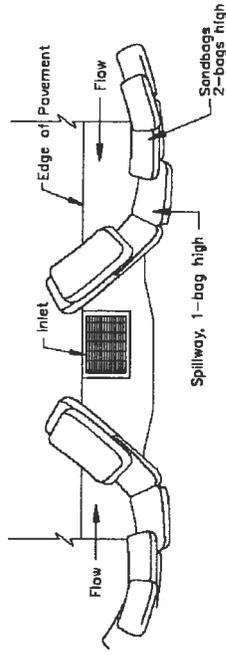
DI PROTECTION TYPE 2
NOT TO SCALE

Notes

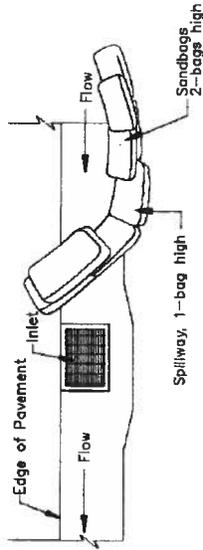
1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow.

SE-10

Storm Drain Inlet Protection



TYPICAL PROTECTION FOR INLET ON SUMP



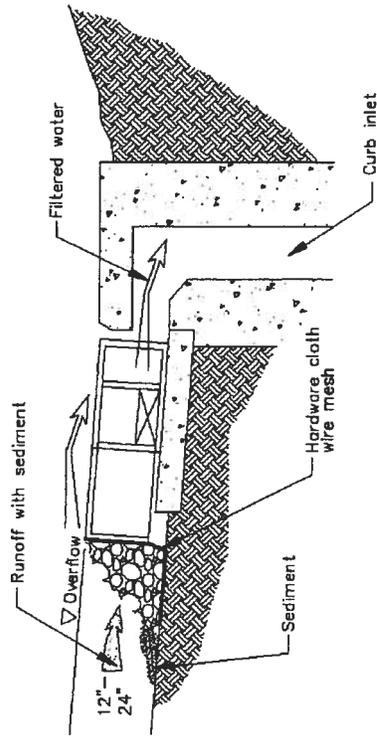
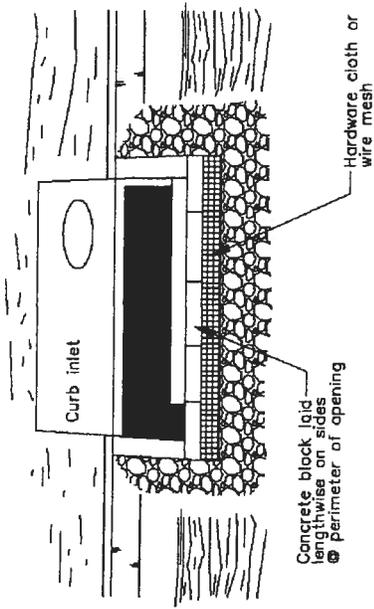
TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:

1. Intended for short-term use.
2. Use to inhibit non-storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed.
5. Not applicable in areas with high silts and clays without filter fabric.

DI PROTECTION TYPE 3
NOT TO SCALE

Storm Drain Inlet Protection SE-10



DI PROTECTION — TYPE 4
NOT TO SCALE

ORDINANCE NO. ORD-13-0024

AN ORDINANCE OF THE CITY COUNCIL OF THE
 CITY OF LONG BEACH AMENDING THE LONG BEACH
 MUNICIPAL CODE BY AMENDING AND RESTATING
 TITLE 18 IN ITS ENTIRETY; AND BY REPEALING
 CHAPTER 21.65, ALL RELATING TO THE ADOPTION AND
 AMENDMENTS TO THE 2013 EDITION OF THE
 CALIFORNIA BUILDING STANDARDS CODES AND THE
 1997 EDITION OF THE UNIFORM HOUSING CODE TO BE
 KNOWN AS THE LONG BEACH BUILDING STANDARDS
 CODE

The City Council of the City of Long Beach ordains as follows:

Section 1. Title 18 of the Long Beach Municipal Code is hereby
 amended in its entirety and restated as shown on Exhibit "A", which is attached hereto
 and incorporated herein by this reference as if set forth in full.

Section 2. Chapter 21.65 of the Long Beach Municipal Code is hereby
 repealed.

Section 3. The City Clerk shall certify to the passage of this ordinance by
 the City Council and cause it to be posted in three (3) conspicuous places in the City of
 Long Beach, and it shall take effect on the thirty-first (31st) day after it is approved by the
 Mayor, but in no event prior to January 1, 2014, with the exception that the "Low Impact
 Development Standards" codified in Chapter 18.74 shall become effective in accordance
 with Long Beach City Charter Section 210; and that the provisions of Chapter 18.76
 relating to "Water Submeters" shall not become effective unless and until the City Council
 considers the adoption of "Consumer Protection Standards" relating to water

OFFICE OF THE CITY ATTORNEY
 CHARLES PARKIN, City Attorney
 333 West Ocean Boulevard, 11th Floor
 Long Beach, CA 90802-4664

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
333 West Ocean Boulevard, 11th Floor
Long Beach, CA 90802-4664

1 submetering.

2

3

I hereby certify that the foregoing ordinance was adopted by the City

4

Council of the City of Long Beach at its meeting of November 12, 2013 by the

5

following vote:

6

Ayes: Councilmembers: Lowenthal, DeLong, O'Donnell, Andrews,

7

Johnson, Austin, Neal.

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Noes: Councilmembers: None.

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Absent: Councilmembers: Garcia, Schipske.

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16

City Clerk

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Approved: 11/14/13

(Date)

20



Mayor

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AMENDED AND RESTATED TITLE 18

2014 CODE AMENDMENTS

TO THE LONG BEACH MUNICIPAL CODE

PREPARED BY

LBD DEVELOPMENT SERVICES



SUSTAINABLE
LONG BEACH

CHAPTER 18.61 NPDES AND SUSMP REGULATIONS

- 18.61.010 – Purpose.
- 18.61.020 – Definition.
- 18.61.030 – Exception.
- 18.61.040 – Applicability.
- 18.61.050 – NPDES and SUSMP Regulations Manual.

CHAPTER 18.61 NPDES AND SUSMP REGULATIONS

18.61.010 – Purpose.

The purpose of this chapter is to provide regulations and give legal effect to certain requirements of the National Pollutant Discharge Elimination System (NPDES) permit issued to the City of Long Beach, and the subsequent requirements of the Standard Urban Storm Water Mitigation Plan (SUSMP), mandated by the California Regional Water Quality Control Board, Los Angeles region (RWQCB). The intent of these regulations is to effectively prohibit non-storm water discharges into the storm drain systems or receiving waters and to require source control BMP to prevent or reduce the discharge of pollutants into the storm water to the maximum extent practicable.

18.61.020 – Definition.

Unless otherwise expressly stated, the following words and terms shall, for the purpose of this chapter, have the meanings as defined in the NPDES and SUSMP Regulations Manual. Where the terms are not defined in the NPDES and SUSMP Regulations Manual, such terms shall have ordinarily accepted meaning such as the context implies. Webster's Third New International Dictionary of the English Language, Unabridged shall be considered as providing ordinarily accepted meanings.

18.61.030 – Exception.

Non-storm water discharges into the storm drain systems or to receiving waters are prohibited except where such discharges are expressly permitted in the NPDES and SUSMP Regulations Manual.

18.61.040 – Applicability.

New development projects and redevelopment projects in the City subject to the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the projects, shall apply if required in the NPDES and SUSMP Regulations Manual.

18.61.050 – NPDES and SUSMP Regulations Manual.

- A. The Building Official shall prepare, maintain, and update, as deemed necessary and appropriate, the NPDES and SUSMP Regulations Manual and shall include technical information and implementation parameters, alternative compliance for technical infeasibility, as well as other rules, requirements and procedures as the City deems necessary, for implementing the provisions of this chapter.
- B. The Building Official shall develop, as deemed necessary and appropriate, in cooperation with other City departments and stakeholders, informational bulletins, training manuals and educational materials to assist in the implementation of this chapter.

NPDES No. CAS004003 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
FY 14 Annual Report

Section IV.IV.A.3.d.P.10

d) Describe efforts your agency made to educate local schools on storm water pollution.

The Storm Water/Environmental Compliance Division contributed \$5,000 in FY 14 to support Heal the Bay's Key to the Sea marine education program. The program provides students, teachers, and informal educators with access to environmental education curriculum and hands-on learning opportunities. The program offers professional development workshops for educators, field trips, and bus stipends for field trips. The two the main content and learning objectives of the program are 1) inspire a curiosity and burgeoning understanding of the beach environment, and 2) connect the students and their daily lives to the impact that they have on the environment, encouraging stewardship behaviors over negative impacts.

The City of Long Beach continued to support the Aquarium Scholarship Fund in FY14. The Aquarium scholarship provides complimentary visits and education lessons aligned with science standards to underprivileged schools, which lack access to cultural and scientific resources. The 40 interactive classroom and auditorium programs available to scholarship recipients emphasize hands-on, inquiry-based teaching by engaging students in activities that inspire learning in fun and creative ways. Props and animations are used to introduce participants to an array of science topics and stimulate curiosity and wonder about the ocean, its inhabitants, and the environment around them. The \$5,000 grant provided an extraordinary educational field trip experience to students from the City of Long Beach.

The department of Parks, Recreation, and Marine continues to provide its Movable Museum program, "Protect Our Watery World" (POWW). This year volunteers educated 550 students from local area elementary schools on non-point source pollution, the durability of trash in the marine environment and the harmful effects of trash on ocean animals.

The City of Long Beach's Adopt-A-Beach program is an ongoing conservation and volunteer plan that works in conjunction with the California Coastal Commission. The program allows schools, clubs, businesses, churches, community associations and other groups to partner with the City by agreeing to clean up a quarter mile section of the Long Beach shoreline at least three times annually. People of all ages and diverse backgrounds have become part of the solution to ocean pollution, increasing public awareness that trash on the land inevitably becomes trash on the beach and in the

NPDES No. CAS004003 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
FY 14 Annual Report

ocean. During the 2014 fiscal year, the Adopt-A-Beach program saw 18 regular volunteer groups holding regular monthly cleanups for not only their members, but the general community as well. This year approximately 3,576 volunteers donated over 7,000 hours of service removing over 10,700 lbs of debris from the coastline.

Various Long Beach Unified School District elementary schools hosted the Environmental Defenders Rock the Planet Tour hosted by Los Angeles County. It is a 30-minute, high-energy assembly program that is free to all elementary schools in L.A. County. This exciting, music-driven show leads students in grades K-6 to identify environmental problems and possible solutions kids can do themselves to reduce pollution. Topics include the Four R's (Reduce, Reuse, Recycle, and Rethink), storm water pollution prevention, proper disposal of household hazardous waste, and water conservation.

Finally, El Dorado Nature Center continues to promote and implement the Discovery Tour "Explore the Shore" (Appendix E-7) held at two Long Beach shore locations. Created to align with the 5th grade California Science and Math standards, participants in these programs not only get hands-on inquiry based lessons, but an opportunity to use the scientific method to calculate approximately how much debris is on the coast of Long Beach. Students and teachers also participate in a debris removal and brainstorm solutions for ocean pollution. During the 2013-2014 fiscal year staff educated 200 students from local elementary schools.

Section IV.IV.A.8.P.12

8. Did you establish local community partnerships to distribute educational storm water pollution prevention material? Describe the materials that were distributed, who were the key partners, and who were the audience?

Refuse/Recycling

During FY 14, ESB continued to provide a number of refuse and recycling services that included curbside collections, the new Household Hazardous Waste facility and special item pick-ups. In addition, ESB played an active role in the community through various outreach and educational programs. In FY 14, ESB:

- Collected approximately 182,452 tons of waste from City managed routes and beaches.
- Provided all City-serviced refuse accounts with two free bulky item collections

NPDES No. CAS004003 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
FY 14 Annual Report

per year, with any additional collections at a cost of \$6.11 per item.

- Staff attended 15 neighborhood meetings and community events promoting recycling and litter abatement, with 10,400 residents attending.
- 85% of Long Beach's public schools, 71 total, are currently participating in the recycling program and 13 increased their recycling efforts this year. Additionally, 12 private schools are participating in the recycling program.
- Conducted 10 composting workshops and special event composting demonstrations for a total of approximately 1,400 participants, and distributed approximately 200 composting bins to residents and schools throughout the City.
- Received a \$121,879 beverage container recycling block grant from CalRecycle's City County Payment Program that was used to support litter abatement programs and various activities related to beverage container recycling. In addition, the grant funds assisted the City's curbside residential program in collecting nearly 26,749 tons of recyclable material.
- Working together with EDCO and LA County. The EDCO facility allows residents of LA County to drop off household hazardous waste items for proper recycling or disposal. Items that are accepted at this facility include (but are not limited to): batteries, chemicals, pharmaceuticals, and fluorescent light bulbs. In FY 14, the HHW facility serviced 6,761 cars/loads for a total of 530,691 pounds of household hazardous waste collected 3,125 gallons of motor oil and 638 motor oil filters as part of the City's curbside motor oil recycling program.
- Received a block grant from CalRecycle for over \$131,475 that was used to support the City's used motor oil recycling program. The program consists of curbside collection, 23 Used Oil Certified Collection Centers and various public outreach materials.
Produced brochures to inform residents about the importance of recycling used motor oil and promote clean and healthy streets.
- ESB continued its Marina Recycling program, providing approximately 135 recycling bins to Alamitos and Shoreline Marinas, and a 2-yard recycling bin to Rainbow Marina.
- A multifamily recycling ordinance was implemented in FY 2009, requiring the City's private waste haulers to provide the option of recycling to multifamily units with ten or more units.
- The City continued its mandatory commercial recycling, which requires all businesses in Long Beach to recycle.
- Received a \$47,951 tire cleanup block grant from CalRecycle that was used to support litter abatement programs and various activities related to collecting dumped tires throughout the City.
- The City continued its partnership with Recyclebank for a recycling incentive program. Once registered, residents are awarded points for recycling, which

NPDES No. CAS004003 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
FY 14 Annual Report

can then be redeemed for discounts and deals from local businesses and national brands.

- Continued to administer the LB Exchange program which is designed to promote materials reuse by creating a link between local businesses and Long Beach non-profits and schools. Businesses can donate items such as furniture and appliances to these non-profit organizations.

