City of San Diego

TRANSPORTATION & STORM WATER

2016

STORM WATER STANDARDS

Part 2:
Construction BMP Standards

PREPARED BY:

Geosyntec consultants

Michael Baker INTERNATIONAL

think BLUE SAN DIEGO

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

Contents

Appendices

Tables

List of Acronyms

ASBS	Areas of Special Biological Significance
BMP	Best Management Practice
CASQA	California Stormwater Quality Association
CGP	California Construction General Permit
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
RE	Resident Engineer
SDRWQCB	San Diego Regional Water Quality Control Board
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
WPCP	Water Pollution Control Plan

Glossary of Key Terms

Construction BMP — Includes schedules of activities, prohibitions of practices, maintenance procedures, and erosion and sediment control practices to prevent, eliminate, or reduce the pollution of waters of the receiving waters.

Municipal Separate Storm Sewer System (MS4) — A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) owned or operated by the City; (ii) designated or used for collecting or conveying storm water; (iii) which is not a combined sewer; and (iv) which is not part of the Publicly Owned Treatment Works as defined at 40 Code of Federal Regulations section 122.26. Definition per City SW Ordinance and consistent with Regional Permit definition.

Storm Water Pollution Prevention Plan (SWPPP) — A written plan submitted to the City and State Water Resource Control that documents the series of phases and activities that, first, characterizes your site, and then prompts you to select and carry out actions which prevent the pollution of stormwater discharges; used for projects, with land disturbance greater than or equal to 1 acre

Water Pollution Control Plan (WPCP) — A written plan submitted to the City that documents the series of phases and activities that, first, characterizes your site, and then prompts you to select and carry out actions which prevent the pollution of stormwater discharges; used for projects less than 1 acre

Chapter 1

Introduction/Purpose

Part 2 of the Storm Water Standards addresses storm water impacts and required controls associated with construction activities in the City of San Diego (City). The purpose of these standards is to provide guidance to prevent construction activities from adversely impacting downstream and on-site resources. The protection of water quality from on-site pollutant sources is easily attainable when suitable Best Management Practices (BMPs) are planned, installed and correctly maintained.

These standards include:

- General requirements for construction projects (Chapter 2)
- Background on applicable regulations and the City's process for determining project specific applicability of various codes and regulations (Chapters 2-3)
- Required documentation / pollution prevention plans (Chapter 4)
- Minimum BMPs to prevent discharges of pollutants associated with construction activity (Chapter 5)
- Relevant inspection, enforcement and project close-out requirements (Chapters 5-7)

The manual is intended to be used for private development projects that are authorized through the City Development Services Department and for City capital improvement projects. Templates and guidelines are referenced and the applicability to private development projects versus capital projects is identified within the document.

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

Chapter 2

Determining Applicable Storm Water Regulations

Storm water and non-storm water runoff generated by construction activities in San Diego are subject to regulation by the State Water Resources Control Board (SWRCB) and the San Diego Regional Water Quality Control Board (SDRWQCB). The SDRWQCB is responsible for implementing statewide water quality regulations in the San Diego region including state programs implemented as delegated under the Federal Clean Water Act and the California Porter-Cologne Water Quality Act. Under these provisions, the SWRCB and SDRWQCB have adopted several permits that impact construction activities. Applicable storm water regulations include the California Construction General Permit (CGP) and the Phase 1 Municipal Separate Storm Sewer System (MS4) Permit.

All construction sites are required to implement construction BMPs in accordance with the performance standards in this manual. Some sites are additionally required to obtain coverage under the CGP, which is administered by the SWRCB. Generally all sites with soil disturbance of one acre or more are subject to the CGP. The project owner (or owner's representative) is responsible for determining applicability to CGP requirements. The City requirements have been aligned to requirements under the CGP where possible; where the requirements differ, the project owner must comply with both requirements.

In general, for projects disturbing one (1) acre or more that require coverage under and compliance with the CGP, the construction BMPs must be identified in a Storm Water Pollution Prevention Plan (SWPPP). For projects disturbing less than one (1) acre, a Water Pollution Control Plan (WPCP) is required that identifies the pollution prevention measures that will be taken to comply with local City standards. If the project qualifies for an Erosivity Waiver under the CGP, a WPCP may be submitted in lieu of a SWPPP. However, if the Erosivity Waiver expires prior to project completion, the project applicant shall obtain a new Waste Discharge Identification number and submit a SWPPP.

It is the responsibility of the property owner or his/her designee (contractor) to select, install, and maintain appropriate BMPs. The Storm Water Requirements Applicability Checklist (DS-560) shall be completed to determine a project's permanent and construction storm water BMP requirements. A list of construction BMPs is provided for reference in Chapter 5. BMPs must be installed in accordance with an industry recommended standard or in accordance with the requirements of the CGP. More information about BMPs is provided in statewide storm water BMP manuals (e.g., the California Storm Water Quality Association [CASQA] Construction BMP Online Handbook, and the Caltrans Construction Site BMP Manual).

Construction projects have differing requirements based on the degree of threat to receiving waters. This determination is grouped into two considerations:

- Projects subject to the CGP must calculate the Risk Level (or Linear Underground/Overhead Type) and implement the CGP requirements for that Risk Level (or Linear Underground/Overhead Type).
- Projects located in the watershed draining to Areas of Special Biological Significance (ASBS) shall perform inspections at least weekly.

Appendix A shows the watershed draining to the La Jolla ASBS.

Chapter 3

Determining Applicable Non-Storm Water Regulations

Most non-storm water discharges are prohibited, but exceptions apply (see Municipal Code Section 43.0307). Additionally, the project owner is responsible for knowing if coverage under additional National Pollutant Discharge Elimination System (NPDES) permits is required, or if ASBS regulations further prohibit discharges that might otherwise be allowed outside of an ASBS watershed.

Table 3–1 identifies NPDES General Permits that may require enrollment for certain types of discharges. Unique sources of non-storm water discharges, such as discharge of contaminated water that has been treated, may require an individual NPDES permit and the SDRWQCB should be consulted for determination of permit requirements.

Table 3-1. General NPDES Permits That Typically Apply to Non-Storm Water Discharges from Construction Sites

Abbreviation	Permit Name / Order Number	Description	Applicability
Discharge To Land	Conditional Waiver of Waste Discharge Requirements for Low Threat Discharges in the San Diego Region SWRCB Order No. R-2014-0041	Order is intended to cover temporary discharges of low threat waters to land.	Small or temporary dewatering projects, such as excavation during construction, flushing water lines, discharging recycled water which are discharge to land for infiltration
Groundwater Dewatering Discharges – San Diego Region including discharges to San Diego Bay	General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters within the San Diego Region. Order No. R9-2015-0013 NPDES No. CAG919003	Order is intended to cover all discharges of groundwater extraction wastes to surface waters within the San Diego Region including discharges to the San Diego Bay. Emphasis is placed on groundwater extraction due to construction and other groundwater extraction activities regardless of volume, including discharges less than 100,000 gallons per day.	Projects discharging any temporary flow or volume of extracted groundwater into surface waters, including San Diego Bay.

Abbreviation	Permit Name / Order Number	Description	Applicability
Hydrostatic Water and Potable Water Discharges	General Waste Discharge Requirements for Discharges of Hydrostatic Test Water and Potable Water to Surface Waters and Storm Drains or Other Conveyance Systems within the San Diego Region; Order No. R9-2010-0003 NPDES No. CAG679001. Note that this permit expires on October 15, 2015 and that permit coverage by the City for applicable potable water discharges will transition to the Statewide General Permit for Drinking Water System Discharges (SWRCB Order WQ 2014-0194-DWQ). Contact the resident engineer (RE) for project specific clarification.	Order is intended to cover discharges of hydrostatic test water and potable water to various receiving surface waters within the San Diego Region. Certain pollutants potentially contained in hydrostatic test water and/or potable water discharges threaten to cause or contribute to concentrations above narrative and numeric water quality objections contained in state and federal regulations. These types of discharges could pose a chronic or acute toxicity risk to freshwater and saltwater aquatic animal and plant life. Pollutants of concern include, but are not limited to, chlorine and chlorination by-products, total dissolved solids, turbidity, total suspended solids, and sedimentation. Increased volume, velocity, rate, and duration of discharges may also contribute to erosion of natural channels.	Include, but are not limited to, potable and hydrostatic test discharges resulting from testing, repair, and maintenance of pipelines, tanks, and vessels dedicated to drinking water purveyance. Note that the contractor must complete a testing log to document pH and Chlorine testing for submittal to the RE.

Abbreviation	Permit Name / Order Number	Description	Applicability
Potable Water Discharges including Distribution System Dewatering, Flushing, and Pressure Testing.	Statewide General Permit for Drinking Water System Discharges (SWRCB Order WQ 2014-0194-DWQ). Note that the City has applied for coverage as a large system water purveyor.	Order is intended to cover planned or emergency discharges of potable water from water transmission and distributions systems, wells in drinking water aquifers, and water treatment facilities. Discharges from these essential activities may have the potential to impact receiving waters due to toxicity of chemical agents, solids loading, and large volume and or high velocity of discharges. Permit requires discharge monitoring for single events that meet specific criterial and annual representative monitoring as well as receiving water monitoring for discharges that exceed effluent limits in the Order. The Order establishes water quality based effluent limitations for total chlorine residual and turbidity.	Activities covered include those that are essential to comply with regulations to provide reliable and safe drinking water. More common activities include distribution system dewatering, flushing, and pressure testing. Note that the contractor requirements are anticipated to include recording total chlorine residual, estimated volume, turbidity, and amount of reused water.
Utility Vaults and Structures	General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Waters of the United States; Order WQ 2014-0174-DWQ NPDES No. CAG990002	Order is intended to cover short-term intermittent discharges of pollutants to surface waters from utility vaults and underground structures.	Include, but are not limited to, suppliers of natural gas, electricity, internet, cable television, and telephone services.

Discharges to surface waters within the San Diego region from foundation drain or footing drain systems designed to be located at or below the groundwater table to actively or passively extract groundwater during any part of the year are prohibited unless the discharge has coverage under NPDES Permit No. CAG919001 or NPDES Permit No. CAG919002.

Discharges to surface waters within the San Diego region from foundation drain or footing drain systems designed to be located above the groundwater table at all times of the year, and only expected to discharge non-storm water under unusual circumstances may be prohibited if the City of San Diego or SDRWQCB identifies the discharge as a source of pollutants to receiving waters.

If the site is in an ASBS watershed, Special Protections contained in Attachment B to SWRCB Resolution No. 2012-0012 as amended by Resolution No. 2012-0031 apply and are summarized below. In addition, the Hydrostatic Water and Potable Water Permit states that the discharge of hydrostatic test and/or potable water to areas designated by the SWRCB as being an ASBS is prohibited. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

According to the SWRCB ASBS Resolution No. 2012-0031, existing storm water discharges into an ASBS are allowed only under the following conditions:

1. The discharges are authorized by an NPDES permit issued by the SWRCB or Regional Water Board;
2. The discharges comply with all of the applicable terms, prohibitions, and special conditions contained in these Special Protections; and
3. The discharges:
    a. Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
    b. Are designed to prevent soil erosion;
    c. Occur only during wet weather; and
    d. Are composed of only storm water runoff.

Furthermore, the following non-storm water discharges to the ASBS are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

1. Discharges associated with emergency firefighting operations.
2. Foundation and footing drains.
3. Water from crawl space or basement pumps.
4. Hillside dewatering.
5. Naturally occurring groundwater seepage via a storm drain.
6. Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

Chapter 4

Pollution Control Plan Requirements

In accordance with the MS4 Permit, pollution control plans are required to be developed and submitted by the project applicant. In the City, all projects must submit either a SWPPP or WPCP. Table 4-1 identifies which projects require SWPPP or WPCP and the accepted templates. Requirements for each document are further summarized in subsections 4.1 and 4.2.

Table 4-1. SWPPP/WPCP by Land Disturbance and Project Type

Total Land Disturbance (includes storage/laydown yard)	Required Plan
1 acre or greater	CGP coverage and compliant SWPPP (using CASQA or Caltrans template)
Less than 1 acre	WPCP Template, Appendix D
Less than 1 acre (Group Job/Linear)	Linear Utility (Group Job) WPCP Template, Appendix D
Less than 5,000 square feet; Less than 5-foot elevation change	Minor WPCP Template ,Appendix D
Demolition only projects	Demolition WPCP Template, Appendix D

A plan is not required for projects that do not pose a significant threat to water quality. This includes the following project types:

- Electrical Permit
- Fire Alarm Permit
- Fire Sprinkler Permit
- Plumbing Permit
- Sign Permit
- Mechanical Permit
- Spa Permit
- Right of Way Permit for pot holing
- Individual Right of Way Permits that exclusively include of one of the following activities and associated curb/sidewalk repair: water service, sewer lateral, storm drain lateral or dry utility service
- Right of Way Permits with a project footprint less than 150 linear feet that exclusively include one of the following activities: curb ramp, sidewalk and driveway apron replacement, curb and gutter replacement, and retaining wall encroachments.

These projects must still comply with all storm water BMPs pursuant to City of San Diego Municipal Code and City Standards. The Clean Construction brochure (http://www.sandiego.gov/thinkblue/pdf/cleanconstructionguide.pdf) serves as a plan for these types of activities where a site specific plan is not required. The CASQA Construction BMP Online Handbook and Caltrans Construction Site BMP Fact Sheets serve as a reference to develop a construction BMP plan. In addition, the Standard Specifications for Public Works Construction (the "WHITEBOOK") may be a resource for capital improvement projects. If in the opinion of the City Engineer, the project potentially could pose a threat to storm water quality, the City Engineer may require preparation and implementation of a WPCP commensurate with the storm water threat.

4.1. SWPPP Requirements

If a project is subject to CGP, the applicant must provide a SWPPP, using either the CASQA or Caltrans template, which identifies all construction BMP requirements, in accordance with the CGP. A Waste Discharge Identification number is required prior to issuance of a permit and start of construction. The SWPPP must be kept on site and made available upon request of a representative of the City, SDRWQCB, or the SWRCB. Additionally, the CGP has requirements for preparing Site Maps, BMP inspection, discharge monitoring, and reporting that all must be implemented in accordance with CGP requirements. Projects that are required to obtain coverage under the CGP are encouraged to visit the SWRCB's website for permit application instructions.

4.2. WPCP Requirements

For projects not subject to CGP the applicant must provide a WPCP, which identifies all construction BMP requirements with the project submittal. The WPCP is a report and shall depict the BMPs to be implemented during construction to reduce/eliminate discharges of pollutants to the storm drain conveyance system. The WPCP and Site Map shall be updated with each phase of construction activity. The WPCP must be kept on site and made available upon request of a representative of the City, SDRWQCB, or the SWRCB. WPCP templates are available in Appendix D and at the following link(s):

<placeholder for WPCP template link>

<placeholder for WPCP group template link>

<placeholder for Minor WPCP template link>

<placeholder for WPCP demolition template link>

Any hydrology or hydraulic calculations, soils reports or geotechnical reports prepared in support of a WPCP must be prepared by a professional engineer with appropriate registration qualifications issued by the State of California.

4.2.1 Basic Elements to a WPCP

The following steps are to be used to aid in the design and development of erosion and sedimentation control measures to be included in the WPCP.

1. Project planning (establish construction schedule, disturbed area phasing, BMP materials storage)
2. Preserve existing vegetation and delineate clearing limits (orange construction fence, staking with ribbon).
3. Establish construction access points (gravel entrance, shaker plates, tire wash area).
4. Control run-on and run-off flow (using pipe, drainage swales, berms).
5. Install sediment controls (silt fence, sediment traps, etc.).
6. Stabilize soils (erosion controls including but not limited to mulch, hydroseed, straw).
7. Protect slopes (divert water from top of slope, cover with plastic or erosion control blanket).
8. Protect drain inlets (catch basin inserts).
9. Stabilize channels and outlets (cover with grass, riprap).
10. Control pollutants (maintain equipment to prevent leaks, drip pans, covered trash bins).
11. Control dewatering (pump to sediment trap).
12. Maintain BMPs (weekly maintenance/replacement, preparation for storm events).
13. Manage the project (re-assess construction schedule, phasing, contact numbers).
14. Document BMP education of contractor/subcontractor employees
15. Retain Inspection Notices and Self-Inspection Worksheets

Only **qualified** persons shall prepare, amend and certify a WPCP for projects which meet the following criteria:

- Not subject to CGP requirements and
- determined to be a PDP, per Part 1 of the Storm Water Standards and
    - located in the Los Peñasquitos Watershed, or
    - located in the Tijuana River Watershed, or
    - located adjacent to or directly discharge to an Environmentally Sensitive Area, or
    - discharges to ASBS.

A **qualified** WPCP preparer for these cases shall meet at least one of the following:

1. A California registered civil engineer,
2. A California registered geologist,
3. A California registered landscape architect,
4. A professional hydrologist registered through the American Institute of Hydrology,

5. A certified professional soil scientist registered through the Soil Science Society of America,
6. A certified professional in erosion and sediment control registered through EnviroCert International, Inc.,
7. A certified professional in storm water quality registered through EnviroCert International, Inc., or
8. A certified professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies.

4.2.2 Linear Utility (Group Job) WPCP Template

Linear Utility projects involve the replacement and/or rehabilitation of sewer and/or water mains and storm drains along with their associated appurtenances in the public Right of Way. Linear Utility projects may also include ADA improvements to curb ramps and sidewalk, street repair from full width to trench limits, and traffic improvements. For Linear Utility projects, the applicant must provide a Linear Utility WPCP. The Linear Utility WPCP template is located at the link provided in Section 4.2. This template does not apply to street resurfacing projects.

4.2.3 Minor WPCP Template

For projects that create less than 5,000 square feet of ground disturbance and have less than a 5-foot elevation differential over the entire project area, the applicant must provide a Minor Water Pollution Control Plan (DS-570). This form is for the applicant's convenience and does not alleviate responsibility on part of the project owner/applicant from BMP planning and implementation to prevent pollutant discharges.

4.2.4 Demolition WPCP Template

Demolition only projects consist primarily of waste and equipment management activities and grading. Demolition activities may include:

- Mobilizing equipment to the site;
- Dismantling structures, foundations, roads, etc.;
- Clearing/grubbing vegetation;
- Segregating materials;
- Stockpiling waste and soil;
- Hauling demolition materials from the site;
- Grading/earthwork; and
- Demobilizing equipment and demolition materials.

For demolition only projects, where the demolition is phased separately from future construction, applicants must submit a Demolition WPCP. The Demolition WPCP template is located at the link provided in Section 4.2.

Chapter 5

Required Best Management Practices

BMPs collectively refer to a variety of pollution prevention controls implemented throughout the project site at various times during the project. BMPs discussed herein are specifically aimed to control pollution in storm water runoff during the construction phase of the project. The major construction BMP categories as identified in the MS4 Permit are:

1. Project Planning;
2. Good Site Management "Housekeeping", including Waste Management;
3. Non Storm Water Management;
4. Erosion Control;
5. Sediment Control;
6. Run-on and Run-off Control; and
7. Active/Passive Sediment Treatment Systems, where applicable.

BMP implementation must be seasonally appropriate and must plan for year round rain events, including those that may occur during the dry season (May 1 to September 30).

In order to meet the requirements of the permits and ordinances mentioned in Chapter 3, BMPs must be selected, installed, and maintained properly throughout the duration of construction projects. Similar to OSHA Safety requirements, BMPs must be discussed with all project contractors, subcontractors, and any party involved, because education is essential to good BMP implementation and maintenance and overall site compliance. Examples of common BMPs are provided in Tables 5–1 through 5–7; refer to the CASQA Construction BMP Online Handbook and Caltrans Construction Site BMP Fact Sheets for additional BMPs.

Table 5-1. Project Planning

Type	Description
Scheduling	1. Sequencing construction activities to reduce the amount of exposed soil during periods of higher precipitation probability. 2. All projects should consider scheduling activities to minimize the amount of disturbed area during periods of higher precipitation probability. 3. Phasing can be used to maintain stabilized areas (vegetation or impervious cover) as much as possible during construction. 4. Disturbed areas should be stabilized as soon as practical. 5. Attempt to schedule grading outside of periods of higher precipitation probability.
Reference	CASQA EC-1, EC-2 Caltrans SS-01

Table 5-2. Good Site Management "House Keeping"

Type	Description
Material Delivery, Storage, and Use	1. Preventing and containing pollutant discharges from materials that are delivered, stored, and used on-site. 2. Materials of concern include: petroleum products, asphalt, concrete, paints, solvents, soil stabilizers and binders, pesticides, herbicides, fertilizers, detergents, and other hazardous chemicals. Minimize the quantities of materials of concern. 3. Material delivery, storage, and use management should occur at every location of a construction project where materials of concern are delivered, stored, or used. 4. All material delivery and storage should occur in an area designated for the activity and at least 50 feet away from downstream storm drain facilities. 5. Store and label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in water tight containers and in accordance with city, county, state and federal regulations in an enclosed area with secondary containment and cover them at the end of every work day or during wet weather or when rain is forecast. Erodible landscape material should be on pallets. 6. Keep absorbent spill cleanup materials available; dispose of used materials properly. 7. Train employees and subcontractors on proper spill prevention, control, and cleanup procedures. 8. Avoid over-application of soil binders, pesticides, herbicides, and fertilizers.
Reference	CASQA WM-1, WM-2, WM-4 Caltrans WM-01, WM-02
Picture	

Type	Description
Stockpile Management	1. Covering or stabilizing stockpiles and providing sediment controls around the perimeter of stockpiles. 2. Stockpile management should occur at every required stockpile within a construction project year-round. 3. Required stockpiles include those of soil, sand, PCC or AC rubble, cold mix asphalt, aggregate base or sub base, treated wood, and landscaping materials. 4. Stockpile management is effective against storm water and wind erosion. 5. All stockpiles can be covered with plastic or similar material. Raw materials such as cold mix treated wood should also be placed on top of plastic. 6. Alternatively, soil stockpiles may be protected with an erosion control (stabilization) practice. 7. Application of any erodible landscape material within 2 days before a forecast rain event or during wet weather must be discontinued. 8. Typical sediment controls placed around the perimeter of stockpiles are straw wattles (fiber rolls), silt fence, and gravel bags. Inspect gravel bag barriers for sediment accumulations and remove sediments when accumulation reaches one-third the barrier height. 9. All stockpiles should be located away from concentrated flows of storm water and placed at least 50 feet away from downstream storm drain facilities. 10. Remove any temporary BMP from the site when no longer needed. 11. When approved by the Resident Engineer, stockpile material removed from roadways shall be kept away from gutters, drain inlets, drainage ditches, and watercourses. 12. Prior to the onset of precipitation, stockpiles of "cold mix" shall be placed on and covered with plastic or comparable; stockpiles of Portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, or aggregate sub-base shall be either covered and protected with a temporary perimeter sediment barrier; soil stockpiles shall be either covered and protected with a temporary perimeter sediment barrier.
Reference	CASQA WM-3, SE-1, SE-5, SE-6, SE-8 Caltrans WM-03
Picture	

Type	Description
Solid Waste Management	1. Containing and disposing of debris and non-hazardous waste to prevent discharge to the storm drain system. 2. Solid waste management and materials pollution control should occur throughout every construction project for non-hazardous construction waste and scraps, trash from employees or subcontractors, and waste generated from demolition. Waste should be collected, contained and covered in designated areas and littering shall be prohibited. Prior to any rain event and at the end of each day, containers shall be covered and secured. 3. Solid wastes include but are not limited to: i. 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. ii. Landscaping wastes, including vegetative material, plant containers, and packaging materials. iii. Litter, including food containers, beverage cans, coffee cups, paper bags, plastic wrappers, and smoking materials, including litter generated by the public. Avoid using waste containers that do not have lids or are not watertight. Collect and dispose of loose trash and waste daily. Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Litter and debris removal from drainage grates, trash areas and ditches shall be performed weekly to prevent clogging of storm drainage systems .Never hose down a dumpster on the construction site. Toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) shall not be disposed of in dumpsters as well. Berm and cover waste containers or other construction material when rain is forecast or if not actively being used within 14 days. 4. Solid waste storage areas shall be located at least 50' from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding. 5. For saw cutting & Asphalt/Concrete Removal waste; Shovel, absorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location. Residue from grinding operations shall be picked up by means of a vacuum attachment to the grinding machine, shall not be allowed to flow across the pavement, and shall not be left on the surface of the pavement. Water and concrete slurry from saw cutting activities in the gutter are allowable as long as: i. Inlet protection in installed and check dams are in place to slow the flow; and ii. Slurry water is removed from the street and gutter promptly; and iii. Slurry water does not enter the inlet. 6. Paint & Paint Removal is a prohibited discharge and shall be cleaned and disposed of in a proper container. Dispose of residue and unusable thinner/solvents as hazardous waste. Never pour paint down a drain.
Reference	CASQA WM-5; Caltrans WM-05
Picture	

