

***Appendix XV. PWD SOP-6.18: Storm Water Compliance,
Project Construction***

This Page Left Intentionally Blank.

<p style="text-align: center;">CITY OF SAN DIEGO, CALIFORNIA</p> <p style="text-align: center;">Standard Operating Procedure</p>	<p>NUMBER SOP- 6.18</p>	<p>DEPARTMENT Public Works- Engineering</p>
<p>SUBJECT</p> <p style="text-align: center;">Storm Water Compliance</p> <p style="text-align: center;">Project Construction</p>	<p>PAGE 1 of 8</p>	<p>EFFECTIVE DATE SEPTEMBER 2, 2014</p>
	<p>SUPERCEDES SOP - PAGES</p>	

1.0 PURPOSE:

The goal of this Standard Operating Procedure (SOP) is to identify and explain the duties and responsibilities of Field Engineering staff in implementing the Federal, State, and local storm water regulations; and ensuring the contractor's compliance with the subject regulations.

2.0 SCOPE:

This procedure outlines the steps to be taken by the construction management team to ensure that projects at the construction phase are being constructed using Best Management Practices (BMP's) aimed at reducing or eliminating pollutants from entering into the City's storm drain conveyance system and/or receiving waters in compliance with applicable regulations. The procedure also discusses the role of the construction management staff in the inspection, coordination, documentation, and reporting of temporary and permanent storm water BMP's for private and public construction projects. Permanent BMP's are referred to as Treatment Control BMP's (TCBMP)

3.0 BACKGROUND:

The Federal Clean Water Act (CWA) was enacted in 1948 and expanded in 1972 to regulate water quality standards for surface waters. It is unlawful to discharge any pollutant to waters of the United States. The State of California began regulating storm water runoff under the CWA in 1990 by issuing State and Municipal Storm Water Permits. The California State Water Resources Control Board issues the State Construction Permit and the San Diego Regional Board issues the Municipal Storm Water Permit.

The construction projects within the City are required to comply with the construction requirements in the Municipal Storm Water Permit, Order No. R9-2013-0001 (Municipal Permit) and the State Construction General Permit Order No. 2009-0009-DWQ (CGP).

<p style="text-align: center;">CITY OF SAN DIEGO, CALIFORNIA</p> <p style="text-align: center;">Standard Operating Procedure</p>	<p>NUMBER SOP- 6.18</p>	<p>DEPARTMENT Public Works- Engineering</p>
<p>SUBJECT</p> <p style="text-align: center;">Storm Water Compliance</p> <p style="text-align: center;">Project Construction</p>	<p>PAGE 2 of 8</p>	<p>EFFECTIVE DATE SEPTEMBER 2, 2014</p>
	<p>SUPERCEDES SOP - PAGES</p>	

4.0 RESPONSIBILITY:

The Field Engineering Division (FED) is responsible for *enforcing* the storm water regulations associated with construction within the right-of-way, for private development (non-building related), grading, public improvements associated with Engineering Permits, Subdivision improvements, and Capital Improvement Program (CIP) construction projects inspected by the Division. FED's Storm Water Group is responsible for coordinating, providing, and documenting the necessary training and for the annual reporting for storm water compliance in the Division.

The Construction Management (CM) team is responsible for thorough inspection of construction projects to ensure proper implementation and documentation of temporary construction BMPs in accordance with the City's Storm Water Standards Manual, Chapter 5 and proper installation of permanent BMPs (storm water quality features) in accordance with the plans and specifications. Additionally, the CM team is responsible for maintaining all required Storm Water records for their projects including updating data in the Storm Water database in SD Share (Sharepoint).

5.0 PROCEDURE:

This procedure discusses the steps to be taken by the CM team to ensure the Contractor's compliance with the Storm Water regulations as stipulated in the contract documents or the Engineering Permit and subdivision plans.

5.1 Project Identification

The Resident Engineer (RE) reviews the plans and specifications before construction activities begin to determine the storm water requirements and requirements for inspection and documentation. See Attachment 8.1 Flow Chart for Storm Water Pollution Prevention Plan (SWPPP) requirements.