Litter Campaign

ESB established a Litter Abatement and Awareness Campaign program (LitterFree Long Beach) during FY 05. Below is a description of Campaign programs conducted during FY 14:

- Conducted 30 community and business corridor clean-ups.
- Involved 563 volunteer participants at neighborhood and business cleanup events.
- Collected 83 tons of litter from community and business corridor clean-up efforts.
- Promoted the "No Litter Zone" program through door-to-door efforts with 358 businesses participating in the program receiving a free 20-gallon trash can, liners, broom and dust pan for use to help keep their store fronts clean.
- Collected approximately 1,155 tons of litter from alleys throughout the city through the "Alley Clean-Up" program, which involved approximately 1,361 community service workers.
- Provided 255 litter and recycling containers at Special Events throughout the City.
- Maintained sponsorship of 17 street locations through the "Adopt-a-Street" program.
- Continued a program for residents to contact and report businesses that leave unwanted handbills on residential property and create litter in Long Beach neighborhoods.
- Issued nearly 700 citations through the Long Beach Police Department.
- Produced and distributed a "No Junk Mail" brochure to enable residents to
- remove themselves from 'junk mail' advertising lists and pre-screened
- offer directories.
- Promoting neighborhood clean-up events online and in social medias.
- Provided a series of informational brochures and flyers on litter abatement, recycling, hazardous waste, tire amnesty events, holiday tree recycling, and composting.
- Produced promotional car decals, baseball caps, pencils, reusable grocery bags,

NPDES No. CAS004003 Order No. 99-060/R4-2014-0024
 City of Long Beach Municipal Storm Water Permit
 FY 14 Annual Report

- battery bags, chip clips, and rulers.
- Monitor compliance of the plastic bag ban implemented in FY11, which prohibits the use of plastic bags at grocery stores throughout the City. Residents are encouraged to bring reusable tote bags, or can purchase paper bags for \$0.10 each

Section IV.IV.A.9.P.12

9. Did you participate in or publicize workshops or community events to discuss storm water pollution? How many events did you attend?

<u>Event and Date</u>	<u>Number of Attendees</u>
2nd Sunday's In The Village (June 8, 2014)	250
2nd Sunday's In The Village (July 13, 2014)	250
2nd Sunday's In The Village (August 10, 2014)	250
4th District Snow Day (February 22, 2014)	2,500
6th District Back to School Fair (August 9, 2014)	2,500
6th District Snow Day (December 28, 2014)	1,500
Coastal Clean-up (September 20, 2014)	1,051
Earth Day at the Aquarium of the Pacific (April 26, 2014)	5,000
Earth Day Beach Clean Up (April 19, 2014)	185
Environmental Resource Fair (August 2, 2014)	500
Idea Fest (June 7, 2014)	
Mud Mania (August 17, 2014)	1,500
LBUSD Science Fair (May 17, 2014)	4,500
Unity Festival (September 13, 2014)	2,000

NPDES No. CAS004003 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
FY 14 Annual Report

Section IV.IV.D.4.e.P.22

e) Describe procedures your agency has implemented to encourage retention and planting of native vegetation and to reduce water, fertilizer, and pesticide needs:

Native plant materials are of particular concern in several locations – El Dorado Nature Center, 34th Street & Orange Park, the Queensway Bay Area (which includes Golden Shore Marine Reserve), the Jack Dunster Marine Biological Reserve, 7th St. Greenbelt, Colorado Lagoon, and Sims Pond. Azteca, the grounds maintenance contractor, is responsible for the maintenance of the landscaping at El Dorado Nature Center and a full-time city staff gardener monitors the work. In addition, volunteers from the Habitat Stewards program assist with grounds maintenance. The Nature Center is a mixture of native and non-native plant material that was originally planted over 40 years ago. It is department policy to use native or drought tolerant plants only for any new plantings and also to replace any material that must be removed (for various reasons such as disease or general decline). The 17-acre expansion site at the Nature Center is exclusively native plant material. The PRM Maintenance and El Dorado Nature Center staff ensures that plant material selections are appropriate and sustainable. The plant material, once established, is irrigated on a 10-week rotation. Maintenance and Nature Center staff schedule more frequent irrigation during the summer and fire season when grasses are dry and the Santa Ana winds are present. Herbicides and pesticides are minimally used to eliminate invasive weeds and aquatic vegetation. Volunteers and staff use the practice of mulching as an alternative to chemical weed abatement. The Nature Center has instituted a volunteer Habitat Stewards program that has trained over 80 volunteers to help plant and care for native plants, which are installed according to the Center's Master plan.

In the Queensway Bay Area, native species have been planted in Shoreline Park (Lighthouse Point and Beach Garden) and in the restored wetland area commonly referred to as the "Golden Shore Marine Reserve". The selection of native species, which include perennials, grasses, and aquatic species, has been done with input from consultants (i.e., MBC Applied Environmental Science, Acorn Group) and from qualified in-house staff. All invasive weeds are removed by hand, with no herbicides or pesticides. Removal of trash from Golden Shore Marine Reserve is done by hand with great care on a limited or as needed basis to prevent any human impact on the site. Staff from the Golden Yard performs the record keeping. Golden Shore, Sims Pond, 7th St. Greenbelt, and Jack Dunster Marine Biological Reserve is maintained by the Los Cerritos Wetland Stewards, who are experienced in maintaining delicate habitats. Only native and non-invasive plants from the appropriate plant community are used when

NPDES No. CAS004003 Order No. 99-060/R4-2014-0024
City of Long Beach Municipal Storm Water Permit
FY 14 Annual Report

replacing plants at these sites. Most invasive and non-native plants are removed by hand; chemicals are used at a minimum. Mulch is then applied to the site to prevent weeds from returning until the native plants are established, which also helps with water conservation. In the last 6 years, 37 new sites have been developed that were designed with low volume irrigation systems, drought tolerant and native plants, bio swales, and other features to minimize any negative environmental impacts. Less trimming means it generates less green waste.

The contractor and city staff keeps maintenance practices, pesticide records and schedules for these sites.

Landscape contractors and contracted tree trimmers: green waste or biomass generated from trimming, pruning, and clearing is either chipped or shredded and kept on site as mulch. Aquatic vegetation from the lakes and streams are also utilized on site.

Mostly the Los Cerritos Wetland Stewardship, who is experienced in maintaining delicate habitats, maintains Jack Dunster Marine Biological Reserve, Sims Pond, and the greenbelt. Only native non-invasive plants on the original approved plant pallet are used. All invasive plants are removed by hand, minimal herbicides or machinery. Mulch is then applied to the site to prevent plants from returning until the native plants have colonized.

Chittick Field is a water retention basin that was recently developed into a sports facility with landscaped slopes. The inlets to the site have native plants bio swales to take in and reduce the nutrient load. The contractor and city staff follow all environment BMPs for the site as outlined in the permit.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

WEST GATEWAY VESTING TENTATIVE TRACT MAP 066301

MIXED-USE RETAIL & RESIDENTIAL
421 WEST BROADWAY
LONG BEACH, CA 90802

PREPARED FOR:

LYON REALTY ADVISORS
4901 BIRCH STREET
NEWPORT BEACH, CA 92660
(949) 252-9101

APRIL 18, 2007

PREPARED:

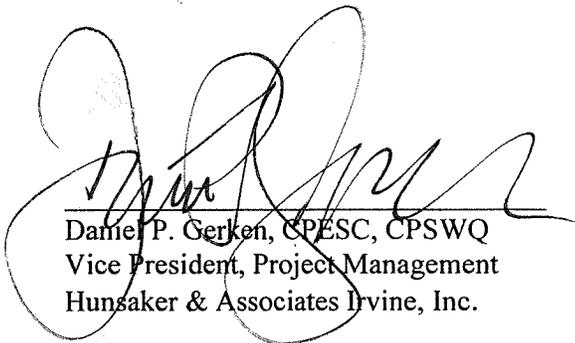
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

BY OFFICER OF LYON REALTY ADVISORS

PREPARED BY:

 **HUNSAKER & ASSOCIATES**
IRVINE, INC.
PLANNING ■ ENGINEERING ■ SURVEYING
Three Hughes • Irvine, CA 92618 • PH: (949) 583-1010 • FX: (949) 583-0759

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Daniel P. Gerken, CPESC, CPSWQ
Vice President, Project Management
Hunsaker & Associates Irvine, Inc.



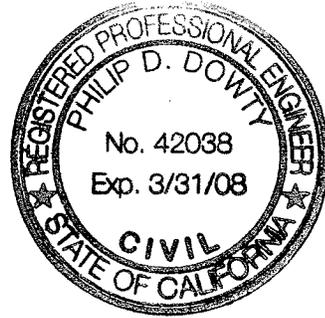
Engineer's Certification

As the engineer of record, I have selected appropriate BMPs to effectively minimize the negative impacts of this project's construction activities on storm water quality. The project owner and contractor are aware that the selected BMPs must be installed, monitored and maintained to insure their effectiveness. The BMPs not selected for implementation are redundant or deemed not applicable to the proposed construction activity.

Philip D. Dowty

4/30/07

SIGNATURE OF ENGINEER



Certification

TABLE OF CONTENTS

1.	INTRODUCTION, REQUIRED NOTICES, AND OTHER PLANS.....	1-1
1.1	Legal Framework & Objectives.....	1-1
1.2	Notice of Intent.....	1-1
1.3	Change of Information.....	1-2
1.4	Notice of Termination.....	1-2
1.5	Other Plans.....	1-3
2.	SITE CONDITIONS.....	2-1
2.1	Vicinity Map.....	2-1
2.2	Site Map.....	2-1
2.3	Project Description.....	2-4
2.4	Pre-Construction Site Conditions.....	2-6
3.	POTENTIAL POLLUTANT SOURCES.....	3-1
3.1	Activities Inventory.....	3-1
3.2	Materials Inventory.....	3-2
4.	BEST MANAGEMENT PRACTICES.....	4-1
4.1	General Description.....	4-1
4.2	Schedule For BMP Implementation.....	4-3
4.3	BMPs for Sediment and Erosion Control.....	4-3
4.3.1	Temporary and Permanent Sediment and Erosion Control BMPs.....	4-4
4.3.2	Sediment and Erosion Control BMPs.....	4-5
4.3.3	General Requirements for Contractors and Licensees.....	4-7
4.4	BMPs for Pollutants Other Than Sediment.....	4-8
4.4.1	BMPs for Non-Sediment Pollutants.....	4-8
4.5	Non-Storm Water BMPs.....	4-10
4.6	Post-Construction BMPs.....	4-12
4.7	SWPPP BMP Consideration Checklist.....	4-14
5.	SITE MONITORING.....	5-1
5.1	Routine Quality Control Monitoring.....	5-1
5.2	Storm-Related Quality Control Monitoring.....	5-3
5.3	Installation, Repairs, and Emergency Preparedness.....	5-5
5.4	Annual Compliance Certification.....	5-5
5.5	Site Inspection Report.....	5-6
5.6	Sediment/Silt and Turbidity Monitoring and Non-Visible Pollutant Monitoring Analysis Action Plan.....	5-6
6.	REPORTING AND REVISIONS.....	6-1
6.1	Non-Compliance with the General Permit or the SWPPP.....	6-1
6.2	Exceedance of a Water Quality Standard.....	6-1

6.3	SWPPP Revisions.....	6-2
7.	RESPONSIBLE PARTIES.....	7-1
7.1	Parties Responsible for Post-Construction BMPs.....	7-1
7.2	SWPPP and BMP-Related Responsibilities.....	7-2
7.3	List of Contractors.....	7-3
8.	TRAINING.....	8-1

APPENDICES

APPENDIX A -	DEFINITIONS
APPENDIX B -	NOI
APPENDIX C -	SITE INSPECTION AND MONITORING REPORTS
APPENDIX D -	CERTIFICATE OF COMPLIANCE
APPENDIX E -	NOTICE OF NON-COMPLIANCE AND NOTICE OF EXCEEDANCE OF WATER QUALITY STANDARD
APPENDIX F -	CHANGE OF INFORMATION
APPENDIX G -	NOTICE OF TERMINATION
APPENDIX H -	TABLE OF PERMIT COMPLIANCE
APPENDIX I -	GENERAL CONSTRUCTION ACTIVITY STORM WATER PERMIT
APPENDIX J -	VICINITY MAP
APPENDIX K -	SITE MAP
APPENDIX L -	PROGRESS MAPS
APPENDIX M -	TRAINING DOCUMENTS
APPENDIX N -	LOS ANGELES COUNTY SUSMP REQUIREMENTS
APPENDIX O -	BEST MANAGEMENT PRACTICES
APPENDIX P -	AMENDMENTS / AMENDMENT LOG
APPENDIX Q -	WATER POLLUTION CONTROL COST BREAKDOWN
APPENDIX R -	SAMPLING ACTIVITY LOG
APPENDIX S -	POLLUTANT TESTING GUIDANCE TABLE

1. INTRODUCTION, REQUIRED NOTICES, AND OTHER PLANS

This section shall discuss the permitting framework surrounding the Storm Water Pollution Prevention Plan (“SWPPP”) and shall state the objectives of the SWPPP.

1.1 Legal Framework & Objectives

The National Pollutant Discharge Elimination System (“NPDES”) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit, see Appendix I) (State Water Resources Control Board Order No. 99-08-DWQ, NPDES No. CAS000002) requires the development and implementation of a Storm Water Pollution Prevention Plan for many construction sites. This SWPPP specifies the implementation of Best Management Practices (“BMPs”), as appropriate, to control the discharge of pollutants to surface waters.

The SWPPP has two major objectives: 1) to help identify the sources of sediment and other pollutants that affect the quality of storm water discharges, and 2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in storm water as well as non-storm water discharges.

The developer or his agent is required to implement the provisions contained in this SWPPP and must comply with the standard provisions and reporting requirements contained in the General Permit. A copy of the General Permit is included as a part of this SWPPP as Appendix I. A copy of this SWPPP shall be kept on site while the site is under construction, commencing with the initial construction activity and ending with termination of coverage under the General Permit.

1.2 Notice of Intent

The Notice of Intent (“NOI”) to comply with the terms of the General Permit is intended to be filed with the State Water Resource Control Board by June 1, 2007. A copy of the NOI is included as Appendix B.

Any modified or amended NOIs, filed to reflect changes of information appearing on the NOI form (as opposed to the Change of Information discussed below), also appear in Appendix B.