Type	Description
Vehicle and Equipment Pollution Prevention	1. Preventing, containing, and disposing of pollutants from cleaning, fueling, and maintaining vehicles and equipment. 2. Vehicle and equipment pollution prevention should occur at every construction project that cleans, fuels, or maintains vehicles or equipment. 3. All cleaning, fueling, and maintenance performed on the site should occur in an area designated for the activity and at least 50 feet away from downstream storm drain facilities. 4. Avoid "topping-off" of fuel tanks. Keep absorbent spill cleanup materials available; dispose of used materials properly. 5. Train employees and subcontractors proper spill prevention, control, and cleanup procedures. 6. Use drip pans or a secondary containment area for fueling and maintenance. 7. Also, the use of gravel bags as temporary linear barrier can be installed along the perimeter of vehicle and equipment fueling and maintenance areas or chemical storage areas. 8. Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, steam cleaning equipment, etc. 9. Inspect for equipment leaks daily. 10. Prevent equipment/vehicle leakage from entering storm drain system.
Reference	CASQA NS-8, NS-9, NS-10 Caltrans NS-08, NS-09, NS-10
Picture	

Type	Description
Spill Prevention and Control	1. Preventing, controlling, and cleaning up spills to reduce pollutant discharges from construction activities. 2. Spill prevention and control should occur at every construction project that uses petroleum products, asphalt, concrete, paints, solvents, soil stabilizers and binders, pesticides, herbicides, fertilizers, detergents, fuels, lubricants, or other products that could harm the environment. 3. Check waste disposal containers frequently for leaks and to make sure they are not overfilled. 4. Train employees and subcontractors proper spill prevention, control, and cleanup procedures. 5. Do not bury or wash spills away with water. 6. Spills shall be covered and protected from storm water run-on during rainfall. If the spill occurs during rain, cover the spill with tarps or other material to prevent contaminating runoff. 7. Minor water spillage or water overflow shall be contained and shall not be allowed to discharge into watercourses or drainage facilities. 8. Keep absorbent spill cleanup materials available; dispose of used materials properly. 9. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil. 10. Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. 11. For assistance in determining whether a waste is hazardous, contact the San Diego County Hazardous Materials Division at 858-505-6880. Additional agencies may need to be contacted in the event of a significant spill.
Reference	CASQA WM-4 Caltrans WM-04
Picture	

Type	Description
Concrete Waste Management	1. Containing and disposing of concrete waste to prevent it from being discharged to the storm drain system. 2. Concrete Waste Management should occur at every construction project where concrete or slurries containing PCC or AC is generated, placed, saw cut, cored, grinded, or demolished. 3. Inform all employees and subcontractors that washout from concrete trucks and concrete waste should be collected in concrete washout. 4. Wash out concrete equipment/trucks offsite or in a contained area, so there is no discharge into the underlying soil or onto surrounding areas. 5. Let concrete harden and dispose of as waste. Concrete washouts should be watertight and prevent any concrete waste from being able to discharge to the storm drain system or watercourses. 6. Avoid allowing concrete washout to become greater than 75% full. 7. Cover waste disposal containers securely at the end of every work day and prior to wet weather. 8. Concrete washout facilities shall be located a minimum of 50 ft from storm drain systems and watercourses. 9. Concrete demolition debris may be stored and disposed by following the stockpile management BMP and solid waste management BMP, respectively.
Reference	CASQA WM-8, WM-3 Caltrans WM-08
Picture	

Type	Description
Sanitary/ Septic and Liquid Waste Management	1. Sanitary/septic waste management practices are implemented on all construction sites that use temporary or portable sanitary/septic waste systems in order to minimize or eliminate the discharge of construction site sanitary/septic waste materials to the storm drain system or to watercourses. 2. Temporary sanitary facilities shall be located away from drainage facilities, watercourses, and from traffic circulation. 3. When subjected to high winds or risk of high winds, as determined by the Engineer, temporary sanitary facilities shall be secured to prevent overturning. 4. Wastewater shall not be discharged or buried within the street right-of-way. 5. Ensure that sanitary/septic facilities are maintained in good working order by a licensed service. Only reputable, licensed sanitary/septic waste haulers may be used. 6. Liquid waste discharges, such as drilling residue, drilling fluids, water-laden dredged material, and drilling mud, to the storm drain system or to watercourses as a result of the creation, collection, and disposal of non-hazardous is prohibited. 7. Liquid waste management is applicable to construction projects that generate any of the following non-hazardous liquid wastes: drilling slurries and fluids, grease and oil-free wastewater and rinse water, dredgings, and other non-storm water liquid discharges not permitted by separate permits. 8. Liquid wastes must be contained in a structurally sound and leak free container and controlled area, such a holding pit, sediment basin, or portable tank. Liquid waste discharges shall always be in a controlled environment. Use temporary dikes or berms to intercept flows and direct them to a containment area for capture. 9. If the liquid waste is sediment laden, use a sediment trap for capturing and treating the liquid waste stream, or capture in a containment device, vacuum and dispose. If necessary, further treat liquid wastes prior to disposal. Treatment may include, though is not limited to, sedimentation, filtration, and chemical neutralization.
Reference	CASQA WM-9, WM-10
Picture	

Table 5-3. Non-Storm Water Management:

Type	Description
Dewatering Operations	1. Managing and/or treating the discharge of non-storm water (groundwater, water used during pipeline flushing, incidental trench water, or other water used during construction activities) or accumulated storm water to prevent unauthorized discharge. The primary concern with accumulated storm water is sediment. 2. Non-storm water and accumulated storm water should be pumped to another area on the site for infiltration to eliminate the need to discharge. 3. If discharge is necessary, common methods for reducing sediment from a discharge are sediment traps / basins, weir tanks, dewatering tanks, filter bags / socks, media / cartridge filters. 4. A filtration device may be substituted for a desilting basin or sediment trap if the Contractor can demonstrate, to the Engineer's satisfaction, that the filtration device provides equivalent or greater removal of suspended solids than the basin. 5. Filter bags may be used for small-scale dewatering operations. 6. Effectively manage all dewatering run-on/run-off within the site, and all dewatering runoff that discharges from the site. 7. Divert run-on water from offsite away from all disturbed areas or otherwise ensure compliance. 8. Ensure that dewatering discharges do not cause erosion at the discharge point. 9. Projects must comply with all sampling requirements of applicable NPDES permits and associated numeric limits. 10. When dewatering, notify and obtain approval from the City prior to discharging into the street, gutter, or storm drain. If allowed to discharge to the street, the gutter from the discharge point to the inlet must be swept clean prior to discharge. 11. If the area has known contamination, testing is required prior to reusing or discharging the groundwater. Contaminated groundwater must be treated or hauled off-site for proper disposal.
Reference	CASQA NS-2 Caltrans NS-02
Picture	

Type	Description
Illicit Connection/ Illegal Discharge Detection and Reporting	Illicit connection/illegal discharge detection and reporting is applicable anytime an illicit discharge is discovered or illegally dumped material is found on the construction site. • Contractor shall inspect the site before beginning the job for evidence of illicit connections or illegal dumping or discharges, and shall promptly notify the Resident Engineer of such conditions. • Contractor shall observe site perimeter for evidence or potential of illicitly discharged or illegally dumped material that may enter the job site. • Contractor shall inspect the site regularly during construction for evidence of illicit connections or illegal dumping or discharges.
Reference	CASQA NS-6
Picture	

Table 5-4. Erosion Control

Type	Description
Seeding	1. Applying seed to a surface with the intention of achieving vegetation which can effectively protect soils from erosion while reducing runoff by encouraging infiltration / transpiration. 2. Scarifying or otherwise preparing soil surfaces prior to seed application increases the likelihood and effectiveness of vegetation establishment. 3. Seeding is effective for temporary and permanent stabilization of slopes, stock piles, and other disturbed soils. 4. Seeds can be combined with mulch and water then sprayed onto surfaces (also referred to as hydro seeding) for immediate erosion protection. 5. Without combining or covering seeds with mulch, seeds will be susceptible to erosion until vegetation has sufficiently established. 6. Supplemental irrigation may be required to establish vegetation.
Reference	CASQA EC-4 Caltrans SS-04
Picture	

Type	Description
Soil Binders	1. Spraying a liquid compound to disturbed soils to bind and stabilize the soil surface (forming a crust). 2. This process reduces the potential for wind and water erosion until vegetation is established. Examples include: guar, psyllium, starch, gypsum, pitch and rosin emulsion, polymers, and acrylates. 3. Soil binders are effective for temporary stabilization of slopes, stockpiles, and other disturbed areas. 4. Soil binders need time to cure and should not be applied less than 24 hours before predicted precipitation. 5. The specific soil binder selected depends on the type of soil. 6. Soil binders must be non-toxic and approved for project-specific application based on environment conditions. 7. Soil binders will need to be reapplied as needed based on the specific soil binder and visual inspection. 8. Soil binders are much less effective in areas that receive traffic.
Reference	CASQA EC-5 Caltrans SS-05
Picture	

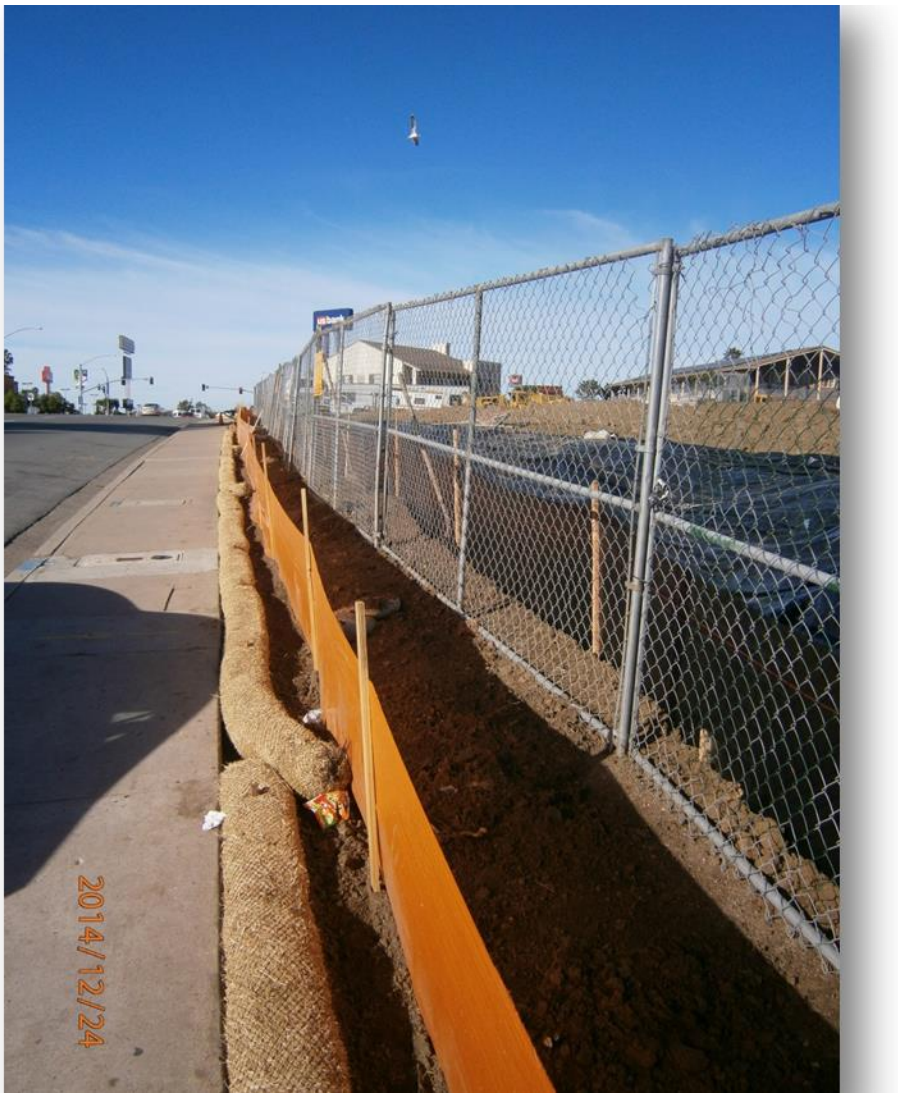
Type	Description
Mulching	Covering disturbed soils with a fibrous wood, straw, or similar material to protect the bare soil from rainfall impact erosion while reducing runoff by encouraging infiltration / evaporation. Mulching is effective for temporary stabilization of slopes, stockpiles, and other disturbed soils. Mulch materials can be combined with water then sprayed onto surfaces (also referred to as hydraulic mulch) for increased wind erosion protection. Typically, mulch must be reapplied every 6 to 12 months. Soil roughening prior to mulch application can increase its effectiveness.
Reference	CASQA EC-3, EC-6, EC-8 Caltrans SS-03, SS-06, SS-08
Picture	

Type	Description
Geotextiles and Mats	Covering disturbed soils with a natural or synthetic blanket or mat. This process greatly reduces the potential for wind and water erosion. Some rolls and mats physically hold the soil in place. Example include: geotextiles, plastic covers, rolled erosion control blankets / mats, straw / mulch blanket, coconut fiber blanket, and plastic netting. Geotextiles and mats are effective for temporary stabilization of steep slopes with high erosion potential, stockpiles, and channels that will be vegetated. Geotextiles and mats are more expensive than other erosion control BMPs. Materials should be selected considering CGP NOT requirements as applicable (e.g., plastic netting may not be allowable if blankets to remain in place after termination). Mats / blankets typically require an anchoring mechanism to hold them in place. Mats / blankets should allow water to flow on top of them and not below which would cause the soil to wash out.
Reference	CASQA EC-7 Caltrans SS-07
Picture	

Type	Description
Non-Vegetative Stabilization	Covering disturbed soils with a non-vegetative material to protect the bare soil from rainfall impact erosion while reducing runoff by encouraging infiltration / evaporation. Examples include: decomposed granite, gravel, and rock slope protection. Non-vegetative stabilization is effective for temporary and permanent stabilization of areas with heavy vehicular or pedestrian traffic or areas where a vegetative cover is infeasible. Non-vegetative stabilization is to be used in combination with other temporary or permanent erosion control and sediment control BMPs. Material should be selected based on the slope and use of the area.
Reference	CASQA EC-16 Caltrans Standard Specifications May 2006 Section 72-2.
Picture	

Type	Description
Soil Roughening	Mechanically roughening soil (track walking or imprinting) to prepare soil for additional BMPs or create small terraces to break up sheet flow. Soil roughening can be applied to slopes, stockpiles, basins, and other disturbed soil areas. Soil roughening can be very effective at controlling erosion and is required to be used in combination with additional erosion control and sediment control BMPs. A common implementation method is to drive heavy equipment with its treads parallel to the contours of the slope. For long slopes additional terracing may be required.
Reference	CASQA EC-15
Picture	

Table 5-5. Sediment Control

Type	Description
Perimeter Controls	Installing a barrier to prevent sediment discharges by controlling run-on and run-off around the perimeter of the construction site or limits of grading. Examples include: silt fence, fiber rolls, gravel bags, and straw bales. Perimeter controls are effective when implemented around the perimeter of the construction site or limits of grading. Perimeter controls are not effective when used in a concentrated flow path. Silt fence and fiber rolls require proper installation which includes trenching and staking. Typically, perimeter controls should be installed prior to grading and remain functional until final stabilization is achieved. Maintenance of perimeter controls must be performed as needed.
Reference	CASQA SE-1, SE-5, SE-6, SE-8, SE-14 Caltrans SC-01, SC-05, SC-06, SC-08
Picture	

Type	Description
Storm Drain Inlet Protection	1. Filtering of storm water before it enters a storm drain inlet with appropriate BMP's reduces the sediment discharge amount. 2. Storm drain inlet protection should be implemented at every storm drain inlet that receives runoff from active construction areas. 3. Inlet protection should be designed to consider ponding and traffic safety as applicable. 4. At low points and areas prone to flooding, inlet protection shall be removed until flooding is no longer in driving lanes; replace inlet protection immediate thereafter. 5. Other sediment controls such as check dams, gravel bags, and berms should be used upstream to reduce the amount of sediment that reaches the storm drain inlet protection. 6. After a storm, sediment that has settled must be cleaned up. 7. Remove all inlet protection devices when the inlet protection is no longer needed. 8. All gravel bags placed in the right-of-way shall be stamped /stenciled with the contractor company name.
Reference	CASQA SE-10, SE-14 Caltrans SC-10
Picture	

Type	Description
Sediment Trap / Basin	Prevent sediment from migrating offsite by installing and maintaining sediment Trap / Basins. Constructing a temporary containment area to detain runoff to allow for deposition of sediment prior to storm water discharge. Sediments traps / basins are effective when implemented within the downstream section of a construction site or at discharge points. Sediment traps can be effectively implemented throughout a large construction site. Sediment basins can efficiently be developed at locations where future post-construction basins will be utilized. Sediment traps should only be used for tributary drainage areas below 5 acres. Sediment basins should be used for tributary drainage areas between 5 and 75 acres. Sediment traps / basins can be large and may not be suitable for small construction projects. Sediment traps / basins should be sized by a Registered Civil Engineer to ensure they have sufficient capacity and be designed in accordance with CASQA Fact Sheet SE-2.
Reference	CASQA SE-2, SE-3 Caltrans SC-02, SC-03
Picture	

Type	Description
Tracking Control	1. Cleaning sediment from public or private streets and roadways to reduce the potential discharge to storm drain inlets or receiving waters. 2. Limit the points of entrance/exit, and speed to the construction site. 3. Route runoff from stabilized entrances/exits through an approved sediment-trapping device before discharge. 4. Properly grade each construction entrance/exit to prevent runoff from leaving the construction site. 5. Sweeping and vacuuming should immediately be implemented on all paved areas within and adjacent to construction sites. Do not sweep up any unknown substance or any object that may be potentially hazardous. Adjust brooms frequently; maximize efficiency of sweeping operations. 6. Street sweepers should be adjusted to eliminate or minimize the amount of runoff generated, especially while standing. Excess sweeper water is an unauthorized non-storm water discharge. 7. Inspect, maintain, and secure areas subject to sediment to prevent tracking on a daily basis. 8. Utilize methods that collect and remove sediment instead of methods that simply spread the sediment around. 9. Never hose down or power wash streets to clean up tracking. 10. Constructing a stabilized surface where sediment can be dislodged from vehicle and equipment tires before being tracked onto off-site paved roads. 11. Stabilized construction entrance / exits should be sufficiently implemented at every construction project to prevent erosion and sediment discharges from site. 12. Construction entrances / exits should be 50 feet or more in length. 13. The most common method is to place 3-6 inch rock at least 1 foot high over filter fabric. 14. Additional rock may need to be added as sediment accumulates. 15. Rumble plates can be added for additional sediment removal. 16. All employees, subcontractors, and suppliers shall be required to utilize the stabilized construction access.
Reference	CASQA TC-1, TC-2, SE-7 Caltrans TC-01, TC-02, SC-07
Picture	

Type	Description
Water Conservation Practices	Water conservation practices are activities that use water during the construction of a project in a manner that avoids causing erosion and/or the transport of pollutants offsite. It applies to all construction projects. Contractor must keep water equipment in good working condition by repairing water leaks promptly. Do not use water or toxic agents to clean construction areas. Direct non-contaminated construction water runoff to areas where it can soak into the ground. Apply water for dust control in accordance with the Caltrans Standard Specifications.
Reference	CASQA NS-1

Table 5-6. Run-on Run-off Control

Type	Description
Dikes, Swales, and Slope Drains	Grading and compacting soil or installing pipe to control / divert / direct runoff. Dikes, swales, and slope drains can be combined to safely convey runoff down a slope, direct runoff to a stabilized channel, reduce potential for flooding, direct runoff to sediment traps / basins. Dikes, swales, and pipes that are used to direct runoff must be properly sized based on the specific application. Typically, slope drains require energy dissipation. Monitor swales and dikes for erosion or accumulation of sediment or debris. Swale and dike slopes should be 2:1 or less. Use vegetation, geotextiles, or mats to stabilize swales. Temporary devices must be removed.
Reference	CASQA EC-9, EC-11 Caltrans SS-09, SS-11
Picture	

Type	Description
Energy Dissipation	Placing rock, riprap, or similar material to reduce erosion from concentrated, high velocity flows. Energy dissipation is effective at pipe outlets, channel linings, and transitions from stabilized to un-stabilized conveyances. Line the area with filter fabric prior to placing rock or riprap. Accumulated sediment may be difficult to remove from energy dissipation area. For pipe outfalls the size of the energy dissipation area will increase with flow rate and/or pipe size. Temporary devices must be removed.
Reference	CASQA EC-10 Caltrans SS-10
Picture	

Table 5-7. Active/Passive Sediment Treatment

Type	Description
Active Treatment System	As required by the CGP, Active Treatment Systems can reliably provide exceptional reductions of turbidity and associated pollutants and should be considered where turbid discharges to sediment and turbidity sensitive waters cannot be avoided using traditional BMPs. Additionally, it may be appropriate to use an Active Treatment System when site constraints inhibit the ability to construct a correctly sized sediment basin, when clay and/or highly erosive soils are present, or when the site has very steep or long slope lengths.
Reference	CASQA SE-11
Picture	
Passive Treatment	Passive Treatment Systems are practices that incorporate a chemical flocculant to reduce turbidity in construction site runoff but do not rely on computerized systems with pumps, filters and real-time controls. Projects with coverage under the CGP should review current requirements for passive treatment. Passive Treatment Systems may trigger numeric action levels.

5.1. Implementation

BMPs shall be designed and implemented to control off-site discharges and prevent sediment-laden water and other pollutants from impacting adjacent properties or entering the City's public storm system and/or adjacent or downstream rivers, streams, and sensitive areas. BMPs shall be designed and implemented so as not to adversely affect any public Right of Way. Down gradient sediment controls (e.g., perimeter controls, inlet protection or sediment traps) shall be implemented prior to the start of any earth disturbing activity.

5.2. Effectiveness

BMPs shall be routinely evaluated for their effectiveness. Self-inspection shall be used to determine the effectiveness of BMPs. Section 7.2 provides guidance on self-inspections. Additional BMPs shall be implemented as dictated by site conditions throughout all phases of the project. The contractor shall contact the SWPPP developer or WPCP preparer as applicable if BMPs are found to be ineffective. As described in Chapter 7, the city inspector may require additional measures depending on individual site conditions.

5.3. Maintenance

BMP measures stated in the SWPPP or WPCP, as applicable, shall be maintained in fully functional condition until no longer required for a completed phase of work or final stabilization has been achieved.

5.4. Project Close-Out

For projects with coverage under the CGP, projects must be closed in accordance with termination requirements in the CGP. The Engineer of Record shall submit a completed DS-563 certification of post construction BMPS to the City prior to close-out. For capital improvement projects, the form is filled out on the D-sheet as part of the as-built process. DS-563 can be found in Appendix D.

For all other projects, the project owner must verify the following:

1. All disturbed areas have been stabilized in accordance with the project's landscaping and paving plan.
2. All BMPs, construction materials, and construction wastes have been removed from the site.

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

Chapter 6

Permanent BMP Inspections During Construction

For Priority Development Projects, a City inspection is required to verify permanent BMPs have been installed in accordance with the Storm Water Quality Management Plan (See Part 1 of this standards manual for additional information). A copy of the Permanent Construction BMP Self Certification Form is provided in Appendix D.

The contractor is prohibited from making modifications to the permanent BMPs shown on the plans. To propose modifications:

- For private permit projects, the engineer of record is required to submit a revised SWQMP to the Development Services Department for approval, prior to installation.
- For capital improvement projects, the contractor is required to obtain approval from the city engineer responsible for the design of the plans.

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

Chapter 7

Compliance Verification and Enforcement

7.1. Agency Inspections

It is the responsibility of the site owners or contractors to abide by inspection requirements. Regardless of any inspections conducted by the City, property owners or contractors are required to prevent any construction-related materials, trash, wastes, spills or residues from entering a storm water conveyance system.