Verify the site Priority:

The RE verifies the construction site priority (low, medium, high) as noted on the plans and included in the SWPPP or Water Pollution Control Plan (WPCP). The site priority determines the minimum inspection frequency per Attachment 8.2.

<p style="text-align: center;">CITY OF SAN DIEGO, CALIFORNIA</p> <p style="text-align: center;">Standard Operating Procedure</p>	<p>NUMBER SOP- 6.18</p>	<p>DEPARTMENT Public Works- Engineering</p>
<p>SUBJECT</p> <p style="text-align: center;">Storm Water Compliance</p> <p style="text-align: center;">Project Construction</p>	<p>PAGE 3 of 8</p>	<p>EFFECTIVE DATE SEPTEMBER 2, 2014</p>
	<p>SUPERCEDES SOP - PAGES</p>	

Verify the Grading Requirements:

The RE verifies the grading requirements of the site. A Weather Triggered Action Plan (WTAP) with a BMP Implementation Plan (BIP) is required in accordance with the City Storm Water Standards Section 5.2., before a project can exceed the City’s maximum disturbed area limit of five acres during the rainy season.

Update the Storm Water Database:

The RE would enter the project into the SD Share SWPP database with all of the relevant information and add the Storm Water notices to the data base on a regular basis.

Pre-Construction Meeting (Pre-Con): The RE’s discussion would include the Storm Water Pollution Prevention requirements, site priority for the project and the Risk Level. The meeting agenda would include a discussion with the Contractor regarding proper Storm Water Pollution Prevention documentation. The contractor would provide the required documents at the pre-con meeting.

5.2 Storm Water Documents Submittal

The required SWPPP documents are submitted by the Contractor prior to the pre-construction meeting. The WPCP is submitted at the pre-com meeting.

Projects less than one acre are subject to *only* to the Municipal Permit: The Water Pollution Control Plan is submitted by the contractor at the pre-con meeting.

CIP Projects equal to or greater than one acre are subject to the CGP: All Storm Water documents required by the CGP shall be submitted by the Contractor prior to the pre-con meeting, (ref: Whitebook section 6-1.8 Pre-construction Meeting), as follows:

- Contractor shall submit the Risk Level Analysis, SWPPP and other required Project Registration Documents (PRDs).
- The Contractor shall submit the names and contact information for their Qualified SWPPP Developer (QSD), Qualified SWPPP Practitioner (QSP) and Data Submitter (DS).

The RE shall review all submitted PRD within 10 days of receipt. RE may *consult* with the Storm Water Senior in FED regarding the SWPPP review to ensure the SWPPP meets the project’s Risk Level Requirements.

- The RE gives a recommendation of approval, rejection or revisions of the submitted PRDs to the Approved Signatory (AS).

<p style="text-align: center;">CITY OF SAN DIEGO, CALIFORNIA</p> <p style="text-align: center;">Standard Operating Procedure</p>	<p>NUMBER SOP- 6.18</p>	<p>DEPARTMENT Public Works- Engineering</p>
<p>SUBJECT</p> <p style="text-align: center;">Storm Water Compliance</p>	<p>PAGE 4 of 8</p>	<p>EFFECTIVE DATE SEPTEMBER 2, 2014</p>
<p style="text-align: center;">Project Construction</p>	<p>SUPERCEDES SOP - PAGES</p>	

- Contractor’s Data Submitter (DS) uploads the approved PRDs onto SMARTS.
- AS would verify RE’s recommendation, certify and submit PRDs onto SMARTS on behalf of the Legally Responsible Person (LRP).
- The RE shall coordinate with the contractor to provide the fee and mail the check to the State Water Resources Board no later than seven (7) days prior to the start of construction. When the Water Discharge Identification Number (WDID) is received from the SWQCB the NTP can be issued.
- When construction is complete and the site is stabilized in accordance with the CGP requirements the QSD shall file the Notice of Termination.

Private Projects Subject to the CGP: It is the responsibility of the private developer or their representative to obtain coverage under the CGP. City Staff is not the LRP and/or AS for private development projects. The City is responsible for verifying enrollment under the CGP by doing the following:

- RE shall obtain a copy of the Notice of Intent and WDID to ensure site’s coverage under the CGP.
- RE shall request the names and contact information of the site’s QDS and QSP, keep this information available, as the QSD and QSP are responsible for implementing the construction BMPs, and other requirements under the CGP.
- RE shall request a copy of QSD and QSP certifications to verify that they are certified as required by the CGP.
- RE shall obtain the Certification (DS-563) for the TCBMP’s from the Engineer of Work (EOW) after the completion of the construction as one of the punch list items prior to project acceptance and closeout.