1.3 Change of Information

A copy of the New Owner Information and Change of Information (“COI”) form is included as Appendix F. This form, along with a map depicting the newly delineated site, is used to terminate coverage for a portion of the project covered under the NOI when either:

- ownership of a portion of the project has been transferred; or
- a phase within a multi-phase project has been completed (see Section 1.3 regarding criteria for completion). (See General Permit, at Section C.7 of the order.)

Maps submitted with the COI form showing areas of changed ownership on the site, as well as the COI forms themselves, shall be treated as Amendments and included with this SWPPP.

1.4 Notice of Termination

The owner shall complete and submit the Notice of Termination (“NOT”) (see Appendix G) once construction is completed. Completion of construction activities means:

- ownership of the entire property covered under the NOI has been transferred; or
- the project is now covered by an individual NPDES permit; or
- construction is complete, the site has been stabilized in accordance with Section A.7 of the General Permit (generally requiring application of vegetation and equivalent stabilization measures so as to achieve either 70% coverage or 70% of the background native vegetation coverage), all elements of the SWPPP have been completed, construction materials and waste have been disposed of properly, the site is in

- compliance with all local water management requirements, all appropriate use permits have been obtained, and a post-construction storm water operation and management plan is in place; or
- construction activities have been suspended temporarily or indefinitely, the site has been stabilized in accordance with Section A.7 of the General Permit, all elements of the SWPPP have been completed, construction materials and waste have been properly disposed of, an operation and maintenance plan for erosion and sediment control is in place, and the site is in compliance with all local water management requirements. (General Permit, at Section C.8 of the order.)

1.5 Other Plans

The following plans, reports, or other documents have been incorporated by reference into this SWPPP and will be kept with the SWPPP at the construction site:

Table 1-1: Documents Incorporated by Reference

<u>SHORT NAME</u>	<u>FULL NAME</u>
Grading Plan	Rough Grading Plan
Erosion Control Plan	Erosion Control Plan
Street and Storm Drain Plans	Improvement Plans
Precise Grading Plans	Precise Grading Plan
Hydrology Report	Hydrology and Hydraulic Analysis
Hydrology Map	Hydrology Map
Landscape Plans	Landscape Improvement Plans
Soils Report	Preliminary Geotechnical Investigation
Site Plan	Engineering Site Plan

2. SITE CONDITIONS

This section will describe the existing site conditions and existing storm water drainage patterns. Additionally, this section will provide a brief description of the figures and plans that provide graphic representations of the site conditions before construction, the anticipated site conditions following construction, and the site conditions as they change during the construction period.

2.1 Vicinity Map

A vicinity map depicting the project and construction site is included as Appendix J. The vicinity map shows:

- the construction site perimeter; and
- general topography and geographic features surrounding the site (including identifiable major roadways and landmarks).

2.2 Site Map

A site map delineating the boundary of the construction site and showing the various site features is included as Appendix K. In addition to the site map, certain project features appear on the Grading Plan and the Erosion Control Plan. The Erosion Control Plan shows the layout for the proposed site improvements and contains the required information concerning sediment control practices and BMPs as they appear prior to termination of the grading permit. City ordinances require that the Erosion Control Plan be updated on an annual basis. Both the Grading Plan and the Erosion Control Plan will be retained on site at all times. The Hydrology Report and the Hydrology Map, submitted to the City for approval provide the basis for the development of the Erosion Control Plan. The Hydrology Map shows the proposed drainage for development of the overall site, including connections to the storm drain system.

Progress Maps will be included as an appendix to the SWPPP. Progress maps depict the site as it appears during critical construction phases or after significant construction benchmarks have been reached (e.g., post-grading, post-paving, etc.). Progress Maps may include locations of specific erosion or sediment control measures, structural BMPs, or other project characteristics. Progress Maps are intended to benefit the site owner in looking at the site as a whole and are neither intended to be a BMP nor are required as part of the SWPPP.

The following table describes site features which the General Permit requires to be shown graphically and designates which map or plan illustrates those features.

Table-1: Graphically-Represented Site Features

SITE FEATURE (General Permit Section)	FIGURE OR PLAN
Site perimeter (A.5.a.2.a)	Site Map, Vicinity Map, Grading Plan & Erosion Control Plan
Existing paved areas and roadways (if any) (A.5.a.2)	Rough Grading Plans ,Grading Plan
Existing Buildings (if any) (A.5.a.2.a)	Rough Grading Plans, Grading Plan
Existing lots (if any) (A.5.a.2.a)	Pre-Construction Site Map (if applicable)
Existing site features that would contribute to pollution (if any) (A.5.b.3)	Pre-Construction Site Map (if applicable)
Existing storm water collection points (A.5.a.2.a)	Site Map (if applicable) or Grading Plan & Erosion Control Plan
Existing storm water discharge points (A.5.a.2.a)	Site Map (if applicable) or Grading Plan & Erosion Control Plan
General topography before construction (A.5.a.2.a)	Vicinity Map
General topography after construction (A.5.a.2.a)	Site Map/Grading Plan
Location of downstream and upstream sediment monitoring locations for discharges into impaired water bodies (if applicable) (A.5.b.7)	Site Map (if applicable) N/A

SITE FEATURE (General Permit Section)	FIGURE OR PLAN
Planned paved areas and roadways (A.5.a.2)	Site Map and Grading Plan & Erosion Control Plan
Planned lots (A.5.a.2.a)	Site Map
Planned buildings (A.5.a.2.a)	Precise Grading Plans
Planned storm water collection points (A.5.a.2.a)	Grading Plan & Erosion Control Plan
Planned storm water discharge points (A.5.a.2.a, A.5.b.7, A.5.b.8)	Grading Plan & Erosion Control Plan
Onsite drainage patterns (including drainage patterns into each onsite storm water inlet point or receiving water) (A.5.a.2.b, A.5.b.1-2)	Grading Plan & Erosion Control Plan and Street & Storm Drain Plans
Offsite drainage areas that discharge into the site (A.5.a.2.b)	Grading Plan & Erosion Control Plan (including Hydrology Report) and Street & Storm Drain Plans
Slopes (A.5.b.1)	Grading Plan & Erosion Control Plan
Areas of cut and fill (A.6.a.2-3)	Grading Plan & Erosion Control Plan
Outline of undisturbed vegetation (A.6.a.1)	Grading Plan
Construction access points (ingress and egress points) (A.5.b.4)	Site Map, Vicinity Map and the Grading Plan & Erosion Control Plan
Areas of soil disturbance (including areas stabilized during rainy season and areas left exposed during rainy season) ¹ (A.6.a.2-3)	Grading Plan & Erosion Control Plan (See also Progress Maps)
Areas designated for storage of soil or waste ² (A.5.b.4)	Progress Maps or Site Map

¹ There are no areas for storage of soil or waste, storage or service of vehicles, or equipment storage cleaning and maintenance which have been designated and will remain unchanged during construction. These areas change and are moved depending on the phase of construction, and some areas of materials and equipment storage can change on a daily basis. For this reason, the areas are not defined on any map or plan. However, if any equipment or vehicle yards, storage areas, or areas of material loading and unloading will remain unchanged for a period of one month or more, those areas will be shown on any Progress Maps appended to this SWPPP. Likewise, areas for soil stockpiles will be shown on any Progress Maps appended to this SWPPP so long as those areas are expected to remain unchanged for a period of one month or more.

SITE FEATURE (General Permit Section)	FIGURE OR PLAN
Areas designated for construction material loading and unloading ² (A.5.b.4)	Progress Maps or Site Map
Areas designated for equipment storage, cleaning, and maintenance (A.5.b.4)	Progress Maps or Site Map
Location of post-construction structural BMPs (A.5.b.6)	Erosion Control Plan and Street & Storm Drain Plans
Locations of proposed non-storm water discharges (if any) ² (A.9)	Site Map

A Site Map is included as Appendix K to the SWPPP.

2.3 Project Description

Lyon Realty Advisors proposes a mixed-use development in one four-story, podium style building comprised of approximately 291 townhome residential condominium units, garage levels for parking, commercial retail units and related improvements. The project is a subdivision of Tentative Tract Map 66301 and is located within the City of Long Beach, Los Angeles County, California. The project site encompasses an area of approximately 3.6 acres and is located on the south side of Third Street, the west side of Chestnut Avenue, the east side of Magnolia Avenue and the north side of Broadway. The additional area involved for improvements in adjacent streets is included in the construction acreage.

Construction entrances will be secured and stabilized according with CASQA BMP TC1.

² There are no proposed non-storm water discharges which are permanent and thus appropriate for graphic representation (such as a low-flow pond with repeated non-storm water flows). All non-storm water discharges from the site are discussed further in Section 4.5.

2.4 Pre-Construction Site Conditions

Pre-construction, the site is comprised of three existing low-rise office buildings of various heights with two paved areas used for parking and about 1/5 of the site area is vacant. The existing site consists of approximately 56% impervious surfaces. Fully developed, the site is expected to consist of approximately 95% impervious surfaces.

The site is relatively flat and drains in a southerly direction, based on information shown on the published USGS topographic map for the area.

Geologically, the subject site is located near the southern margin of the Los Angeles basin, a northwest trending alleviated lowland situated at the north end of the Peninsular Ranges geomorphic province of coastal southern California. This basin, which is a surface expression of a deep structural trough, has been subdivided into four primary structural blocks distinguished from one another by contrasting basement rock types and stratigraphy.

On-site drainage for the project is collected through a series of area and roof drains and conveyed to a CDS unit in the subterranean parking area, then pumped out to the underground storm drain system. Any drainage and nuisance flows in the subterranean parking area shall be conveyed to the sanitary sewer system and treated as “industrial wastes”.

The project resides in the Los Angeles River Watershed and is within the jurisdiction of the Los Angeles Regional Water Quality Board (Region 4, LARWQCB). Although the site does not discharge directly into an impaired water body, it does discharge into the flood control system that is tributary to the Los Angeles River. From Willow Street to Queensway Bay, the Los Angeles River Estuary is a USEPA 303d listed waterbody for Chlordane (sediment), DDT (sediment), Lead (sediment) and PCBs (sediment).

2.5 Construction Schedule

Grading operations are scheduled to commence in approximately July 2007. Grading is anticipated to be completed in September 2010. Paving operations are scheduled to commence in approximately October 2007, and are anticipated to be completed in approximately August 2010. Landscape improvements are scheduled to commence in approximately March 2008, and are anticipated to be completed in approximately December 2010.

Activity	Estimated Start Date	Actual Start Date	Estimated Completion Date	Actual Completion Date
Demolition	07/01/07		09/01/10	
Grading	Jan 2008		Feb 2008	
Paving	Dec 2008		Dec 2008	
Structure Construction	Apr 2008		Apr 2009	
Landscape Improvements	May 2009		Jun 2009	

3. POTENTIAL POLLUTANT SOURCES

This section provides an inventory of the activities or materials that could result in the discharge of pollutants in the storm water runoff from the site or which may result in non-storm water discharges.

3.1 Activities Inventory

The table that follows generally presents the activities taking place on the site during the construction phase, which have the potential to contribute sediment and other pollutants to either storm water or non-storm water discharges. Additionally, the table demonstrates the category of pollutants to which each activity may potentially contribute. These categories relate to the BMPs discussed further in Section 4.

Table 3-1: Activities

Activity	Potential Pollutant Category		
	Sediment/ Erosion	Non- Sediment	Non-Storm Water
Earth work (e.g., grading, trenching, and excavation, import, export, and stockpiling of soil)	X		
Construction of erosion control measures (e.g., desilting basins, down drains, storm drain system, sand bag dikes, and slope protection)	X	X	
Utility installation (including gas, electric, domestic water, reclaimed water, cable, storm drain, telephone and related communication lines, and sanitary sewer)	X	X	
Fire hydrant and water main testing and flushing (including potable water supply pipeline disinfection, flushing, and maintenance)			X
Hydrostatic testing of pipelines			X
Concrete waste management	X	X	
Washing of stone, concrete, or masonry with acids or other similar compounds		X	
Sandblast grit management		X	
Paving (asphalt and concrete)	X	X	
Sweeping and washing of paved areas (including streets) and buildings	X	X	X

Activity	Potential Pollutant Category		
	Sediment/ Erosion	Non- Sediment	Non-Storm Water
Landscaping (including irrigation system construction)	X	X	X
Construction of habitable structures (residential and retail)	X	X	
Construction of non-habitable structures (including pump stations, walls, and monument signs)	X	X	
Vehicle and construction equipment storage, cleaning, maintenance, fueling, and stored fuel management	X	X	
Management of contaminated soils	X	X	
Solid and hazardous waste management (including disposal)		X	
Material delivery and storage	X	X	
Painting		X	
Portable sanitary and septic waste management		X	

With respect to the above list and where applicable, such as with structure construction, subsets of activities, such as framing and roofing, are presumed to be included within the larger, more general activity.

3.2 Materials Inventory

The list that follows represents, generally, construction materials other than sediment, equipment, and vehicles which have a potential to contribute to the discharge of pollutants to either storm water or non-storm water discharges. Where applicable, general classes of materials are meant to include the specific. Additionally, the table demonstrates the category of pollutants to which each activity may potentially contribute. These categories relate to the BMPs discussed further in Section 4.

Table 3-2: Materials and Equipment

Activity	Potential Pollutant Category		
	Sediment/ Erosion	Non- Sediment	Non-Storm Water
Asphalt paving materials and solvents		X	
Concrete and concrete slurry		X	
Curing compounds		X	
Petroleum products		X	
Demolition equipment	X	X	

Activity	Potential Pollutant Category		
	Sediment/ Erosion	Non- Sediment	Non-Storm Water
Fertilizers and mulch		X	
Herbicides and pesticides		X	
Lime and gypsum (landscaping)		X	
Chlorine		X	X
Natural earthen materials (including sand, sandblast grit, gravel, and topsoil)	X	X	
Green waste (e.g., scrap tree trimmings and landscaping wastes)		X	
Aluminum building and drainage materials		X	
Masonry products		X	
Packaging materials		X	
Paints and solvents		X	
Plaster and other products (included with concrete products)		X	
Roofing materials		X	
Steel products		X	
Construction debris (including scrap flooring, carpeting metals, rubber, plastic, glass, wood, and masonry)		X	
Cleaning solutions and detergents		X	
Air conditioning condensate		X	X
Acids		X	
Antifreeze		X	
Adhesives		X	
Portable toilet waste		X	
Equipment parts and fluids (including hydraulic fluid and batteries)		X	
Domestic wastes, food containers, and cigarettes		X	
Earth moving equipment (including bulldozers, scrapers, and compactors)	X	X	
Water trucks	X	X	X
Asphalt paving equipment (including paving machines, rollers, and tack trucks)	X	X	
Concrete trucks	X	X	
Street cleaning trucks (including sweepers)	X	X	X
Delivery and materials trucks	X	X	
Cranes	X	X	
Welding equipment		X	
Personal vehicles	X	X	
Street striping equipment		X	

4. BEST MANAGEMENT PRACTICES

4.1 General Description

This section identifies best management practices (“BMPs”) to be used for this project. BMPs are the schedule of activities, prohibitions of practices, maintenance procedures, and other management practices that reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges. BMPs include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, waste disposal, and drainage from raw material storage. BMP implementation must take into account changing weather conditions and construction activities, and various combinations of BMPs may be used over the life of the project to maintain compliance with the Clean Water Act. The General Permit gives the owner the discretion to determine the most economical, effective, and possibly innovative BMPs to achieve the performance-based goals of the General Permit.