The City is responsible for performing periodic storm water compliance inspections of construction sites within its boundaries, and all project owners must allow City Inspectors onto the project site for these inspections. All construction sites are subject to site inspection by City staff in accordance with the City's Municipal Code, the Municipal Permit, City's policies and procedures and these standards.

City inspectors have the authority at any phase of construction to require additional BMPs if the SWPPP/WPCP is not protective of water quality. An example of a Municipal Inspector's checklist is provided in Appendix C.

Note: projects may also be subject to inspection by staff of the SWRCB, SDRWQCB, or U.S. EPA. Inspection procedures for those agencies are separate and carry different enforcement actions/mechanisms.

Construction site priority determines the frequency of inspections that will be conducted by City Staff and is described below. Risk Level and LUP Type determinations can be made using the Risk Determination Worksheet located in the CGP.

1. ASBS
    a. Projects located in the ASBS watershed. A map of the ASBS watershed can be found here <placeholder for ASBS map link>
2. High Priority
    a. Projects 1 acre or more determined to be Risk Level 2 or Risk Level 3 per the CGP and not located in the ASBS watershed.
    b. Projects 1 acre or more determined to be LUP Type 2 or LUP Type 3 per the CGP and not located in the ASBS watershed.
3. Medium Priority
    a. Projects 1 acre or more but not subject to an ASBS or high priority designation.
    b. Projects determined to be Risk Level 1 or LUP Type 1 per the CGP and not located in the ASBS watershed.

4. Low Priority
    a. Projects not subject to a medium or high priority designation and not located in the ASBS watershed.

Each construction site shall be inspected by City staff for compliance with storm water standards at the minimum frequencies shown in Table 7–1. Site-specific inspection frequencies are re-assessed periodically, especially when grading activities are planned during the rainy season. City inspection requirements are summarized in Appendix C. City staff may conduct additional inspections and modify site priority based on several factors including, but not limited to:

- Site conditions;
- Developer/Contractor previous violations and past performance;
- Rain events during the dry season
- Grading during rainy season; and
- Proximity to water bodies

Table 7-1. Minimum Inspection Frequency by City

Site Priority	Criteria	Wet Season	Dry Season
ASBS	Projects located in the ASBS watershed	Weekly	Quarterly
High	Projects 1 acre or more and Risk Level 2 or 3 and not in ASBS watershed OR Projects 1 acre or more and LUP Type 2 or 3 and not in ASBS watershed	Bi-weekly	Quarterly
Medium	Projects 1 acre or more and not in ASBS watershed or determined to by High priority OR Risk Level 1 or LUP Type 1 and not in ASBS watershed	Monthly	Quarterly
Low	Projects not subject to ASBS, High or Medium priority designation	Quarterly	As-Needed

The City Inspector may require additional measures depending on individual site conditions.

For projects subject to the CGP, the SDRWQCB is responsible for verifying and enforcing detailed requirements of the CGP. The City inspection staff will verify coverage under the CGP and enforce its Municipal Codes and standards related to prevention of pollutant discharges to the City's drainage system. The City inspection staff will work with SDRWQCB staff in assuring compliance at these sites. City staff will document observations of potential violations and will notify the SDRWQCB of the noncompliance in accordance with Order R9-2013-0001 if the noncompliance poses a threat to human or environmental health.

7.2. Self-Inspection

Storm water BMPs for construction sites are typically temporary measures that require frequent maintenance to maintain effectiveness. These facilities may require relocation, revision and re-installation, particularly as project grading progresses. Therefore, owner/contractor self-inspections are required. They shall be performed by the owner's/contractor's Qualified Contact Person specifically trained in storm water pollution prevention site management and storm water BMPs, including installation and maintenance of sediment and erosion control measures. Additional qualified persons may assist with the inspection activities under the direction of the Qualified Contact Person. For projects covered under the CGP the Qualified Contact Person must be a Qualified SWPPP Practitioner or someone trained by and working under the direction of the Qualified SWPPP Practitioner. A Qualified Contact Person is required for all construction sites year round, no matter the season.

The four primary purposes of self-inspections conducted by owners and contractors include the following:

- To ensure that the owner/contractor takes full responsibility for managing storm water pollution caused by the project site's construction activities.
- To ensure that storm water BMPs are properly documented, implemented, and functioning effectively.
- To identify maintenance (e.g., sediment removal) and repair needs.
- To ensure that project proponents implement site-specific storm water pollution prevention plans or water pollution control plans.

A self-inspection checklist, noting date, time, conditions and inspection date, must be kept on-site and made available for inspection upon request. Additional self-inspection requirements may apply for projects subject to CGP requirements.

Self-inspections must be performed by a Qualified Contact Person according to the following schedule:

- Daily forecasting at all times
- At 24-hour intervals during extended rainfall events
- Daily evaluations as grading operations are being conducted during the rainy season
- Weekly (every 7 days) evaluations in the dry season during grading operations.

7.3. Enforcement

The San Diego Municipal Code establishes Storm Water Ordinances that apply to construction projects. All project owners and their contractors (as applicable) must meet the requirements of all applicable codes prior to, during, and after construction. The purpose of these ordinances is control the discharge of urban pollutants, improve water quality, and comply with NPDES permit requirements.

The City is responsible for storm water quality compliance from City facilities and capital projects and the City enforces its codes and ordinances to maintain compliance with the San Diego Regional MS4 permit. For construction of City capital projects where a contractor performs work, the City is the Legally Responsible Party for CGP projects over 1 acre. However, for both CGP and non-CGP projects implemented by a contractor, the contractor is responsible to perform work in accordance with the project SWPPP or WPCP to maintain compliance with NPDES regulations. The City has the ability to issue a stop work order for non-compliant work and penalties can be assessed by the City to the contractor and any penalties leveraged against the City by regulators can be passed to the contractor in accordance with enforcement authority established in its codes, ordinances and by contract documents.

Storm water requirements are contained in the following chapters of the San Diego Municipal Code (http://www.sandiego.gov/city-clerk/officialdocs/legisdocs/muni.shtml):

- Chapter 4 Article 3 Division 3 – Storm Water Management and Discharge Control
- Chapter 14 Article 2 Division 1 – Grading Regulations
- Chapter 14 Article 2 Division 2 – Drainage Regulations

The City has the legal authority to implement the requirements of the Municipal Permit (through the enforcement of its Codes and Ordinances) as stated in the "Certification of Adequate Legal Authority" in Appendix XXIV (August 20, 2007 letter from Michael J. Aguirre, City Attorney, to Honorable Susan Ritschel, Chair, Regional Water Quality Control Board, San Diego Region).

Section §43.0304 *Illicit Discharges* of the City of San Diego Municipal Code states, "(a) Except as provided in San Diego Municipal Code section 43.0305, it is unlawful for any person to cause a non-storm water discharge to the MS4. (b) It is unlawful for any person to cause either individually or jointly any discharge into or from the MS4[1] that results in or contributes to a violation of the MS4 permit." **In effect, all construction sites (no matter the size) must have measures in place at all times during construction to control site runoff, sediment to inlets or ditches, mud tracking on pavement.** Even those sites not required to submit permit applications must comply with the City's Storm Water Management Ordinance. City of San Diego Inspectors are charged with enforcement of the storm water regulations and will investigate complaints or inspect any construction site for compliance. A Correction Notice or Notice of Violation (NOV) may be issued on a first visit. The NOV is not a citation but a notice to the responsible party at that site that compliance with the storm water quality regulations is required or, in accordance with §43.0311, the enforcement official may seek injunctive relief, civil penalties, or pursue any administrative remedy provided in the San Diego Municipal Code. These enforcement actions could include: municipal citations, administrative civil penalties up to $10,000 per day per violation, and/or No Further Inspection, Hold and Stop Work Notices. More information on these requirements is available online at:

[1]Municipal separate storm sewer system (MS4) means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) owned or operated by the City; (ii) designated or used for collecting or conveying storm water; (iii) which is not a combined sewer; and (iv) which is not part of the Publicly Owned Treatment Works as defined at 40 Code of Federal Regulations section 122.26.

- Section 43.03 of the City of San Diego Municipal Code (http://docs.sandiego.gov/municode/MuniCodeChapter04/Ch04Art03Division03.pdf)
- Storm Water Management and Discharge Control (http://www.sandiego.gov/stormwater/regulations/index.shtml); and
- Storm Water Division Regulations; and Think Blue (http://www.sandiego.gov/thinkblue/)

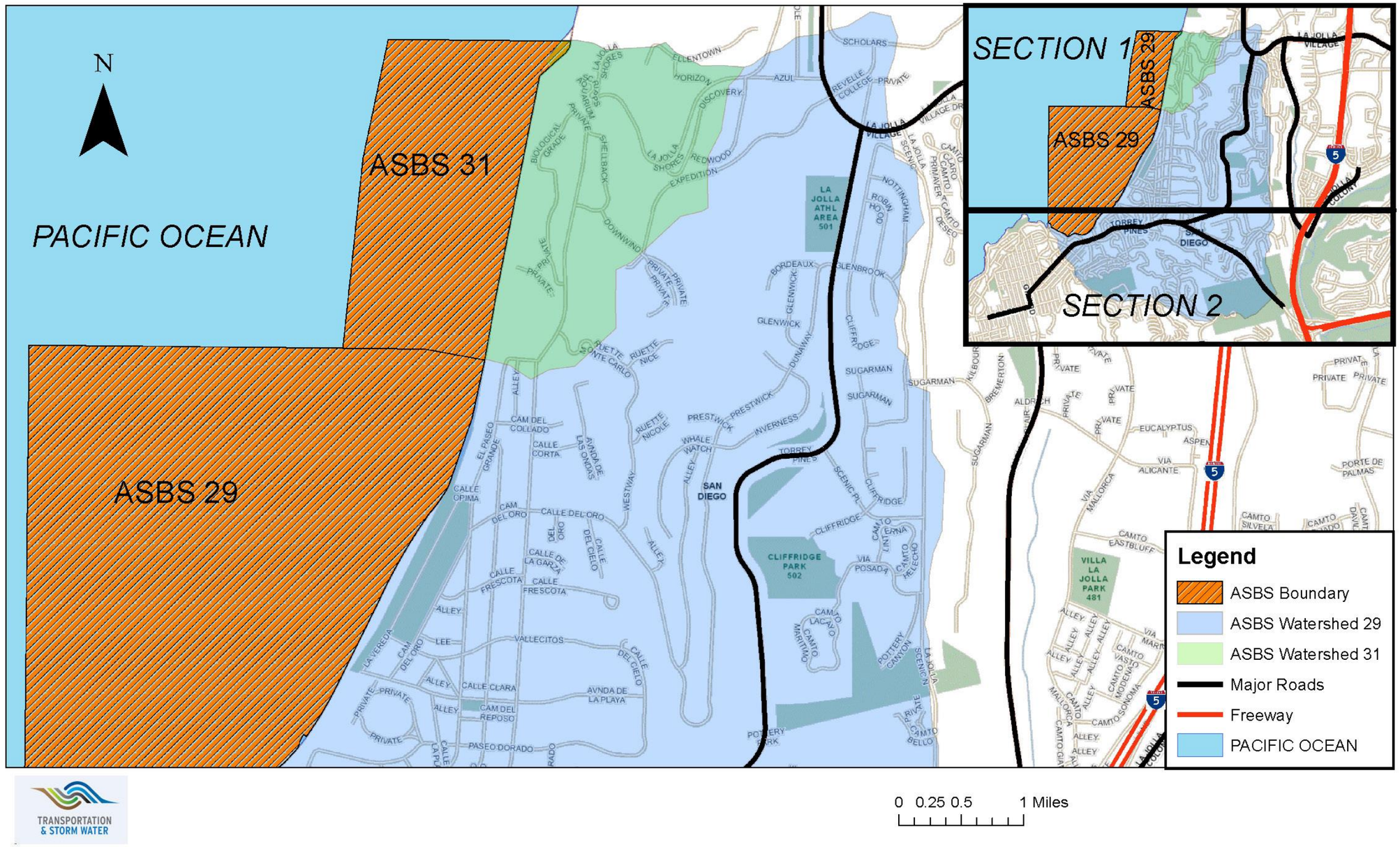
THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

Appendix A

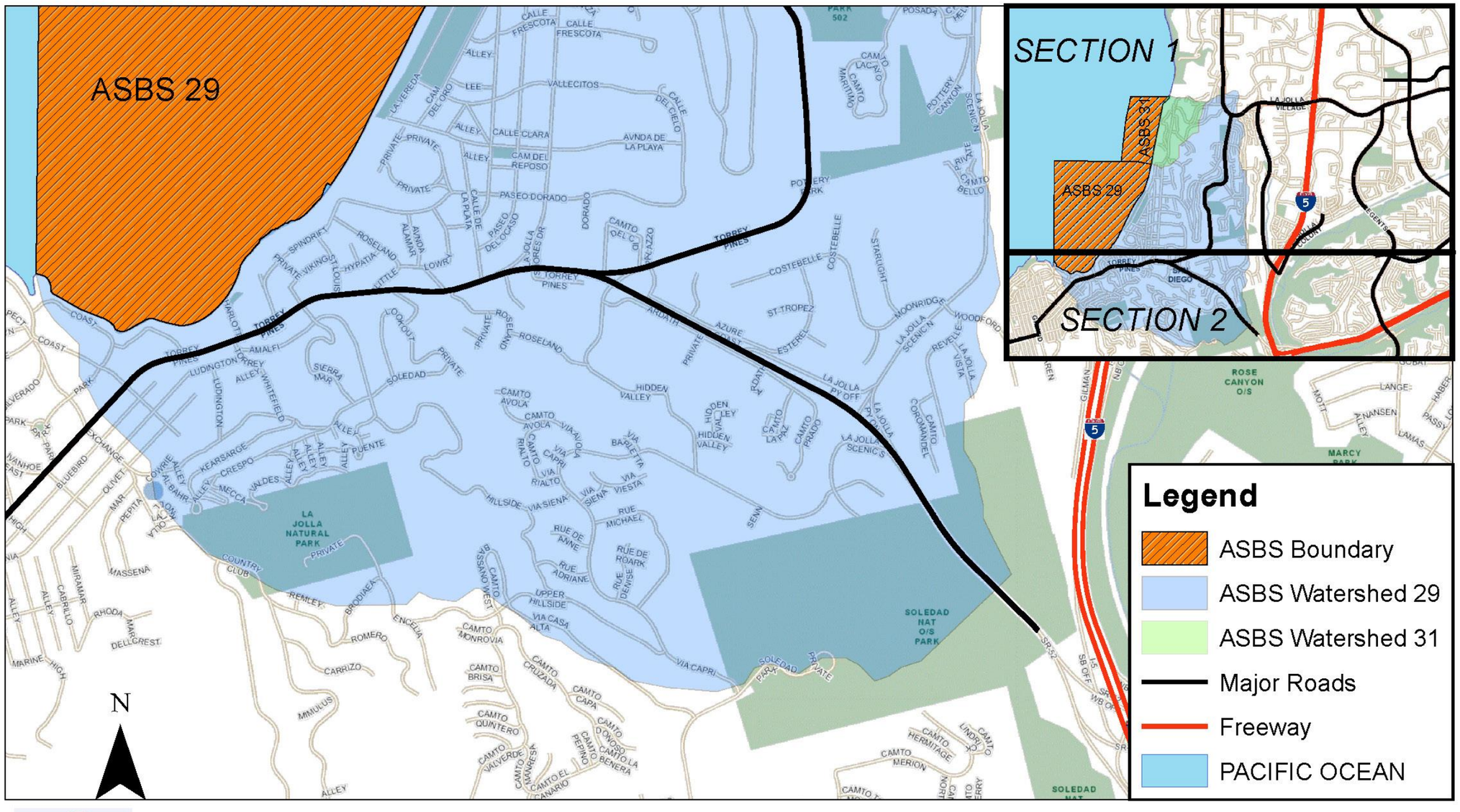
ASBS Maps

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

ASBS WATERSHED - SECTION 1



ASBS WATERSHED - SECTION 2



Appendix B

Best Management Practices

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

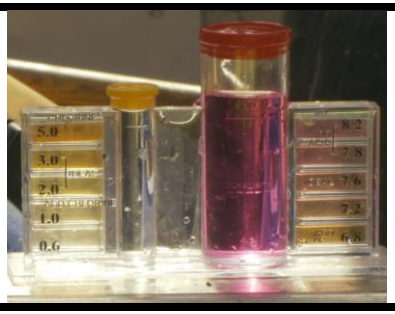
Construction Storm Water Permit Violations

Frequent	Compliant		Non-Compliant	
Erosion & Source Control	Provide mats, mulches, blankets, and other BMPs to temporarily stabilize and permanently establish vegetation on disturbed soils.		Fiber Rolls are not considered erosion control and must be in combination with soil stabilization.	
Sediment Control	Install silt fences, gravel bags, and other BMPs to intercept runoff and settle out sediment while allowing storm water to run through.		Inadequate and poorly maintained perimeter controls lead to the transportation of sediment off site	
Inlet Protection	Use inlet protection BMPs to capture sediment before it enters the storm drain.		Missing or inadequate inlet protection allows sediment to enter the storm drain and/or downstream water bodies.	

Frequent	Construction Storm Water Permit Violations	
	Compliant	**Non-Compliant**
Vehicle Tracking	Provide rock pads, shaker plates, and other tracking BMPs to knock sediment off tires before it is tracked offsite. Sweepers reduce the dust further. 	Vehicles track sediment onto public roads. Paved surfaces are not swept daily and BMPs are not maintained, nor monitored. 
Good Housekeeping	Prevent storm water pollution with good housekeeping practices, proper concrete washouts, materials storage and waste disposal. 	Poor containment of trash, hazardous material spills, and vehicle leakage. 
Stockpile Protection	In active stockpiles must be properly covered with adequate anchoring system (i.e. gravel bags or staked fiber rolls). 	Remove/dispose of construction debris immediately or provide proper protection. 

Linear Construction Storm Water Permit Violations

Frequent

	Compliant		Non-Compliant	
Sediment and Dust Control	Final sweeping is performed as the last step of daily operation after the trenches have been backfilled and covered with cold mix, or permanent trench cap.		Street sweeping shall be used to remove tracked soils, sand & other debris from paved areas. Vacuuming shall be used to remove slurry & cuttings from paved areas. All streets, gutters & sidewalks shall be cleaned daily.	
Hydrostatic Testing and Potable Water Discharges	Testing for chlorine and pH is required. An appropriate testing kit must be used, and results must be documented. Flushing should be controlled & monitored by the contractor at all times.		Non-visible pollutants such as an exceedance of chlorine & pH is prohibited. Testing the chlorine & pH with a pool kit is not allowed. Clean downstream gutters prior to testing.	
Inlet Protection	Use inlet protection BMPs to capture sediment & other pollutants before they enter the storm drain. Prior to rain events, remove inlet protection BMP in flood prone areas. Maintain & replace as necessary.		Lack of inlet protection allows pollutants into storm drains and/or water bodies. Install check dams upstream of inlets to further reduce debris load.	

Frequent

Linear Construction Storm Water Permit Violations

	Compliant		Non-Compliant	
Stockpile Protection	All stockpiles must be properly covered and bermed at the end of each working day and prior to rain events. Keep gutters clear.		All active and inactive material stockpiles shall be securely covered with temporary perimeter barriers.	
Good Housekeeping	Use and properly maintain concrete washouts, materials/waste storage and disposal. Keep Port-a-Pottys and washouts as far away from inlets as possible.		Use secondary containment, such as drip pans or bermed plastics for containment of trash, hazardous materials, and vehicle leakage.	
Source Control prior to rain	Prevent runoff pollution by covering exposed trenches, properly anchoring covers & using run-on controls to slow flows (i.e. Gravel bag Chevrons).		Work site perimeter, inlets and material stockpiles to be evaluated prior to rain events and daily during extended rains and after.	

Appendix C

Municipal Inspector Checklists

City inspection of construction sites for storm water compliance shall include, but not be limited to the following:

1. Assessment of BMP effectiveness including implementation of an effective combination of erosion, sediment and non-storm water BMPs to meet the City's minimum water quality protection requirements and prevent the discharge of pollutants into storm water and receiving waters;
2. Check for coverage under the CGP (Notice of Intent and/or Waste Discharge Identification No.) during initial inspection;
3. Ensure compliance with the City's applicable ordinances, permits and other site specific requirements;
4. Visual observations for non-storm water discharges, potential illicit connections and potential discharge of pollutants in storm water runoff;
5. Ensure proper implementation of plans and specifications;
6. Education and outreach on storm water pollution prevention as needed;
7. Ensure that the project proponents implement their storm water management on a year-round basis; and
8. Creation of a written or electronic inspection report.

City inspection staff will utilize the following framework when conducting an inspection:

1. Review the site erosion control and BMP implementation plans and determine whether they are being properly implemented;
2. Determine if BMPs are being used in accordance with the intent of all laws and approved plans;
3. Determine whether BMPs are effectively being implemented and maintained properly; and
4. Determine whether the owner/developer/contractor is making appropriate adjustments when ineffective BMPs are found.

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

STORM WATER CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPs) AND DISCHARGE ENFORCEMENT RESPONSIBILITIES				
ROLES	**INSPECTION & ENFORCEMENT OF CONSTRUCTION BMPs**		**ENFORCEMENT FOR SW DISCHARGE***	**ENFORCEMENT OF MUNICIPAL CODE**
PERMIT TYPE	**DSD – Building Construction & Safety Division**	**ECP – Field Engineering Division**	**T & SW – Storm Water Division Code Enforcement**	**DSD – Neighborhood Code Compliance Division**
Capital Improvement Project (CIP)	None	YES	DISCHARGE ONLY*	None
Construction Permits (Grading or Right of Way)	None	YES	DISCHARGE ONLY*	None
Building Permit	YES	None	DISCHARGE ONLY*	None
Demolition Permit	YES	None	DISCHARGE ONLY*	None
Small Construction Not Requiring Any Permit	None	None	DISCHARGE ONLY*	None
Abandoned Sites with Active Permits	YES for Building Permits and refer to DSD Engineering Section	YES for Construction Permits and refer to DSD Engineering Section	DISCHARGE ONLY*	None
Abandoned Sites with Expired Permits	None	None	YES**	YES
Illegal Construction (No Permit Obtained)	None	None	DISCHARGE ONLY*	YES
*Report discharges to Think Blue Hotline at 619-235-1000. **Storm Water Division is responsible for enforcing Minimum BMPs per respective land use.				

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

The City of San Diego

BMP NOTICE

STORM WATER POLLUTION PREVENTION INSPECTION
Public Works – Engineering and Capital Projects
Field Engineering (858) 627-3200

DATE: _____
NAME: _____
WEATHER: _____
NOTICE: _____ PRIORITY: _____

PROJECT: _____
CONTRACTOR: _____ PHONE: _____
SITE CONTACT: _____ PHONE: _____
OWNER: _____
PERMIT NUMBER: _____ WORK ORDER: _____
ADDRESS: _____
LOCATION: _____
SITE STATUS: _____

CORRECTIVE ACTIONS:

- ☐ Existing BMP adequately maintained
- ☐ BMP inadequate, adjustments needed
- ☐ Maintain SWPP Document
- ☐ Improve Erosion Control BMP
- ☐ Improve Sediment Control BMP's
- ☐ Improve Perimeter Control BMP's
- ☐ Improve Materials Handling
- ☐ Maintain Street Sweeping
- ☐ Maintain Construction Access

COMMENTS:

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

Appendix D

Templates and Forms

- WPCP Template
- Linear Utility (Group Job) Template
- Minor WPCP Template
- Demolition Template
- Permanent BMP Construction Self Certification Form DS-563

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

Water Pollution Control Plan

for Project:

Located at:

Address:

WPCP Prepared by:

Company:

Individual:

Address:

Preparation Date:

Prepared for:

City of San Diego

Department:

Address:

TABLE OF CONTENTS

APPENDICES

A SITE MAP (TO BE COMPLETED BY APPLICANT)
B CERTIFICATION
C CITY OF SAN DIEGO FORM DS-560, STORM WATER REQUIREMENTS APPLICABILITY CHECKLIST
D RELEVANT BMP FACT SHEETS FROM CASQA OR CALTRANS

LIST OF TABLES

1.0 PROJECT INFORMATION

1.1 INTRODUCTION

The San Diego Regional Water Quality Control Board (RWQCB) adopted Order No. R9-2013-0001, *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region* on May 8, 2013 (MS4 Permit). The MS4 Permit requires the City of San Diego (City) to necessitate implementing effective best management practices (BMPs) to reduce discharges of pollutants in storm water from construction sites to the maximum extent practicable and effectively prohibit non-storm water discharges from construction sites into the MS4. These BMPs must be site specific, seasonally appropriate, and construction phase appropriate. BMPs must be implemented at each construction site year-round. Dry season BMP implementation must plan for and address unseasonal rain events that may occur during the dry season (May 1 through September 30).