Other Submittal Requirements: When a project will concurrently be grading five acres or more during the rainy season, the contractor shall submit a Weather Triggered Action Plan (WTAP) along with BMP Implementation Plan (BIP) to the RE, see grading requirements above. Additionally, if a project will be utilizing Advanced Treatment System (ATS), the Contractor shall submit the ATS Plan to the RE to ensure that the ATS meets the requirements of the City Storm Water Standards, Section 5.2.

5.3 Construction BMPs Inspection

The RE shall inspect the project on a regular basis to ensure compliance with the construction BMP requirements in accordance with the site’s SWPPP or WPCP. The RE shall inspect the site and issue BMP Inspection Notices as needed and at a minimum the required frequency based on the project priority ranking, see Attachment 8.2. BMP Notices shall be thorough and comprehensive to accurately document the conditions of the site and any corrective actions required. It is recommended to include

<p style="text-align: center;">CITY OF SAN DIEGO, CALIFORNIA</p> <p style="text-align: center;">Standard Operating Procedure</p>	<p>NUMBER SOP- 6.18</p>	<p>DEPARTMENT Public Works- Engineering</p>
<p>SUBJECT</p> <p style="text-align: center;">Storm Water Compliance</p>	<p>PAGE 5 of 8</p>	<p>EFFECTIVE DATE SEPTEMBER 2, 2014</p>
<p style="text-align: center;">Project Construction</p>	<p>SUPERCEDES SOP - PAGES</p>	

photos of the site, particularly when BMP deficiencies are noted (Attachment 8.3 - BMP Notice form)

If inadequate or deficient BMPs are observed on the site, the RE must document deficiencies on the BMP Notice and require corrective action from the Contractor within a stated amount of time. The RE shall provide a copy of the Inspection Notice to the Contractor and file a copy in the project file as well as in the SWPP database. When corrective actions are required, the RE shall re-inspect the site within 48 hours of the BMP Notice issuance.

If the Contractor fails to comply with the RE's request for corrective action, or if the RE observes that the Contractor's negligence threatens to cause pollutants or sediment to leave the project site, the RE shall notify the Supervising Engineer and issue another BMP Notice. In cases where a potential for significant pollution is imminent or it is likely to have a sediment discharge, the RE would notify the Section Head and recommend the immediate issuance of a Stop Work Order to the Owner/Contractor with the Deputy Director's authorization.

If an active pollutant discharge from a construction site is observed by an RE at any time, the RE shall immediately report it to the Storm Water Division, Enforcement Section, by calling the hotline at 619-235-1000, or report it on line at <http://www.sandiego.gov/stormwater/services/servicerequest>. The RE shall follow up with the contractor and direct the contractor to provide verification that the discharge was reported to the Regional Board as required.

When a project exceeds the City's maximum disturbed area limit of five acres during the rainy season, the RE would enforce the requirements of the site's WTAP and BIP. The WTAP and BIP shall be deployed within 24 hours of a forecast of 50 percent chance of rain or greater.

5.4 Permanent BMP Inspection

The RE shall review the requirements for permanent BMP's specified on the plans. This is for CIP, Engineering Permits and Subdivisions. The RE shall verify that the subject BMP's are being constructed in accordance with the approved plans and specifications. The RE and Supervising Engineer shall ensure that all design changes, or deviations from the approved plans and specifications, that impact permanent BMP features are reviewed and approved by the Project Manager for CIP projects or DSD staff for private projects, to meet the requirements established in the Water Quality Technical Report (WQTR) and that the changes are properly documented. For CIP projects, any changes to the permanent BMPs from the original project bid plan set will be