There are two general categories of BMPs, structural BMPs and non-structural BMPs. Structural BMPs involve the specific construction, modification, operation, maintenance, or monitoring of facilities to minimize the introduction of pollutants into the drainage system or to remove pollutants from the drainage system. Non-structural BMPs are activities, programs, and other non-physical measures that will contribute to the reduction of pollutants from non-point sources to the drainage system. In general, non-structural BMPs are source control measures.

BMPs can be either temporary or permanent (including post-construction BMPs). Temporary BMPs can be either structural or non-structural, and include activities such as soil stabilization during construction, construction materials handling procedures, and silt fence installation. Permanent BMPs include those structural and non-structural BMPs that are designed to remain on site after construction, and include activities such as construction of desilting basins, installation of permanent vegetation, and stenciling of storm drains.

The General Permit requires that the owner develop and implement a SWPPP based on BMPs. The General Permit specifies that BMPs must satisfy the best available technology (“BAT”) and best conventional technology (“BCT”) standards.

The following BMP program is structured to maintain compliance with the BAT and BCT standards and provide multiple safeguards against potential harm to the environment. The multiple-safeguard approach described above and the BMPs that follow are intended to operate as a flexible approach to maintain compliance with permit requirements. As it is impossible to anticipate all potential environmental issues that could arise on a daily basis during the course of the project, this BMP program has been tailored to provide effective options to the owner and its representatives who have responsibility for overseeing workplace safety and environmental compliance. If an item in the workplace is in need of attention or correction, persons responsible for SWPPP implementation have been instructed to take all appropriate steps to address the situation in a prompt and effective manner.

For similar reasons, contractors should regard the following BMPs primarily as the framework governing their obligation to protect water quality. Contractors should use their best judgment in deciding the appropriate action to be taken, guided by the General Permit’s and the owner’s overriding goal of reducing or eliminating pollutant discharges to receiving waters. See further Section 4.3.3.

In order to take full advantage of the water quality benefits of existing and planned facilities, and to assure that the selection of a particular BMP would not adversely impact other valuable resources or facilities, structural opportunities and constraints were considered and investigated, subsequent to the selection of BMPs for this development.

In addition to the BMPs discussed in this section, contractors on the site shall comply with all requirements of the General Permit and conditions of this SWPPP. A copy of the General Permit is included as Appendix I.

4.2 Schedule For BMP Implementation

BMPs for the site shall be implemented on a year-round basis, not just during the part of the year when there is a high probability of precipitation. BMPs will be implemented in a proactive manner during all seasons while construction is occurring, as appropriate to protect water quality during the life of the project. At a minimum, during the traditional Southern California rainy season (October 1 to April 30), an effective combination of erosion and sediment control BMPs will be implemented on all disturbed areas, and sediment control BMPs will be implemented along the site perimeter and at all operational storm drain inlets. At a minimum, during the traditional Southern California dry season (May 1 to September 31), sediment control BMPs will be implemented at the downstream perimeter and at all operational inlets in the event of a predicted storm.

4.3 BMPs for Sediment and Erosion Control

This subsection discusses BMPs to protect surface waters from potential soil erosion and sediment transport from the site. The activities, materials, and/or equipment having the potential to contribute sediment to storm water or to cause erosion on the site are listed in Section 3.1 and 3.2 of this SWPPP.

BMPs for sediment and erosion control selected for use at the site consist of: (1) the BMPs designed by the owner and included in Appendix O; (2) the BMPs in the Erosion Control Plan for the site (3) the BMPs selected from the CASQA January 2003 Stormwater Best Management Practice Handbook – Construction; and (4) the BMPs selected from the CASQA January 2003 Stormwater Best Management Practice Handbook – New Development and Redevelopment and included in Appendix O, all as further discussed below.

The City of Long Beach SUSMP requirements states that prior to the rainy season October 1 of each year the owner must create and/or update the site's Erosion Control Plan and obtain approval from the City Engineer.

Appended to this SWPPP report are sediment and erosion control BMP fact sheets from the California Storm Water Best Management Practice Handbook for Construction Activity (Storm Water Quality Association 2003) that have been selected for the site. The fact sheets have been edited to tailor them more specifically to the site and anticipated practices therein. The fact sheets, at times, provide very detailed specifications that were not created for this project. Where specifications in the fact sheets conflict with those in the Erosion Control Plan, BMPs contained in the Erosion Control Plan govern. The CASQA BMP Manuals are available at www.cabmphandbooks.com.

4.3.1 Temporary and Permanent Sediment and Erosion Control BMPs

The following table provides a summary of both temporary and permanent sediment and erosion control BMPs to be utilized on the site. The owner or builder will use their best professional judgment to implement an effective combination of these BMPs, as appropriate for the prevailing weather conditions and status of construction.

Table 4-1: Temporary and Permanent Erosion/Sediment Control BMPs

Permanent Facilities	Temporary Devices
Storm Drains	Bags & Fences
Asphalt Dikes	Soil Bags (UV treated)
Outlet Structures	Silt Fence (fabric)
Inlet Structures	Debris Fence (chain link)
Rip Rap	Slope Protection
Mechanically Stabilized Embankment Walls	Jute Mat (mainly used with landscape)
Reinforced Concrete Box	Soil Sealer
Terrace Drain	Paper Industry Based Products
Down Drain	Binder Materials
V-Ditch	Hydroseed with Binder Materials (including irrigated and non-irrigated types)
Toe Drain	
Brow Ditch	
Retaining Wall	Polymers (light sealer)
Curb & Gutter	Miscellaneous
Landscaping	Soil Chevrons

Permanent Facilities	Temporary Devices
Concrete Energy Dissipater	Soil Detention Berms
Pavement (including concrete, asphalt, interlocking pavers, and turf blocks)	Soil V-Ditch
	Hay/Straw Bales
	Fiber Rolls
	Visqueen (plastic covering)

4.3.2 Sediment and Erosion Control BMPs

The table that follows presents the titles and basic descriptions of the BMPs included in Appendix O that address sediment and erosion control. In addition to the BMPs in the fact sheets and in the Erosion Control Plan, the owner has designed additional BMPs to achieve effective sediment and erosion control. These BMPs are located in Appendix O and marked as owner-designed BMPs. The owner-designed BMPs are meant to work in conjunction with, or in addition to, the BMP fact sheets. The table that follows presents titles and basic descriptions of the Owner-Designed Sediment and Erosion Control BMPs as well as the erosion and sediment control fact sheets for the site. BMPs WM-3 (Stockpile Management) and WE-1 (Wind Erosion Control) shall be employed, as required, to control project fugitive dust.

Table 4-2: Sediment and Erosion Control BMPs

BMP Number/Title	General Description
OD SEC ¹ 1: Source Control	Controlling erosion at the source.
OD SEC 2: Sandbags	Requiring sandbagging of streets as necessary.
OD SEC 3: Erosion Control Plan	Requiring BMP installation per the Erosion Control Plan.
OD SEC 4: Dust/Debris	Controlling dust, sand, and debris generation.
OD SEC 5: Sediment Minimization	Attenuating sediment from leaving the site.
OD SEC 6: Run-on	Diverting offsite run-on from passing over disturbed areas.
OD SEC 7: Fugitive Dust	Requiring dust control measures as per the Fugitive Dust Control Plan.

¹ Owner-Designed Sediment and Erosion Control BMP.

BMP Number/Title	General Description
OD SEC 8: Wind Erosion	Controlling wind erosion from stockpiles through tracking and soil binders.
OD SEC 9: Disturbed Areas	Stabilizing disturbed areas with a variety of BMPs.
OD SEC 14: Alternative BMPs	Governing the use of BMPs not discussed in this SWPPP.
EC-3: Hydraulic Mulch EC 5: Soil Binders EC 7: Geotextiles and Mats	Stabilizing soil with mulch, soil binders, hydroseeding, mats and sealants as deemed necessary to control erosion at the source.
EC 9: Earth Dike Drainage Swales	Managing runoff, desilting, and/or channeling water with earthen berms. Managing offsite run-on and onsite runoff through stabilized channels.
WE-1: Wind Erosion Control	Controlling dust, sand, and debris generation through a variety of means.
TC 1: Stabilized Construction Entrance/Exit	Stabilizing points of ingress and egress and points where paved and unpaved roads meet.
TC 2: Stabilized Construction Roadway	Stabilizing vehicle routes through watering, berms, and/or paving.
SE 1: Silt Fence	Detaining sediment-laden water with, primarily, fabric fencing or fencing combined with sandbags.
SE 3: Sediment Trap	Reducing runoff velocity and trapping sediment by creating microclimates and increasing infiltration and sedimentation.
SE 4: Check Dams SE 6: Gravel Bag Berm	Reducing the velocity of water with berms and sandbag dikes.
SE-7 Street Sweeping and Vacuuming	Controlling sediment and dust from through sweeping and vacuum means.
SE 8: Sand Bag Barrier	Detaining sediment-laden water and preventing hazardous material runoff with sandbag barriers.
SE 10: Storm Drain Inlet Protection	Protect storm drain inlet.
CA ² 40: Employee/Subcontractor Training	Stressing the importance of employee training and requiring bilingual training when appropriate.
WE-1: Wind Erosion Control	Controlling fugitive dust through, primarily, watering and street sweeping.

BMP Number/Title	General Description
TC-2: Stabilized Construction Roadway	Stabilizing vehicle routes through watering, berms, and/or paving.
TC-1: Stabilized Construction Entrance/Exit	Stabilizing points of ingress and egress and points where paved and unpaved roads meet.
EC-9: Earth Dikes and Drainage Swales	Managing runoff, desilting, and/or channeling water with earthen berms.
EC-7: Geotextiles and Mats	Temporarily preventing water and wind induced erosion of exposed soils.
EC-11: Slope Drains	Draining slopes and channeling water with pipe drops, down drains, and/or V-ditches.
SE-1: Silt Fence	Detaining sediment-laden water with, primarily, fabric fencing or fencing combined with sandbags.
SE-6: Gravel Bag Berm	Detaining sediment-laden water and preventing hazardous material runoff with sandbag barriers.
SE-10: Storm Drain Inlet Protection	Detaining sediment-laden water with straw and/or sandbag barriers.

4.3.3 General Requirements for Contractors and Licensees

The owner's standard contract requires that: (1) all construction be conducted with provisions for the control of sand, silt, and debris originating at the construction site; (2) that appropriate areas be contained with berms, desilting basins, or similar structures to prevent runoff during construction operation; and (3) that during construction, each contractor check and maintain berms and desilting basins prior to, during, and after all rainfall events. The standard contract between the owner and each contractor also requires the contractor to comply with the SWPPP, with the General Permit, and with any and all applicable local, State, and Federal laws and regulations governing their activities.

4.4 BMPs for Pollutants Other Than Sediment

This subsection discusses BMPs to protect surface waters from potential pollution from materials other than soil and sediment. Activities, materials, and/or equipment having the potential to contribute pollutants to storm water are listed in Sections 3 and 3.2 of this SWPPP.

4.4.1 BMPs for Non-Sediment Pollutants

Appended to the SWPPP (Appendix O) are contractor activity BMP fact sheets adopted for this site from the California Storm Water Best Management Practice Handbook for Construction (CASQA January 2003) that have been selected for the site. The fact sheets have been edited to tailor them more specifically to the site and anticipated practices therein. Where specifications from the fact sheets conflict with the Erosion Control Plan, the Erosion Control Plan governs.

In addition to the descriptions found on the fact sheets, the owner has designed additional BMPs, which will be implemented, as appropriate, to ensure effective control of pollutants other than sediment. These BMPs are located in Appendix O and marked as owner-designed BMPs. The owner-designed BMPs are meant to work in conjunction with or in addition to the BMP fact sheets. The table that follows presents titles and basic descriptions of the Owner-Designed Non-Sediment BMPs as well as contractor activity fact sheets for the site.

Table 4-3: Non-Sediment BMPs

BMP Number/Title	General Description
ODNS ³ 1: Structure Construction/Painting	Requiring areas to be covered, enclosed, bermed or otherwise protected.
ODNS 2: Storage Areas	Governing location and containment of storage areas.
ODNS 3: Fuel Storage	Allowing onsite fuel storage under specific conditions only.

³ Owner-Designed Non-Sediment BMP.

BMP Number/Title	General Description
ODNS 4: Hazardous Materials Disposal	Requiring disposal in accordance with all applicable laws.
ODNS 5: Vehicle/Equipment Cleaning	Requiring offsite cleaning.
ODNS 6: Asphalt Sawcut Slurry	Specifying control of asphalt and concrete slurry.
ODNS 7: Fertilizers/Pesticides	Requiring use and storage as per Los Angeles County guidelines.
ODNS 8: Soil Amendments	Specifying use of soil amendments.
ODNS 9: Spills	Requiring handling of spills in accordance with all applicable laws and owner's compliance manual.
ODNS 12: Vehicle/Equipment Parking and Storage	Requiring containment or other precautionary measures for parked vehicles and stored equipment.
ODNS 13: Acid Washing and Sandblasting	Prohibiting disposal of neutralized acid wash water or sandblast grit in storm drains and detailing appropriate disposal options.
ODNS 14: Alternative BMPs	Governing the use of BMPs not discussed in this SWPPP.
NS-3: Paving and Grinding Operations	Requiring runoff prevention, proper disposal of wastes, and employee training.
NS-12 Concrete Curing	Requiring runoff prevention of via protection of drains and WM-4
NS-13: Concrete Finishing	Requiring runoff prevention with enclosures or berms, using good housekeeping practices, using safer alternative products, and employee training.
WM-1: Material Delivery and Storage	Requiring minimization of materials stored onsite, storage of materials in stabilized or secured areas, storage of certain materials in secondary containment, and employee training.
WM-2: Material Use	Compelling the use of alternative products, minimization of hazardous material use, and employee training.
WM-3: Stockpile Management	Requiring protection of stockpiles from erosion through means of location, covers and berms
WM-4: Spill Prevention and Control	Reducing the chance for spills, containing and cleaning up spills, properly disposing of spilled materials, and training employees.
WM-5: Solid Waste Management	Requiring designated waste collection areas and, when possible, the regular and proper disposal of materials, and employee training.