Construction projects that result in disturbance of one acre or more of total land area or are part of a larger common plan of development or sale must obtain coverage under the State Water Resource Control Board's (SWRCB's) *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWQ* NPDES No. CAS000002 (Construction General Permit). The Construction General Permit requires developing and implementing a Storm Water Pollution Prevention Plan (SWPPP).

A Water Pollution Control Plan (WPCP) must be developed and implemented for construction projects that:

- Result in disturbance of less than one acre of total land area and are not part of a larger common plan of development or sale; and

- Have *Grading*, *Public Right-of-Way*, and *Demolition/Removal* approval types (see the City's Form DS-560) or require submittal for a Drainage and Grades review.

This template may be utilized to meet the City's WPCP requirement.

A Minor Water Pollution Control Plan (MWPCP) (see the City's Form DS-570) may be developed and implemented for projects that disturb less than 5,000 square feet and have less than a 5 foot elevation differential over the entire project area. Some construction project types, such as interior plumbing, electrical and mechanical work, may be considered exempt. The City's Form DS-560, *Storm Water Requirements Applicability Checklist* can be used to determine the storm water requirements for the project (see Appendix C).

NOTE: It is the responsibility of the project owner to ensure that all construction activities comply with local and state regulations, including San Diego Municipal Code Sect. 43.03. The guidance and template provided here is for the applicant's convenience and do not alleviate responsibility on part of the project owner to determine the appropriate level of BMP planning and implementation to prevent pollutant discharges.

The WPCP developer should complete the text and check boxes. Additional completion information is provided in red font.

1.2 OBJECTIVES

The main objectives of the WPCP are:

- To identify all pollutant sources which may affect the quality of storm water discharges from the site associated with construction activities;

- To identify non-storm water discharges and eliminate unauthorized non-storm water discharges, illicit connections, and dumping;

- To establish, construct, implement, and maintain best management practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non–storm water discharges from the construction site; and

- To develop an inspection program to determine the effectiveness of site BMPs.

1.3 GENERAL PROJECT INFORMATION

This section provides project information relevant to the development of this WPCP.

1.3.1 Project Location

The project location and identifying information are provided in Table 1.

[Complete Table 1.]

Table 2 Project Location and Contact Information

Contact Information			
Applicant Name: **For Private use Owner; For CIP use Asset Department Name**	**Contact Name**:		
Mailing Address:	**City**:	**State**:	**Zip Code:**
Telephone No.:	**Email address**:		
Project Information			
Address:	**City:**	**State:**	**Zip Code:**
APN No.:	**Permit Application No.For CIP use WBS#**		
Contractor Company Name:		**Contact Name:**	
Address:	**City**:	**State: CA**	**Zip Code:**
Telephone No.:	**Email address**:		
Qualified Contact Person (QCP):			
Telephone No.:	**Email address**:		

1.3.2 Project Description

The project description is provided in Table 2.

[Complete Table 2.]

Table 3 Project Description

Project Scope:	
Land Use Type:	
Watershed:	
Receiving Water Body:	
303(d) Listed Impairments	
Soil Type:	
Slope Inclination:	
Slope Aspect:	
Fill Material and Borrow Area Location(s):	
Storm Water Conveyance:	
Existing and Planned Storm Water Features:	
Sources of Run-on to the Site:	
Discharge Locations:	
Other Site Features:	

1.3.3 Project Size

The size of the project and disturbed area is described in Table 3, as well as the elevation differential over the project area.

[Complete Table 3.]

Table 4 Project Size

Total Project Size (in ac):	**Estimated Amount of Disturbed Area (ac):**
Estimated Elevation Differential over Entire Project Area (ft):	

1.3.4 Construction Schedule

The construction schedule is provided in Table 4, including an indication of activities to be performed in the rainy season and the phase of construction (Grading and Land Development, Streets and Utilities, Vertical Construction, or Post-Construction). The rainy season is October 1 through April 30 of each year. The schedule shall include dates for installation and removal of construction BMPs. In addition, the schedule shall identify periods of inactivity exceeding 14 days (Slope stabilization is required on all inactive slopes during the rainy season).

[Complete Table 4.]

Table 5 Construction Schedule

Construction Activity	Start Date	Finish Date	Rainy Season (Y/N)	Phase of Construction

1.3.5 Site Priority

Select the site priority identified on the City's Form DS-560 (see Appendix C) in Table 5.

Table 6 Site Priority

Site Priority	Check One
ASBS: Projects located in the ASBS watershed.	☐
High: Projects 1 acre or more determined to be Risk Level 2 or Risk Level 3 per the Construction General Permit and not located in the ASBS watershed; Projects 1 acre or more determined to be LUP Type 2 or LIP Type 3 per the Construction General Permit and not located in the ASBS watershed.	☐
Medium: Projects 1 acre or more but not subject to an ASBS or high priority designation.	☐
Low: Projects requiring a WPCP, but not subject to an ASBS, medium, or high priority designation.	☐
If "High", is the project covered under an Erosivity Waiver by the RWQCB?	Yes ☐ No ☐
If "Yes", provide WDID# **and include a copy of the NOI in the Appendix.**	

1.3.6 Site Features, Construction Activities, and Associated Potential Pollutants

Potential pollutant sources may stem from construction materials used on-site that are not designed to be outdoors and exposed to environmental conditions (i.e., are used in the process of construction, but are not the final product). Construction materials have the potential to come into contact with storm water when stored or used outdoors on the site.

[The questions in Table 6 are designed to assist with selecting appropriate BMPs for the site; please check "Yes" or "No" and provide additional information if needed.]

Table 7 Determination of Site Features, Activities, and Potential Pollutants

No.	Site Feature Question	No	Yes	If Yes, Select BMPs from Table:
1	Is there run-on to the site from surrounding areas?	☐	☐	14
2	Are storm drain inlets located within the project boundary and/or will the site discharge storm water to nearby storm drain inlets?	☐	☐	12 and 14
3	Will concentrated flows and/or large accumulations of water occur on-site?	☐	☐	14
4	Is the site adjacent to a waterway or sensitive habitat (i.e., wetland, vernal pool, etc.)? Note: additional permitting may be required.	☐	☐	11
5	Is the site likely to discharge to impaired or sensitive water bodies (tributary to a Clean Water Act Section 303[d]-listed/impaired water body segments), adjacent to or discharging directly to coastal lagoons, or other receiving waters in Environmentally Sensitive Areas (as defined in Attachment C of the San Diego Municipal Storm Water Permit, Order No R9-2013-0001)?	☐	☐	See *Storm Water Standards*
6	Will the site have exposed/disturbed slopes greater than 5 percent?	☐	☐	7, 8, 9, 10, and 12

Table 6 (Continued) Determination of Site Features, Activities, and Potential Pollutants

No.	Site Activity Question	No	Yes	If *Yes*, Select BMPs from Table:	Potential Pollutant Sources (add, if not listed)
7	Will there be soil-disturbance activities (grading, stockpiling, trenching, etc.)?	☐	☐	7, 8, 9, 10, 12, and 13	Sediment
8	Will there be asphalt paving, cutting, and/or patching?	☐	☐	17	Asphalt, aggregate
9	Will there be stockpiling (i.e., soil, concrete, solid waste, etc.) for over 24 hours?	☐	☐	7 and 16	Stockpiled material, *please specify:*
10	Will there be slurries from concrete or mortar mixing, coring, or saw cutting?	☐	☐	15, 16, and 17	Concrete materials, aggregate, slurry water
11	Will wash water or liquid waste be generated from this project?	☐	☐	15, 16, and 19	Liquid waste, *please specify:*
12	Will there be dewatering operations?	☐	☐	19	Dewatering water, *please specify:*
13	Will there be on-site storage of construction materials such as mortar mix, raw landscaping and soil stabilization materials, treated lumber, rebar, and plated metal fencing materials?	☐	☐	17	Construction materials, *please specify:*
14	Will trash or solid wastes (including landscaping wastes) be generated from this project?	☐	☐	16	Solid waste, *please specify:*
15	Will hazardous materials or wastes, including paint, be stored or handled on-site?	☐	☐	16	Hazardous material, *please specify:*
16	Will construction equipment and/or vehicles be stored, fueled, maintained, or washed on- site?	☐	☐	15, 18, and 19	Engine fluids, fuels, oil, grease, wash water
17	Will portable sanitary facilities (“Porta-potties”) be used on the site?	☐	☐	15 and 16	Sanitary waste
18	Are underlying soils potentially contaminated?	☐	☐	16	Contaminated soil

Table 6 (Continued) Determination of Site Features, Activities, and Potential Pollutants

No.	Site Activity Question	No	Yes	If *Yes*, Select BMPs from Table:	Potential Pollutant Sources (add, if not listed)
19	Will dust (i.e., from grading, driving on unpaved roads, etc.) or particulates (i.e., from sandblasting, concrete cutting, painting, etc.) be generated from this project?	☐	☐	20	Sediment, particulate construction materials, *please specify:*
20	Other activities will be performed that are not described above?	☐	☐	Select applicable BMPs from Tables 7-20	*Please specify:*
21	Final stabilization of the site is required.		☐	21	Not applicable

1.4 RESPONSIBILITY FOR WPCP DEVELOPMENT AND IMPLEMENTATION

This WPCP shall be completed and certified by a Qualified Contact Person (QCP). A QCP will also be responsible for amending this WPCP. The QCP is responsible for WPCP implementation and self-inspections (see Section 3.0).

1.5 AVAILABILITY

This WPCP shall remain on-site at all times during business hours and readily available for review by the U.S. Environmental Protection Agency (EPA), SWRCB, San Diego RWQCB, City of San Diego representatives, and all operating personnel for the duration of the project. Authorized representatives from the U.S. EPA, SWRCB, San Diego RWQCB, and the City of San Diego shall be permitted entry to the site for reviewing this WPCP, inspecting the site, and/or collecting storm water samples.

1.6 AMENDMENTS

This WPCP shall be amended whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater, or to the City's MS4 or are deemed necessary by the Resident Engineer or Building Inspector.

1.7 NON-STORM WATER DISCHARGES

Discharging any material other than storm water to Waters of the State or to the City's MS4 is prohibited. However, certain exceptions apply.

According to the SWRCB ASBS Resolution No. 2012-0031, existing storm water discharges into an ASBS are allowed only under the following conditions:

4. The discharges are authorized by an NPDES permit issued by the SWRCB or Regional Water Board;
5. The discharges comply with all of the applicable terms, prohibitions, and special conditions contained in these Special Protections; and
6. The discharges:
    a. Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
    b. Are designed to prevent soil erosion;
    c. Occur only during wet weather; and
    d. Are composed of only storm water runoff.

Furthermore, the following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

1. Discharges associated with emergency firefighting operations.
2. Foundation and footing drains.
3. Water from crawl space or basement pumps.
4. Hillside dewatering.
5. Naturally occurring groundwater seepage via a storm drain.
6. Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

See the City's Storm Water Standards – Construction BMP Standards to determine applicable non-storm water regulations.

1.8 SITE MAP DEVELOPMENT

A Site Map must be developed and included as Appendix A of this WPCP. The site map should be neat and legible. Several sheets may be used to illustrate the phasing of BMP implementation as construction progresses over time. When two or more sheets are used to illustrate the plan view, an index sheet is required. The Site Map must include all of the following, where applicable:

- Legend, north arrow, and scale of the drawing
- The site boundary and limits of construction;
- Key site features such as steep slopes, highly erodible soils, etc., including State and federal wetlands, if any;
- Storm water conveyance features including, but not limited to all streams and drainage ways delineated, all storm drain inlets and outlets, curb and gutter, swales and channels.
- Anticipated discharge points for construction wastewater (i.e. stormwater, groundwater, and construction wastewater such as dewatering byproducts);
- Drainage areas and direction of flow
- Location of nearby water bodies (including Clean Water Act Section 303(d) List of Impaired Segments in the site's vicinity)
- Location of entrance/exits to the project area
- Areas of soil disturbance and potential pollutant sources;
- Material, stockpile, and waste storage areas(e.g., trash, soil, fuel, construction materials);
- Vehicle and equipment fueling, wash and maintenance areas;
- Locations of portable sanitary facilities;
- Locations where underlying soil is potentially contaminated; and
- Locations of all BMP implementation areas (types of erosion and sediment controls, as well as dewatering and soil stabilization controls, where applicable).
- Location of building and activity areas (e.g., fueling islands, garages, waste container area, wash racks, hazardous material storage areas)

[Develop a Site Map that includes all the features listed above and include as Appendix A. Update as necessary.]

2.0 BEST MANAGEMENT PRACTICES

The BMPs listed in this WPCP will be implemented on a year-round basis throughout the project duration, not solely during seasons in which the probability of a rain event is high. All areas not in use for 14 days will be stabilized (i.e., exposed soil will be covered). Sufficient BMP materials will be maintained on-site to allow implementation with this WPCP and emergency installation in the event of a breech. Locations where BMPs will be implemented are to be shown on the Site Map in Appendix A.

BMPs must be implemented on construction sites to reduce pollution to the maximum extent practicable. The City's *Storm Water Standards* outlines the requirements for construction storm water BMPs. The following BMP categories must be addressed:

- Erosion control;
- Sediment control;
- Run-on and site storm water management;
- Materials management;
- Non-storm water management;
- Particulate and dust control; and
- Final stabilization.

BMPs from each of the above categories must be used together as a system in order to prevent potential pollutant discharges. Each category is generally described and applicable BMPs are listed in the following sections. Projects containing site features identified with a "yes" answer in Table 6 must utilize BMPs from the applicable BMP table(s). If no BMPs from a specific table are selected, an explanation must be provided. For BMP implementation details, refer to:

- California Stormwater Quality Association (CASQA) *Construction BMP Handbook Portal*, 2010, online at: http://www.casqa.org/LeftNavigation/ConstructionBMPHandbookPortalSWPPPTemplate/tabid/200/Default.aspx, (subscription required); and
- California Department of Transportation (Caltrans) *Construction Site BMP Handbook*, 2003, online at: http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf.

2.1 EROSION CONTROL

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles and many have the secondary effect of increasing water infiltration. Erosion controls are provided in Table 7–9.

Erosion controls must be used in conjunction with sediment controls. Apply erosion controls as soon as grading and/or excavation are completed for any portion of the site, but no longer than 14 days after activity has ceased. Prior to and during rain events, slopes must be stabilized and erosion control BMPs must be maintained. Loose construction and landscaping materials, including stockpiles, must be covered and bermed at the end of each work day. Plastic sheeting for erosion control should be avoided for long term use, except to cover stockpiles prior to rain events. Exposed areas shall be inspected frequently and if signs of erosion are observed, additional erosion control BMPs shall be implemented.

Scheduling/phasing construction is required on all sites to minimize soil exposure and soil disturbance during the rainy season. When planning grading activities, minimize slope length and gradient to the greatest extent possible to avoid erosion and to promote vegetation establishment. Ensure slopes are set back from the property boundary whenever possible. Inactive stockpiles should be covered and bermed (with jute netting and fiber rolls or similar).

[Select from the general erosion control BMPs from Table 7].

Table 8 General Erosion Control BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Scheduling/Phasing Construction	EC-1	SS-1	☐
Minimize Slope Length and Gradient	-	-	☐
Manage Soil Stockpiles	WM-3	WM-3	☐
If no BMPs were selected, explain the rationale:			
Describe any additional erosion control BMPs to be implemented:			
Describe where erosion and sediment control BMPs will be implemented/installed:			

2.1.1 Physical Stabilization

Physical stabilization consists of materials other than vegetation used to temporarily or permanently stabilize exposed areas. Materials used for physical stabilization should be determined based on site conditions. For example, geotextiles are generally installed where runoff is concentrated and are left in place long term. Jute erosion control blankets, hydraulic mulch, and soil binders are usually installed as temporary BMPs. Permanent physical stabilization may be necessary where vegetation cannot establish, such as on steep slopes, where topsoil has been removed, or where there is lack of water. Projects likely to discharge to Environmentally Sensitive Areas shall use high performance erosion control methods, such as bonded fiber matrix or anchored erosion control blankets on all exposed slopes.

Erosion control blankets, which can consist of jute, straw, coconut, and/or wood fiber, are common BMPs for stabilizing slopes. The type of blanket used usually depends on the longevity needed (see BMP references for details). Blankets need to be staked into the soil as specified by the manufacturer, keyed in on the top of the slope, and must have good soil contact to be effective (i.e., generally not suitable for rocky sites). Turf reinforced mats are installed in swales and ditches and are used in conjunction with vegetation (the roots lock the mat into the soil and further reduce erosion from high velocity flows).

Hydraulic mulch usually consists of wood fiber mulch, water, and sometimes soil binder. Bonded fiber matrix is similar, but the mulch material is long strand wood fibers that lock together with a bonding agent and is also applied hydraulically. Soil binders can consist of natural materials, such as guar, or man-made polymers (although some may not function well on sandy soils). The longevity varies with different products; see the BMP references for details.

Straw is generally the material used for mulch; it should be punched into soil or covered with soil binder so that it does not blow or wash away. Chipped brush and trees may also be used as mulch and usually doesn't required application of soil binder. Vegetation grubbed from the site, chipped, and reapplied to exposed soils may also provide a seed bank for vegetation establishment. Mulch used in conjunction with seeding may also enhance vegetation establishment.

A compost blanket (a layer of compost on the soil surface) can be a very effective BMP and can be used on rocky slopes. An added benefit of compost is that can enhance vegetation establishment while protecting again erosion. The thickness of the compost layer needed is dependent upon the slope gradient (see BMP resources for details). Soil binder in conjunction with compost blanket is usually not necessary. Compost can be applied by hand, with a compost blower, or hydraulically (certain proprietary brands are designed to be applied with hydroseeding equipment).

Roughening a slope reduces the slope's erodibility. Although when used alone, soil roughening does not meet final stabilization requirements and, therefore, is generally used to prepare soil for seeding application, as it provides micro-sites for seed germination. This is performed by mechanical methods such as track-walking, sheep's foot rolling, scarifying, etc.

Reapplying topsoil consists of removing and stockpiling topsoil in areas to be graded or cut. Reapplying the topsoil after grading is completed can provide seed, organic matter, symbiotic fungi, and other elements beneficial to vegetation establishment. The topsoil stockpile must be covered if it will be inactive for over 14 days; however, plastic materials should not be used, as they can sterilize the soil. Jute or straw erosion control blankets are recommended.

Permanent stabilization may consist of retaining walls, rock gabions (wire mesh blocks filled with rock that can be stacked), rock, etc. These features are used on or to support steep slopes or where water velocities/wave action is high (i.e., sea walls, etc.)

[Select physical stabilization BMPs from Table 8.]

Table 9 Physical Stabilization BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Erosion Control Blankets and Turf Reinforced Mats	EC-7	SS-7	☐
Hydraulic Mulch and Bonded Fiber Matrix	EC-3, EC-5	SS-3	☐
Soil Binders	EC-5	SS-5	☐
Mulch	EC-6, EC-8, EC-14	SS-6, SS-8	☐
Compost Blankets	EC-14	-	☐
Soil Roughening	EC-15	-	☐

Table 8 (Continued) Physical Stabilization BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Topsoil Reapplication	-	-	☐
Permanent Stabilization (i.e., retaining walls, rock gabions, rock riprap, etc.)	-	-	☐
Other Material (to be approved by the City)	EC-16	-	☐
If no BMPs were selected, explain the rationale:			
Describe any additional physical stabilization BMPs to be installed:			
Describe where physical stabilization BMPs will be installed:			

2.1.2 Vegetation Stabilization

Vegetation must be installed, irrigated, and established (to uniform vegetative coverage with 70 percent coverage) prior to October 1. In the event that stabilizing vegetation has not been established by October 1, other forms of physical stabilization (see previous section) must be employed to prevent erosion until the vegetation is established.

Preserving existing vegetation to the maximum extent possible reduces the need for vegetation re-establishment and is recommended. Areas where vegetation is to be protected need to be clearly marked on the site to avoid accidental removal. Where preservation is not feasible, interim and permanent vegetation/landscaping can be established by seeding; hydroseeding; and installing plugs, sod, or container stock. Begin re-establishing permanent vegetation as early in the project as feasible. The soil should be prepared prior to seeding and the use of compost blankets or straw mulch in conjunction with seeding is recommended. Streambank stabilization is often accomplished with willow staking and live brush mats (see BMP references for details).

[Select from the vegetation stabilization BMPs from Table 9.]

Table 10 Vegetation Stabilization BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Preserve Existing Vegetation	EC-2	SS-2	☐
Establish Interim Vegetation	EC-4	SS-4	☐
Establish Permanent Landscaping	-	-	☐

Table 9 (Continued) Vegetation Stabilization BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Streambank Stabilization	EC-12	SS-12	☐
If no BMPs were selected, explain the rationale:			
Describe any additional vegetation stabilization BMPs to be implemented:			
Describe where vegetation stabilization BMPs will be installed:			

2.2 SEDIMENT CONTROL

The goal of sediment control is to capture soil particles which have become detached from disturbed areas by water or wind. Sediment controls, consisting of perimeter control, resource protection, sediment capture, and off-site sediment tracking control (as described below) are required year-round and must be installed and maintained to comply with performance standards of the *Storm Water Standards* (City of San Diego 2012), Section 5.1. Sediment control BMPs are provided in Tables 10–13. They should be used in conjunction with erosion controls.

2.2.1 Perimeter Control

Perimeter control BMPs must be installed and maintained year round and upgraded during the rainy season to comply with performance standards from the *Storm Water Standards* (City of San Diego 2012), Section 5.1. They may consist of silt fencing, gravel bag barriers, fiber rolls (straw wattles), or compost socks/berms. All of the BMPs listed, except gravel bag barriers and compost socks, must be trenched in and backfilled to be effective. Gravel bags and fiber rolls should be stacked if necessary so that storm water cannot flow over the top. Sand bags are not recommended; if the bag is compromised, the sand can be a pollutant source. Certain types of compost socks may also be effective at filtering pollutants other than sediment, including metals and oil/grease.

[Select perimeter control BMPs from Table 10.]

Table 11 Perimeter Control BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Silt Fencing	SE-1	SC-10	☐
Gravel Bag Barriers	SE-6	SC-6	☐
Fiber Rolls or Straw Wattles	SE-5	SC-5	☐

Table 10 (Continued) Perimeter Control BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Compost Socks and Berms	SE-13	-	☐
If no BMPs were selected, explain the rationale:			
Describe any additional perimeter control BMPs to be implemented:			
Describe where perimeter control BMPs will be installed:			

2.2.2 Resource Protection

Year-round protection of waterways and sensitive areas is required. Linear protection may be installed using silt fencing, gravel bag barriers, fiber rolls, and/or compost socks/berms. Linear protection should be installed between the construction area and the sensitive area. However, it should not be installed up and down a slope, which can cause erosion.

The City's *Storm Water Standards* requires preserving natural hydraulic features and riparian area buffers where possible. Additionally, BMPs must be implemented for performing demolition adjacent to a water body (such as installing turbidity curtains) and crossing waterways, dry conveyances, or areas where storm water flows.

[Select at least one BMP from Table 11 if resources, such as water bodies and sensitive areas, are located within or adjacent to the site.]

Table 12
Resource Protection BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Linear Protection	SE-1, SE-6, SE-5, SE-13	SC-10, SC-6, SC-5	☐
Preserve Natural Hydraulic Features and Riparian Area Buffers	-	-	☐
Demolition Adjacent to Water	NS-15	NS-15	☐

Table 11 (Continued) Resource Protection BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Temporary Stream Crossing	NS-4	-	☐
If no BMPs were selected, explain the rationale:			
Describe any additional resource protection BMPs to be implemented:			
Describe where resource protection BMPs will be installed:			

2.2.3 Sediment Capture

Sediment in storm water is generally captured by gravity-based (i.e., sediment traps and basins) and passive filtration systems (i.e., silt fence, fiber rolls, etc.). Active treatment systems, which use chemical to flocculate sediments from the water, can be used; however, an additional plan and operator certifications are needed.