<p style="text-align: center;">CITY OF SAN DIEGO, CALIFORNIA</p> <p style="text-align: center;">Standard Operating Procedure</p>	<p>NUMBER SOP- 6.18</p>	<p>DEPARTMENT Public Works- Engineering</p>
<p>SUBJECT</p> <p style="text-align: center;">Storm Water Compliance</p> <p style="text-align: center;">Project Construction</p>	<p>PAGE 6 of 8</p>	<p>EFFECTIVE DATE SEPTEMBER 2, 2014</p>
	<p>SUPERCEDES SOP - PAGES</p>	

documented in the daily reports, on new construction drawings when required, on the as-built plans and by the PM. For Engineering Permits/Subdivisions, any changes to the permanent BMPs shall be documented and reflected in a construction change or redlines, all shown on the as-builts and on the Maintenance Agreement exhibit.

An operational check by the asset owner will be requested and shall occur on the permanent BMP's prior to the submittal of the as-built drawings. The operational check requirements include the EOW permanent BMP certification (DS- 563) form (Attachment 8.4), completed and submitted. For CIP, the form is placed on the plans, signed by EOW and the Permanent BMP Certification for CIP (Attachment 8.5) is completed and submitted to be filed with the project documents. When the operational check corrective items, if any, have been satisfied and the Operation & Maintenance (O&M) Manuals are received, the permanent BMP's are accepted at the same time the other improvements shown on the approved plans are accepted. The permanent BMPs are included in the final check list (Attachment 8.6) that the REs are to use as a guide to ensure all items required by the CIP contractor or Engineering Permit/Subdivision have been satisfied.

The RE would ensure that the permanent BMPs maintenance requirements are documented in the project O&M manuals. The RE shall provide a copy of the As-Built drawings incorporating the permanent BMP information and the O&M manuals to the asset owner department prior to close-out of the project.

5.4 JURMP Report

The Construction Management team shall ensure that all BMP Notices and other relevant data are entered into the SWPP database on the PWD/Engineering SD Share as required for all assigned projects. It is required by the Municipal Permit to report annually on all active construction projects in the Jurisdictional Urban Runoff Management Plan Report (JURMP) that is submitted at the end of each fiscal year to the Regional Board. The Construction Management team shall compile all the information required by the Field Engineering Division for this annual report on a regular basis utilizing the SWPP database. This includes periodic verification that the frequency of the Inspection Notices meets the minimum requirements.

6.0 DEFINITIONS:

- AS: Approved Signatory
- BIP: BMP Implementation Plan

<p style="text-align: center;">CITY OF SAN DIEGO, CALIFORNIA</p> <p style="text-align: center;">Standard Operating Procedure</p>	<p>NUMBER SOP- 6.18</p>	<p>DEPARTMENT Public Works- Engineering</p>
<p>SUBJECT</p> <p style="text-align: center;">Storm Water Compliance</p>	<p>PAGE 7 of 8</p>	<p>EFFECTIVE DATE SEPTEMBER 2, 2014</p>
<p style="text-align: center;">Project Construction</p>	<p>SUPERCEDES SOP - PAGES</p>	

- BMP: Best Management Practices
- CIP: Capital Improvement Program
- CGP: Construction General Permit
- CM: Construction Manager (Supervising Engineer)
- DS: Data Submitter
- DD: Deputy Director
- JURMP: Jurisdictional Urban Runoff Management Plan
- LRP: Legally Responsible Person
- LUP: Linear Underground/Overhead Projects
- MS4: Municipal Separate Storm Sewer System
- NPDES: National Pollution Discharge Elimination System
- NOI: Notice of Intent
- NOT: Notice of Termination
- PM: Project Manager
- PRD: Project Registration Documents
- QSD: Qualified SWPPP Developer
- QSP: Qualified SWPPP Practitioner
- RE: Resident Engineer
- RWQCB: Regional Water Quality Control Board
- SUSMP: Standard Urban Storm Water Mitigation Plan
- SWPPP: Storm Water Pollution Prevention Plan
- TCBMP: Treatment Control Best Management Practices
- URMP: Urban Runoff Management Program
- WDID#: Water Discharge Identification Number

CITY OF SAN DIEGO, CALIFORNIA Standard Operating Procedure	NUMBER SOP- 6.18	DEPARTMENT Public Works- Engineering
SUBJECT Storm Water Compliance Project Construction	PAGE 8 of 8	EFFECTIVE DATE SEPTEMBER 2, 2014
	SUPERCEDES SOP - PAGES	