BMP Number/Title	General Description
WM-6: Hazardous Waste Management	Compelling the minimization of hazardous material use, proper disposal of hazardous materials, and employee training.
WM-7: Contaminated Soil Management	Requiring the detection, treatment, and/or disposal of contaminated soils.
WM-8: Concrete Waste Management	Requiring offsite washout areas, when possible, designated and secured onsite washout areas, and employee training.
WM-9: Sanitary/Septic Waste Management	Requiring the provision of convenient and well-maintained facilities, placement of those facilities either away from paved areas or in secured areas, and provision of regular service and disposal.
WM-10: Liquid Waste Management	Requiring diversion from storm drain and proper disposal of liquid waste
NS-10: Vehicle and Equipment Maintenance	Compelling offsite maintenance, if possible, onsite maintenance in designated or secured areas, cover for materials stored outside, inspection for leaks and spills, immediate containment of leaks and spills, and employee training.
TABLE 4.2: Quick Reference Disposal Alternatives	Used in conjunction with other fact sheets to dispose of hazardous materials and other pollutants.

4.5 Non-Storm Water BMPs

This subsection discusses BMPs to protect surface waters from potential pollution from non-storm water discharges. Non-storm water discharges will be eliminated or reduced to the extent feasible and will be controlled through implementation of appropriate BMPs.

The activities, materials, and/or equipment having the potential to contribute pollutants in the form of non-storm water discharges from the site are listed in Section 3.1 and 3.2 of this SWPPP.

Owner-designed non-storm water BMPs are located in Appendix O and will be implemented, as appropriate, for the site. Titles and basic descriptions of the BMP fact sheets included in Appendix O which address non-storm water discharges appear in Table 4-4, below (fact sheets

selected from California Storm Water Best Management Practices Handbook for Construction Activity (CASQA January 2003) and tailored to specifically address site conditions and anticipated practices therein). In addition to the descriptions found on the fact sheets, the owner has designed additional BMPs which will be implemented, as appropriate, to ensure effective control of potential pollutants in non-storm water discharges. These BMPs are located in Appendix O and marked as owner-designed BMPs. The owner-designed BMPs are meant to work in conjunction with or in addition to the BMP fact sheets. The table that follows presents titles and basic descriptions of the Owner-Designed Non-Storm Water BMPS as well as the relevant fact sheets for the site.

Table 4-4: Non-Storm Water BMPs

BMP Number/Title	General Description
OD Non Storm 3: Irrigation of Landscaped Areas	Governing plant selection, irrigation types, and pesticide use.
OD Non-Storm 5: Cleaning of Paved Areas and Buildings	Governing sweeping and washing of buildings and paved areas, including streets, and controlling pollution in wash waters and discharges of rinse water.
OD Non-Storm 6: Alternative BMPs	Governing the use of BMPs not discussed in this SWPPP.
NS-1: Water Conservation Practices	Compelling water conservation practices to be observed onsite
NS-2: Dewatering Operations	Recommending dewatering procedures
NS-3 Paving and Grinding Operations	Requiring runoff prevention, proper disposal of wastes, and employee training.
NS-10: Vehicle and Equipment Maintenance	Compelling offsite maintenance, if possible, onsite maintenance in designated or secured areas, cover for materials stored outside, inspection for leaks and spills, immediate containment of leaks and spills, and employee training.
NS-11: Pile Driving Operations	Requiring proper maintenance of pile driving equipment and proper disposal of waste material.
NS-12: Concrete Curing	Requiring runoff prevention of via protection of drains and WM-4

BMP Number/Title	General Description
NS-13: Concrete Finishing	Requiring runoff prevention with enclosures or berms, using good housekeeping practices, using safer alternative products, and employee training.

4.6 Post-Construction BMPs

The following facilities are planned to minimize pollutant discharges, including sediment, and provide water quality benefits for the community on a permanent basis after construction has been completed. The table below describes the permanent facilities that will be constructed in order to control sediment and erosion as well as pollution from other waste materials. Where applicable, BMP fact sheet (located in Appendix O) numbers or references to the appropriate plan are given to provide further details and specifications regarding the facility.

Table 4-5: Permanent Structural Facilities for Erosion/Sediment/Solid Waste Control

Facility	Details/Specifications
Storm Drains	Erosion Control Plan & Street and Storm Drain Plans
Outlet Structures	EC-10, Erosion Control Plan & Street and Storm Drain Plans
Inlet Structures	Erosion Control Plan & Street and Storm Drain Plans
Landscaping	Landscaping Plan
Pavement(including concrete, asphalt, interlocking pavers, and turf block)	Erosion Control Plan & Street and Storm Drain Plans
Water Quality Treatment Control BMPs	Storm Drain Plans and SUSMP

In addition to the BMPs in the fact sheets and in the Erosion Control Plan, the owner has designed additional post-construction BMPs, which will be implemented, as appropriate, to achieve effective control of pollutants. The Owner-Designed Post-Construction BMPs are

located in Appendix O. The table that follows presents titles and basic descriptions of these post-construction BMPs.

Table 4-6: Post-Construction BMPs

BMP Number/Title	General Description
ODPC ⁴ 1: Landscaping	Discussing the landscape plan and requiring conservation measures during irrigation.
ODPC 2: Storm Drain Stenciling	Requiring stenciling and inspection/cleaning of all storm drain inlets.
ODPC 6: Community Education	Distributing pollution-related brochures to residents and commercial tenants.
ODPC 8: Hazardous Materials	Discussing hazardous materials programs for the project.
Table 4.2: Quick Reference Disposal Alternatives	Providing general methods regarding disposal of hazardous materials and other pollutants.

⁴ Owner-Designed Post-Construction BMPs.

4.7 SWPPP BMP Consideration Checklist

CONSTRUCTION SITE BMPs CONSIDERATION CHECKLIST					
The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as "Not Used" with a brief statement describing why it is not being used.					
EROSION CONTROL BMPs					
BMP No.	BMP	CONSIDERED FOR PROJECT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
EC-1	Scheduling	✓	✓		
EC -2	Preservation of Existing Vegetation			✓	Site is a previously vacant area, partially vegetated
EC -3	Hydraulic Mulch	✓	✓		
EC -4	Hydroseeding	✓		✓	Other methods employed
EC -5	Soil Binders	✓	✓		
EC -6	Straw Mulch	✓		✓	Other methods employed
EC -7	Geotextiles & Mats	✓	✓		
EC -8	Wood Mulching	✓		✓	Other methods employed
EC -9	Earth Dikes & Drainage Swales	✓	✓		
EC -10	Velocity Dissipation Devices	✓		✓	Site does not drain to unlined channel
EC -11	Slope Drains	✓		✓	No slopes on site

CONSTRUCTION SITE BMPs CONSIDERATION CHECKLIST

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as "Not Used" with a brief statement describing why it is not being used.

SEDIMENT CONTROL BMPs

BMP No.	BMP	CONSIDERED FOR PROJECT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
SE-1	Silt Fence	✓	✓		
SE -2	Sediment Basin	✓		✓	Sediment Traps used
SE -3	Sediment Trap	✓	✓		
SE -4	Check Dam	✓	✓		
SE -5	Fiber Rolls	✓		✓	Other methods employed
SE -6	Gravel Bag Berm	✓	✓		
SE -7	Street Sweeping and Vacuuming	✓	✓		
SE -8	Sand Bag Barrier	✓	✓		
SE -9	Straw Bale Barrier	✓		✓	Other methods employed
SE -10	Storm Drain Inlet Protection	✓	✓		

WIND EROSION CONTROL BMPs

WE-1	Wind Erosion Control	✓	✓		
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TRACKING CONTROL BMPs

TC-1	Stabilized Construction Entrance/Exit	✓	✓		
TC-2	Stabilized Construction Roadway	✓	✓		
TC-3	Entrance/Outlet Tire Wash	✓		✓	Owner designed method employed

**CONSTRUCTION SITE BMPs
CONSIDERATION CHECKLIST**

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as "Not Used" with a brief statement describing why it is not being used.

NON-STORM WATER MANAGEMENT BMPs

BMP No.	BMP	CONSIDERED FOR PROJECT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
NS-1	Water Conservation Practices	✓	✓		
NS-2	Dewatering Operations	✓	✓		
NS-3	Paving and Grinding Operations	✓	✓		
NS-4	Temporary Stream Crossing			✓	No onsite streams
NS-5	Clear Water Diversion			✓	No onsite streams
NS-6	Illicit Connection/ Discharge	✓		✓	Activity prohibited onsite
NS-7	Potable Water/Irrigation	✓		✓	Activity prohibited onsite
NS-8	Vehicle and Equipment Cleaning	✓		✓	Activity prohibited onsite
NS-9	Vehicle and Equipment Fueling	✓		✓	Activity prohibited onsite
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			✓	Not applicable to project
NS-15	Demolition Adjacent to Water			✓	Not applicable to project
NS-16	Temporary Batch Plants			✓	Not applicable to project

**CONSTRUCTION SITE BMPs
CONSIDERATION CHECKLIST**

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as "Not Used" with a brief statement describing why it is not being used.

WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs

BMP No.	BMP	CONSIDERED FOR PROJECT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
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	✓	✓		

5. SITE MONITORING

This section discusses the program to inspect and maintain all BMPs as identified in the site plan and elsewhere in this SWPPP throughout the entire duration of the project.

5.1 Routine Quality Control Monitoring

The owner or the owner's agent, as well as the contractors, will inspect the site on a regular basis to ensure that an effective combination of BMPs is maintained at the site and that construction wastes are being disposed of in the correct manner. Pollution and erosion control devices will be inspected to ensure their proper implementation and good working order, and that they are being utilized, as appropriate, as construction progresses.

Personnel responsible for the inspections associated with the monitoring program will be trained as follows:

- To determine when maintenance is needed on erosion control measures, desilting devices, and slope protection
- To determine when the vegetation of slopes is required
- The handling, storing, and clean-up of hazardous materials
- To recognize surface erosion.

The following is a list of the items that will be monitored. If any unusual conditions are observed they will be added to the list of items to be monitored.

- Strawrolls/Checkdams/Sandbags
- Silt Fences
- Berms and Dikes

- Slope Protection – Polymer, Mulch, and Matting
- Vegetation/Revegetation
- Dust Control
- Surface Erosion
- Slope Stability
- Debris Clean-up
- Storage – Soil and Materials
- Disposal Areas (export sites)
- Spills or Leaks – Vehicles, Equipment, and Materials
- Integrity of Irrigation System
- V-ditches and Slope Drains
- Drain Inlet Protection
- Portable Toilets
- Non-Storm Water BMPs (if applicable)
- Construction Entrances

A site inspection report (see Section 5.5 of this SWPPP) may be prepared and kept for all routine monitoring and kept with a copy of this SWPPP on site.

5.2 Storm-Related Quality Control Monitoring

In addition to routine monitoring, the site will be monitored prior to the start of the storm season (October 1st) to ensure that the site is in compliance with the General Permit. The site will be monitored prior to a storm event, once every 24 hours during extended storm events, and after the occurrence of a storm. These storm reviews will concentrate on items in the following table:

Table 5-1: Storm Event Monitoring

	Before Storm Events	During Extended Storm Events (where accessible within each 24-hour period)	After Storm Events
Remove all sediment that has accumulated behind desilters, checkdams, silt fences, etc.	X	X	X
Clean-up and store all hazardous material out of the weather and away from exposure to runoff.	X	X	
Make sure that all temporary erosion devices are in place.	X	X	
Ensure slope protection devices/measures and plastic sheeting are in good condition.	X	X	X
Ensure vegetation is installed and in good condition.	X	X	X
Ensure adequate amount of stockpiled sandbags.	X		
Review all observations and, where safe to do so, take corrective measures should maintenance, repair, or addition of structures become necessary to prevent the movement of sediment from the site, or to prevent the addition of other pollutants into the storm water runoff.		X	
Inspect site for signs of surface erosion.			X
Inspect site for flows outflanking or undermining structures.			X
Inspect site for slope stability and note any slope movement.			X
Inspect site for any containment failure of stored materials and for containment of portable sanitary facilities.			X
Review all observations and take corrective measures should maintenance, repair, or addition of structures become necessary to prevent the movement of sediment from the site, or to prevent the addition of other pollutants into the storm water runoff.			X

A site inspection report (see Section 5.5) will be prepared for all storm-related monitoring and kept with a copy of this SWPPP on site.

5.3 Installation, Repairs, and Emergency Preparedness

All removable protective erosion control devices will be in place at the end of each working day when the five-day rain probability forecast exceeds 40%. Additionally, all necessary erosion and sediment control devices shall be installed prior to storm events. If construction of the project necessitates removal of any erosion or sediment control device, such device shall be replaced at the end of each working day when the five-day rain probability forecast exceeds 40% or prior to the start of a weekend or holiday.

Compliance with this SWPPP requires the inspector to identify BMP effectiveness and notify the owner, or owner's representative, so that BMPs may be repaired or design changes implemented as soon as feasible, depending on field conditions. All corrective maintenance to BMPs shall be performed as soon as possible depending on worker safety. After a rainstorm, all silt and debris shall be removed from check dams, berms, and desilting basins, and the basins will be drained. Any graded slope surface protection measures damaged by rain shall be repaired as soon as possible (see further detail in fact sheets SE-3 and SE-4).

Equipment, materials, and workers must be available for rapid response to failures and emergencies. Necessary materials shall be available on site and stockpiled at convenient locations for rapid construction of temporary erosion or sediment control devices when rain is imminent or problems arise.

5.4 Annual Compliance Certification

The owner will annually inspect the site and certify that the construction activity on site is in compliance with the State General Construction Activity Permit and the SWPPP. A site inspection report shall be prepared and kept with a copy of this SWPPP on site. Annual compliance certification shall be based upon a review of the site inspection reports completed since the last annual compliance certification. Annual compliance certification shall be completed by July 1 of each year.