Storm drain inlet filters are considered "last resort" BMPs, which are designed to capture only small amounts of sediment. Controlling sediment should begin upstream of the storm drain inlet, via erosion and sediment controls installed at the source. Good housekeeping (i.e., street sweeping and maintaining stabilized entrances/exits) should be performed throughout the life of the project. Check dams may also be installed in the gutter upstream of the drain to slow the velocity of runoff and pre-filter before reaching the drain. Block and gravel filters, which will likely allow higher velocities of runoff to flow through than gravel bags, and compost socks, which allow for moderate runoff flow-through and also may filter metals and oil/grease are recommended.

Sediment basins must be designed in accordance with an industry standard, such as Caltrans's *Construction Site Best Management Practices Manual* (2003). If the project is 1 acre or greater, basins must be designed according to CASQA's *Construction BMP Guidance Handbook*, as per the Construction General Permit. See also, County of San Diego's *Standard Lot Perimeter Protection Design System*, PDS# 659, which allows runoff retention of storm water on flat (less than 3 percent slope) sites, less than an acre in size with applicable perimeter controls, outlet protection, maximum detention time, and inspection/maintenance. If utilizing an active treatment system on-site, refer to Construction General Permit, Attachment F and *Storm Water Standards* (City of San Diego 2012), Section 5.4.2.

[Select from the sediment capture BMPs from Table 12.]

Table 13 Sediment Capture BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Storm Drain Inlet Protection	SE-10	SC-10	☐
Sediment Trap	SE-3	SC-3	☐
Sedimentation Basin	SE-2	SC-2	☐
Active Treatment System	SE-11	-	☐
If no BMPs were selected, explain the rationale:			
Describe any additional sediment capture BMPs to be implemented:			
Describe where sediment capture BMPs will be implemented/installed:			

2.2.4 Off-Site Sediment Tracking

Off-site sediment tracking BMPs must be installed and maintained year-round at entrances/exits to comply with performance standards from the *Storm Water Standards*. The construction site entrance/exit needs to be stabilized to ensure tracking does not occur. If minimal amounts of sediment tracking are anticipated, shaker plates or similar may be used. However, if larger amounts of sediment tracking or clayey soils are expected, the entrance/exits should be stabilized with 3-6-inch rock overlaying filter fabric, 50 feet by 30 feet minimum, with the length corresponding to the anticipated level of tracking. A tire wash may be installed, if necessary, but must be frequently inspected and maintained to ensure non-storm water discharges to not occur. The entrance/exit should be designed so that vehicles and equipment cannot be driven around the stabilization measures. Construction roads should be stabilized with road base or soil binder to prevent wind and water erosion.

Roads adjacent to the site should be swept or vacuumed when sediment or construction debris has been deposited. Adjacent roads should be inspected daily to ensure tracking is not occurring.

[Select from the off-site sediment tracking BMPs from Table 13.]

Table 14 Off-Site Sediment Tracking BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Construction Entrance/Exit Stabilization	TC-1	TC-1	☐
Construction Road Stabilization	TC-2	-	☐
Tire Wash	TC-3	TC-3	☐

Table 13 (Continued) Off-Site Sediment Tracking BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Street Sweeping and Vacuuming	SE-7	SC-7	☐
If no BMPs were selected, explain the rationale:			
Describe any additional off-site sediment tracking BMPs to be implemented:			
Describe where off-site sediment tracking BMPs will be implemented/installed:			

2.3 RUN-ON AND SITE STORM WATER MANAGEMENT CONTROLS

All run-on, runoff within the site, and runoff that discharges off-site, must be managed to prevent erosive flows. Run-on and site storm water management BMPs are provided in Table 14. Runoff from the site must be directed away from all disturbed areas. If runoff or dewatering operation discharges are concentrated, velocity must be controlled using an energy dissipater. Discharge points and discharge flows must be free of pollutants, including sediment.

Run-on to the site should be diverted around the site if possible. Check dams are used to reduce velocity of concentrated flows, limit erosion in channels, and trap sediment. They can be installed in gutter to reduce sediment loading to storm drain inlets. Slope drains and drainage swales should be used to convey runoff downslope without causing erosion. Slope drains and sediment trap/basin outlets require outlet protection to prevent erosion in this area.

[Select run-on and site storm water management BMPs from Table 14.]

Table 15 Run-On and Site Storm Water Management BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Divert Run-on from Surrounding Areas	EC-9, SE-5, SE-6, SE-13	SC-5, SS-9, SC-6, NS-5	☐
Check Dams	SE-4	SC-4	☐
Slope Drains and/or Stabilized Drainage Swales	EC-9, EC-11	SS-9, SS-11	☐
Outlet Protection	EC-10	SS-10	☐
If no BMPs were selected, explain the rationale:			
Describe any additional run-on and site storm water management BMPs to be implemented:			
Describe where run-on and site storm water management BMPs will be implemented/installed:			

2.4 MATERIALS AND WASTE MANAGEMENT CONTROLS

BMPs must be installed to control all construction and waste materials. Additionally, construction-related materials, spills, and residues must be prevented from entering the MS4. Materials and waste management BMPs are provided in Table 15–18. Keep an inventory of construction materials that will be used outdoors and exposed to precipitation, other than those designed for this purpose (i.e., poles, bricks, etc.). Designate materials loading, unloading, and storage areas. Do not perform activities during a rain

event that may contribute to storm water pollution (i.e., loading/ unloading, etc.) and minimize exposure of construction materials to precipitation.

2.4.1 Spill Control

Post procedures for storage, clean-up, and spill-reporting for hazardous materials and wastes in open, conspicuous, and accessible locations adjacent to storage areas. Ensure all on-site staff receives spill prevention, control, and reporting training. Ample spill controls materials should be stored on-site. Significant spills must be reported to the City Enforcement Agency within 24 hours.

[Select spill control BMPs from Table 15.]

Table 16 Spill Control BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Spill Prevention and Control	WM-4	WM-4	☐
Reporting Significant Spills	-	-	☐
If no BMPs were selected, explain the rationale:			
Describe any additional spill control BMPs to be implemented:			
Describe where spill control BMPs will be implemented/installed:			

2.4.2 Waste Management

Wastes must be fully managed to prevent discharges to the MS4. Properly designate and protect waste storage areas. Waste disposal containers must be free of leaks and covered at the end of every business day and during rain events.

Liquid waste management includes, but is not limited to, wash water, or accumulated storm water that has come into contact with pollutants. In some cases, a system to collect liquid wastes from the ground (via vacuuming or collecting in a temporary capture device) may be necessary.

Install secondary containment for, and stake down, portable restrooms to prevent leaks and blow-over. Portable restrooms must be located away from storm water conveyance features and vehicle/equipment traffic. Stockpiled waste materials must be secure and protected from wind and rain at all times unless actively being used. Waste stockpiles must be covered and bermed unless actively being used. Remove waste stockpiles from the site as soon as possible.

[Select waste management BMPs from Table 16].

Table 17 Waste Management BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Solid Waste Management	WM-5	WM-5	☐
Liquid Waste Management	WM-10	WM-10	☐
Contaminated Soil Management	WM-7	WM-7	☐
Sanitary Waste Management	WM-9	WM-9	☐
Concrete Waste Management	WM-8	WM-8	☐
Hazardous Waste Management	WM-6	WM-6	☐
Stockpiled Waste Management	WM-3	WM-3	☐
If no BMPs were selected, explain the rationale:			
Describe any additional waste management BMPs to be implemented:			
Describe where waste management BMPs will be implemented installed:			

2.4.3 Material Storage and Handling

Manage and store construction materials, chemicals (including paints, solvents, glue/epoxy, primers thinners, liquid asphalts and emulsions, and hazardous materials) so that they will not spill or leak and will not pollute storm water. Cover or store materials indoors and provide secondary containment for materials not designed to come into contact with storm water. Paving and concrete materials should be properly contained and covered if necessary. Slurries from cutting activities should be vacuumed and disposed of off-site. Storm drain inlets downstream of paving and concrete activities should be covered while handling or using materials that could discharge to the storm drain system.

[Select material storage and handling BMPs from Table 17.]

Table 18 Material Storage and Handling BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Material Storage	WM-1	WM-1	☐
Material Handling	WM-2	WM-1	☐

Table 17 (Continued) Material Storage and Handling BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Paving and Grinding Operations	NS-3	NS-3	☐
Concrete Management	NS-12, NS-13, NS-16	NS-12, NS-14	☐
If no BMPs were selected, explain the rationale:			
Describe any additional material storage and handling BMPs to be implemented:			
Describe where material storage and handling BMPs will be implemented/installed:			

2.4.4 Vehicle and Equipment Management

Vehicle and equipment management BMPs are needed if these will be used, fueled, maintained, and/or parked onsite. Storage, service, cleaning, and maintenance areas for vehicles and equipment shall be identified with signage and fully contained. Spill materials should always be available during fueling and fueling operations should not be left unattended. If fueling or maintaining equipment in the field is performed, drip pans should be used to capture spills. Also utilize drip pans under leaking equipment or vehicles, inspect the pans regularly to prevent overflow, and remove leaking vehicles/ equipment from the site as soon as feasible.

[Select vehicle and equipment management BMPs from Table 18.]

Table 19 Vehicle and Equipment Management BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Vehicle and Equipment Fueling	NS-9	NS-9	☐
Vehicle and Equipment Maintenance	NS-10	NS-10	☐
If no BMPs were selected, explain the rationale:			
Describe any additional vehicle and equipment management BMPs to be implemented:			
Describe where vehicle and equipment management BMPs will be implemented/installed:			

2.5 NON-STORM WATER MANAGEMENT CONTROLS

Non-storm water discharges are defined as any discharges to the storm water conveyance system that is not entirely composed of storm water. Non-storm water management BMPs are provided in Table 19. Non-storm water discharges must be eliminated or controlled to the maximum extent practicable. See Section 1.7 for a list of allowable discharges to the City's MS4. All non-storm water discharges shall be controlled by implementing water conservation practices, implementing good housekeeping techniques, and implementing a program to detect and eliminate illicit discharges.

The site should be inspected frequently for illicit connections and discharges. If observed, action should be taken as soon as possible to halt the connection/discharge. Illicit discharges to the City's MS4 should be reported to the City Enforcement Agency within 24 hours. Overspray and overwatering of vegetation for erosion control and landscaping should be avoided. Water line breaks should be repaired as soon as possible. Vehicle and equipment cleaning should be performed off-site if possible or otherwise in a location where wash water will drain to the sanitary sewer.

Dewatering uncontaminated (i.e., free of sediment or any other pollutant) groundwater is allowable, but may require additional permitting depending on the discharge location (i.e., see the San Diego RWQCB's Order No. R9-2007-0034, Order No. R9-2008-0002 and General Conditional Waiver No. 2). If discharging groundwater to the sanitary sewer, a Request for Authorization must be submitted to the City Public Utilities Department. Dewatering of accumulated, uncontaminated storm water is allowable if the discharges are monitored/visually observed.

[Select non-storm water management BMPs from Table 19.]

Table 20 Non-Storm Water Management BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Illicit Connection/Discharge Control	NS-6	NS-6	☐
Potable Water/Irrigation	NS-7	NS-7	☐
Vehicle and Equipment/Cleaning	NS-8	NS-8	☐
Water Conservation Practice	NS-1	NS-1	☐
Dewatering Operations	NS-2	NS-2	☐
If no BMPs were selected, explain the rationale:			
Describe any additional non-storm water management BMPs to be implemented:			
Describe where non-storm water management BMPs will be implemented/installed:			

2.6 PARTICULATE AND DUST CONTROL

Wind erosion control BMPs are implemented to prevent the air deposition of site materials and site operations. Particulate and dust control BMPs are provided in Table 20. Such particulates can include sediment, nutrients, trash, metals, bacteria, oil/grease, and organics. Ensure a water truck is available while construction activities are being performed, especially when soil and stockpiled material is being handled. Spray exposed soils with water or soil binder via water truck. Ensure construction materials are not discharged through the air. Do not perform activities that may discharge particulates on windy days.

[Select particulate and dust control BMPs from Table 20.]

Table 21 Particulate and Dust Control BMPs

Best Management Practices	References		Check BMP, if applicable
	CASQA BMP	Caltrans BMP	
Wind Erosion Control	WE-1	WE-1	☐
If no BMPs were selected, explain the rationale:			
Describe any additional particulate and dust control BMPs to be implemented:			
Describe where particulate and dust control BMPs will be implemented:			

2.7 FINAL STABILIZATION

For a construction project to be considered complete, all of the following conditions must be met:

- The site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity.
- There is no potential for construction-related storm water pollutants to be discharged into site runoff.
- Final stabilization has been reached by one of the following:
  - Attaining 70 percent uniform vegetative cover or equivalent stabilization measures2, such as: erosion control blankets, reinforced channel liners, and geotextiles;
  - Calculating annual average soil loss with the Revised Universal Soil Loss Equation (RUSLE) or RUSLE2 for pre- and post-construction to demonstrate that the site will not yield more sediment than prior to construction; or
  - Otherwise demonstrating that final stabilization has been achieved.
- Construction materials, temporary BMPs, and wastes have been removed from the site.
- Post-construction BMPs, if required, have been effectively implemented.

Final stabilization BMPs are provided in Table 21.

[Select the final stabilization BMP in Table 21.]

2 Where background native vegetation covers less than 100 percent of the surface, the 70 percent coverage criteria is adjusted as follows: if the native vegetation covers 50 percent of the ground surface, 70 percent of 50 percent (0.70 X 0.50 = 0.35) would require 35 percent total uniform surface coverage.

Table 22 Final Stabilization BMP

Best Management Practices	References		Check BMP
	CASQA BMP	Caltrans BMP	
Final Stabilization	-	-	☐
Describe final stabilization BMPs:			
Describe where final stabilization BMPs will be installed:			

3.0 BEST MANAGEMENT PRACTICE MAINTENANCE AND INSPECTION

Construction is a dynamic operation where changes are expected. Construction site activities can damage BMPs. Storm water BMPs for construction sites are typically temporary measures that require frequent maintenance to maintain effectiveness. BMPs facilities may require relocation, revision and re-installation, particularly as project grading progresses.

3.1 BMP MAINTENANCE

Best management practice maintenance requirements are listed in Table 22. The following subsections describe the inspection program responsibilities and requirements.

Table 23 BMP Maintenance Requirements

Best Management Practices	Maintenance Requirements
Scheduling/Phasing Construction	Periodically review construction schedule to determine if activity during the rainy season can be minimized.
Minimize Slope Length and Gradient	Not applicable.
Manage Soil Stockpiles	Replace compromised covers and berms. Ensure stockpiled material is within the bermed area. Store ample supplies of cover material and fiber rolls on site.
Erosion Control Blankets and Turf Reinforced Mats	Replace compromised blankets and mats. Ensure good soil contact.
Hydraulic Mulch and Bonded Fiber Matrix	Reapply if signs of erosion are observed.
Soil Binders	Reapply if signs of erosion are observed.
Mulch	Reapply where soil is exposed.
Compost Blankets	Reapply where soil is exposed.
Soil Roughening	Not applicable.
Topsoil Reapplication	Not applicable.
Permanent Stabilization (i.e., retaining walls, rock gabions, rock riprap, etc.)	Remove accumulated sediment and debris.
Other Material (to be approved by the City)	Remove accumulated sediment and debris.
Preserve Existing Vegetation	Ensure protected vegetation is clearly marked.
Establish Interim Vegetation	Reapply seed or replant stock if vegetation does not establish.
Establish Permanent Landscaping	Reapply seed or replant stock if vegetation does not establish.
Streambank Stabilization	Reinstall if stabilization does not establish.

Table 22 (Continued) BMP Maintenance Requirements

Best Management Practices	Maintenance Requirements
Silt Fencing	Replace compromised silt fence. Ensure fence is trenched and backfilled. Removed sediment accumulated to 1/3 the fence height.
Gravel Bag Barriers	Replace every 2-3 months as bags degrade. Remove sediment accumulated to 1/3 the bag height.
Fiber Rolls or Straw Wattles	Replace compromised rolls. Ensure rolls are trenched in and backfilled. Remove sediment accumulated to 1/3 the roll height.
Compost Socks and Berms	Replace compromised socks. Remove sediment accumulated to 1/3 the sock height.
Linear Protection	See applicable BMPs.
Preserve Natural Hydraulic Features and Riparian Area Buffers	Not applicable.
Demolition Adjacent to Water	Empty debris-catching devices daily. Ensure collected debris is stored away from the watercourse.
Temporary Stream Crossing	Repair if signs of erosion are observed. Replace displaced aggregate from culvert inlets and outlets.
Storm Drain Inlet Protection	Repair compromised protection. Remove accumulated sediment and debris.
Sediment Trap	Corrective measures should be taken if the BMP does not dewater completely in 96 hours or less to prevent vector production. Repair if trap is compromised or signs of erosion are noted at the outlet. Remove accumulated sediment when it reaches 1/3 capacity.
Sedimentation Basin	Corrective measures should be taken if the BMP does not dewater completely in 96 hours or less to prevent vector production. Repair if trap is compromised or signs of erosion are noted at the outlet. Remove accumulated sediment when it reaches 1/3 capacity.
Active Treatment System	See manufacturer's recommendations and CASQA guidance.
Construction Entrance/Exit Stabilization	Install prior to construction start; replace gravel when surface voids are visible; remove post-construction.
Construction Road Stabilization	Install prior to construction start; replace gravel when surface voids are visible; remove post-construction.
Tire Wash	Remove accumulated sediment to maintain system performance. Ensure non-storm water discharges are not occurring.
Street Sweeping and Vacuuming	Implement as soon as possible upon sediment deposition.

Table 22 (Continued) BMP Maintenance Requirements

Best Management Practices	Maintenance Requirements
Divert Run-on from Surrounding Areas	Ensure that diversions are effective.
Check Dams	Remove accumulated sediment and debris when it reaches 1/3 the height of the dam.
Slope Drains and/or Stabilized Drainage Swales	Replace/repair if visible signs of erosion are observed.
Outlet Protection	Remove accumulated sediment and debris when observed in protection devices.
Spill Prevention and Control	Ensure that ample supplies of spill cleanup materials are stored onsite and within vehicles and equipment.
Reporting Significant Spills	Ensure that on-site staff receives spill cleanup and reporting training.
Solid Waste Management	Arrange for waste collection as necessary; remove deposited solids in containment areas and collection devices; inspect and repair containment areas and capturing devices.
Liquid Waste Management	Arrange for waste collection as necessary; remove liquid wastes containment areas and collection devices; inspect and repair containment areas and capturing devices.
Contaminated Soil Management	Ensure that contaminated soil stored on-site is covered and bermed at all times and does not have the potential to contact storm water or groundwater.
Sanitary Waste Management	Coordinate with a local contractor for frequent inspection and maintenance.
Concrete Waste Management	Repair concrete washout when compromised. Ensure adequate freeboard prior to rain events. Remove accumulated waste when 1/3 capacity.
Hazardous Waste Management	Keep storage areas clean and organized; store ample cleanup supplies on site; control storage area perimeter; repair containment structures, covers, and liners as necessary.
Stockpiled Waste Management	Ensure that stockpiled waste is covered and bermed at all times, unless actively using.
Material Storage and Handling	Store ample supplies of spill cleanup materials onsite; clean and organize storage areas; repair perimeter controls, containment structures, covers, and liners; spot check materials use throughout the construction period to ensure proper practices are utilized.
Paving and Grinding Operations	Arrange for regular collection of paving wastes. Inspect storm drains near paving to ensure their cover.

Table 22 (Continued) BMP Maintenance Requirements

Best Management Practices	Maintenance Requirements
Concrete Management	Remove and dispose of hardened concrete as needed. Concrete waste facilities must be cleaned, or new facilities must be constructed and ready for use once facilities are 75% full. Inspect concrete waste facilities for damage (e.g. torn liner, evidence of leaks, signage, etc.). Repair all identified damage.
Vehicle and Equipment Fueling	Resupply on-site spill cleanup materials; clean up spills, properly dispose of contaminated soil and clean up materials;
Vehicle and Equipment Maintenance	Inspect vehicles and equipment for leaks; if possible, prohibit washing vehicles on-site; ensure equipment wash water discharges to the sanitary sewer.
Illicit Connection/Discharge Control	Prohibit staff and subcontractors from disposing of debris on site; notify owner/operator of illicit connections or discharge incidents immediately.
Potable Water/Irrigation	Repair broken lines and correct irrigation overspray as soon as possible.
Vehicle and Equipment/Cleaning	Ensure washing discharges to not leave the site.
Water Conservation Practice	Repair water equipment as needed to prevent non-storm water discharges.
Dewatering Operations	Ensure dewatering is not causing erosion, discharges do not contain pollutants, and activities are continuously monitored.
Final Stabilization	Not applicable.

3.2 BMP INSPECTIONS

Routine inspections are necessary to ensure the integrity and effectiveness of BMPs, and helps protect a site from unexpected weather events. Project owners or contractors should perform daily inspections to identify BMPs in need of maintenance. Self-inspections are to be performed by a QCP, as described in the following section. Upon identifying failures or other maintenance items, repairs or design changes to BMPs should be completed as quickly as feasible.

3.2.1 Qualified Contact Person

A QCP, as per the *Storm Water Standards* (City of San Diego 2012) definition, is to be assigned for the project. The QCP is to be specifically trained in storm water pollution prevention, including the installation and maintenance of sediment and erosion control measures. The QCP may designate additional, trained persons to assist with QCP responsibilities. The specific duties of the QCP and persons delegated by the QCP are:

- Coordinating with the appropriate City representatives to ensure the project complies with the WPCP and approved plans at all times;
- Implementing all elements of the WPCP, including prompt and effective erosion, sediment, tracking, and wind erosion control measures and management of non-storm water discharges and construction materials and liquid, solid, and hazardous wastes;
- Assigning authority to mobilize crews in order to conduct immediate and complete BMP repairs and providing storm water pollution prevention training;

- Tracking weather conditions, as reported on the National Weather Service Forecast's website [http://www.noaa.gov/wx.html]);
- Performing self-inspections;
- Informing the proper City representatives of non-compliance, such as unauthorized discharges, illicit connections or dumping activities, and immediately correcting the problems;
- Overseeing site stabilization;
- Ensuring that the WPCP is available onsite at all times during business hours; and
- Ensuring that WPCP records are retained for a minimum of three years

[Complete Table 23 with the name and contact information for the QCP and any additional persons designated by the QSP.]

Table 24
Qualified Contact Person and Designees

	Name	Company/ Organization	Phone Number
Qualified Contact Person			
Additional Persons Designated by the Qualified Contact Person			

3.2.2 Self-Inspections

The QCP or his/her designees is required to perform self-inspections, as per the *Storm Water Standards.* The objectives are to:

- Demonstrate the site is in compliance with the City's *Storm Water Standards* (2012) and San Diego Municipal Code Sect. 43.03;
- Ensure that storm water BMPs are properly documented, implemented, and effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges;
- Identify BMP maintenance (i.e., sediment removal) and repair needs;
- Ensure that the site-specific WPCP is fully implemented and updated; and
- Ensure final stabilization of the site before demobilization.

The *Storm Water Standards* (City of San Diego 2012) requires performing self-inspections throughout the life of the project (until final stabilization is achieved). Self-inspections are not required during dangerous weather conditions such as flooding and electrical storms or outside of scheduled site business hours. Self-inspections are to be performed:

- At 24-hour intervals during extended rainfall events;
- During the rainy season, daily while grading operations are being conducted; and
- During the dry season, weekly.

During self-inspections, the QCP or designee should identify and record BMPs that are in need of maintenance to operate effectively, have failed, or could fail to operate as intended and if additional BMPs are needed. If additional BMPs are necessary, the WPCP should be revised accordingly. All self-inspections must be documented using a checklist. The self-inspection checklist shall also note the date, time, and weather conditions during the inspection. Completed checklists should be made available upon request. During self- inspections, storm water discharges must be monitored to determine the presence of pollutants. If any failures or deficiencies are identified, repairs or design changes should begin to be implemented within 72 hours and noted on the self-inspection checklist.

3.2.3 Recordkeeping and Reports

Records for the following items should be retained for a minimum of three years:

- Completed site inspection forms;
- Training documentation (if any);
- Discharge reports (if any); and
- WPCP and amendments (if any).