WPCP: Water Pollution Control Plan

WTAP: Weather Triggered Action Plan

7.0 REFERENCES AND/OR RELATED DOCUMENTS:

- 7.1 Storm Water Standards included in the Land Development Manual (<http://www.sandiego.gov/development-services/news/pdf/stormwatermaual.pdf>)
- 7.2 State General Construction Permit (http://www.waterboards.ca.gov/water_issues/progeams/stormwater/docs/constpermits/wgo_2009_0009_complete.pdf)
- 7.3 Receiving Water Risk Analysis (http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml)
- 7.4 Electronic Filing (www.smarts.waterboards.ca.gov)
- 7.5 Weather forecast from NOAA (<http://www.srh.noaa.gov/forecast>)

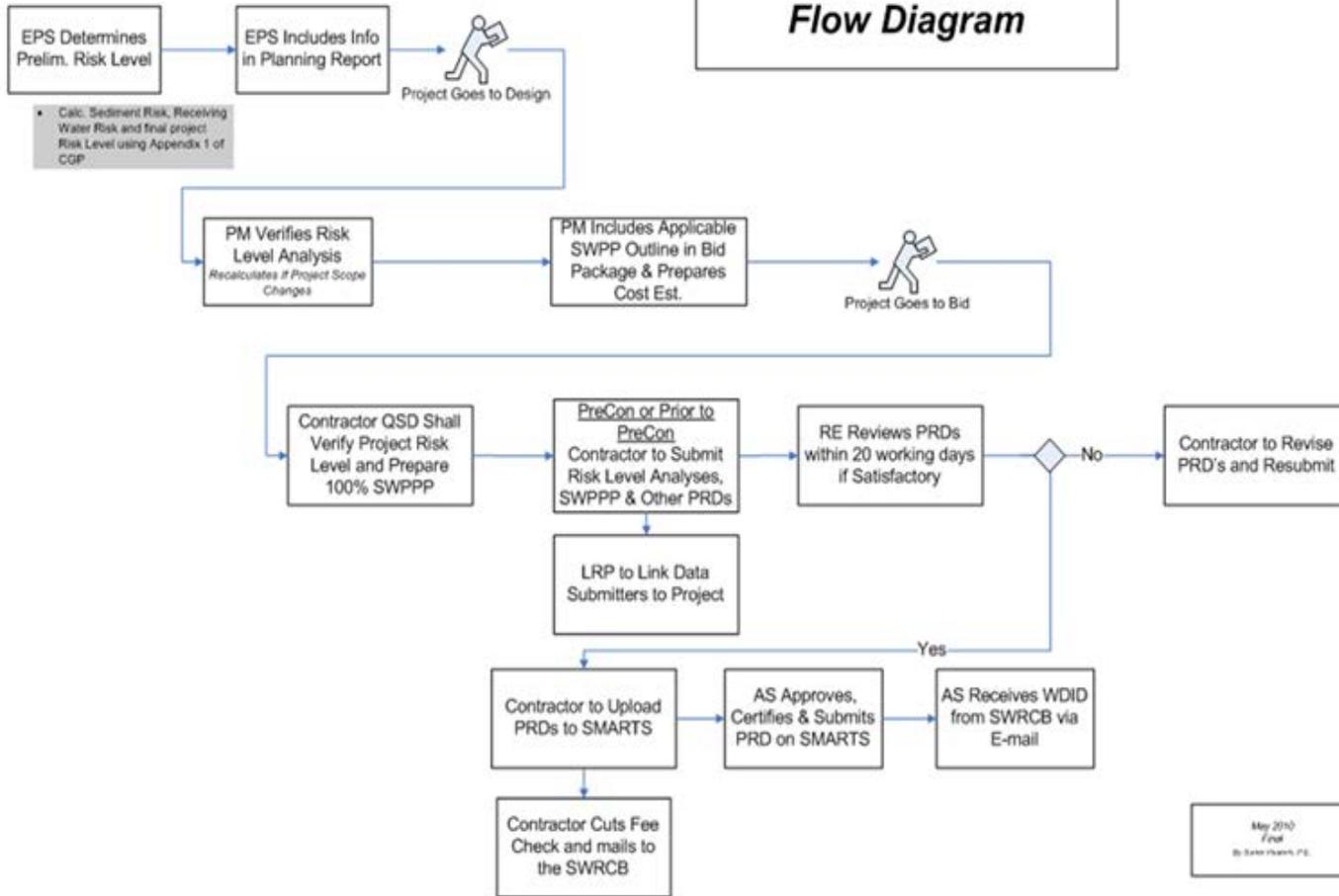
8.0 ATTACHMENTS:

- 8.1 Flow Chart for SWPPP requirements
- 8.2 Minimum Inspection Frequency for Municipal Permit Projects
- 8.3 BMP Notice
- 8.4 Permanent BMP Construction self certification form (DS-563)
- 8.5 Permanent BMP Certification for CIP
- 8.6 Final project completion checklist

ATTACHMENT 8.1 Flow Chart for SWPPP requirements

8.7

**CGP Process
Flow Diagram**



May 2010
Final
By Steve Clark, P.E.

ATTACHMENT 8.2

Minimum Inspection Frequencies for Municipal Permit Projects			
Site Priority	Rainy Season	Dry Season	Minimum
High Priority	Bi-weekly Or more as needed	As-needed	Notice issued at the beginning & at the end of construction
Medium Priority	Monthly Or more as-needed	As-needed	
Low Priority	As-needed	As-needed	



THE CITY OF SAN DIEGO

BMP NOTICE

STORM WATER POLLUTION PREVENTION INSPECTION
FIELD ENGINEERING DIVISION, ECP

Project: Contractor: Site contact person: Owner: Permit number: Address: Location: Site Status:	Date: Name: Weather: Notice:	Priority: Phone: FAX: Work order number:
--	---------------------------------------	---

(grading, storm drains, underground utilities, paving, buildings, percent complete)

<input type="checkbox"/> Existing BMP's adequately maintained <input type="checkbox"/> BMP's inadequate, adjustments needed <input type="checkbox"/> Maintain SWPPP Document <input type="checkbox"/> Improve Erosion Control BMP's <input type="checkbox"/> Improve Sediment Control BMP's <input type="checkbox"/> Improve Perimeter Control BMP's <input type="checkbox"/> Improve Materials handling (i.e. Good Housekeeping: concrete wash out, site clean-up, trash, debris) <input type="checkbox"/> Maintain Street Sweeping <input type="checkbox"/> Maintain construction access	<input type="checkbox"/> Permanent BMP's inspection Comments:
--	--

Comments: _____

: Contractor : SWPP Division File : RE file

 THE CITY OF SAN DIEGO	City of San Diego Development Services 1222 First Ave., MS-501 San Diego, CA 92101 (619) 236-5500	<h1 style="margin: 0;">Permanent BMP Construction</h1> <h2 style="margin: 0;">Self Certification Form</h2>	FORM DS-563 FEBRUARY 2013
--	--	--	--

Date Prepared: _____	Project No.: _____
----------------------	--------------------

Project Applicant: _____	Phone: _____
--------------------------	--------------

Project Address: _____

Project Engineer: _____	Phone: _____
-------------------------	--------------

The purpose of this form is to verify that the site improvements for the project, identified above, have been constructed in conformance with the approved Standard Urban Storm Water Mitigation Plan (SUSMP) documents and drawings.

This form must be completed by the engineer and submitted prior to final inspection of the construction permit. Completion and submittal of this form is required for all new development and redevelopment projects in order to comply with the City's Storm Water ordinances and NDPES Permit Order No. R9-2007-0001. Final inspection for occupancy and/or release of grading or public improvement bonds may be delayed if this form is not submitted and approved by the City of San Diego.

CERTIFICATION:
 As the professional in responsible charge for the design of the above project, I certify that I have inspected all constructed Low Impact Development (LID) site design, source control and treatment control BMP's required per the approved SUSMP and Construction Permit No. _____; and that said BMP's have been constructed in compliance with the approved plans and all applicable specifications, permits, ordinances and Order No. R9-2007-0001 of the San Diego Regional Water Quality Control Board.

I understand that this BMP certification statement does not constitute an operation and maintenance verification.

Signature: _____

Date of Signature: _____

Printed Name: _____

Title: _____

Phone No. _____



Clear Form

Engineer's Stamp

 THE CITY OF SAN DIEGO	City of San Diego Transportation & Storm Water Chesapeake Dr. Ste 100, MS 1900 San Diego, CA 92123 (858) 541-4300	<h1 style="margin: 0;">Permanent BMP</h1> <h2 style="margin: 0;">Certification for CIP</h2> <h3 style="margin: 0;">Self Certification Form</h3>	Form DS-563 CIP/PW FEBRUARY 2013
--	---	---	--

Date Prepared:	Project WBS No.:
Project Name:	Project Drawing No.:
Project Address/Location:	
Project Engineer:	Phone:

The purpose of this form is to verify that the site improvements for the project, identified above, have been constructed in conformance with the approved Standard Urban Storm Mitigation Plan (SUSMP) documents and drawings.

This form must be completed by the engineer of work and submitted prior to final inspection of the construction contract work. Completion and submittal of this form is required for all Capital Improvement Projects that have required permanent BMP's in order to comply with the City's Storm Water ordinances and NDPES Permit Order No. R9-2007-0001. Final inspection for acceptance and close-out may be delayed if this form is not submitted and approved by the City of San Diego.

CERTIFICATION:

As the professional in responsible charge for the design of the above project, I certify that I have inspected all construction Low Impact Development (LID) site design, source control and treatment control BMP's required per the approved SUSMP and Contract requirements WBS No.: _____; and that said BMP's have been constructed in compliance with the approved plans and all applicable specifications, permits, ordinances and Order No. R9-2007-0001 of the San Diego Regional Water Quality Control Board.

I understand that this BMP certification statement does not constitute an operation and maintenance verification.

Signature: _____

Date of Signature: _____

Printed Name: _____

Title: _____

Phone No. _____

Clear Form



Engineer's Stamp

ATTACHMENT 8.6: Final Project Completion Checklist

FINAL PROJECT COMPLETION CHECKLIST FOR CIP/SUBDIVISION/PERMIT PROJECTS

PROJECT NAME:

WBS/PTS #

DWG. NO.

STORM DRAINS	YES	NA	DATE REQUESTED	DATE COMPLETED
Operational Performed				
Televising				
Punchlist Completed				
PERMANENT BMPs				
Operational performed				
Operational Maintenance Agreement Recorded				
Operational Maintenance Report Received				
Permanent BMP Certification Recorded				
WATER MAIN	YES	NA	DATE REQUESTED	DATE COMPLETED
Pressure Test				
Televising				
Chlorine Residual OK				
Bacteria Test				
Operational Performed				
Punchlist Completed				
SEWER MAINS	YES	NA	DATE REQUESTED	DATE COMPLETED
Pressure Test				
Wayneball				
Mandrel				
Operational Performed				
Televising				
Punchlist Completed				
	YES	NA	DATE REQUESTED	DATE COMPLETED
AS-BUILT PLANS (REDLINES)				
SURVEY MONUMENT LETTER				
PAVEMENT SECTION SHOWN				
TRAFFIC SIGNAL RELEASE				
STREET LIGHT RELEASE				
SIGNING AND STRIPING RELEASE				
PARK AND RECREATION APPROVAL				
MEGOHM TEST OF IRRIG. WIRES				
LANDSCAPE ADVISOR WALK-THRU				
DRIVEWAY STATION AND WIDTH				
MMC WALK THROUGH *				
CERTIFICATION FROM REGISTERED LANDSCAPE ARCHITECT				
BACKFLOW CERTIFICATION				
APPROVED ASGRADED SOILS AND GEOTECHNICAL REORT **				
MAP NOs. AND EASEMENT Nos				
PUNCHLIST COMPLETED				

OTHER: Trench cuts resurfaced per trench cut ordinance. New and resurfaced streets in service date for Street Division:

* MMC shall be notified for Brush management, Revegetation, Sensitive Habitats and Mitigation/Monitoring and on site Permanent BMPs for Private development Projects

** To Be Approved by City Geology Staff

Resident Engineer Signature _____

Area Supervisor Signature _____