A Certificate of Compliance or Notice of Non-Compliance form shall be prepared for the annual certification. These forms are located in Appendices D and E. Annual compliance documents shall be retained for a period of at least three years from the date generated. Notices of Non-Compliance shall be submitted to the Regional Water Quality Control Board in accordance with Section 6.1 of this SWPPP.

5.5 Site Inspection Report

A site inspection report will be prepared in conjunction with each pre-storm event, post-storm event, and storm event inspection and may be prepared for routine inspections. Additionally, a site inspection report will be prepared for the annual compliance certification and kept with a copy of this SWPPP on site. Site inspection reports will also be prepared to verify BMP application and effectiveness during one-time discharges of non-storm water when such discharges occur.

The site inspection report form is located in Appendix C. Such reports shall be retained for a period of at least three years from the date generated.

5.6 Sediment/Silt and Turbidity Monitoring and Non-Visible Pollutant Monitoring Analysis Action Plan

Construction Storm Water Sampling and Analysis Action Plan for this project

The purpose of this action plan is to provide compliance with Construction Activity Storm Water Discharge Permit, Order 99-08 DWQ and Resolution 2001-046. This action plan was developed using guidance from the California Stormwater Quality Task Force's document dated October 2001.

1. Sedimentation Monitoring

The storm water runoff from this construction site does not directly discharge into a 303(d) water body listed as impaired for sedimentation, siltation, or turbidity. As a result, sampling and monitoring for sedimentation, siltation, and turbidity will NOT be performed.

2. Non-Visible Pollutant Monitoring

Non-visible pollutants which have the potential to be present in storm water leaving the construction site could include the following:

Table 5-2: Non-Visible Pollutants

Category Of Material	Associated Non-Visible Pollutant
Asphalt paving materials and solvents	Solvents Curing compounds
Cleaning solutions	Acids Bleaches Trisodium phosphate (TSP) Solvents
Concrete products	Acid wash Non-pigmented curing compounds
Landscaping products	Aluminum sulfate Sulfur-elemental Fertilizers Gypsum
Line flushing products	Chlorinated water
Paints and Solvents	Adhesives Paint strippers Resins Sealants Solvents Thinners
Pesticides	Fungicides Herbicides Insecticides Pesticides Rodenticides
Portable toilet waste	Portable toilet waste

Category Of Material	Associated Non-Visible Pollutant
Soil amendments	Copolymer Lignin Sulfonate Psyllium Guar Lime Plant gums
Dust control products	Salts (magnesium chloride, calcium chloride, and natural brines)
Equipment parts and fluids	Equipment and vehicle fluids Battery acid

Monitoring for these non-visible pollutants will be conducted in accordance with Sections A.5.b8 and A-8 of the General Permit. These sections were added to the General Permit on April 26, 2001, and are included in the SWPPP.

Although these non-visible pollutants may be present on the construction site, it is not anticipated that they will be discharged in offsite storm water for the following reasons:

- Construction materials and compounds are kept or used in a manner so that they will not come into contact with storm water (e.g., water-tight containers, under a water-tight roof, inside a building, etc.).
- BMP's implemented for specific pollutants at the construction site fully contained the exposed pollutants (e.g., bermed concrete washout areas).
- Building materials are in their final constructed form or are designed for exposure (e.g., fence material and support structure).
- Where pollutants may have been spilled or released onsite, they have been properly cleaned-up and storm water exposure has been eliminated prior to a storm event.
- Cover and containment BMP's for construction material stockpiles have been properly implemented to protect them from run-on and from contributing pollutants to storm water runoff.

This construction project will ensure that proper regular inspections are conducted throughout the duration of the project to make sure that appropriately selected BMP's have been implemented, are being maintained and are effective in preventing potential pollutants from coming in contact with storm water.

In the unlikely event of having pollutants come into contact with storm water, the following contingency sampling strategy has been developed.

Contingency Sampling Plan

A. Monitoring Strategy for Non-Visual Pollutants

1. Sample locations to be used:

- a. A safe and convenient location will be selected for sampling of runoff that has been contaminated by contact with the suspected pollutant source. Typically, this will be upstream of the potential pollutant source or from the established base line sampling location for the project.

2. Parameters to be analyzed:

- a. The parameter sampled will be dictated by the source of the suspected pollutant.
- b. It should be noted that in some instances, it could be necessary to sample for more than one parameter where several pollutants may have come into contact with storm water. Such a situation could occur if a materials storage area was breached or compromised and several pollutant sources came into contact with stormwater.

3. Quality control samples such as split samples, field blanks and equipment blanks will be determined by the qualified laboratory that has been contracted with.

4. Data evaluation will be performed by the qualified lab who will then inform the developer of the results. If high levels of indicator parameters are found relative to background levels, the regional board will be notified. If such an indication is received, BMP's will be reviewed for malfunctions or potential upgrades.
5. Training for sampling personnel will be conducted by the qualified laboratory.
6. Sampling procedures will be established by the qualified laboratory. This will include procedures for all required paper work including field tracking forms and chains of custody.
7. Sampling and analysis records will be kept in the SWPPP. These records would consist of field and analytical data, calibration charts, field tracking, chains of custody, training records and laboratory certification information.

5.7 In The Event of a Spill

The Construction Site Superintendent is required by law to report all significant releases or suspected significant releases of hazardous materials including oil.

To report a spill, call the following agencies:

- Dial 911
- County of Los Angeles Hotline (800) 303-0003
- Governor's Office of Emergency Services Warning Center (800) 852-7550 (24 hours).
- For spills of 'Federal Reportable Quantities' of oil, chemicals, or other hazardous materials to land, air, or water, notify the National Response Center (800) 424-8802.
- If you are not sure whether the spill is of a 'reportable quantity, call the federal Environmental Protection Agency (800) 424-9346 for clarification.

- For further information, see State Office of Emergency Services, Hazardous Materials Division's California Hazardous Material Spill Release Notification Guidance

Agencies to call if you find or suspect contaminated soil or groundwater:

- Regional Water Quality Control Board Los Angeles Basin (213) 266-7500
- California Environmental Protection Agency (Cal EPA) Department of Toxic Substances Control (DTSC) (510) 540-3732

Documents and resources are available from:

- State Water Resources Control Board (SWRCB) (916) 341-5250
- Cal EPA, DTSC (916) 322-3670
- General Construction Activity Storm Water Permit
- California Storm Water Best Management Practice Handbook Construction Activity
- Waste Minimization for the Building Construction Industry Fact Sheet

ELAP/NELAP Accredited Laboratory List

Lab Name	Street	City	State	Zip	County	Phone	Cert No.	Program	Expiration Date
ABC ENVIRONMENTAL LABORATORIES	3701 SAN GABRIEL RIVER PARKWAY	PICO RIVERA	CA	90660	LOS ANGELES	(562) 413-8343	2584	ELAP	03/31/06
ABN ENVIRONMENTAL LABORATORIES, INC.	10926 RUSH STREET, SUITE A-168	SOUTH EL MONTE	CA	91733	LOS ANGELES	(626) 575-5137	1507	ELAP	04/30/07
ACCULABS, INC.	15437 E PROCTOR AVE	CITY OF INDUSTRY	CA	91745	LOS ANGELES	(626) 934-1288	2608	ELAP	03/31/07
ADVANCED TECHNOLOGY LABORATORIES	3275 WALNUT AVENUE	SIGNAL HILL	CA	90755	LOS ANGELES	(562) 989-4045	1838	ELAP	12/31/06
ADVANCED TECHNOLOGY LABORATORIES	3275 WALNUT AVENUE	SIGNAL HILL	CA	90755	LOS ANGELES	(562) 989-4045	02107CA	NELAP	05/31/06
AES ALAMITOS LLC LAB	690 N STUDEBAKER ROAD	LONG BEACH	CA	90803	LOS ANGELES	(562) 493-7384	2470	ELAP	06/30/07
AES REDONDO BEACH	1100 NORTH HARBOR DRIVE	REDONDO BEACH	CA	90277	LOS ANGELES	(310) 318-7441	2498	ELAP	02/28/06
ALPHA SCIENTIFIC CORPORATION	16760 GRIDLEY ROAD	CERRITOS	CA	90703	LOS ANGELES	(562) 505-8206	2633	ELAP	11/30/07
AMERICAN ANALYTICS	9765 ETON AVENUE	CHATSWORTH	CA	91311	LOS ANGELES	(818) 998-5547	1471	ELAP	03/31/07
AMERICAN ANALYTICS	9765 ETON AVENUE	CHATSWORTH	CA	91311	LOS ANGELES	(818) 998-5547	1894	ELAP	06/30/07
AMERICAN ANALYTICS	9765 ETON AVENUE	CHATSWORTH	CA	91311	LOS ANGELES	(818) 998-5547	2621	ELAP	05/31/07
AMERICAN ENVIRONMENTAL TESTING LABORATORY, INC.	2834 NORTH NAOMI STREET	BURBANK	CA	91504	LOS ANGELES	(818) 845-8200	1541	ELAP	06/30/07
AMERICAN SCIENTIFIC LABORATORIES, LLC	2520 N SAN FERNANDO ROAD	LOS ANGELES	CA	90065	LOS ANGELES	(323) 223-9700	2200	ELAP	01/31/07
AMERISCI LOS ANGELES	24416 S MAIN STREET SUITE 308	CARSON	CA	90745	LOS ANGELES	(310) 834-4868	2322	ELAP	09/30/06
ANACHEM LABORATORIES, LLC	140 STANDARD STREET	EL SEGUNDO	CA	90245	LOS ANGELES	(310) 322-4993	1164	ELAP	04/30/06
ANTELOPE VALLEY ANALYTICAL LABORATORY	44802 1/2 ELM	LANCASTER	CA	93534	LOS ANGELES	(661) 949-2003	1692	ELAP	12/31/07
ANTELOPE VALLEY-EAST KERN WATER AGENCY	6500 WEST AVENUE N	PALMDALE	CA	93551	LOS ANGELES	(661) 943-3201	1460	ELAP	03/31/07
APPLIED MICROBIOLOGICAL SERVICES	2625 LIME AVENUE	SIGNAL HILL	CA	90755	LOS ANGELES	(562) 595-7576	1257	ELAP	07/31/06
BASE ENVIRONMENTAL ANALYTICAL LABORATORY	BUILDING 4282 LABORATORY ROAD	EDWARDS AFB	CA	93524	LOS ANGELES	(661) 275-7785	2087	ELAP	09/30/07
BIOSCREEN TESTING SERVICES, INC.	3892 DEL AMO BLVD	TORRANCE	CA	90503	LOS ANGELES	(310) 214-0043	1565	ELAP	07/31/07
BRITISH PETROLEUM OPERATION LABORATORY	1801 E SEPULVEDA BLVD	CARSON	CA	90745	LOS ANGELES	(310) 816-8719	2473	ELAP	06/30/07
CITY OF BURBANK WATER DEPARTMENT	2030 NORTH HOLLYWOOD WAY	BURBANK	CA	91505	LOS ANGELES	(818) 238-3500	1484	ELAP	03/31/07
CALIFORNIA AMERICAN WATER COMPANY	8657 EAST GRAND AVENUE	ROSEMEAD	CA	91770	LOS ANGELES	(626) 614-2538	1732	ELAP	03/31/06
CALTECH ENVIRONMENTAL LABORATORIES, INC.	6814 ROSECRANS AVENUE	PARAMOUNT	CA	90723	LOS ANGELES	(562) 272-2700	2424	ELAP	09/30/06