4.0 REFERENCES

California Department of Transportation (Caltrans)
2003 *Storm Water Quality Handbook SWPPP/WPCP Preparation Guide*. February 1.

California Stormwater Quality Association (CASQA)
2003 *Construction Stormwater BMP Handbook*. January.

City of San Diego
2012 *Storm Water Standards*. Available online at: http://www.sandiego.gov/thinkblue/pdf/stormwatermanual.pdf. January 20.

San Diego Regional Water Quality Control Board (RWQCB)
2013 Order No. R9-2013-0001, *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region*. Available online at: http://www.waterboards.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/updates_052313/2013-0523_Order_No._R9-2013-0001_COMPLETE.pdf . May 8.

State Water Resources Control Board (SWRCB)
2009 *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Water Quality Order 2009-0009-DWQ*, General Permit No. CAS000002. Available online at: http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

A SITE MAP

B CERTIFICATION

Appendix B

This WPCP must be certified by the applicant.

[Please sign and date below.]

The applicant must print and sign the following certification before a permit will be issued.			
I have read and understand that the City of San Diego has adopted minimum requirements for managing urban runoff, including storm water from construction and land development activities. I certify that the BMPs selected on this form will be implemented to minimize the potentially negative impacts of this project's construction and land development activities on water quality. I further agree to install, monitor, maintain, or revise the selected BMPs to ensure their effectiveness. I also understand that non-compliance with the City's Storm Water Standards may result in enforcement by the City, including fines, cease and desist orders, or other actions. I further understand that approval of this WPCP does not relieve me of my responsibility to comply with storm water regulations including the protection of adjacent properties from inundation as a result of my construction activities.			
Applicant Signature:		**Date:**	

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING.

C CITY OF SAN DIEGO FORM DS-560, STORM WATER REQUIREMENTS APPLICABILITY CHECKLIST

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

WATER POLLUTION CONTROL PLAN
for
Project Name (Linear Utility/Group Job)

LOCATED AT:

Address/Location

PREPARED BY:

Consultant Company Name
Consultant Address
Consultant Phone Number

PREPARED FOR:

Contractor Company Name
Contractor Address
Contractor Phone Number

Preparation Date:

CITY OF SAN DIEGO
PUBLIC WORKS
DEPARTMENT

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

TABLE OF CONTENTS

APPENDICES

A BMP PLAN (TO BE COMPLETED BY APPLICANT)
B CERTIFICATION
C CITY OF SAN DIEGO FORM DS-560, STORM WATER REQUIREMENTS APPLICABILITY CHECKLIST
D CONSTRUCTION SCHEDULE
E ADDITIONAL BMPS REQUIRED FOR WATER QUALITY SENSITIVE AREAS
F HYDROSTATIC DISCHARGE REQUIREMENTS CERTIFICATION
G SELF-INSPECTION CHECKLISTS

LIST OF TABLES

1.0 PROJECT INFORMATION

1.1 INTRODUCTION

Section 43.03 of the San Diego Municipal Code requires the City of San Diego (City) to necessitate implementing effective best management practices (BMPs) to reduce discharges of pollutants in storm water from construction sites to the maximum extent practicable and effectively prohibit non-storm water discharges from construction sites into the Municipal Separate Storm Sewer Systems (MS4). These BMPs must be site specific, seasonally appropriate, and construction phase appropriate. BMPs must be implemented at each construction site year-round. Dry season BMP implementation must plan for and address unseasonal rain events that may occur during the dry season (May 1 through September 30).

A Water Pollution Control Plan (WPCP) must be developed and implemented for all Group Job projects that

- Result in disturbance of less than one acre of total land area, or are considered maintenance projects and are not part of a larger common plan of development or sale, or
- Result in disturbance of an acre or more of total land area and are considered regular maintenance projects performed to restore the original line, grade, or capacity of the facility, or
- Result in disturbance of one to five acres of total land area and can demonstrate that there will be no adverse water quality impacts by applying for a Construction Rainfall Erosivity Waiver.

This template was developed specifically for the City's Group Jobs, which are maintenance projects, performed in City rights-of-way, and generally—but not always—linear underground projects. Group Jobs may consist of, but not limited to, the following activities:

- Performing asphalt and concrete cutting;
- Trenching and shoring the trench;
- Stockpiling trench backfill, aggregate, cold mix asphalt, etc.;
- Bypass piping and pumping of potable water or sewage;
- Removing pipe laterals, manholes, vaults, and related appurtenances that are disposed of off-site;
- Covering trenches at the end of each day with metal plates and cold mix asphalt;
- Installing new pipeline and associated features;
- Backfilling the trench upon pipeline completion;
- Restoring the site to its original condition, which may include replacing asphalt, concrete, and curb/gutter and landscaping repair;
- Roadway striping; and
- Cleaning the site.

Heavy equipment, various construction materials, and a portable sanitary facility (restroom) is typically located within the jobsite. Work is not performed during precipitation.

Since Group Jobs are generally similar in nature, assumptions have been made in this Group Job WPCP template regarding the potential pollutants, pollutant sources, construction materials, and wastes. For instance, it is assumed little to no erosion sources will exist, as Group Jobs are usually located in paved roadways (i.e., other than trenching, stockpiling trench soils, and very minor landscape work, no earthwork is performed). The projects typically don't have disturbed slopes. Vehicle (truck and auto) fueling, maintenance, and cleaning are performed off-site. Equipment (i.e., backhoes, bobcats, pumps, etc.) fueling and emergency maintenance may be performed on-site, but washing occurs off-site. Potable water sources, other than the water lines, are not present. **If any of these assumptions are not accurate for the project, this Group Job WPCP template must be modified to reflect the appropriate site conditions, construction activities, potential pollutants, and best management practices (BMPs) to control potential pollutants.**

This WPCP is required to be updated by the QCP or Contractor whenever there is a change in construction operations or BMP implementation or deemed necessary by the Resident Engineer.

NOTE: It is the responsibility of the Contractor to ensure that all construction activities comply with local and state regulations, including San Diego Municipal Code Sect. 43.03. The guidance and template provided here is for the WPCP developer's convenience and does not alleviate responsibility to determine the appropriate level of BMP planning and implementation to prevent pollutant discharges.

1.2 OBJECTIVES

The main objectives of the WPCP are:

- To identify all pollutant sources which may affect the quality of storm water discharges from the site associated with construction activities;
- To identify non-storm water discharges and eliminate unauthorized non-storm water discharges, illicit connections, and dumping;
- To establish, construct, implement, and maintain best management practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non–storm water discharges from the construction site; and
- To develop an inspection program to determine the effectiveness of site BMPs.

1.3 RESPONSIBILITY FOR WPCP DEVELOPMENT AND IMPLEMENTATION

This WPCP shall be completed and certified by a Qualified Contact Person (QCP). A QCP will also be responsible for amending this WPCP. The QCP is responsible for WPCP implementation and self- inspections (see Section 3.0).

1.4 AVAILABILITY

This WPCP shall remain at the jobsite at all times during business hours by the Contractor's Foreman and readily available for review by the U.S. Environmental Protection Agency (EPA),

SWRCB, San Diego RWQCB, City of San Diego representatives, and all operating personnel for the duration of the project. Authorized representatives from the U.S. EPA, SWRCB, San Diego RWQCB, and the City of San Diego shall be permitted entry to the site for reviewing this WPCP, inspecting the site, and/or collecting storm water samples.

1.5 AMENDMENTS

This WPCP shall be amended whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater, or to the City's MS4 or are deemed necessary by the Resident Engineer.

1.6 GENERAL PROJECT INFORMATION

This section provides project information relevant to the development of this WPCP.

1.6.1 Project Location

The project location and identifying information are provided in Table 1.

Table 25: Project Location and Contact Information

Contact Information			
City Project Manager (PM) Name:	**Resident Engineer (RE) Name**:		
Mailing Address:	**City**: San Diego	**State**: CA	**Zip Code:**
Telephone No.: **PM:** **RE:**	**Email address**: **PM:** **RE**:		
Project Information			
Project Location:	**City:** San Diego	**State:** CA	**Zip Code:**
Drawing No.(s):	**WBS No. (s):**		
City Enforcement Agency Information			
Telephone No.: (619) 235-1000 (Storm Water Hotline) **Website:** Storm Water Division - Storm Water Service Request			

1.6.2 Project Description

The project description is provided in Table 2.

Table 26 : Project Description

Project Scope:	***Example: The project consists of approximately 7,845 linear feet (LF) or 1.49 miles of 8 inch sewer mains being installed. Additionally, approximately 4,090 linear feet or 0.77 miles of 12 inch water mains will be installed.***
Fill Material and Borrow Area Location(s):	***Example: Imported backfill material from Lakeshire Landfill.***
Existing Storm Water Features:	***Example: The project is within an established neighborhood with an existing gutter, paved streets, storm drain, and storm drain inlets. Drainage does not enter any vegetation, canyon, etc.***
Sources of Run-on to the Jobsite:	***Example: The project generally drains to the west and will encounter storm water run-on coming from the east.***
Discharge Locations:	***Example: The project is upstream to two storm drain inlets which will be protected. There are no adjacent water bodies.***
Other Site Features:	

1.6.3 Project Size

The size of the project and disturbed area is described in Table 3.

Table 27 : Project Size

Total Project Length (miles or ft):	**Estimated Amount of Disturbed Area (ft^2 or acres):**

1.6.4 Construction Schedule

The construction schedule is provided in Appendix D, including an indication of activities to be performed in the rainy season, the phase of construction, and construction BMP installation and removal.

1.6.5 Site Priority and Special Project Features

The site priority, as identified on the City's Storm Water Applicability Checklist, and Special Project Features, are provided in Table 4 (to filled out by the PM)

Table 28 : Site Priority and Special Project Features

This table to be completed by City staff **Site Priority**	**Check One**	
ASBS: Projects located in the Areas of Special Biological Significance (ASBS) watershed.	☐	
High: Projects 1 acre or more and Risk Level 2 or 3 and not in ASBS watershed OR Projects 1 acre or more and LUP Type 2 or 3 and not in ASBS watershed	☐	
Medium: Projects 1 acre or more and not in the ASBS watershed or determined to be High priority OR Risk Level 1 or LUP Type 1 and not in ASBS watershed	☐	
Low: Projects requiring a WPCP, but not subject to ASBS, High or Medium priority designation.	☐	
Special Project Features	**No**	**Yes**
Environmentally Sensitive Areas: Projects discharging to impaired or sensitive water bodies (tributary to a Clean Water Act Section 303[d]-listed/impaired water body segments), adjacent to or discharging directly to coastal lagoons, or other receiving waters (as defined in Attachment C of the San Diego Municipal Storm Water Permit, Order No R9-2007-0001 and Order No R9-2013-0001).	☐	☐

1.6.6 Site Features, Construction Activities, and Associated Potential Pollutants

Potential pollutant sources may stem from construction materials that are not designed to be outdoors and exposed to environmental conditions (i.e., are used in the process of construction, but are not the final product). Construction materials have the potential to come into contact with storm water when stored or used outdoors on the site.

Table 29 : Determination of Site Features, Activities, and Potential Pollutants

No.	Site Feature Question	No	Yes	If *Yes*, Select BMPs from Table:
1	Is there run-on to the jobsite from surrounding areas?	☐	☐	8
2	Will the site discharge storm water to nearby storm drain inlets?	☐	☐	7, 10 and 8
3	Will concentrated flows and/or large accumulations of water occur at the jobsite?	☐	☐	8
4	Is the jobsite adjacent to a waterway or sensitive habitat (i.e., wetland, vernal pool, etc.)?	☐	☐	7
5	If project is located within the ASBS watershed (Table 4) non-storm water discharge (i.e. hydrostatic testing, potable water, etc.) is prohibited. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.	☐	☐	13

Table 5 (Continued)
Determination of Site Features, Activities, and Potential Pollutants

No.	Site Activity Question	No	Yes	If *Yes*, Select BMPs from Table:	Potential Pollutant Sources (add, if not listed)
6	Will there be soil-disturbance activities (i.e., stockpiling, trenching, etc.)?	☐	☐	7	Sediment
7	Will there be asphalt paving, cutting, and/or patching?	☐	☐	11	Asphalt, aggregate
8	Will there be stockpiling (i.e., soil, concrete, solid waste, etc.) for over 24 hours?	☐	☐	7, 10, and 11	Stockpiled material, *please specify:*
9	Will there be slurries from concrete or mortar mixing, coring, or saw cutting?	☐	☐	9 and 10	Concrete materials, aggregate, slurry water
10	Will wash water or liquid waste be generated from this project?	☐	☐	9, 10, and 13	Liquid waste, *please specify:*

No.	Site Activity Question	No	Yes	If *Yes*, Select BMPs from Table:	Potential Pollutant Sources (add, if not listed)
11	Will there be dewatering operations?	☐	☐	13	Dewatering water, *please specify:*
12	Will a wastewater bypass be utilized as part of the project?	☐	☐	9 and 10	Wastewater
13	Will there be storage of construction materials that have the potential to pollute storm water, such as Portland cement, curing compounds, asphalt emulsions, etc.?	☐	☐	11	Construction materials, *please specify:*
14	Will trash or solid wastes (including landscaping wastes) be generated from this project?	☐	☐	10	Solid waste, *please specify:*
15	Will hazardous materials or wastes, including paint, be stored or handled at the jobsite?	☐	☐	9 and 10	Hazardous material, *please specify:*
16	Will construction equipment and/or vehicles be stored, fueled, or maintained at the jobsite?	☐	☐	9, 10, 12, and 13	Engine fluids, fuels, oil, grease
17	Will portable sanitary facilities ("Porta-potties") be used at the jobsite?	☐	☐	9 and 10	Sanitary waste
18	Will dust (i.e., from driving on unpaved roads, etc.) or particulates (i.e., from sandblasting, concrete cutting, painting, etc.) be generated from this project?	☐	☐	14	Sediment, particulate construction materials, *please specify:*
19	Other activities will be performed that are not described above?	☐	☐	Select applicable BMPs from Tables 7–14	*Please specify:*

No.	Site Activity Question	No	Yes	If *Yes*, Select BMPs from Table:	Potential Pollutant Sources (add, if not listed)
20	Final stabilization of the site is required.	☐	☐	15	Not applicable

1.7 NON-STORM WATER DISCHARGES

Discharging any material other than storm water to Waters of the State or to the City's MS4 is prohibited. However, as per *California RWQCB San Diego Region Order No. R9-2013-0001*, the following discharges to the City's MS4 are allowed as long as they are not a source of pollutants to receiving waters:

- Diverted stream flows;
- Rising groundwater;
- Uncontaminated groundwater infiltration;
- Springs;
- Flows from riparian habitats and wetlands;
- Discharges from potable water sources; and
- Discharges from foundation and footing drains if the system is designed to be located above the groundwater table at all times of the year, and the system is only expected to discharge non-storm water under unusual circumstances.

1.8 BMP PLAN

The BMP Plan (attached as Appendix A) shall include:

- The site boundary and limits of construction;
- Key site features;
- Storm water conveyance features and discharge points;
- Drainage areas and direction of flow;
- Nearby water bodies (including Clean Water Act Section 303(d) List of Impaired Segments in the site's vicinity);
- Municipal storm water system features (i.e., inlets, curbing, etc.);
- Proposed areas of soil disturbance and potential pollutant sources;
- Proposed areas of material, stockpile, and waste storage areas;
- Proposed locations of portable sanitary facilities;
- Proposed locations where underlying soil is potentially contaminated; and
- Proposed locations of all BMP implementation areas.

The BMP Plan shall be updated as construction progresses to provide current project and BMP status, as well as future planned operations and BMP implementation.

2.0 BEST MANAGEMENT PRACTICES

The BMPs listed in this WPCP will be implemented throughout the project's duration, not solely during seasons in which the probability of a rain event is high. All areas not in use for 14 days will be stabilized (i.e., exposed soil will be legally disposed of or covered). Sufficient BMP materials will be maintained at the jobsite to allow implementation with this WPCP and emergency installation in the event of a breech. Locations where BMPs will be implemented are to be shown on the BMP Plan in Appendix A.

BMPs must be implemented on construction sites to reduce pollution to the maximum extent practicable. Sections 5.0 and the City's *Storm Water Standards* outlines the requirements for construction storm water BMPs. The following BMP categories must be addressed:

- Erosion and sediment control;
- Run-on and site storm water management;
- Materials management;
- Non-storm water management;
- Particulate and dust control; and
- Final stabilization

BMPs from each of the above categories must be used together as a system in order to prevent potential pollutant discharges. Each category is generally described and applicable BMPs are listed in the following sections. Projects containing site features identified with a "yes" answer in Table 6 must utilize BMPs from the applicable BMP table(s). If no BMPs from a specific table are selected, an explanation must be provided. For BMP implementation details, refer to:

- California Storm Water Quality Association (CASQA) *Construction BMP Handbook Portal*, 2010, online at: http://www.casqa.org/LeftNavigation/ConstructionBMPHandbookPortalSWPPPTemplate/tabi__d/200/Default.aspx, (subscription required); or
- California Department of Transportation (Caltrans) *Construction Site BMP Handbook*, 2003, online at: http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf.

2.1 EROSION AND SEDIMENT CONTROL

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. The goal of sediment control is to capture soil particles which have become detached from disturbed areas by water or wind. See City's *Storm Water Standards* Erosion and sediment controls are provided in Table 6.

Group Jobs are generally performed in roadways and the primary soil-disturbing activity is trenching; therefore, these projects and have very low erosion potential. Sediment sources are stockpiles, areas where concrete and asphalt have been removed, and very small areas of disturbed landscaping. Source control of potential pollutant areas should be the focus of BMP

implementation. BMPs such as perimeter controls, although required by the City's *Storm Water Standards*, may be infeasible in roadways. Likewise, storm drain inlet protection may cause flooding or ponding hazards. Storm drain inlets located within and downstream of the project should be covered during dry weather. If a ponding hazard is anticipated, the inlet protection may be removed during rain events. However, it should be ensured that pollutants from the jobsite will not discharge to the unprotected inlets via good housekeeping (i.e., thorough street sweeping, stockpile control, etc.) and upstream BMPs, such as installing gravel bag check dams in the gutter upstream of the drain to slow the velocity of runoff and pre- filter before reaching the drain. If no ponding hazard exists, block and gravel inlet filters and compost sock filters, which allow for moderate runoff flow-through (certain types of compost socks may also filter metals and oil/grease) are recommended.

Sediment control BMPs that require trenching and backfilling (i.e., fiber rolls and silt fence) are not included as optional BMPs in this template, since trenching and backfilling would not be possible in roadways. Gravel bag barriers and compost socks do not require trenching/backfilling and may be used in roadways. Gravel bags and fiber rolls should be stacked if necessary to capture the appropriate volume of material or storm water and they should be turned upslope at the ends to ensure runoff does not flow around the BMP. Sand bags are not recommended; if the bag is compromised, the sand can be a pollutant source.

Trenches are to be covered with metal plates, compacted cold mix patch, or other material and loose construction and landscaping materials, including stockpiles, must be covered and bermed at the end of each work day. The stockpile shall not be located in the gutter. Exposed areas shall be inspected frequently and if signs of erosion are observed, additional BMPs shall be implemented. Schedule and/or phase the project to avoid construction in the rainy season and to expose as little soil as possible at any one time. Additional protection is required if work is done within the rainy season and prior to a rain event in the dry season.

Year-round protection of waterways and sensitive areas is required. The City's *Storm Water Standards* requires preserving natural hydraulic features and riparian area buffers where possible. Gravel bags and/or compost socks can be used to protect resources, such as water bodies, wetlands, or other sensitive area adjacent to the site.

Sediment tracking must be controlled to comply with performance standards from the City's *Storm Water Standards*. If applicable, construction site entrance/exit(s) should be stabilized if sediment tracking is expected to occur; shaker plates or similar may be used. The entrance/exit(s) should be designed so that vehicles and equipment cannot be driven around the stabilization measures. Roads should be swept or vacuumed when sediment or construction debris has been deposited. Adjacent roads should be inspected daily to ensure tracking is not occurring.

Table 30 : Erosion and Sediment Control BMPs

Best Management Practices	References		Check Applicable BMP
	CASQA BMP	Caltrans BMP	
Scheduling/Phasing Construction	EC-1	SS-1	☐
Gravel Bag Barriers	SE-6	SC-6	☐
Compost Socks and Berms	SE-13	-	☐
Check Dams	SE-4	SC-4	☐
Storm Drain Inlet Protection	SE-10	SC-10	☐
Construction Entrance/Exit Stabilization	TC-1	TC-1	☐
Street Sweeping and Vacuuming	SE-7	SC-7	☐
Manage Soil Stockpiles	WM-3	WM-3	☐
Describe any additional erosion and sediment control BMPs to be implemented:			
Describe where erosion and sediment control BMPs will be implemented/installed:			

2.2 RUN-ON AND SITE STORM WATER MANAGEMENT CONTROLS

All run-on entering the jobsite and runoff that discharges off the jobsite, must be managed to prevent contact with pollutants. Run-on and site storm water management BMPs are provided in Table 7. Run- off from the jobsite must be directed away from all disturbed areas. If runoff or dewatering operation discharges are concentrated and discharging to an unpaved area, the velocity must be controlled using outlet protection. Discharge points and discharge flows must be free of pollutants, including sediment. Run-on to the site should be diverted around the site if possible. Check dams may be used to reduce velocity of concentrated flows and trap sediment.

Table 31: Run-On and Site Storm Water Management BMPs

Best Management Practices	References		Check Applicable BMP
	CASQA BMP	Caltrans BMP	
Divert Run-on from Surrounding Areas	EC-9, SE-6, SE-13	SS-9, SC-6, NS-5	☐
Check Dams	SE-4	SC-4	☐
Slope Drains and/or Stabilized Drainage Swales	EC-9, EC-11	SS-9, SS-11	☐
Outlet Protection	EC-10	SS-10	☐
If no BMPs were selected, explain the rationale:			
Describe any additional run-on and site storm water management BMPs to be implemented:			
Describe where run-on and site storm water management BMPs will be implemented/installed:			

2.3 MATERIALS AND WASTE MANAGEMENT CONTROLS

BMPs must be installed to control all construction and waste materials. Additionally, construction-related materials, spills, and residues must be prevented from entering the MS4. Materials and

waste management BMPs are provided in Table 9–12. Keep an inventory of construction materials that will be used outdoors and exposed to precipitation, other than those designed for this purpose (i.e., poles, bricks, etc.). Designate areas for material loading, unloading, and storage areas. Do not perform activities during a rain event that may contribute to storm water pollution (i.e., loading/ unloading, etc.) and minimize exposure of construction materials to precipitation.

2.3.1 Spill Control

Post procedures for storage, clean-up, and spill-reporting for hazardous materials and wastes in open, conspicuous, and accessible locations adjacent to storage areas. Ensure the contractor receives spill prevention, control, and reporting training. Ample spill control materials should be stored at the jobsite. Significant spills must be reported to the City Enforcement Agency within 24 hours.

Table 32 Spill Control BMPs

Best Management Practices	References		Check Applicable BMP
	CASQA BMP	Caltrans BMP	
Spill Prevention and Control	WM-4	WM-4	☐
Reporting Significant Spills	-	-	☐
If no BMPs were selected, explain the rationale:			
Describe any additional spill control BMPs to be implemented:			
Describe where spill control BMPs will be implemented:			

2.3.2 Waste Management

Wastes must be fully managed to prevent discharges to the MS4. Properly designate and protect waste storage areas. Waste disposal containers must be free of leaks and covered at the end of every business day and during rain events. Stockpiled waste materials must be secure and protected from wind and rain at all times unless actively being used. Waste stockpiles must be covered and bermed unless actively being used. Remove waste stockpiles from the site as soon as possible.

Liquid waste management includes, but is not limited to, wash water, or accumulated storm water that has come into contact with pollutants. In some cases, a system to collect liquid wastes from the ground (via vacuuming or collecting in a temporary capture device) may be necessary. Vacuuming of concrete slurry needs to take place immediately during the saw cutting process.

Liquid waste that discharges from the site is considered an illicit discharge; BMPs must be implemented to prevent them.

Install secondary containment for portable restrooms to prevent leaks. Portable restrooms must be located away from storm water conveyance features (i.e. 50 feet minimum from storm drain inlet) and vehicle/equipment traffic.

Table 33 Waste Management BMPs

Best Management Practices	References		Check Applicable BMP
	CASQA BMP	Caltrans BMP	
Solid Waste Management	WM-5	WM-5	☐
Liquid Waste Management	WM-10	WM-10	☐
Contaminated Soil Management	WM-7	WM-7	☐
Sanitary Waste Management	WM-9	WM-9	☐
Concrete Waste Management	WM-8	WM-8	☐
Hazardous Waste Management	WM-6	WM-6	☐
Stockpiled Waste Management	WM-3	WM-3	☐
If no BMPs were selected, explain the rationale:			
Describe any additional waste management BMPs to be implemented:			
Describe where waste management BMPs will be implemented:			

2.3.3 Material Storage and Handling

Manage and store construction materials, chemicals (including paints, solvents, glue/epoxy, primers thinners, liquid asphalts and emulsions, and hazardous materials) so that they will not spill or leak and will not pollute storm water. Cover or store materials indoors and provide secondary containment for materials not designed to come into contact with storm water. Paving and concrete materials should be properly contained and covered if necessary. Slurries from saw cutting activities should be vacuumed and disposed of off-site. Storm drain inlets downstream

of paving and concrete activities should be covered while handling or using materials that could discharge to the storm drain system.

Table 34 Material Storage and Handling BMPs

Best Management Practices	References		Check Applicable BMP
	CASQA BMP	Caltrans BMP	
Material Storage	WM-1	WM-1	☐
Material Handling	WM-2	WM-1	☐
Paving and Grinding Operations	NS-3	NS-3	☐
Concrete Management	NS-12, NS- 13, NS-16	NS-12, NS- 14	☐
Describe any additional material storage and handling BMPs to be implemented:			
Describe where material storage and handling BMPs will be implemented:			

2.3.4 Vehicle and Equipment Management

Vehicle and equipment management BMPs are needed if these will be used, fueled, maintained, and/or parked at the jobsite. Storage, service, cleaning, and maintenance areas for vehicles and equipment shall be identified with signage and fully contained. Spill materials should always be available during fueling and fueling operations should not be left unattended. If fueling or maintaining equipment in the field is performed, drip pans should be used to capture spills. Also utilize drip pans under leaking equipment or vehicles, inspect the pans regularly to prevent overflow, and remove leaking vehicles/ equipment from the site as soon as feasible.

Table 35 Vehicle and Equipment Management BMPs

Best Management Practices	References		Check Applicable BMP
	CASQA BMP	Caltrans BMP	
Vehicle and Equipment Fueling	NS-9	NS-9	☐
Vehicle and Equipment Maintenance	NS-10	NS-10	☐
If no BMPs were selected, explain the rationale:			
Describe any additional vehicle and equipment management BMPs to be implemented:			
Describe where vehicle and equipment management BMPs will be implemented:			

2.4 NON-STORM WATER MANAGEMENT CONTROLS

Non-storm water discharges are defined as any discharges to the storm water conveyance system that are not entirely composed of storm water. Non-storm water management BMPs are provided in Table 12. Non-storm water discharges must be eliminated or controlled to the maximum extent practicable. See Section 1.7 for a list of allowable discharges to the City's MS4. All non-storm water discharges shall be controlled by implementing water conservation practices, implementing good housekeeping techniques, and implementing a program to detect and eliminate illicit discharges.

The site should be inspected frequently for illicit connections and discharges. If observed, action should be taken as soon as possible to halt the connection/discharge. Illicit discharges to the City's MS4 should be reported to the City Enforcement Agency within 24 hours. Water line breaks should be repaired as soon as possible. Vehicle and equipment cleaning should be performed off-site.

Hydrostatic discharge testing shall comply with the requirements of Order No. R9-2010-0003. All testing results for pH and chlorine shall be logged in Appendix F for discharge events that exceed or equal 325,850 gallons per day. In addition, non-storm water discharges (i.e. hydrostatic testing, potable water, etc.) to Areas of Special Biological Significance (ASBS) is prohibited as defined in Order No. R9-2010- 0003. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas. If discharging to the sanitary sewer within the ASBS, a Request for Authorization must be submitted to the City Public Utilities Department for review and approval.

Excess water that is drained from an existing water main that results in the comingling of dirt and water as a result from a "cut and plug" or similar operation cannot be discharged directly into a storm drain inlet without proper treatment and/or appropriate construction BMPs. This is a case by case scenario which will need to be approved by the RE. Use Table 13 below to identify and describe the anticipated means and methods of how to eliminate/prevent the non-storm water discharge during a "cut and plug."

Dewatering uncontaminated (i.e., free of sediment or any other pollutant) groundwater is allowable, but may require additional permitting depending on the discharge location (i.e., see the San Diego RWQCB's Order No. R9-2007-0034, Order No. R9-2008-0002 and General Conditional Waiver No. 2). If discharging groundwater to the sanitary sewer, a Request for Authorization must be submitted to the City Public Utilities Department. Dewatering of accumulated, uncontaminated storm water is allowable if the discharges are monitored/visually observed.

Table 36 Non-Storm Water Management BMPs

Best Management Practices	References		Check Applicable BMP
	CASQA BMP	Caltrans BMP	
Illicit Connection/Discharge Control	NS-6	NS-6	☐
Potable Water/Irrigation	NS-7	NS-7	☐
Vehicle and Equipment/Cleaning	NS-8	NS-8	☐
Water Conservation Practice	NS-1	NS-1	☐
Dewatering Operations	NS-2	NS-2	☐
Cut and Plug or Similar Operation? Yes No **If Yes, please describe BMP below in Boxes 2 and 3**			
1. If no BMPs were selected, explain the rationale:			
2. Describe any additional non-storm water management BMPs to be implemented:			
3. Describe where non-storm water management BMPs will be implemented:			

2.5 PARTICULATE AND DUST CONTROL

Wind erosion control BMPs are implemented to prevent the air deposition of site materials and site operations. Particulate and dust control BMPs are provided in Table 13. Such particulates can include sediment, nutrients, trash, metals, bacteria, oil/grease, and organics. Ensure a water truck is available while construction activities are being performed, especially when soil and stockpiled material is being handled. Spray exposed soils with water or soil binder via water truck to ensure construction materials are not discharged through the air. Do not perform activities that may discharge particulates on windy days.

Table 37 Particulate and Dust Control BMP

Best Management Practices	References		Check Applicable BMP
	CASQA BMP	Caltrans BMP	
Wind Erosion Control	WE-1	WE-1	☐
Describe any additional particulate and dust control BMPs to be implemented:			
Describe where particulate and dust control BMPs will be implemented:			

2.6 FINAL STABILIZATION

For a construction project to be considered complete, all of the following conditions must be met:

- Final stabilization has been reached by one of the following:
  - Where no vegetation is present prior to construction, the site is returned to its original line and grade and/or compacted to achieve stabilization and the street is to have its final treatment (i.e. AC overlay, slurry seal, etc.); or
  - In disturbed areas that were vegetated prior to construction activities, the area disturbed must be re-established to a uniform vegetative cover equivalent to 70 percent coverage of the preconstruction vegetative conditions; or
  - Where preconstruction vegetation covers less than 100 percent of the surface, such as in arid areas, the 70 percent coverage criteria are adjusted as follows: if the preconstruction vegetation covers 50 percent of the ground surface, 70 percent of 50 percent (.70 X .50=.35) would require 35 percent total uniform surface coverage; or
  - Equivalent stabilization measures have been employed. These measures include, but are not limited to, the use of such BMPs as blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, or other erosion resistant soil coverings or treatments.
- The site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity.

- There is no potential for construction-related storm water pollutants to be discharged into site runoff.
- Construction materials, temporary BMPs, and wastes have been removed from the site.
- Post-construction BMPs, if required, have been effectively implemented.

Table 38 Final Stabilization BMP

Best Management Practices	References		Check Applicable BMP
	CASQA BMP	Caltrans BMP	
Final Stabilization	-	-	☐
Describe final stabilization BMPs:			
Describe where final stabilization BMPs will be installed:			

3.0 BEST MANAGEMENT PRACTICE MAINTENANCE AND INSPECTION

Construction is a dynamic operation where changes are expected. Storm water BMPs for construction sites are typically temporary measures that require frequent maintenance to maintain effectiveness. BMPs facilities may require relocation, revision and re-installation.

3.1 BMP MAINTENANCE

Best management practice maintenance requirements are listed in Table 15. The following subsections describe the inspection program responsibilities and requirements.

Table 39 BMP Maintenance Requirements

Best Management Practices	Maintenance Requirements
Scheduling/Phasing Construction	Periodically review construction schedule to determine if activity during the rainy season can be minimized.
Gravel Bag Barriers	Replace as bags degrade or as needed. Remove sediment accumulated to 1/3 the bag height.
Compost Socks and Berms	Replace compromised socks. Remove sediment accumulated to 1/3 the sock height.
Check Dams	Remove accumulated sediment and debris when it reaches 1/3 the height of the dam.
Storm Drain Inlet Protection	Repair compromised protection and any accumulated sediment and debris. Removal of inlet protection is required before rain events in order to prevent flooding hazards.
Construction Entrance/Exit Stabilization	Install prior to construction start; replace gravel when surface voids are visible; remove post-construction.
Street Sweeping and Vacuuming	Implement as soon as possible upon sediment deposition. Immediately vacuum concrete slurry from sawcutting.
Manage Soil Stockpiles	Replace compromised covers and berms. Ensure stockpiled material is within the bermed area and not in the gutter.
Divert Run-on from Surrounding Areas	Ensure diversions are effective.
Outlet Protection	Remove accumulated sediment and debris when observed in protection devices.
Spill Prevention and Control	Ensure ample supplies of spill cleanup materials are stored in the contractor's staging area, trailer and/or within vehicles and equipment.
Reporting Significant Spills	Ensure the contractor receives spill cleanup and reporting training.
Solid Waste Management	Arrange for waste collection as necessary; remove deposited solids in containment areas and collection devices; inspect and repair containment areas and capturing devices.

Best Management Practices	Maintenance Requirements
Liquid Waste Management	Arrange for waste collection as necessary; remove liquid wastes containment areas and collection devices; inspect and repair containment areas and capturing devices.
Contaminated Soil Management	Ensure contaminated soil is legally disposed of at the end of the work day. Otherwise it is be covered and bermed at all times and will not have the potential to contact storm water or groundwater.
Sanitary Waste Management	Contractor to conduct frequent inspection and maintenance.
Concrete Waste Management	Repair concrete washout when compromised.
Hazardous Waste Management	Keep storage areas clean and organized; store ample cleanup supplies on site; control storage area perimeter; repair containment structures, covers, and liners as necessary.
Stockpiled Waste Management	Ensure stockpiled waste is covered and bermed at all times, unless actively using.
Manage Material Stockpiles	Replace compromised covers and berms. Ensure stockpiled material is within the bermed area. Store ample supplies of cover material and fiber rolls on site.
Material Storage and Handling	Store ample supplies of spill cleanup materials in the contractor's trailer or staging area; clean and organize storage areas; repair perimeter controls, inlet protection, containment structures, covers, and liners; spot check materials use throughout the construction period to ensure proper practices are utilized.
Paving and Grinding Operations	Arrange for regular collection of paving wastes. Inspect storm drains near paving to ensure their cover.
Concrete Management	Remove and dispose of excess hardened concrete as needed.
Vehicle and Equipment Fueling	Resupply spill cleanup materials; clean up spills, properly dispose of contaminated soil and clean up materials.
Vehicle and Equipment Maintenance	Ensure vehicles and equipment are inspected for leaks; prohibit washing vehicles on the jobsite.
Illicit Connection/Discharge Control	Prohibit contractors of illicit connections or discharge and disposing of debris on jobsite.

Best Management Practices	Maintenance Requirements
Dewatering Operations	Ensure dewatering is not causing erosion, discharges do not contain pollutants, and activities are continuously monitored. A separate permit is required for dewatering discharge entering sanitary sewer and/or storm drain (per Section 2.4).
Final Stabilization (70% of original vegetation cover)	N/A

3.2 BMP INSPECTIONS

Self-inspections are to be performed by a QCP, as described in the following section.

3.2.1 Qualified Contact Person

A QCP, as per the *Storm Water Standards* (City of San Diego 2012) definition, is to be assigned for the project. The QCP is to be specifically trained in storm water pollution prevention, including the installation and maintenance of sediment and erosion control measures. The QCP may designate additional, trained persons to assist with QCP responsibilities. The specific duties of the QCP and persons delegated by the QCP are:

- Implementing all elements of the WPCP;
- Assigning authority to mobilize crews in order to conduct immediate and complete BMP repairs and providing storm water pollution prevention training;
- Tracking weather conditions, as reported on the National Weather Service Forecast's website [http://www.noaa.gov/wx.html]);
- Performing self-inspections;
- Informing the proper City representatives of non-compliance, such as unauthorized discharges, illicit connections or dumping activities, and immediately correcting the problems;
- Overseeing final stabilization; and
- Ensuring WPCP availability and retaining records.

Table 16 provides the name and contact information for the QCP and any additional persons designated by the QSP.

Table 40 Qualified Contact Person and Designees

	Name	Company/ Organization	Contact
Qualified Contact Person			**Phone No.:** **Emergency No.:** **Email:**
Additional Persons Designated by the Qualified Contact Person			**Phone No.:** **Emergency No.:** **Email:**
			Phone No.: **Emergency No.:** **Email:**

3.2.2 Self-Inspections

The QCP or his/her designees is required to perform self-inspections, as per the *Storm Water Standards* (City of San Diego 2012). The objectives are to:

- Demonstrate the site is in compliance with the City's Storm Water Standards and San Diego Municipal Code Sect. 43.03;
- Ensure that storm water BMPs are properly documented, implemented, and effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges;
- Identify BMP maintenance (i.e., sediment removal) and repair needs;
- Ensure that the site-specific WPCP is fully implemented and updated; and
- Ensure final stabilization of the site before demobilization.

The City's *Storm Water Standards* requires performing self-inspections throughout the life of the project (until final stabilization is achieved). Self-inspections are not required during dangerous weather conditions such as flooding and electrical storms or outside of scheduled site business hours. Self-inspections are to be performed:

- At 24-hour intervals during extended rainfall events;
- During the rainy season, daily;
- During the dry season, weekly.

During self-inspections, the QCP or designee should identify and record BMPs that are in need of maintenance to operate effectively, have failed, or could fail to operate as intended and if additional BMPs are needed. If additional BMPs are necessary, the WPCP should be revised accordingly and submitted to the RE for review. All self-inspections must be documented using a checklist (generated and formatted by the QCP or designee). The self-inspection checklist shall also note the date, time, and weather conditions during the inspection. Completed checklists should be made available upon request. During self-inspections, storm water discharges must be

monitored to determine the presence of pollutants. If any failures or deficiencies are identified, repairs or design changes should begin to be implemented within 72 hours and noted on the self-inspection checklist. All completed checklists shall be included in Appendix F of this WPCP.

3.2.3 Recordkeeping and Reports

Upon final acceptance by the RE, the QCP shall submit the following items to the RE:

- Completed site inspection checklists;
- Training documentation (if any);
- Discharge reports (if any); and
- WPCP and amendments (if any);
- City-issued corrective notices (if any).

4.0 REFERENCES

California Department of Transportation (Caltrans)
2003 *Storm Water Quality Handbook SWPPP/WPCP Preparation Guide*. February 1.

California Storm Water Quality Association (CASQA)
2003 *Construction Storm Water BMP Handbook*. January.

City of San Diego Municipal Code
Section 43.03 Storm Water Discharge and Management Control. Available online at http://docs.sandiego.gov/municode/MuniCodeChapter04/Ch04Art03Division03.pdf

City of San Diego
2012 *Storm Water Standards*. Available online at http://www.sandiego.gov/thinkblue/pdf/stormwatermanual.pdf. January 20.

San Diego Regional Water Quality Control Board (RWQCB)
2013 Order No. R9-2013-0001, *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region*. Available online at: http://www.waterboards.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/updates052313/2013-0523_Order_No._R9-2013-0001_COMPLETE.pdf. May 8.

State Water Resources Control Board (SWRCB)
2009 *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Water Quality Order 2009-0009-DWQ*, General Permit No. CAS000002. Available online at: http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

A BMP PLAN

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

B CERTIFICATION

Appendix B

This WPCP must be certified by the Contractor.

The applicant must print and sign the following certification:		
I have read and understand that the City of San Diego has adopted minimum requirements for managing urban runoff, including storm water from construction activities. I certify that the BMPs selected on this form will be implemented to minimize the potentially negative impacts of this project's construction activities on water quality. I further agree to install, monitor, maintain, or revise the selected BMPs to ensure their effectiveness. I also understand that non-compliance with the City's Storm Water Standards may result in enforcement by the City, including fines, cease and desist orders, or other actions.		
Contractor Name:		**Date:**
Contractor Signature:		

C CITY OF SAN DIEGO FORM DS-560 - STORM WATER REQUIREMENTS APPLICABILITY CHECKLIST

D CONSTRUCTION SCHEDULE

E ADDITIONAL BMPS REQUIRED FOR WATER QUALITY SENSITIVE AREAS

F HYDROSTATIC DISCHARGE REQUIREMENTS CERTIFICATION

Hydrostatic Discharge Requirements Certification (Discharge Events ≥ 325,850 gpd)

All discharge activities related to this project comply with the Regional Water Quality Control Board (RWQCB) Order No. R9-2010-0003, General Permit for Discharges of Hydrostatic Test Water and Potable Water to Surface Water and Storm Drains as referenced by (http://www.waterboards.ca.gov/sandiego/board_decisions/adopted_orders/2010/R9-2010-0003.pdf), and as follows:

Discharged water has been dechlorinated to below **0.1** *(mg/l)* level; and effluent has been maintained between **6** and **9** *(pH)* based on:

Event #	Discharge Date	Item Tested	Duration	Description of the Proposed Discharge	Method and Test Result	*Is Discharge Within Limits?* YES	NO	Comment/Action Taken
		Chlorine						
		pH						
		Chlorine						
		pH						
		Chlorine						
		pH						
		Chlorine						
		pH						

Qualified Personnel Conducting Tests (Print Name): | **SAP No.(s):**

***Signature:** | **Project Name:**

** By signing, I hereby certify and affirm under penalty of perjury that all of the statements and conditions for hydrostatic discharge events are correct.*

Have any thresholds been exceeded? Per Order No. R9-2010-0003, would this be a reportable discharge and must be reported **within 24 hours** of the event? [Reportable discharge would include violation of maximum gallons per day, any upset which exceeds any effluent limit]

G SELF-INSPECTION CHECKLISTS

City of San Diego
Development Services
1222 First Ave., MS-302
San Diego, CA 92101
(619) 446-5000
THE CITY OF SAN DIEGO

"Minor" Water Pollution Control Plan (MWPCP)

FORM DS-570
OCTOBER 2012

MWPCP REQUIREMENTS

The City requires a Water Pollution Control Plan (WPCP), a Minor Water Pollution Control Plan (MWPCP) or a Storm Water Pollution Prevention Plan (SWPPP), for all construction projects that have potential for storm water pollution. Some construction project types, such as interior plumbing, electrical and mechanical work, may be considered exempt. The appropriate plan is determined by the following guidelines:

1. Any project subject to the Construction General Permit (CGP) (typically projects with 1 acre or more of ground disturbance) requires a SWPPP and may not utilize a WPCP or MWPCP. If coverage under the CGP (Permit which requires a SWPPP) is not required for the project, see below:
2. The following approval types (see Form DS-3032) require a WPCP: Grading, Public Right-of-Way, and Demolition/Removal. Exceptions may be made allowing use of this MWPCP for minor work.
3. The following approval types (see Form DS-3032) require a WPCP whenever a submittal for Drainage and Grades review is required: Exceptions may be made allowing use of this MWPCP for minor work.
4. This MWPCP may be utilized for projects that create less than 5,000sf of ground disturbance and have less than a 5ft elevation differential over the entire project area.

NOTE: It is the responsibility of the project owner to ensure that all construction activities comply with local and state regulations, including San Diego Municipal Code Sect. 43.03. The guidance and template provided here is for the applicants' convenience and do not alleviate responsibility on part of the project owner to determine the appropriate level of BMP planning and implementation to prevent pollutant discharges.

STEP 1. IDENTIFY RELEVANT PROJECT INFORMATION

Applicant Name:	Contact Name:		Project Number:
Contact Information:			
Mailing Address:	City:	State:	Zip Code:
Telephone No.:	E-mail Address:		
Project Information:			
Address:	City: San Diego	State: CA	Zip Code:
APN:	Permit Application Number:		
Brief Project Description:			
Improvements (overall square footage):	Estimate Project Start Date:		Estimate Project Finish Date:
Total Lot Size in ft^2:	Estimated Amount of Disturbed Differential Acreage:		Estimate Elevation over entire Project Area:

Printed on recycled paper. Visit our web site at www.sandiego.gov/development-services.
Upon request, this information is available in alternative formats for persons with disabilities.
DS-570 (10-12)

STEP 2: IDENTIFY CONSTRUCTION STORM WATER BMPs

Unprotected construction sites have the potential to discharge sediment and other pollutants into local waterways. All construction projects are required to reduce pollution to the maximum extent practicable by implementing best management practices (BMPs). The City's Storm Water Standards Manual outline the requirements for Construction Stormwater BMPs. There are five categories:

1. Erosion control practices
2. Velocity reduction
3. Sediment control practices
4. Offsite sediment tracking control
5. General site and materials management

BMPs from each of the five categories must be used together as a system in order to prevent potential discharges.

If you answer "Yes" to any of the questions below, your project is subject to Table 1 on the following page (Minimum Required Standard Construction Stormwater BMPs). As noted in the table, please select at least the minimum number of required BMPs, or as many as are feasible for your project. If no BMP is selected, an explanation must be given in the box provided. The following questions are intended to aid in determining construction BMP requirements for your project, please check box either "Yes" or "No".

1.	Will there be soil disturbing activities that will result in exposed soil areas? (This includes minor grading and trenching.) **Reference Table items A**	❑ Yes ❑ No
2.	Will there be asphalt paving, including patching? **Reference Table 1 items C and E**	❑ Yes ❑ No
3.	Will there be slurries from mortar mixing, coring, or concrete saw cutting? **Reference Table 1 items C and E**	❑ Yes ❑ No
4.	Will there be solid wastes from concrete demolition and removal, wall construction, or form work? **Reference Table 1 items C and E**	❑ Yes ❑ No
5.	Will there be stockpiling (soil, compost, asphalt, concrete, solid waste) for over 24 hours? **Reference Table 1 items C and E**	❑ Yes ❑ No
6.	Will there be dewatering operations? **Reference Table 1 items B and C**	❑ Yes ❑ No
7.	Will there be temporary on-site storage of construction materials, including mortar mix, raw landscaping and soil stabilization materials, treated lumber, rebar, and plated metal fencing materials? **Reference Table 1 items D and E**	❑ Yes ❑ No
8.	Will trash or solid waste product be generated from this project? **Reference Table 1 item E**	❑ Yes ❑ No
9.	Will construction equipment be stored on site (e.g.: fuels, oils, trucks, etc.? **Reference Table 1 item E**	❑ Yes ❑ No
10.	Will Portable Sanitary Services ("Porta-potty") be used on the site? **Reference Table 1 item E**	❑ Yes ❑ No

Clear Page 2

TABLE 1
MINIMUM REQUIRED STANDARD CONSTRUCTION STORMWATER BMPs
(Source: CALTRANS Storm Water Quality Handbooks)

Minimum Required Best Minimum Required Best Management Practices	CALTRANS Stormwater Handbook Detail	Check at least one BMP from each section below	If your project requires no BMP from any of the sections below, please explain within space provided
A. Select Erosion Control Method			
Vegetation Stabilization Planting (Summer)	SS-2, SS-4	❑	
Hydraulic Stabilization Hydroseeding (Summer)	SS-4	❑	
Bonded Fiber Matrix or Stabilized Fiber Matrix (Winter)	SS-3	❑	
Physical Stabilization Erosion Control Blanket (Winter)	SS-7	❑	
Lot Perimeter Protection Detail	SC-1, SC-5, SC-6, SC-8	❑	
Mulch, Straw, Woodchips, Soil Application	SS-6, SS-8	❑	
B. If Runoff or Dewatering Operation is concentrated, velocity must be controlled using an energy dissipater			
Energy Dissipater Outlet Protection	SS-10	❑	
C. Select Sediment Control method for all disturbed areas (Chose at least one)			
Silt Fence	SC-1	❑	
Fiber Rolls (Straw Wattles)	SC-5	❑	
Gravel Bags	SC-6, SC-8	❑	
Dewatering Filtration	NS-2	❑	
Storm Drain Inlet Protection	SC-10	❑	
D. Select method for preventing offsite tracking of sediment (choose at least one)			
Stabilized Construction Entrance	TC-1	❑	
Entrance/Exit Tire Wash	TC-3	❑	
Street Sweeping & Vacuuming	SC-7	❑	
E. Select the General Site Management BMPs for each waste that will be on site			
Material Delivery & Storage	WM-1	❑	
Spill Prevention & Control	WM-4	❑	
Concrete Waste Management	WM-8	❑	
Solid Waste Management	WM-5	❑	
Sanitary Waste Management	WM-9	❑	
Hazardous Waste Management	WM-6	❑	

The applicant must print and sign the following certification before a permit will be issued.
I have read and understand that the City of San Diego has adopted minimum requirements for managing urban runoff, including storm water, from construction and land development activities. I certify that the BMPs selected on this form will be implemented to minimize the potentially negative impacts of this project's construction and land development activities on water quality. I further agree to install, monitor, maintain, or revise the selected BMPs to ensure their effectiveness. I also understand that non-compliance with the City's Storm Water Standards may result in enforcement by the City, including fines, cease and desist orders, or other actions.