CALTECH ENVIRONMENTAL LABORATORIES, INC.	6814 ROSECRANS AVENUE	PARAMOUNT	CA	90723	LOS ANGELES	(562) 272-2700	2047	ELAP	03/31/07
CASTAIC LAKE WATER AGENCY	27234 BOUQUET CANYON ROAD	SANTA CLARITA	CA	91350-2173	LOS ANGELES	(661) 297-1600	2104	ELAP	09/30/07
CENTRUM ANALYTICAL LABORATORIES, INC.	3299 HILL STR, SUITE 305	SIGNAL HILL	CA	90804	LOS ANGELES	(951) 779-0310	2562	ELAP	08/31/07
CENTRUM ANALYTICAL LABORATORIES, INC.	3299 HILL STREET SUITE 305	SIGNAL HILL	CA	90755	LOS ANGELES	(562) 498-7005	2479	ELAP	07/31/07
CHEM PRO LABORATORY, INC.	941 WEST 190th STREET	GARDENA	CA	90248-4398	LOS ANGELES	(323) 770-8515	1265	ELAP	07/31/06
CHEMICAL & ENVIRONMENTAL LABORATORIES, INC.	14148 EAST FIRESTONE BOULEVARD	SANTA FE SPRINGS	CA	90670	LOS ANGELES	(562) 921-8123	2268	ELAP	08/31/05
CHEMTEK ENVIRONMENTAL LABORATORIES, INC.	13554 LARWIN CIRCLE	SANTA FE SPRINGS	CA	90670	LOS ANGELES	(562) 926-9848	1435	ELAP	01/31/07
CITY OF AVALON WASTEWATER TREATMENT FACILITY	25 PEBBLY BEACH ROAD	AVALON	CA	90704	LOS ANGELES	(310) 510-0731	1899	ELAP	06/30/07
CITY OF BURBANK WASTEWATER TREATMENT FACILITY	740 NORTH LAKE STREET	BURBANK	CA	91502-1642	LOS ANGELES	(818) 972-1115	1819	ELAP	10/31/06
CLEAN EARTH ENVIRONMENTAL LABORATORY	1639 11th STREET, SUITE 114	SANTA MONICA	CA	90404	LOS ANGELES	(310) 399-4447	2622	ELAP	11/30/07
CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.	5756 ALBA STREET	LOS ANGELES	CA	90058	LOS ANGELES	(323) 277-2501	2560	ELAP	08/31/07
COLUMBIA ANALYTICAL SERVICES, INC.	6925 CANOGA AVENUE	CANOGA PARK	CA	91303	LOS ANGELES	(818) 587-5550	1296A	ELAP	08/31/06
COLUMBIA ANALYTICAL SERVICES, INC.	6925 CANOGA AVENUE	CANOGA PARK	CA	91303	LOS ANGELES	(818) 587-5550	02115CA	NELAP	12/31/06
COLUMBIA ANALYTICAL SERVICES, INC.	6925 CANOGA AVENUE	CANOGA PARK	CA	91303	LOS ANGELES	(818) 587-5550	1296	ELAP	07/31/06
CONOCO PHILLIPS COMPANY LOS ANGELES REFINERY	1660 WEST ANAHEIM STREET	WILMINGTON	CA	90744	LOS ANGELES	(310) 952-6314	2497	ELAP	01/31/08
CRG MARINE LABORATORIES, INC.	2020 DEL AMO BLVD, SUITE 200	TORRANCE	CA	90501	LOS ANGELES	(310) 533-5190	2261	ELAP	07/31/07
CROSSBY & OVERTON ANALYTICAL LABORATORY	1655 CANAL STREET	LONG BEACH	CA	90813	LOS ANGELES	(562) 432-5445	1568	ELAP	07/31/07
CTL ENVIRONMENTAL SERVICES	24404 SOUTH VERMONT AVENUE, SUITE 307	HARBOR CITY	CA	90710	LOS ANGELES	(310) 530-5006	1492	ELAP	04/30/07
DEMENNO / KERDOON	2000 NORTH ALAMEDA STREET	COMPTON	CA	90222	LOS ANGELES	(310) 537-7100	2037	ELAP	12/31/06
DS WATERS OF AMERICA LP	1449 N AVENUE 46	LOS ANGELES	CA	90041	LOS ANGELES	(323) 551-5716	2578	ELAP	12/31/07
EMAX LABORATORIES, INC.	1835 WEST 205th STREET	TORRANCE	CA	90501	LOS ANGELES	(310) 618-8889	02116CA	NELAP	08/31/06
EMS LABORATORIES, INC.	117 WEST BELLEVUE DRIVE	PASADENA	CA	91105	LOS ANGELES	(626) 568-4065	1119	ELAP	02/28/06
ENCORP ENVIRONMENTAL MANAGEMENT & SERVICES	615 NORTH NASH STREET, SUITE 203	EL SEGUNDO	CA	90245	LOS ANGELES	(310) 840-9811	2379	ELAP	08/31/07
ENVIRO-CHEM, INC.	1214 EAST LEXINGTON AVENUE	POMONA	CA	91766	LOS ANGELES	(909) 590-5905	1555	ELAP	06/30/06
EXXON MOBIL OIL CORPORATION	3700 WEST 190th STREET	TORRANCE	CA	90504-5733	LOS ANGELES	(310) 212-2829	1695	ELAP	12/31/07
FORENSIC ANALYTICAL	2959 PACIFIC COMMERCE DRIVE	RANCHO DOMINGUEZ	CA	90221	LOS ANGELES	(310) 763-2374	1366	ELAP	10/31/06
HYGEIA LABORATORIES, INC.	82 W SIERRA MADRE BLVD	SIERRA MADRE	CA	91024-2434	LOS ANGELES	(626) 355-4711	1259	ELAP	08/31/06
ENVIRONMENTAL MONITORING DIVISION LABORATORY at HYPERION TREATMENT PLANT	12000 VISTA DEL MAR	PLAYA DEL REY	CA	90293	LOS ANGELES	(310) 648-5262	1723	ELAP	01/31/08

LOS ANGELES BUREAU OF SANITATION	4600 COLORADO BLVD	LOS ANGELES	CA	90039	LOS ANGELES	(213) 972-1307	1451	ELAP	02/28/07
CITY OF LOS ANGELES BUREAU OF SANITATION	445 FERRY STREET	SAN PEDRO	CA	90731	LOS ANGELES	(310) 732-4713	1546	ELAP	06/30/07
LOS ANGELES BUREAU OF SANITATION - EMD	6100 WOODLEY AVENUE	VAN NUYS	CA	91406	LOS ANGELES	(818) 778-4210	1477	ELAP	03/31/07
CITY OF LOS ANGELES DEPT OF WATER & POWER ENVIRONMENTAL LABORATORY	1630 NORTH MAIN STREET, BUILDING 7	LOS ANGELES	CA	90012	LOS ANGELES	(213) 367-7270	2553	ELAP	05/31/07
CITY OF LOS ANGELES DEPT OF WATER & POWER	1630 NORTH MAIN STREET, BUILDING 7	LOS ANGELES	CA	90012	LOS ANGELES	(213) 367-7270	1207	ELAP	06/30/06
CITY OF LOS ANGELES DEPT. of WATER & POWER- WATER QUALITY LABS.	555 EAST WALNUT STREET	PASADENA	CA	91101-1658	LOS ANGELES	(213) 367-8487	1336	ELAP	09/30/06
CITY OF LOS ANGELES - STANDARDS TESTING LABORATORY	2319 DORRIS PLACE	LOS ANGELES	CA	90031	LOS ANGELES	(213) 485-2242	1292	ELAP	08/31/06
COUNTY OF LOS ANGELES	1102 NORTH EASTERN AVENUE	LOS ANGELES	CA	90063	LOS ANGELES	(323) 267-2333	1825	ELAP	11/30/06
LOS ANGELES COUNTY AGRICULTURAL COMMISSIONER / W&M	11012 GARFIELD AVENUE, BLDG. B	SOUTH GATE	CA	90280	LOS ANGELES	(562) 940-6778	1430	ELAP	01/31/07
LOS ANGELES COUNTY PUBLIC HEALTH LABORATORY	313 NORTH FIGUEROA STREET, ROOM 1127	LOS ANGELES	CA	90012	LOS ANGELES	(213) 250-8619	1398	ELAP	12/31/06
JOINT WATER POLLUTION CONTROL WATER QUALITY LAB	24501 SOUTH FIGUEROA STREET	CARSON	CA	90745	LOS ANGELES	(310) 830-2400	1034	ELAP	10/31/07
LANCASTER TREATMENT PLANT LABORATORY	1865 WEST AVENUE D	LANCASTER	CA	93534	LOS ANGELES	(805) 723-8537	1051	ELAP	12/31/07
LONG BEACH TREATMENT PLANT LABORATORY	7400 WILLOW STREET	LONG BEACH	CA	90815	LOS ANGELES	(562) 421-8612	1033	ELAP	10/31/07
LOS COYOTES TREATMENT PLANT LABORATORY	16515 PIUMA AVENUE	CERRITOS	CA	90701	LOS ANGELES	(562) 860-2390	1031	ELAP	10/31/07
POMONA TREATMENT PLANT LABORATORY	295 HUMANE WAY	POMONA	CA	91766	LOS ANGELES	(909) 623-6721	1068	ELAP	12/31/07
SAN JOSE CREEK WATER QUALITY LABORATORY	1965 SOUTH WORKMAN MILL ROAD	WHITTIER	CA	90601	LOS ANGELES	(562) 699-7411	1052	ELAP	11/30/07
SAN JOSE CREEK ANALYTICAL PLANT LABORATORY	1965 SOUTH WORKMAN MILL ROAD	WHITTIER	CA	90601	LOS ANGELES	(562) 699-7411	1032	ELAP	10/31/07
SAUGUS TREATMENT PLANT LABORATORY	26200 SPRINGBROOK AVENUE	SAUGUS	CA	91350	LOS ANGELES	(661) 259-6846	1040	ELAP	11/30/07
VALENCIA TREATMENT PLANT LABORATORY	28185 THE OLD ROAD	VALENCIA	CA	91335	LOS ANGELES	(661) 257-2575	1041	ELAP	11/30/07
WHITTIER NARROWS TREATMENT PLANT LABORATORY	301 NORTH ROSEMEAD BOULEVARD	EL MONTE	CA	91733	LOS ANGELES	(626) 443-2954	1036	ELAP	12/31/07
LA TESTING	159 PASADENA AVENUE	SOUTH PASADENA	CA	91030	LOS ANGELES	800-303-0047	2283	ELAP	12/31/05
LAS VIRGENES MUNICIPAL WATER DISTRICT	731 MALIBU CANYON ROAD	CALABASAS	CA	91302	LOS ANGELES	(818) 251-2333	1533	ELAP	05/31/07
LONG BEACH WATER DEPARTMENT	2950 REDONDO AVENUE	LONG BEACH	CA	90806	LOS ANGELES	(562) 570-2482	1409	ELAP	12/31/06
CITY OF LONG BEACH DEPT OF HEALTH & HUMAN SERVICES	2525 GRAND AVENUE	LONG BEACH	CA	90815	LOS ANGELES	(562) 570-4077	2368	ELAP	05/31/07
MAETL	2834 NORTH NAOMI STREET	BURBANK	CA	91504	LOS ANGELES	(818) 557-6339	2402	ELAP	01/31/06
MALIBU MESA WASTEWATER RECLAMATION PLANT LAB	3863 SOUTH MALIBU COUNTRY DRIVE	MALIBU	CA	90265	LOS ANGELES	(310) 456-1470	2135	ELAP	05/31/06
MICHELSON LABORATORIES, INC.	6280 CHALET DRIVE	COMMERCE	CA	90040-3704	LOS ANGELES	(562) 928-0553	1198	ELAP	05/31/06
MICRON ENVIRONMENTAL LABS	500 NORTH FIRST AVE SUITE 4	ARCADIA	CA	91006	LOS ANGELES	(626) 574-7591	2297	ELAP	03/31/06

MOBILE ONE LABORATORIES, INC.	3825 INDUSTRY AVE	LAKEWOOD	CA	90712	LOS ANGELES	(562) 426-6991	2530	ELAP	12/31/07
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	700 MORENO AVENUE	LA VERNE	CA	91750	LOS ANGELES	(909) 392-5034	1615	ELAP	08/31/07
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	13100 BALBOA BOULEVARD	GRANADA HILLS	CA	91344	LOS ANGELES	(818) 832-2113	1367	ELAP	10/31/06
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	700 MORENO AVENUE	LA VERNE	CA	91750	LOS ANGELES	(909) 392-5294	1618	ELAP	09/30/07
MWH LABORATORIES, a division of MWH Americas, Inc.	750 ROYAL OAKS DRIVE, SUITE 100	MONROVIA	CA	91016-3829	LOS ANGELES	(626) 386-1100	1422	ELAP	01/31/07
MWH LABORATORIES, a division of MWH Americas, Inc.	750 ROYAL OAKS DRIVE, SUITE 100	MONROVIA	CA	91016-3829	LOS ANGELES	(626) 386-1100	01114CA	NELAP	01/31/07
NESTLE WATERS QUALITY ASSURANCE LABORATORY	1544 EAST WASHINGTON BOULEVARD	LOS ANGELES	CA	90021	LOS ANGELES	(213) 763-1350	1698	ELAP	01/31/06
NEW CURE, INC.	2550 GREENWOOD AVENUE	MONTEREY PARK	CA	91755	LOS ANGELES	(323) 720-9775	1901	ELAP	06/30/07
NORTHROP GRUMMAN SPACE TECHNOLOGY	ONE SPACE PARK	REDONDO BEACH	CA	90278	LOS ANGELES	(310) 813-9354	2241	ELAP	05/31/07
PACIFIC COAST ANALYTICAL SERVICES, INC.	15751 ROXFORD STREET, UNIT F	SYLMAR	CA	91342	LOS ANGELES	(818) 364-7470	1829	ELAP	11/30/06
PALMDALE WATER DISTRICT LABORATORY	700 EAST AVENUE S	PALMDALE	CA	93550	LOS ANGELES	(661) 947-4111	1776	ELAP	07/31/06
CITY OF PASADENA WATER QUALITY LABORATORY	311 WEST MOUNTAIN STREET	PASADENA	CA	91103	LOS ANGELES	(626) 744-3704	1473	ELAP	03/31/07
PATRIOT ENVIRONMENTAL LABORATORY SERVICES, INC.	7271 GARDEN GROVE BLVD. SUITE A	GARDEN GROVE	CA	92841	LOS ANGELES	(714) 899-8900	2540	ELAP	02/28/07
POSITIVE LAB SERVICE	781 EAST WASHINGTON BLVD	LOS ANGELES	CA	90021	LOS ANGELES	(213) 745-5312	1131	ELAP	02/28/08
POSITIVE LAB SERVICE	781 E WASHINGTON BLVD.	LOS ANGELES	CA	90021	LOS ANGELES	(213) 745-5312	2534	ELAP	01/31/07
RAYTHEON COMPANY	2000 E EL SEGUNDO BOULEVARD, BUILDING E1/F150	EL SEGUNDO	CA	90245	LOS ANGELES	(310) 647-4370	1016	ELAP	08/31/07
RCH RESEARCH AND ENVIRONMENTAL LABORATORIES	2880 - A ANA STREET (PCT BLDG.)	DOMINGUEZ	CA	90221	LOS ANGELES	(310) 763-5023	2279	ELAP	10/31/07
CITY OF SANTA MONICA WATER DIVISION	1228 SOUTH BUNDY DRIVE	LOS ANGELES	CA	90025	LOS ANGELES	(310) 826-6712	1469	ELAP	03/31/07
SILLIKER, INC	6360 GATEWAY DRIVE	CYPRESS	CA	90630	LOS ANGELES	(714) 226-0000	1534	ELAP	06/30/07
SOUTHERN CALIFORNIA GAS COMPANY	8101 SOUTH ROSEMEAD BOULEVARD	PICO RIVERA	CA	90660	LOS ANGELES	(562) 806-4344	1744	ELAP	04/30/06
SOUTHLAND TECHNICAL SERVICES, INC.	7801 TELEGRAPH ROAD, SUITE L	MONTEBELLO	CA	90640	LOS ANGELES	(323) 888-0728	1986	ELAP	04/30/06
STRATA ANALYSTS GROUP, INC	1842 EAST 28th STREET	LONG BEACH	CA	90806	LOS ANGELES	(562) 426-0199	2052	ELAP	04/30/07
THREE VALLEYS MUNICIPAL WATER DISTRICT	1021 MIRAMAR AVENUE	CLAREMONT	CA	91711	LOS ANGELES	(909) 621-5568	1581	ELAP	07/31/07
U.S. FILTER WESTATES	5375 SOUTH BOYLE AVENUE	LOS ANGELES	CA	90058	LOS ANGELES	(323) 277-3083	2325	ELAP	02/28/06
U.S. FILTER RECOVERY SERVICES CA	5375 SOUTH BOYLE AVENUE	LOS ANGELES	CA	90058-3923	LOS ANGELES	(323) 277-1505	2313	ELAP	07/31/06
PUBLIC WORKS CENTER SAN DIEGO	B-60195	SAN CLEMENTE ISLAND	CA	92135	LOS ANGELES	(619) 524-9230	05237CA	NELAP	08/31/06
NAVAL SURFACE WARFARE CENTER, SEAL BEACH	800 SEAL BEACH BLVD	SEAL BEACH	CA	90740-5000	LOS ANGELES	(562) 826-7167	2048	ELAP	03/31/07
WECK LABORATORIES, INC.	14859 E CLARK AVENUE	INDUSTRY	CA	91745	LOS ANGELES	(626) 336-2139	1132	ELAP	03/31/06

WECK LABORATORIES, INC.	14859 E CLARK AVENUE	INDUSTRY	CA	91745	LOS ANGELES	(626) 336-2139	04229CA	NELAP	10/31/06
WEST BASIN WATER QUALITY LABORATORY	1935 HUGHES WAY	EL SEGUNDO	CA	90245	LOS ANGELES	(310) 414-0183	2111	ELAP	01/31/08
WEST COAST ANALYTICAL SERVICE, INC.	9240 SANTA FE SPRINGS ROAD	SANTA FE SPRINGS	CA	90670	LOS ANGELES	(562) 948-2225	1268	ELAP	08/31/06

6. REPORTING AND REVISIONS

6.1 Non-Compliance with the General Permit or the SWPPP

The discharger will notify the Regional Water Quality Control Board of any instance in which the construction site is not in compliance with the State General Construction Activity Permit and the SWPPP. Non-compliance notification shall be made either when the discharger cannot certify compliance based on the annual compliance procedures discussed in Section 5.4 of this SWPPP and/or when the discharger has had other instances of non-compliance excluding exceedances of water quality standards discussed in Section 6.2 of this SWPPP. Non-compliance notification must be submitted within 30 days of identification of non-compliance. Notification shall identify: the noncompliance event, an initial assessment of any impact caused by the event, a description of the actions necessary to achieve compliance, and a time schedule indicating when compliance will be achieved. A Notice of Non-Compliance form may be found in Appendix E.

6.2 Exceedance of a Water Quality Standard

If the discharger determines that storm water discharges and/or authorized non-storm water discharges are causing or contributing to an exceedance of an applicable water quality standard, the discharger shall immediately implement corrective measures. The discharger shall then notify the Regional Water Quality Control Board by telephone as soon as possible, but no later than 48 hours after the discharge has been discovered. The discharger shall then submit a report to the Regional Water Quality Control Board within 14 calendar days describing: the nature and cause of the water quality standard exceedance, the BMPs currently being implemented, any additional BMPs which will be implemented to prevent or reduce pollutants that are causing or contributing to the exceedance of water quality standards, any maintenance or repair of BMPs, and a schedule for corrective action implementation. A Notice of Water Quality Exceedance form may be found in Appendix E.

6.3 SWPPP Revisions

The SWPPP will be revised to reflect any additional BMPs that have been and will be implemented, the implementation schedule for added BMPs, and any additional monitoring required.

The SWPPP shall be amended whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, ground waters, or the municipal storm sewer system. The SWPPP shall also be amended if the discharger violates a condition of the General Permit or has not achieved the general objective of reducing or eliminating pollutants in storm water discharges. If the Regional Water Quality Control Board determines that the discharger is in violation of the General Permit, the SWPPP shall be amended within 14 calendar days after notification.

Revisions to the SWPPP and additions to the Appendix shall be treated as amendments. All amendments will be signed, dated, and directly attached to this SWPPP.

7. RESPONSIBLE PARTIES

The owner shall be responsible for construction of permanent sediment and erosion control BMPs. The following table indicates parties responsible for operation, maintenance, and funding of post-construction BMPs.

7.1 Parties Responsible for Post-Construction BMPs

Table 7-1: Post-Construction BMP Responsibilities

Homeowners Association and/or Retail Leasing Agency	Local Agencies/Public Agencies
Litter Control.	Recycling.
Catch Basin Stenciling.	Facility Oil Recycling.
Drainage Facility Maintenance.	Recommended Municipal Hazardous Material Management Guidelines.
Water Quality Treatment Control BMPs	
Irrigation.	Public Street Sweeping
Landscaping Maintenance.	
Distribution of Brochures.	
Private Lot Sweeping	

7.2 SWPPP and BMP-Related Responsibilities

Table 7-2: SWPPP and BMP Responsible Parties

Responsibility	Name and Telephone Number
Pre-storm Inspections	Name: Peter Zak Telephone Number: (949) 833-1244
During-storm Inspections	Name: Peter Zak Telephone Number: (949) 833-1244
Post-storm Inspections	Name: Peter Zak Telephone Number: (949) 833-1244
Routine Inspections	Name: Peter Zak Telephone Number: (949) 833-1244
Field Testing and/or Lab Testing under Non-Visible Pollutant Monitoring Program	Name: Peter Zak Telephone Number: (949) 833-1244
Ensuring Full Compliance with the General Permit	Name: Peter Zak Telephone Number: (949) 833-1244
Annual Compliance Inspection and Certification	Name: Peter Zak Telephone Number: (949) 833-1244
Elimination of Unauthorized Discharges	Name: Peter Zak Telephone Number: (949) 833-1244
Non-Storm Water Management	Name: Peter Zak Telephone Number: (949) 833-1244
Signing SWPPP, NOI, NOT, COI, and Amendments	Name: Peter Zak Telephone Number: (949) 833-1244
Preparation and Signing of Reports	Name: Peter Zak Telephone Number: (949) 833-1244
Implementation of the SWPPP	Name: Peter Zak Telephone Number: (949) 833-1244

7.3 List of Contractors

This list includes responsible parties under contract (i.e., contractor or sub-contractor) to the owner and responsible for SWPPP implementation. This list shall be revised as necessary to reflect the addition or deletion of contractors working on the project.

LIST OF CONTRACTORS/SUBCONTRACTORS

The following is a list of all contractors (or subcontractors) responsible for implementing the SWPPP.

<u>Contractor</u>	<u>Contact person</u>	<u>Ph. number</u>

8. TRAINING

This section shall discuss the documentation of all training conducted for the project.

The owner shall be responsible for training its personnel and if necessary, the contractors working on the site regarding: preparation, revisions, and implementation of the SWPPP; BMP design, installation, and maintenance; and inspecting, monitoring, and reporting. Contractors shall be responsible for training their personnel as well as their subcontractors on SWPPP implementation, BMP installation and maintenance; and inspection, monitoring and reporting.

Additional Specific information regarding training may be found at:

http://www.dot.ca.gov/hq/construc/stormwater/swppp_training.html.

<http://www.waterboards.ca.gov/stormwtr/training.html>

Specific training documents regarding the project pertaining to training for all persons responsible for preparation, implementation, amendments, revisions, and installation and repairs of BMPs for this SWPPP shall be documented and included in the Appendix. Training documents may be found in Appendix M.

Training documentation shall include both formal and informal training. Where appropriate, the training documents shall state the date of the meeting, the names of the participants, and the materials discussed.

APPENDICES

ATTACHMENT E

2013-2014 Summaries of
Watershed Activities

LOWER LOS ANGELES RIVER
WATERSHED COMMITTEE

2013-14 Summary of Watershed Activities

During the period of July 1, 2013 through June 30, 2014, the Lower Los Angeles River Watershed (LLAR) Group accomplished several milestones. These included:

Adopting LID Ordinances throughout the LLAR area (except the City of Long Beach which is under a different MS4 Permit)

- Adopting Green Streets policies and resolutions throughout the LLAR area.
- In early 2014, LID and Green Street drafts (and where applicable completed and adopted ordinances) were submitted to the Regional Board. Comments were received from Regional Board staff and where applicable, modifications were made prior to June 28, 2014.

The LLAR worked collaboratively towards and ultimately submitted a Draft Watershed Management Program (WMP) which included a Coordinated Integrated Monitoring Program and Reasonable Assurance Analysis. On June 27, 2014, the Draft WMP was submitted to the Regional Board.

- Regular meetings (monthly) of the LLAR Technical Committee were primarily held at the City of Downey City Hall.
- A stakeholder meeting was held on May 1, 2014 to acquaint the public with the WMP.
- A presentation of WMP status was made to the Regional Board on September 12, 2013.

Many of the agencies, in collaboration with other cities of the Gateway Water Management Authority, applied for and were awarded a \$1.5 million dollar grant from the State Water Resources Control Board for the installation of Tree Box style bio-filtration systems along major thoroughfares.

Non-Stormwater Outfall Screening began during 2013-14 and continued through November 2014 when three cycles had been conducted. The number of outfalls screened was:

Watershed	Major Outfalls Screened in Each Cycle
Lower Los Angeles River	174
Rio Hondo	98

The Non-Stormwater Outfall Screening will be more fully detailed in the 2014-15 annual report or equivalent submittals.



Summary of Activities of the Los Cerritos Channel Watershed Group July 1, 2013 – June 30, 2014

WMP

The Los Cerritos Channel Watershed Group spent much of the year preparing a Draft Watershed Management Program (WMP), which was submitted to the Los Angeles Regional Water Board on June 29, 2014. Key elements of the WMP included: Identification of Water Quality Priorities; a Water Quality Improvement Strategy; Watershed Control Measures and BMP Programs; and Implementation Schedules.

Proposition 84 Grant

During the year, the Watershed Group initiated implementation of its Los Cerritos Channel Watershed Segmentation and Low Impact Development (LID) Proposition 84 grant to support future implementation of LID Ordinances and Green Streets Policies. The results will be studied together with the results of the outfall monitoring program and used during the first adaptive management process cycle to update the WMP.

CIMP

Concurrently with development of the WMP, the Watershed Group developed a Coordinated Integrated Monitoring Program (CIMP) customized to fit the unique characteristics of the watershed. The CIMP builds on 13 years of City of Long Beach monitoring at the base of the watershed and emphasizes a watershed segmentation approach to both wet-weather and dry-weather monitoring.

MS4 Front

On November 13, 2013, the Watershed Group participated in a joint meeting with the Lower San Gabriel River Watershed Committee to review the MS4 Front web-based system for managing MS4 permit. The Watershed Groups hosted this meeting to promote strengthened data management to improve program management and reporting. All of the cities in the watershed have subscribed to the service.

Screening of Non-Stormwater Outfalls

During the reporting period one round of non-stormwater outfall inspections was completed. During March and April 2014, 262 major and minor outfalls were inspected during dry weather. Six of these outfalls are headwaters of the open channels. All 262 outfalls were then re-inspected in September and October 2014. Summaries of the results of these inspections are shown in the following tables. The detailed data are currently being evaluated to determine which ones have significant discharges. The detailed data and the determination of significance will be included in the revised Watershed Management Program to be submitted to the Regional Water Board.

**Summary of Los Cerritos Channel Watershed Non-Stormwater Outfall Inspections
March/April, September, and October 2014**

Headwaters by Channel:						
Total Number of Headwaters and Flowing Headwaters in the Los Cerritos Watershed						
Channel	Headwaters with Total Flow (=> 1 gpm)	Headwaters with Total Flow (=> 3 gpm)	Headwaters with Total Flow (=> 5 gpm)	Headwaters with Total Flow (=> 1 gpm) Multiple Times	Headwaters with Total Flow (=> 3 gpm) Multiple Times	Headwaters with Total Flow (=> 5 gpm) Multiple Times
Clark	1	1	1	1	0	0
Downey	1	1	1	1	1	1
Los Cerritos	2	2	2	2	2	2
Palo Verde	1	1	1	1	1	1
Wardlow	1	1	1	1	1	1
Total Number All Channels:	6	6	6	6	5	5

By Channel : Total Number of Outfalls and Flowing Outfalls in the Los Cerritos Watershed							
Channel	Total # Outfalls	Outfalls with Total Flow (=> 1 gpm)	Outfalls with Total Flow (=> 3 gpm)	Outfalls with Total Flow (=> 5 gpm)	Outfalls with Total Flow (=> 1 gpm) Multiple Times	Outfalls with Total Flow (=> 3 gpm) Multiple Times	Outfalls with Total Flow (=> 5 gpm) Multiple Times
Clark	85	5	4	3	0	0	0
Del Amo	30	3	2	2	1	0	0
Downey	19	2	0	0	1	0	0
Los Cerritos	41	2	1	1	0	0	0
Palo Verde	74	4	3	2	0	0	0
Wardlow	7	1	0	0	1	0	0
Total Number All Channels:	256	17	10	8	3	0	0

During the period of July 1, 2013 through June 30, 2014, the Lower San Gabriel River Watershed (LSGR) Group accomplished several milestones. These included:

Adopting LID Ordinances throughout the LSGR area (except the City of Long Beach which is under a different MS4 Permit).

Adopting Green Streets policies and resolutions throughout the LSGR area.

In early 2014, LID and Green Street drafts (and where applicable completed and adopted ordinances) were submitted to the Regional Board. Comments were received from Regional Board staff and where applicable, modifications were made prior to June 28, 2014.

The LSGR worked collaboratively towards and ultimately submitted a Draft Watershed Management Program (WMP) which included: a Draft Coordinated Integrated Monitoring Program and Reasonable Assurance Analysis. The Draft WMP was submitted to the Regional Board on June 27th, 2014.

Monthly meetings of the LSGR Technical Committee were held at the City of Norwalk City Hall.

A stakeholder meeting was held on April 30, 2014 to acquaint the public with the WMP.

Many of the agencies, in collaboration with other cities of the Gateway Water Management Authority applied for and were awarded a total \$1.5 million from the State Water Resources Control Board for the installation of Tree Box style bio-filtration systems along major thoroughfares.

An Early Action Monitoring station was installed in North Coyote Creek and, although this was an extreme drought year, four samples were collected during the wet season. Based on the results of the Early Action Monitoring (see attached Memorandum Report), several actions were taken:

- The need for increased emphasis on sediment control was recognized which included undertaking preliminary efforts to determine the feasibility of requiring vacant lots to have vegetative perimeters.
- Sediment observations were added to the planned Non-Stormwater Outfall Screening to investigate potential evidence of excessive sediment discharges.
- The sampling intake of the Early Action Monitoring site was evaluated and determined to need to be re-situated in the center of the low-flow channel (accomplished in preparation for 2014-15).
- Future the 2014-15 monitoring results would be reviewed to confirm TSS (sediment) levels.

Non-Stormwater Outfall Screening began during 2013-14 and continued through November 2014 when three cycles had been conducted. The number of major outfalls screened was:

Watershed	Major Outfalls Screened in Each Cycle
Lower San Gabriel River	102
Coyote Creek and tributaries	133

This is anticipated to be more fully detailed in the 2014-15 annual report.