Signature: _____ Date: _____

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

Check List: Water Pollution Control Plan for Demolition Activities

CITY INSPECTORS' CHECKLIST FOR SITES UTILIZING A WPCP

INSPECTOR'S CHECKLISTS

1. WPCP Review Checklist
2. Site Inspection Checklist

WPCP Review Checklist

1. **Project information**
   - A. PROJECT LOCATION
   - B. PROJECT DESCRIPTION
   - C. PROJECT SIZE
   - D. DEMOLITION SCHEDULE
   - E. SITE PRIORITY
   - F. SITE FEATURES, DEMOLITION ACTIVITIES, AND ASSOCIATED POTENTIAL POLLUTANTS
   - G. Responsibility for WPCP development and Implementation AVAILABILITY
   - H. Amendments
   - I. Non-storm Water Discharges
   - J. site map development

2. **Best Management Practices**
   - A. Erosion Control
     - I. PHYSICAL STABILIZATION
     - II. VEGETATION STABILIZATION
   - B. Sediment Control
     - I. PERIMETER CONTROL
     - II. RESOURCE PROTECTION
     - III. SEDIMENT CAPTURE
     - IV. OFF-SITE SEDIMENT TRACKING
   - C. Run-on and Site Storm Water Management Controls
   - D. Materials and Waste Management Controls
     - I. SPILL CONTROL
     - II. WASTE MANAGEMENT
     - III. MATERIAL STORAGE AND HANDLING
     - IV. VEHICLE AND EQUIPMENT MANAGEMENT
   - E. Non-storm Water Management Controls
   - F. Particulate and Dust Control
   - G. final stabilization

3. **Best Management Practice Maintenance and inspection**
   - A. BMP Maintenance
   - B. BMP Inspections
     - I. QUALIFIED CONTACT PERSON
     - II. SELF-INSPECTIONS
     - III. RECORDKEEPING AND REPORTS

Site Inspection Checklist

1. BEST MANAGEMENT PRACTICES
    - A. EROSION CONTROL
        - I. PHYSICAL STABILIZATION
        - II. VEGETATION STABILIZATION
    - B. SEDIMENT CONTROL
        - I. PERIMETER CONTROL
        - II. RESOURCE PROTECTION
        - III. SEDIMENT CAPTURE
        - IV. OFF-SITE SEDIMENT TRACKING
    - C. Run-on and Site Storm Water Management Controls
    - D. Materials and Waste Management Controls
        - I. SPILL CONTROL
        - II. WASTE MANAGEMENT
        - III. MATERIAL STORAGE AND HANDLING
        - IV. VEHICLE AND EQUIPMENT MANAGEMENT
    - E. Non-storm Water Management Controls
    - F. Particulate and Dust Control
    - G. final stabilization

2. Best Management Practice Maintenance and inspection
    - A. BMP Maintenance
    - B. BMP Inspections

Table 6: Determination of Site Features, Activities, and Potential Pollutants

No.	Site Feature Question	No	Yes	If *Yes*, Select BMPs from Table:	Potential Pollutant Sources (add, if not listed)
1	Is there run-on to the site from surrounding areas?	☐	☐	14	Not applicable
2	Are storm drain inlets located within the project boundary and/or will the site discharge storm water to nearby storm drain inlets?	☐	☐	12 and 14	Not applicable
3	Will concentrated flows and/or large accumulations of water occur on-site?	☐	☐	14	Not applicable
4	Is the site adjacent to a waterway or sensitive habitat (i.e., wetland, vernal pool, etc.)? Note: additional permitting may be required.	☐	☐	11	Not applicable
5	Is the site likely to discharge to impaired or sensitive water bodies (tributary to a Clean Water Act Section 303[d]-listed/impaired water body segments), adjacent to or discharging directly to coastal lagoons, or other receiving waters in Environmentally Sensitive Areas (as defined in Attachment C of the San Diego Municipal Storm Water Permit, Order No R9-2013-0001)?	☐	☐	See *Storm Water Standards*	Not applicable
6	Will the site have exposed/disturbed slopes greater than 5 percent?	☐	☐	7, 8, 9, 10, and 12	Sediment
7	Will there be soil-disturbance activities (grading, stockpiling, trenching, etc.)?	☐	☐	7, 8, 9, 10, 12, and 13	Sediment
9	Will there be stockpiling (i.e., soil, concrete, solid waste, etc.) for over 24 hours?	☐	☐	7 and 16	Stockpiled material, *please specify:*
10	Will liquid waste be generated from this project?	☐	☐	15, 16, and 19	Liquid waste, *please specify:*
11	Will there be dewatering operations?	☐	☐	19	Dewatering water, *please specify:*
12	Will there be on-site storage of demolition or site restoration materials such as raw landscaping and soil stabilization materials, treated lumber, rebar, and plated metal fencing materials?	☐	☐	17	Demolition materials, *please specify:*
13	Will trash or solid wastes (including landscaping wastes) be generated from this project?	☐	☐	16	Solid waste, *please specify:*

14	Will hazardous materials or wastes, including paint, be stored or handled on-site?	☐	☐	16	Hazardous material, *please specify:*
15	Will equipment and/or vehicles be stored, fueled, maintained, or washed on- site?	☐	☐	15, 18, and 19	Engine fluids, fuels, oil, grease, wash water
16	Will portable sanitary facilities (“Porta-potties”) be used on the site?	☐	☐	15 and 16	Sanitary waste
17	Are underlying soils potentially contaminated?	☐	☐	16	Contaminated soil
18	Will dust or particulates be generated from this project?	☐	☐	20	Sediment, particulate demolition materials, *please specify:*
19	Other activities will be performed that are not described above?	☐	☐	Select applicable BMPs from Tables 7–20	*Please specify:*
20	Final stabilization of the site is required.	-	☐	21	Not applicable

Table 7: General Erosion Control BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Scheduling/Phasing Construction	EC-1	SS-1	☐
Minimize Slope Length and Gradient	-	-	☐
Manage Soil Stockpiles	WM-3	WM-3	☐

Table 8: Physical Stabilization BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Erosion Control Blankets and Turf Reinforced Mats	EC-7	SS-7	☐
Hydraulic Mulch and Bonded Fiber Matrix	EC-3, EC-5	SS-3	☐
Soil Binders	EC-5	SS-5	☐
Mulch	EC-6, EC-8, EC-14	SS-6, SS-8	☐
Compost Blankets	EC-14	-	☐
Soil Roughening	EC-15	-	☐
Topsoil Reapplication	-	-	☐
Permanent Stabilization (i.e., retaining walls, rock gabions, rock riprap, etc.)	-	-	☐
Other Material (to be approved by the City)	EC-16	-	☐

Table 9: Vegetation Stabilization BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Preserve Existing Vegetation	EC-2	SS-2	☐
Establish Vegetation/Permanent Landscaping	EC-4	SS-4	☐
Streambank Stabilization	EC-12	SS-12	☐

Table 10: Perimeter Control BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Silt Fencing	SE-1	SC-10	☐
Gravel Bag Barriers	SE-6	SC-6	☐
Fiber Rolls or Straw Wattles	SE-5	SC-5	☐
Compost Socks and Berms	SE-13	-	☐

Table 11: Resource Protection BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Linear Protection	SE-1, SE-6, SE-5, SE-13	SC-10, SC-6, SC-5	☐
Preserve Natural Hydraulic Features and Riparian Area Buffers	-	-	☐
Demolition Adjacent to Water	NS-15	NS-15	☐
Temporary Stream Crossing	NS-4	-	☐

Table 12: Sediment Capture BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Storm Drain Inlet Protection	SE-10	SC-10	☐
Sediment Trap	SE-3	SC-3	☐
Sedimentation Basin	SE-2	SC-2	☐
Active Treatment System	SE-11	-	☐

Table 13: Off-Site Sediment Tracking BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Construction Entrance/Exit Stabilization	TC-1	TC-1	☐
Construction Road Stabilization	TC-2	-	☐
Tire Wash	TC-3	TC-3	☐
Street Sweeping and Vacuuming	SE-7	SC-7	☐

Table 14: Run-On and Site Storm Water Management BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Divert Run-on from Surrounding Areas	EC-9, SE-5, SE-6, SE-13	SC-5, SS-9, SC-6, NS-5	☐
Check Dams	SE-4	SC-4	☐
Slope Drains and/or Stabilized Drainage Swales	EC-9, EC-11	SS-9, SS-11	☐
Outlet Protection	EC-10	SS-10	☐

Table 15: Spill Control BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Spill Prevention and Control	WM-4	WM-4	☐
Reporting Significant Spills	-	-	☐

Table 16: Waste Management BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Solid Waste Management	WM-5	WM-5	☐
Liquid Waste Management	WM-10	WM-10	☐
Contaminated Soil Management	WM-7	WM-7	☐
Sanitary Waste Management	WM-9	WM-9	☐
Concrete Waste Management	WM-8	WM-8	☐
Hazardous Waste Management	WM-6	WM-6	☐
Stockpiled Waste Management	WM-3	WM-3	☐

Table 17: Material Storage and Handling BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Material Storage	WM-1	WM-1	☐
Material Handling	WM-2	WM-1	☐
Grinding Operations	NS-3	NS-3	☐

Table 18: Vehicle and Equipment Management BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Vehicle and Equipment Fueling	NS-9	NS-9	☐
Vehicle and Equipment Maintenance	NS-10	NS-10	☐

Table 19: Non-Storm Water Management BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Illicit Connection/Discharge Control	NS-6	NS-6	☐
Potable Water/Irrigation	NS-7	NS-7	☐
Vehicle and Equipment/Cleaning	NS-8	NS-8	☐
Dewatering Operations	NS-2	NS-2	☐

Table 20: Particulate and Dust Control BMPs

Best Management Practices	References		Check BMP, if applicable
	CASQA BMP	Caltrans BMP	
Wind Erosion Control	WE-1	WE-1	☐

Table 21: Final Stabilization BMP

Best Management Practices	Check only one BMP
70% final cover method	☐
Revised Universal Soil Loss Equation (RUSLE) or RUSLE2 method	☐
Custom method that demonstrates in other manner not listed in this table that site complies with the final stabilization requirement.	☐

Table 22: BMP Maintenance Requirements

Best Management Practices	Maintenance Requirements
Scheduling/Phasing Demolition	Periodically review schedule to determine if activity during the rainy season can be minimized.
Minimize Slope Length and Gradient	Not applicable.
Manage Soil Stockpiles	Replace compromised covers and berms. Ensure stockpiled material is within the bermed area. Store ample supplies of cover material and fiber rolls on site.
Erosion Control Blankets and Turf Reinforced Mats	Replace compromised blankets and mats. Ensure good soil contact.
Hydraulic Mulch and Bonded Fiber Matrix	Reapply if signs of erosion are observed.
Soil Binders	Reapply if signs of erosion are observed.
Mulch	Reapply where soil is exposed.
Compost Blankets	Reapply where soil is exposed.
Soil Roughening	Not applicable.
Topsoil Reapplication	Not applicable.
Permanent Stabilization (i.e., retaining walls, rock gabions, rock riprap, etc.)	Remove accumulated sediment and debris.
Other Material (to be approved by the City)	Remove accumulated sediment and debris.
Preserve Existing Vegetation	Ensure protected vegetation is clearly marked.
Establish Vegetation	Reapply seed or replant stock if vegetation does not establish.
Silt Fencing	Replace compromised silt fence. Ensure fence is trenched and backfilled. Removed sediment accumulated to 1/3 the fence height.
Gravel Bag Barriers	Replace every 2-3 months as bags degrade. Remove sediment accumulated to 1/3 the bag height.
Fiber Rolls or Straw Wattles	Replace compromised rolls. Ensure rolls are trenched in and backfilled. Remove sediment accumulated to 1/3 the roll height.
Compost Socks and Berms	Replace compromised socks. Remove sediment accumulated to 1/3 the sock height.
Linear Protection	See applicable BMPs.
Preserve Natural Hydraulic Features and Riparian Area Buffers	Not applicable.
Demolition Adjacent to Water	Empty debris-catching devices daily. Ensure collected debris is stored away from the watercourse.
Temporary Stream Crossing	Repair if signs of erosion are observed. Replace displaced aggregate from culvert inlets and outlets.

Table 22: BMP Maintenance Requirements (continued)

Storm Drain Inlet Protection	Repair compromised protection. Remove accumulated sediment and debris.
Sediment Trap	Corrective measures should be taken if the BMP does not dewater completely in 96 hours or less to prevent vector production. Repair if trap is compromised or signs of erosion are noted at the outlet. Remove accumulated sediment when it reaches 1/3 capacity.
Sedimentation Basin	Corrective measures should be taken if the BMP does not dewater completely in 96 hours or less to prevent vector production. Repair if trap is compromised or signs of erosion are noted at the outlet. Remove accumulated sediment when it reaches 1/3 capacity.
Active Treatment System	See manufacturer's recommendations and CASQA guidance.
Site Entrance/Exit Stabilization	Install prior to demolition start; replace gravel when surface voids are visible; remove post-construction.
Site Road Stabilization	Install prior to demolition start; replace gravel when surface voids are visible; remove post-construction.
Tire Wash	Remove accumulated sediment to maintain system performance. Ensure non-storm water discharges are not occurring.
Street Sweeping and Vacuuming	Implement as soon as possible upon sediment deposition.
Divert Run-on from Surrounding Areas	Ensure that diversions are effective.
Check Dams	Remove accumulated sediment and debris when it reaches 1/3 the height of the dam.
Slope Drains and/or Stabilized Drainage Swales	Replace/repair if visible signs of erosion are observed.
Outlet Protection	Remove accumulated sediment and debris when observed in protection devices.
Spill Prevention and Control	Ensure that ample supplies of spill cleanup materials are stored onsite and within vehicles and equipment.
Reporting Significant Spills	Ensure that on-site staff receives spill cleanup and reporting training.
Solid Waste Management	Arrange for waste collection as necessary; remove deposited solids in containment areas and collection devices; inspect and repair containment areas and capturing devices.
Liquid Waste Management	Arrange for waste collection as necessary; remove liquid wastes containment areas and collection devices; inspect and repair containment areas and capturing devices.
Contaminated Soil Management	Ensure that contaminated soil stored on-site is covered and bermed at all times and does not have the potential to contact storm water or groundwater.
Sanitary Waste Management	Coordinate with a local contractor for frequent inspection and maintenance.

Table 22: BMP Maintenance Requirements (continued)

Best Management Practices	Maintenance Requirements
Concrete Waste Management	Ensure adequate freeboard prior to rain events. Remove accumulated waste when 1/3 capacity.
Hazardous Waste Management	Keep storage areas clean and organized; store ample cleanup supplies on site; control storage area perimeter; repair containment structures, covers, and liners as necessary.
Stockpiled Waste Management	Ensure that stockpiled waste is covered and bermed at all times, unless actively using.
Material Storage and Handling	Store ample supplies of spill cleanup materials onsite; clean and organize storage areas; repair perimeter controls, containment structures, covers, and liners; spot check materials use throughout the demolition period to ensure proper practices are utilized.
Vehicle and Equipment Fueling	Resupply on-site spill cleanup materials; clean up spills, properly dispose of contaminated soil and clean up materials.
Vehicle and Equipment Maintenance	Inspect vehicles and equipment for leaks; if possible, prohibit washing vehicles on-site; ensure equipment wash water discharges to the sanitary sewer.
Illicit Connection/Discharge Control	Prohibit staff and subcontractors from disposing of debris on site; notify owner/operator of illicit connections or discharge incidents immediately.
Potable Water/Irrigation	Repair broken lines and correct irrigation overspray as soon as possible.
Grinding Operations	Inspect storm drains near paving to ensure their cover.
Dewatering Operations	Ensure dewatering is not causing erosion, discharges do not contain pollutants, and activities are continuously monitored.

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

THE CITY OF SAN DIEGO City of San Diego **Development Services** 1222 First Ave., MD-302 San Diego, CA 92101 (619) 446-5000	**Permanent BMP Construction** **Self Certification Form**	FORM DS-563 January 2016

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 Storm Water Quality Management Plan (SWQMP) 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. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100. 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 structural BMP's required per the approved SWQMP 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. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100 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.

Engineer's Stamp

DS-563 (01-16)

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

Appendix E

Construction BMP General Notes

PRIOR TO ANY SOIL DISTURBANCE, TEMPORARY EROSION AND SEDIMENT CONTROLSHALL BE INSTALLED BY THE CONTRACTOR OR QUALIFIED PERSON(S) AS INDICATED BELOW:

1 ALL REQUIREMENTS OF THE CITY OF SAN DIEGO "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND/OR WATER POLLUTION CONTROL PLAN (WPCP) FOR CONSTRUCTION LEVEL BMP'S AND, IF APPLICABLE, THE WATER QUALITY TECHNICAL REPORT (WQTR) FOR POST CONSTRUCTION TREATMENT CONTROL BMP'S.

2 THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL STORM DRAIN INLETS. INLET PROTECTION IN THE PUBLIC RIGHT OF WAY MAY BE TEMPORARILY REMOVED WHERE IT IS PRONE TO FLOODING PRIOR TO A RAIN EVENT AND REINSTALLED AFTER RAIN IS OVER.

3 ALL CONSTRUCTION BMPS SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.

4 THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING, AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION AND SEDIMENT CONTROL MEASURES.

5 THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER QUALITY MEASURES AND IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED SWPPP/WPCP WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS, CIVIL PENALTIES AND/OR STOP WORK NOTICES.

6 THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF ALL SILT, DEBRIS AND MUD ON AFFECTED AND ADJACENT STREET(S) AND WITHIN STORM DRAIN SYSTEM DUE TO CONSTRUCTION VEHICLES/EQUIPMENT AND CONSTRUCTION ACTIVITY AT THE END OF EACH WORK DAY.

7 THE CONTRACTOR SHALL PROTECT NEW AND EXISTING STORM WATER CONVEYANCE SYSTEMS FROM SEDIMENTATION, CONCRETE RINSE, OR OTHER CONSTRUCTION RELATED DEBRIS AND DISCHARGES WITH THE

APPROPRIATE BMPS THAT ARE ACCEPTABLE TO THE ENGINEER AND AS INDICATED IN THE SWPPP/WPCP

8 THE CONTRACTOR OR QUALIFIED PERSON SHALL CLEAR DEBRIS, SILT AND MUD FROM ALL DITCHES AND SWALES PRIOR TO AND AFTER EACH RAIN EVENT.

9 IF A NON-STORM WATER DISCHARGE LEAVES THE SITE, THE CONTRACTOR SHALL IMMEDIATELY STOP THE ACTIVITY AND REPAIR THE DAMAGES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF THE DISCHARGE. AS SOON AS PRACTICAL, ANY AND ALL WASTE MATERIAL, SEDIMENT AND DEBRIS FROM EACH NON STORM WATER DISCHARGE SHALL BE REMOVED FROM THE STORM DRAIN CONVEYANCE SYSTEM AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

10 EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID DEPLOYMENT OF CONSTRUCTION BMPS WHEN RAIN IS IMMINENT.

11 THE CONTRACTOR SHALL RESTORE AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPS TO WORKING ORDER YEAR ROUND.

12 THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DUE TO GRADING INACTIVITY OR UNFORESEEN CIRCUMSTANCES TO PREVENT NON-STORM WATER AND SEDIMENT-LADEN DISCHARGES.

13 THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.

14 ALL EROSION AND SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED SWPPP/WPCP SHALL BE INSTALLED AND MAINTAINED. ALL EROSION AND SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE PROPERLY DOCUMENTED AND INSTALLED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

15 UPON NOTIFICATION BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL ARRANGE FOR MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION AND SEDIMENT CONTROL MEASURES AND OTHER BMPS RELATIVE TO ANTICIPATED CONSTRUCTION ACTIVITIES.

16 THE CONTRACTOR SHALL CONDUCT VISUAL INSPECTIONS DAILY AND MAINTAIN ALL BMPS AS NEEDED. VISUAL INSPECTIONS AND MAINTENANCE OF ALL BMPS SHALL BE CONDUCTED BEFORE, DURING AND AFTER EVERY RAIN EVENT AND EVERY 24 HOURS DURING ANY

PROLONGED RAIN EVENT. THE CONTRACTOR SHALL MAINTAIN AND REPAIR ALL BMPS AS SOON AS POSSIBLE AS SAFETY ALLOWS.

17 **CONSTRUCTION ENTRANCE AND EXIT AREA**. TEMPORARY CONSTRUCTION ENTRANCE AND EXIT AREA SHALL BE ON LEVEL, STABILIZED GROUND. THE ENTRANCE AND EXIT AREA SHALL BE CONSTRUCTED BY OVERLAYING THE STABILIZED ACCESS AREA WITH 3 TO 6" DIAMETER STONES. THE AREA SHALL BE MINIMUM 50' LONG X 30' WIDE. IN LIEU OF STONE COVERED AREA, THE CONTRACTOR MAY CONSTRUCT RUMBLE RACKS OF STEEL PANELS WITH RIDGES MINIMUM 20' LONG X 30' WIDE CAPABLE OF PREVENTING THE MIGRATION OF CONSTRUCTION MATERIALS INTO THE TRAVELED WAYS.

18 **PERFORMANCE STANDARDS**. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING WATER POLLUTION CONTROL MEASURES BASED ON PERFORMANCE STANDARDS. PERFORMANCE STANDARDS SHALL INCLUDE:

A. NON-STORM WATER DISCHARGES FROM THE SITE SHALL NOT OCCUR TO THE MEP[3]. STORM WATER DISCHARGES SHALL BE FREE OF POLLUTANTS INCLUDING SEDIMENT TO THE MEP.

B. EROSION SHALL BE CONTROLLED BY ACCEPTABLE BMPS TO THE MEP. IF RILLS AND GULLIES APPEAR THEY SHALL BE REPAIRED AND ADDITIONAL BMPS INSTALLED TO PREVENT A REOCCURRENCE OF EROSION.

C. AN INACTIVE AREA SHALL BE PROTECTED TO PREVENT POLLUTANT DISCHARGES. A SITE OR PORTIONS OF A SITE SHALL BE CONSIDERED INACTIVE WHEN CONSTRUCTION ACTIVITIES HAVE CEASED FOR A PERIOD OF 14 OR MORE CONSECUTIVE DAYS.

[3] **MAXIMUM EXTENT PRACTICABLE (MEP)** - THE TECHNOLOGY-BASED STANDARD ESTABLISHED BY THE UNITED STATES CONGRESS IN THE CLEAN WATER ACT 402(P)(3)(B)(III) THAT MUNICIPAL DISCHARGES OF URBAN RUNOFF SHALL MEET. MEP GENERALLY EMPHASIZES POLLUTION PREVENTION AND SOURCE CONTROL BMPS PRIMARILY AS THE FIRST LINE OF DEFENSE IN COMBINATION WITH TREATMENT METHODS SERVING AS BACKUP AND ADDITIONAL LINES OF DEFENSE.

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING