Water Pollution Control Plan

for Project:

Located at:

Address:

WPCP Prepared by:

Company:

Individual:

Address:

Preparation Date:

Prepared for:

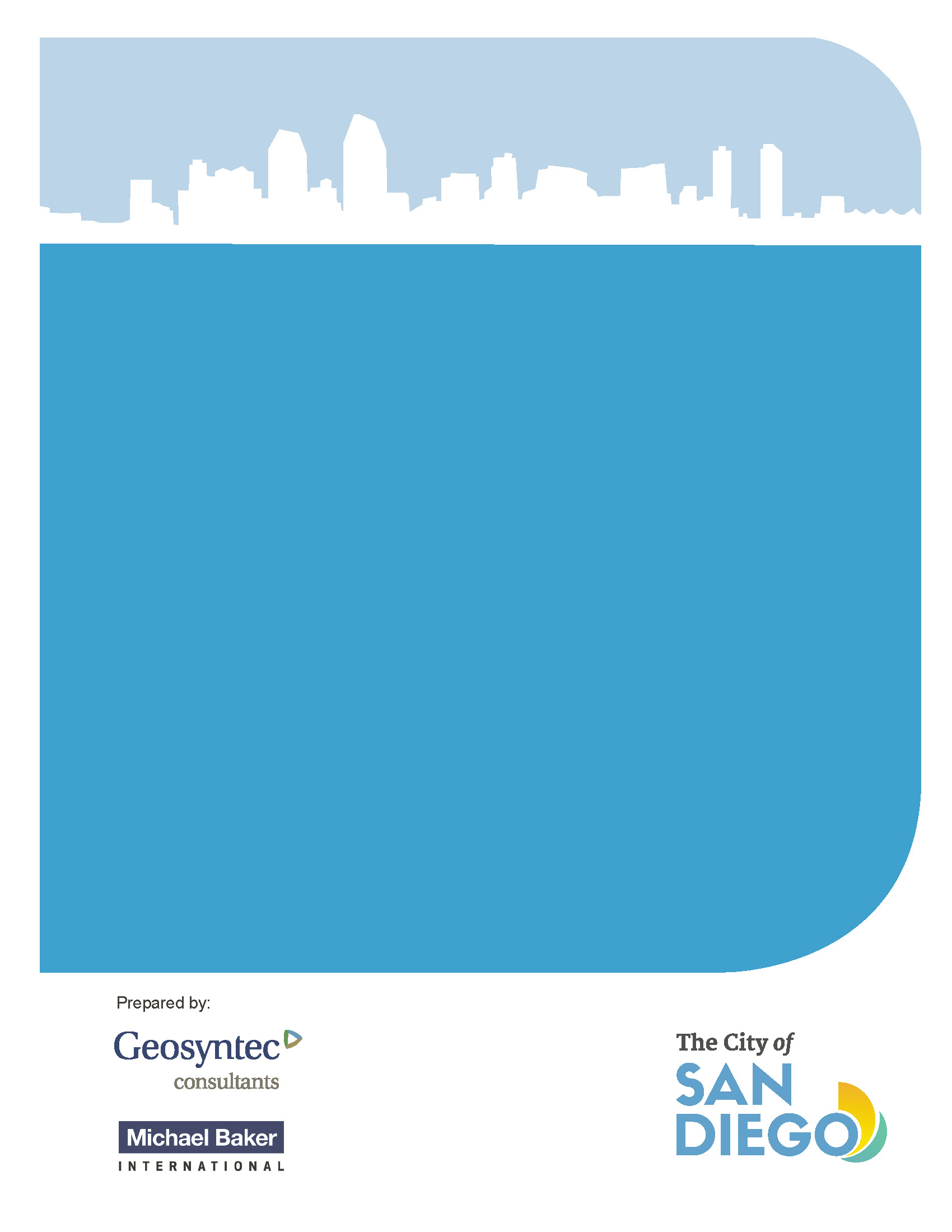
City of San Diego

Department:

Address:

Project Start Date:

Project End Date:



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# 1.0 WPCP Requirements

# 1.1 Introduction

The San Diego Regional Water Quality Control Board (RWQCB) adopted Order No. R9-2013-0001 as amended by Order Nos. R9-2015-0001 and R9-2015-0100, *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 November 18, 2015 (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, construction phase appropriate, and 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 as amended by Order Nos. 2010-0014-DWQ and 2012-006-DWQ (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, or otherwise do not require coverage under the Construction General Permit; 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 is required to be utilized to meet the City’s WPCP requirement. The WPCP must be certified by the applicant (see **Appendix C**).

A Minor Water Pollution Control Plan (MWPCP) (see the City’s [Form DS-570](http://www.sandiego.gov/development-services/pdf/industry/forms/ds570.pdf)) 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 D**).

**NOTE: It is the responsibility of the project owner to ensure that all construction activities comply with local and state regulations, including Part 2 of the Storm Water Standards Manual (2018) and San Diego Municipal Code Section 43.03. The guidance and template provided here are for the WPCP developer’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 must 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 authorized non-storm water discharges and eliminate unauthorized non-storm water discharges, illicit connections, and dumping;
* To establish, construct, implement, and maintain 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

The WPCP must be prepared, certified, and amended by a Qualified WPCP Preparer as defined in *Storm Water Standards – Part 2* (2018) if the project meets the following criteria:

* Not subject to Construction General Permit requirements; and
* Determined to be a Priority Development Project (PDP), per Part 1 of the Storm Water Standards; and
* Located in the Los Peñasquitos Watershed, Tijuana River Watershed, adjacent to or directly discharges to an Environmentally Sensitive Area, or discharges to an ASBS.

The Qualified WPCP Preparer shall meet at least one of the following registrations or certifications:

1. A qualified SWPPP developer (QSD);
2. A qualified SWPPP practitioner (QSP);
3. A California registered civil engineer;
4. A California registered geologist;
5. A California registered landscape architect;
6. A professional hydrologist registered through the American Institute of Hydrology;
7. A certified professional soil scientist registered through the Soil Science Society of America;
8. A certified professional in erosion and sediment control registered through EnviroCert International, Inc.;
9. A certified professional in storm water quality registered through EnviroCert International, Inc.;
10. A certified erosion, sediment, and storm water inspector registered through EnviroCert International, Inc.;
11. A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control Inc.; or
12. A certified professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies.

The WPCPs that do not require a Qualified WPCP Preparer must be prepared, certified, and amended by a Qualified Contact Person (QCP).

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

## 1.3.1 Qualified Contact Person

A QCP, as per the City’s *Storm Water Standards – Part 2* (2018) definition, must be assigned to the project. The QCP must 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.

**Table 1** provides the name and contact information for the WPCP Preparer and QCP and any additional persons designated by the QCP.

*[Complete Table 1 with the name and contact information for the WPCP Preparer and QCP and any additional persons designated by the QCP.]*

Table 1. Qualified WPCP Preparer and Contact Person and Designees

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Company/ Organization** | **Phone Number** |
| Qualified WPCP Preparer |  |  |  |
| Qualified Contact Person |  |  |  |
| Additional Persons Designated by the Qualified Contact Person |  |  |  |
|  |  |  |

## 1.3.2 Self-Inspections

The QCP or designee is required to perform self-inspections, as per the City’s *Storm Water Standards – Part 2* (2018).The objectives are to:

* Demonstrate the site is in compliance with the City’s *Storm Water Standards – Part 2* (2018) and San Diego Municipal Code Section 43.03;
* Ensure that the owner/contractor takes full responsibility for managing storm water pollution caused by the project site’s construction activities;
* Ensure that storm water BMPs are properly documented, implemented, and are functioning effectively;
* Identify BMP maintenance (e.g., 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 – Part 2* (2018) 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;
* Daily during all phases of construction during the wet season; and
* Weekly during all phases of construction during the dry season.

Additionally, weather forecasting must be performed daily and a WTAP is required for every project. See **Section 4.3** for WTAP implementation requirements and timelines.

During self-inspections, the QCP or designee will 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 must be revised accordingly. Self-inspections must be documented using a checklist, documentation of daily inspections is at the discretion of the QCP. The self-inspection checklist must also note the date, time, and weather conditions during the inspection. Completed checklists must be kept in **Appendix F** and 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 must begin to be implemented within 72 hours and noted on the self-inspection checklist.

# 1.4 Availability

This WPCP must remain onsite at all times during business hours and readily available for review by the U.S. Environmental Protection Agency (EPA), SWRCB, RWQCB, City representatives, and all operating personnel for the duration of the project. Authorized representatives from the EPA, SWRCB, RWQCB, and the City 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 RE or Building Inspector. Amendments shall be documented in the Amendment Log (**Appendix A**).

# 1.6 Storm Water Discharges to ASBS

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 RWQCB;
2. The discharges comply with all of the applicable terms, prohibitions, and special conditions contained in these Special Protections; and
3. The discharges:
   1. Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
   2. Are designed to prevent soil erosion;
   3. Occur only during wet weather; and
   4. Are composed of only storm water runoff.

# 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.

Per Attachment A of the MS4 Permit, 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; and
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 - Part 2* (2018) to determine applicable non-storm water regulations.

# 2.0 Project Information

# 2.1 Project and Site Description

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

## 2.1.1 Project Location

The project location and identifying information are provided in **Table 2**.

*[Complete Table 2.]*

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.: | City Project Tracking Number: For CIP use WBS# | | | |
| Contractor Company Name: | | | Contact Name: | |
| Address: | City: | | State: CA | Zip Code: |
| Telephone No.: | Email address: | | | |
| Qualified WPCP Preparer: | | | | |
| Telephone No.: | Email address: | | | |
| Qualified Contact Person (QCP)\*: | | | | |
| Telephone No.: | Email address: | | | |
| City Enforcement Agency Information | | | | |
| Telephone No.: (619) 235-1000 (Storm Water Hotline)  Website: [Storm Water Division - Storm Water Service Request](http://www.sandiego.gov/stormwater/services/servicerequest.shtml) | | | | |

\* See **Section 1.3.1** for definition.

## 2.1.2 Project Description

The project description is provided in **Table 3**.

*[Complete Table 3.]*

Table 3. Project Description

|  |  |
| --- | --- |
| **Project Description** | |
| Project Name: |  |
| Total Project Acreage, including set-up and laydown areas: |  |
| Estimated Disturbed Area (acres): |  |
| Project Scope: |  |
| Land Use Type (Existing/Proposed): |  |
| Existing Impervious/ Pervious Areas (Acres): |  |
| Proposed Impervious/Pervious Areas (Acres): |  |
| Watershed: |  |
| Receiving Water Body: |  |
| 303(d) Listed Impairments: |  |
| Soil Type: |  |
| Existing and Planned Storm Water Features: |  |
| Sources of Run-on to the Site: |  |
| Discharge Locations: |  |
| Other Site Features: |  |

## 2.1.3 Construction Schedule

The construction schedule is provided in **Table 4**, including anticipated activities to be performed in the wet season and dry season and the phase of construction (Demolition, Rough Grading, Final Grading, Vertical Construction, Post-Construction Stabilization). The wet season is October 1 through April 30 of each year. The construction schedule will serve as the basis for the BMP phasing plan in **Section 3.1.1** and **Appendix H**. In addition, the schedule must identify anticipated periods of inactivity exceeding 14 days.

*[Complete Table 4.]*

Table 4. Construction Schedule

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Phase of Construction** | **Construction Activity** | **Start Date** | **Finish Date** | **Wet Season (Y/N)** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## 2.1.4 Site Priority

Construction site priority determines the frequency of inspections that will be conducted by City staff.

*[Select site priority]*

Table 5. Site Priority and Minimum Inspection Frequency

| **Priority** | **Criteria** | **Wet Season**  **(October 1 to April 30)** | **Dry Season**  **(May 1 to September 30)** | **Check One** |
| --- | --- | --- | --- | --- |
| **ASBS** | Projects located in an Area of Special Biological Significance (ASBS) watershed. A map of the ASBS watersheds can be found in Appendix A of Part 2 of the City of San Diego Storm Water Standards (2018). | Weekly | Quarterly |  |
| **High1** | 1. Projects that qualify as Risk Level 2 or Risk Level 3 per the CGP and not located in an ASBS watershed. 2. Projects that qualify as LUP Type 2 or LUP Type 3 per the CGP and not located in an ASBS watershed. | Bi-weekly | Quarterly |  |
| **Medium** | 1. Projects that are not located in an ASBS watershed or designated as a high priority site. 2. Projects that qualify as Risk Level 1 or LUP Type 1 per the CGP and not located in an ASBS watershed. 3. WPCP projects located within the Los Peñasquitos Watershed Management Area. | Monthly | Quarterly |  |
| **Low** | Projects not subject to a medium or high site priority designation and are not located in an ASBS watershed. | Quarterly | As-Needed |  |
| **Is the project covered under a Rainfall Erosivity Waiver by the RWQCB?** | | ❒ Yes  ❒ No | | |
| **If “Yes,” provide Waiver# and include a copy of the NOI in Appendix C.** | | | | |
| **1Note that this template is not applicable for “High” Priority projects.** | | | | |

## 2.1.5 Site Features, Construction Activities, and Associated Potential Pollutants

Potential pollutant sources may stem from construction materials used onsite 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 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 the site adjacent to a waterway or sensitive habitat (e.g., wetland, vernal pool, etc.)? Note: additional permitting may be required. |  |  | 7 | NA |
| 2 | Is the site likely to discharge to an ASBS? Note: additional permitting may be required. |  |  | 7 | NA |
| 3 | Will there be asphalt paving, cutting, and/or patching? |  |  | 8 | Asphalt, aggregate |
| 4 | Will there be onsite storage of construction materials such as mortar mix, raw landscaping and soil stabilization materials, treated lumber, rebar, and plated metal fencing materials? |  |  | 8 | Construction materials,  *please specify:* |
| 5 | Will there be slurries from concrete or mortar mixing, coring, or saw cutting? |  |  | 8, 9, and 11 | Concrete materials, aggregate, slurry water |
| 6 | Will wash water or liquid waste be generated from this project? |  |  | 9, 11, and 12 | Liquid waste,  *please specify:* |
| 7 | Will there be stockpiling (i.e., soil, concrete, solid waste, etc.) for over 24 hours? |  |  | 9 and 13 | Stockpiled material, *please specify:* |
| 8 | Will trash or solid wastes (including landscaping wastes) be generated from this project? |  |  | 9 | Solid waste,  *please specify:* |
| 9 | Will hazardous materials or wastes, including paint, be stored or handled onsite? |  |  | 9 and 11 | Hazardous material, *please specify:* |
| 10 | Are underlying soils potentially contaminated? |  |  | 9 | Contaminated soil |
| 11 | Will portable sanitary facilities (“Portable toilets”) be used on the site? |  |  | 9 and 11 | Sanitary waste |
| 12 | Will construction equipment and/or vehicles be stored, fueled, maintained, or washed onsite? |  |  | 10, 11, and 12 | Engine fluids, fuels, oil, grease, wash water |
| 13 | Will there be dewatering operations? |  |  | 12 | Dewatering water, *please specify:* |
| 14 | Will the site have exposed/disturbed slopes greater than 5 percent? |  |  | 13, 14, 15, 17, and 18 | Sediment |
| 15 | 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? |  |  | 16 | Sediment, particulate construction materials,  *please specify:* |
| 16 | Are storm drain inlets located within the project boundary and/or will the site discharge storm water to nearby storm drain inlets? |  |  | 13, 18, and 20 (locations of protected inlets must be shown on Site Map) | NA |
| 17 | Is there run-on to the site from surrounding areas? |  |  | 20 | Sediment, other,  *please specify:* |
| 18 | Will concentrated flows and/or large accumulations of water occur onsite? |  |  | 20 | Sediment |
| 19 | Will other activities be performed that are not described above? |  |  | Select applicable BMPs from Tables 7-21 | *Please specify:* |
| 20 | Final stabilization of the site is required. | - |  | 21 | Not applicable |

# 2.2 Site Map Development

A Site Map must be developed and included as **Appendix B** of this WPCP. 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 project’s surrounding area (vicinity map);
* The construction site boundary and limits of disturbance;
* 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 delineated streams and drainage ways; storm drain inlets and outlets; curbs and gutters; and swales and channels;
* Anticipated discharge points for runoff (i.e. storm water, 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;
* Locations of all BMP implementation areas including erosion controls, sediment controls, dewatering controls, and soil stabilization controls, where applicable;
* Locations of post-construction BMPs (as applicable); and
* Locations of building and activity areas (e.g., fueling islands, garages, waste management areas, wash racks, hazardous material storage areas).

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

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

# 3.0 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 that have been disturbed and are not re-disturbed for 14 days must be stabilized (i.e., exposed soil will be covered). Sufficient BMP materials will be maintained onsite to allow implementation with this WPCP and emergency installation in the event of a breach. Locations where BMPs will be implemented are to be shown on the Site Map in **Appendix B**.

BMPs must be implemented on construction sites to reduce pollution to the maximum extent practicable. The City’s *Storm Water Standards – Part 2* (2018)outlines the requirements for construction storm water BMPs. The following BMP categories must be addressed. The applicable BMP category table number in *Storm Water Standards – Part 2* (2018)is also provided and shall be used as the primary reference for BMP implementation and maintenance.

* Project Planning, *Storm Water Standards – Part 2* (2018)Table 5-1
* Good Site Management “Housekeeping”, *Storm Water Standards – Part 2* (2018)Table 5-2
* Non-Storm Water Management, *Storm Water Standards – Part 2* (2018)Table 5-3
* Erosion Control, *Storm Water Standards – Part 2* (2018)Table 5-4
* Sediment Control, *Storm Water Standards – Part 2* (2018)Table 5-5
* Run-on and Runoff Control, *Storm Water Standards – Part 2* (2018)Table 5-6

Note: Active/Passive Sediment Treatment is unlikely to apply to projects preparing WPCPs.

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*, 2015, online at: <http://www.casqa.org/LeftNavigation/ConstructionBMPHandbookPortalSWPPPTemplate/tabid/200/Default.aspx>, (subscription required); and
* California Department of Transportation (Caltrans) *Construction Site BMP Handbook*, 2017, online at: http://www.dot.ca.gov/hq/construc/stormwater/documents/CSBMP-May-2017-Final.pdf.

# 3.1 Project Planning

## 3.1.1 Scheduling/Phasing Plan

A scheduling/phasing plan must be developed for each project to address work activities and BMP sequencing for each construction phase (i.e., demolition, mass grading, rough grading, final grading, and stabilization). It is the responsibility of the Qualified WPCP Preparer to develop the project-specific scheduling/phasing plan, clearly denoting BMP installation activities. This plan must identify steps the project will implement to:

1. Reduce the amount of soil exposed at any one time and during periods of high precipitation potential;
2. Maintain stabilized areas; and
3. Minimize work areas, staging areas, and construction roads.

This plan must consist of a listed sequence of construction activities and BMP installation activities which identifies the specific order in which construction activities and BMPs must be implemented.

During construction, the City may require additional phasing or scheduling plans if conditions change, current plans do not address work activities and BMPs adequately, or the City otherwise identifies a potential risk of discharge.

The scheduling/phasing plan must be updated for each phase of construction and kept onsite and made available for inspection upon request by a representative of the City, SDRWQCB, or the SWRCB.

Other storm water related provisions shall be included in **Appendix I** as applicable (e.g. 401 Permit, 404 Permit, Coastal Development Permit, Streambank Alteration Permit, Air Pollution Control District Permit, etc.).

*[Develop a scheduling/phasing plan that addresses the major construction phases and activities included in this project, as well as the implementation of BMPs in relation to construction activities. An example scheduling/phasing plan consists of a sequence of BMP installation activities for each phase is provided below. Activities are presented in the order (sequence) they are expected to be completed. BMP installation activities are indicated in italics. Note the below is provided as an example only. Project specific activities and BMPs must be included in the Project’s scheduling/phasing plan included in Appendix H.]*

**Example Phase 1 - Demolition and Mass/Rough Grading**

|  |  |  |
| --- | --- | --- |
| Activity | Start Date | End Date |
| 1. Survey and flag construction and laydown site boundaries. |  |  |
| 1. *Install perimeter control BMPs as shown on the Site Map.* |  |  |
| 1. *Install construction entrances (rock) as shown on Site Map.* |  |  |
| 1. Prepare temporary parking and staging areas. |  |  |
| 1. *Install inlet protection as shown on Site Map.* |  |  |
| 1. Begin clearing and grubbing. |  |  |
| 1. *Implement material management and waste management BMPs.* |  |  |
| 1. *Temporarily stabilize throughout construction following the completion of land disturbing activities.* |  |  |

**Example Phase 2 – Final Grading**

|  |  |  |
| --- | --- | --- |
| Activity | Start Date | End Date |
| 1. *Implement material management and waste management BMPs.* |  |  |
| 1. *Inspect and maintain Phase 1 BMPs.* |  |  |
| 1. *Stabilize disturbed areas that will be inactive for 14 days or more.* |  |  |
| 1. *Install concrete washout.* |  |  |
| 1. Begin excavations for utilities and foundations. |  |  |
| 1. Install utilities and storm drains. |  |  |
| 1. *Install inlet protection devices as inlets are completed.* |  |  |
| 1. Start construction of foundations. |  |  |
| 1. Stabilize access roadways with asphalt pavement. |  |  |
| 1. Complete final grading. |  |  |
| 1. *Begin permanent stabilization as areas are brought to final grade.* |  |  |

**Example Phase 3 – Stabilization**

|  |  |  |
| --- | --- | --- |
| Activity | Start Date | End Date |
| 1. *Inspect and maintain Phase 1 and Phase 2 BMPs.* |  |  |
| 1. *Stabilize disturbed areas that will be inactive for 14 days or more with vegetation.* |  |  |
| 1. Pave Site. |  |  |
| 1. Perform vertical construction. |  |  |
| 1. Install permanent stabilization measures at all areas. |  |  |

## 3.1.2 Resource Protection

Year-round protection of waterways and sensitive areas is required. The City’s *Storm Water Standards – Part 1* (2018) requires preserving natural hydraulic features and riparian area buffers where possible. Linear protection may be implemented using linear sediment controls such as silt fencing, gravel bag barriers, fiber rolls, and/or compost socks/berms. Linear sediment controls must be installed between the construction area and the sensitive area. However, linear sediment controls must not be installed up and down a slope (i.e., perpendicular to contours), which can cause erosion. Additionally, BMPs must be implemented when 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 7 if resources, such as water bodies and sensitive areas, are located within or adjacent to the site.]*

Table 7. Resource Protection BMPs

|  |  |  |  |
| --- | --- | --- | --- |
| **Best Management Practices** | **References** | | **Check at least one BMP** |
| **CASQA BMP** | **Caltrans BMP** |
| **Linear Sediment Controls** | SE-1, SE-5, SE-6,SE-8 SE-12, SE-13 | SC-01,SC-05, SC-06, SC-08 |  |
| **Preserve Natural Hydraulic Features and Riparian Area Buffers** | - | - |  |
| **Demolition Adjacent to Water** | NS-15 | NS-15 |  |
| **Temporary Stream Crossing** | NS-4 | - |  |
| If no BMPs were selected, provide explanation: | | | |
| Describe any additional resource protection BMPs to be implemented: | | | |
| Describe where resource protection BMPs will be installed: | | | |

# 3.2 Good Site Management “Housekeeping”

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. Good Site Management “Housekeeping” BMPs are provided in **Tables 8–11**. Keep an inventory of construction materials that will be used outdoors and exposed to precipitation, other than those designed for this purpose (e.g., poles, bricks). Designate materials loading, unloading, and storage areas. Do not perform activities during a rain event that may contribute to storm water pollution (e.g., loading/unloading) and minimize exposure of construction materials to precipitation.

## 3.2.1 Material Storage and Handling

All material delivery and storage must occur in an area designated for the activity and at least 50 feet away from downstream storm drain facilities. On projects with limited space, material must be stored at least 5 feet away from downstream storm drain facilities. All materials that may contribute pollutants to storm water runoff must be stored off the ground or stored within secondary containment. All materials must be covered at the end of every work day and prior to rain, in accordance with the WTAP implementation schedule applicable to the project. Keeping materials in a storage container (i.e., Conex box) or indoors satisfies the coverage requirement. All hazardous materials and hazardous wastes (a waste with properties that make it potentially dangerous or harmful to human health or the environment) must be stored in watertight containers and labelled in accordance with all local, state, and federal regulations. The storage area for these materials and wastes must be enclosed with watertight secondary containment. Absorbent spill cleanup materials must be readily available onsite in all material storage areas. Apply soil binders, pesticides, herbicides, and fertilizers only were designated without overspray to prevent potential discharge by storm water or non-storm water runoff.

*[Select material storage and handling BMPs from Table 8.]*

Table 8. Material Storage and Handling BMPs

| **Best Management Practices** | **References** | | **Check at least one BMP** |
| --- | --- | --- | --- |
| **CASQA BMP** | **Caltrans BMP** |
| **Material Storage** | WM-1 | WM-01 |  |
| **Material Handling and Use** | WM-2 | WM-02 |  |
| **Paving and Grinding Operations** | NS-3 | NS-03 |  |
| **Concrete Management** | NS-12, NS-13, NS-16 | NS-12, NS-14 |  |
| **Landscape Material Management** | WM-1, WM-2 WM-5 | WM-03, WM-05 |  |
| If no BMPs were selected, provide explanation: | | | |
| Describe any additional material storage and handling BMPs to be implemented: | | | |
| Describe where material storage and handling BMPs will be implemented/installed: | | | |

## 3.2.2 Waste Management

Wastes must be fully managed to prevent discharges to the MS4. Waste management areas must be designated using visible signage. Waste storage areas must be located at least 50 feet from drainage facilities and watercourses and must not be located in areas prone to flooding or ponding per site conditions and the Federal Emergency Management Agency flood map database (https://msc.fema.gov/portal). When infeasible, place waste storage areas as far away as possible from drainage facilities and watercourses. Waste containers are not allowed to leak and must be covered and secured at the end of every day and prior to rain. Waste disposal containers must be inspected for leaks on a weekly basis and must be emptied when they become 95% full. Washdown of waste containers is prohibited onsite.

Littering is prohibited in all areas of the construction project and must be collected at the end of every work day. Loose trash and waste within the project boundary or that originates from the project must be collected daily and disposed of properly. Litter and debris removal from drainage grates, trash areas, and ditches must be performed daily to prevent clogging of storm drainage systems.

Liquid waste management is applicable for all activities that generate any of the following non-hazardous liquid wastes: drilling slurries and fluids; grease and oil-free wastewater and rinse water; dredging; and other non-storm water liquid discharges not permitted by separate permits. Liquid waste discharges as a result of the creation, collection, and disposal of non-hazardous waste is prohibited. Liquid wastes must be contained in a structurally sound and leak-free container and stored in a controlled area with perimeter controls.

Hazardous liquid waste (e.g., used oils, solvents, and paints) and chemicals (e.g., acids, pesticides, additives, and curing compounds) must only be stored in watertight containers in designated hazardous waste storage areas with appropriate labelling, coverage, and watertight secondary containment. The waste storage area must be covered at the end of every work day, and prior to and during rain events. Disposal of these materials must be in accordance with local, state, and federal regulations.

Concrete waste management must occur at every area where concrete or slurries containing Portland cement concrete or asphalt cement is generated, placed, saw cut, cored, grinded, or demolished. Saw cutting slurry shall be vacuumed during the cutting operation and shall not be allowed to sheet-flow more than maximum 12 inches beyond either side of the saw cut line. The vacuum operator shall be within a maximum of five feet of the saw operator to vacuum the slurry. If the slurry was not fully removed from the vacuumed operation, the remainder shall be removed with an appropriate method until no slurry can be dislodged by manual brushing with a wire brush. Slurry/residue must be disposed of properly at the end of each day. Washout from concrete trucks and concrete waste must be collected in a designated concrete washout. Concrete washouts must be watertight and fitted with secondary containment to prevent any concrete waste from being able to discharge on to the ground or offsite. Concrete washout containers must be cleaned or exchanged when containment reaches 75% capacity. Concrete washout containers must be covered securely at the end of every work day. Wash out concrete equipment/trucks offsite or in a contained area located a minimum of 50 feet from storm drain facilities and watercourses. For projects with limited space a distance less than 50 feet but greater than 5 feet may be allowed if additional BMPs are installed downstream of wash out area.

Install containment for portable restrooms and inspect regularly for leaks. Portable restrooms must be located at least 50 feet away from storm drain facilities, watercourses, and traffic circulation. For projects with limited space a distance less than 50 feet but greater than 5 feet may be allowed if additional BMPs are installed downstream of the temporary sanitary facility.

*[Select waste management BMPs from Table 9].*

Table 9. Waste Management BMPs

|  |  |  |  |
| --- | --- | --- | --- |
| **Best Management Practices** | **References** | | **Check at least one BMP** |
| **CASQA BMP** | **Caltrans BMP** |
| **Solid Waste Management** | WM-5 | WM-05 |  |
| **Liquid Waste Management** | WM-10 | WM-10 |  |
| **Contaminated Soil Management** | WM-7 | WM-07 |  |
| **Sanitary/Septic Waste Management** | WM-9 | WM-09 |  |
| **Concrete Waste Management** | WM-8 | WM-08 |  |
| **Hazardous Waste Management** | WM-6 | WM-06 |  |
| **Stockpile Management** | WM-3 | WM-03 |  |
| If no BMPs were selected, provide explanation: | | | |
| Describe any additional waste management BMPs to be implemented: | | | |
| Describe where waste management BMPs will be implemented installed: | | | |

## 3.2.3 Vehicle and Equipment Management

Vehicle and equipment management BMPs are implemented if vehicles and equipment will be used, fueled, maintained, and/or parked at the jobsite. Equipment is not permitted to leak. If equipment is found to be leaking it must immediately be repaired or removed. Drip pans must be placed underneath all equipment when not in use to detect leaks. Any visible leaks or accumulation in drip pans or containment must be cleaned daily and before rain. Inspections for equipment leaks must be performed daily by the Contractor. All cleaning, fueling, and maintenance performed onsite must occur in an area designated for the activity which is fitted with appropriate secondary containment and is at least 50 feet away from downstream storm drain facilities. Fueling and maintenance must be performed using drip pans or secondary containment, such as plastic laid out on the ground using a perimeter berm created with gravel bags or fiber rolls under the edge of the plastic. Topping-off of fuel tanks is prohibited. Absorbent spill cleanup materials must be readily available wherever vehicle and equipment cleaning, fueling, and maintenance activities occur. Employees and subcontractors must be trained in proper spill prevention, control, and cleanup procedures. See Spill Prevention and Control BMP for documentation and reporting procedures. Oil, antifreeze, and other fluids shall be drained from inoperable vehicles intended for recycling or long-term outdoor storage. Drained fluids shall be disposed of in accordance with applicable hazardous materials regulations. Do not clean vehicles or equipment onsite using soaps, solvents, degreasers, steam cleaning equipment, etc.

*[Select vehicle and equipment management BMPs from Table 10.]*

Table 10. Vehicle and Equipment Management BMPs

|  |  |  |  |
| --- | --- | --- | --- |
| **Best Management Practices** | **References** | | **Check at least one BMP** |
| **CASQA BMP** | **Caltrans BMP** |
| **Vehicle and Equipment Cleaning** | NS-8 | NS-08 |  |
| **Vehicle and Equipment Fueling** | NS-9 | NS-09 |  |
| **Vehicle and Equipment Maintenance** | NS-10 | NS-10 |  |
| If no BMPs were selected, provide explanation: | | | |
| Describe any additional vehicle and equipment management BMPs to be implemented: | | | |
| Describe where vehicle and equipment management BMPs will be implemented/installed: | | | |

## 3.2.4 Spill Control

Spill prevention and control must occur at every area 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. All employees and subcontractors must be trained in proper spill prevention, control, and cleanup procedures. Documentation of training must be per the project WPCP and kept at the construction site with the WPCP. Post procedures for storage, clean-up, and spill reporting for hazardous materials and wastes in open, conspicuous, and accessible locations adjacent to storage areas. Ample spill controls materials must be stored onsite.

Spills must be contained and cleaned immediately in accordance with the applicable spill control plan, health and safety plan, and safety data sheets. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil according to all local, state, and federal regulations. Spills on asphalt or concrete must be contained and cleaned using adsorbent materials (“kitty litter”).

Remove all spent spill cleanup materials and dispose of according to all local, state, and federal regulations. Notify the RE or City Inspector after the spill is contained; prior to resuming construction activities. Spills must 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. Minor spillage or overflow of potable water must be contained and must not be allowed to discharge into watercourses or drainage facilities.

Any significant release or threatened release of a hazardous material requires immediate reporting by the responsible person to:

* The California Governor’s Office of Emergency Services (Cal OES) State Warning Center at 800-852-7550;
* The San Diego County Hazardous Materials Division at 858-505-6880; and
* Emergency response at 9-1-1.

Significant spills must also be reported to the City’s Solid Waste Local Enforcement Agency within 24 hours at 619-533-3688. Federal regulations require that discharges of oil or petroleum products into or on any waters of the State be reported to the Cal OES State Warning Center at 800-852-7550 and the National Response Center at 800-424-8802 (24 hours). For more information on what is classified as a “significant or threatened release of hazardous material,” visit the CAL OES website at [www.caloes.ca.gov/FireRescueSite/Pages/Spill-Release-Reporting.aspx](http://www.caloes.ca.gov/FireRescueSite/Pages/Spill-Release-Reporting.aspx). Significant spills must be reported to the City Enforcement Agency within 24 hours.

*[Select spill control BMPs from Table 11.]*

Table 11 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, provide explanation: | | | |
| Describe any additional spill control BMPs to be implemented: | | | |
| Describe where spill control BMPs will be implemented: | | | |

# 3.3 Non-Storm Water Management Controls

Illicit discharge and non-storm water discharges are defined as any discharge to the MS4 that is not composed entirely of storm water. The MS4 system includes all conveyances owned by the City designed to collect or convey storm water. Non-storm water discharges must be eliminated or controlled to the maximum extent practicable. Examples of non-storm water include but are not limited to runoff of potable (such as fire hydrant nuisance water) and non-potable water, irrigation runoff, and liquid waste or water from construction activities (such as trench nuisance water) discharging into a storm drain or offsite. 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. Non-storm water management BMPs are provided in **Table 12**.

The site must be inspected by the Contractor for illicit connections and discharges. If observed, action must be taken as soon as possible to halt the connection/discharge. Illicit discharges to the City’s MS4 must be reported to the City’s Solid Waste Local Enforcement Agency at 619-533-3688 within 24 hours. Overspray and overwatering of vegetation for erosion control and landscaping shall be avoided. Water line breaks must be repaired as soon as possible. Ensure that construction-related materials, wastes, spills, or residues are prevented from discharging from the construction site to streets, drainage facilities, receiving waters, or adjacent properties by wind or runoff. Air conditioning condensate discharges shall be controlled to prevent them from reaching storm drains, curbs and gutters, or any other part of the MS4 system.

Dewatering of accumulated, uncontaminated storm water is allowable under the following conditions described in the Dewatering Operations BMP in the City’s *Storm Water Standards – Part 2 (2018)*:

1. The City must be notified (619-235-1000 or [SWPPP@sandiego.gov](mailto:SWPPP@sandiego.gov)) prior to discharging into the street, gutter, or storm drain. The gutter from the discharge point to the inlet must be swept clean prior to discharge.
2. Water discharging from the site must be clear or field-tested and documented to be less than 20 Nephelometric Turbidity Units (NTU) or demonstrated through a drainage study that the project is not causing and/or contributing to exceedances in the receiving water.
3. Discharges from dewatering operations must be directed through an appropriate pollution prevention or treatment system of control measures, such as a filter bag and sediment trap or sediment basin, prior to being discharged from the construction site.
4. Ensure that dewatering discharges do not cause erosion at the discharge point by implementing the Temporary Energy Dissipation BMP.

Note that the Water Quality Control Plan for the San Diego Region requires that waters be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

The Water Quality Objective for inland surface waters is 20 NTU. The maximum increase in turbidity for lagoons and estuaries is specified in the Basin Plan and ranges from 10 – 20% over natural turbidity levels. Other Basin Plan requirements may apply.

*[Select non-storm water management BMPs from Table 12.]*

Table 12 Non-Storm Water Management BMPs

|  |  |  |  |
| --- | --- | --- | --- |
| **Best Management Practices** | **References** | | **Check at least one BMP** |
| **CASQA BMP** | **Caltrans BMP** |
| **Illicit Connection/Discharge Detection and Reporting** | NS-6 | NS-06 |  |
| **Potable Water/Irrigation** | NS-7 | NS-07 |  |
| **Vehicle and Equipment/Cleaning** | NS-8 | NS-08 |  |
| **Water Conservation Practices** | NS-1 | NS-01 |  |
| **Dewatering Operations** | NS-2 | NS-02 |  |
| If no BMPs were selected, provide explanation: | | | |
| Describe any additional non-storm water management BMPs to be implemented: | | | |
| Describe where non-storm water management BMPs will be implemented/installed: | | | |

# 3.4 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from being detached and mobilizing 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 **Tables 13-16**.

Erosion controls must be used in conjunction with sediment controls (see **Section 3.5**). 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. At a minimum, erosion control is required on all disturbed areas prior to a 50% probability of precipitation. Projects that are subject to an enhanced WTAP trigger are required to stabilize disturbed areas at a lower probability of precipitation.

All stockpiles must be stabilized at the end of each day. In addition, all stockpiles must be bermed (i.e. perimeter controls) at the end of each day. Stockpiles in the right-of-way must be stabilized with an erosion control product and bermed (i.e. perimeter control) at the end of each day. All stockpiles must be stabilized with an erosion control product and bermed (i.e. perimeter control) prior to rain. Projects that are subject to an enhanced WTAP trigger are required to stabilize and berm all stockpiles at a lower probability of precipitation. For stockpiles where only a portion (or “face”) is actively being used, the remaining inactive portion (or faces) must be designated on the site map and stabilized with an erosion control product and bermed at all times. Active faces must be bermed (i.e. perimeter control) and stabilized at the end of each day.

Construction support areas (e.g., parking, staging, material storage, fabrication areas) must be stabilized. Due to the nature of activities in these areas, periodic reapplication of temporary stabilization measures or redressing of gravel stabilization is required.

Scheduling/phasing of construction activities is required on all sites to minimize soil exposure and soil disturbance. 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.

Prior to a rain event, active and inactive areas of construction, including construction support areas, are required to be stabilized in accordance with WTAP requirements in **Section 4.3**.

*[Select from the general erosion control BMPs from Table 13].*

Table 13. General Erosion Control BMPs

|  |  |  |  |
| --- | --- | --- | --- |
| **Best Management Practices** | **References** | | **Check at least one BMP** |
| **CASQA BMP** | **Caltrans BMP** |
| **Planning and Scheduling** | EC-1 | SS-1 |  |
| **Stockpile Management** | WM-3 | WM-3 |  |
| If no BMPs were selected, provide explanation: | | | |
| Describe any additional erosion control BMPs to be implemented: | | | |
| Describe where erosion control BMPs will be implemented/installed: | | | |

## 3.4.1 Non-Vegetative Stabilization

Non-vegetative stabilization consists of materials other than vegetation used to temporarily or permanently stabilize exposed areas. Materials used for non-vegetative stabilization must 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 non-vegetative stabilization may be necessary where vegetation cannot be established, 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 must 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).

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 that is 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. Hydraulic applications must be applied and re-applied as needed to maintain full coverage of soil in the area to be stabilized without shadowing or thin patches. Where necessary and as field conditions allow, apply mulch from multiple directions to provide full coverage. Hydraulic mulch shall not be oversprayed onto roadways, drainage channels, or existing vegetation.

Straw is generally the material used for mulch; it shall 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; usually this material doesn’t require 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) may be used on rocky slopes. An added benefit of compost is that it can enhance vegetation establishment while protecting against erosion. The thickness of the compost layer needed is dependent upon the slope gradient (see BMP references for details). 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. 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 or stabilized and bermed at the end of every day and prior to rain. 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 (e.g., sea walls, etc.)

*[Select non-vegetative stabilization BMPs from Table 14.]*

Table 14. Non-Vegetative Stabilization BMPs

| **Best Management Practices** | **References** | | **Check at least one BMP** | |
| --- | --- | --- | --- | --- |
| **CASQA BMP** | **Caltrans BMP** |
| **Geotextiles and Mats** | EC-7 | SS-7 |  | |
| **Hydraulic Mulch and** **Bonded Fiber Matrix** | EC-3 | SS-3 |  | |
| **Soil Binders** | EC-5 | SS-5 |  | |
| **Straw and Wood Mulch** | EC-6, EC-8 | SS-6, SS-8 |  |
| **Compost Blankets** | EC-14 | - |  |
| **Soil Preparation/ Roughening (not a stand-alone BMP)** | EC-15 | - |  |
| **Topsoil Reapplication** | - | - |  |
| **Permanent Stabilization (i.e., retaining walls, rock gabions, rock riprap, etc.)** | - | - |  |
| **Other Material – Non-Vegetative Stabilization (to be approved by the City)** | EC-16 | - |  |
| If no BMPs were selected, provide explanation: | | | |
| Describe any additional non-vegetative stabilization BMPs to be installed: | | | |
| Describe where non-vegetative stabilization BMPs will be installed: | | | |

## 3.4.2 Vegetative Stabilization

It is recommended that vegetation is 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 non-vegetative 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 may 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 shall 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 15.]*

Table 15. Vegetative 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 (Hydroseeding)** | EC-4 | SS-4 |  |
| **Establish Permanent Landscaping** | - | - |  |
| **Streambank Stabilization** | EC-12 | SS-12 |  |
| If no BMPs were selected, provide explanation: | | | |
| Describe any additional vegetative stabilization BMPs to be implemented: | | | |
| Describe where vegetation stabilization BMPs will be installed: | | | |

## 3.4.3 Dust Control

Dust control BMPs are implemented to prevent the air deposition of site materials and particulates from site operations. Such particulates can include sediment, nutrients, trash, metals, bacteria, oil/grease, and organics. Dust generated by construction activities shall be controlled and is prohibited from leaving the site. Control dust using dust control practices appropriate for the site. Water-based dust suppression shall be applied in a way that avoids overwatering and oversaturation. If dust cannot be controlled, discontinue activities generating dust and evaluate the need for additional stabilization. Do not perform activities that may discharge particulates on windy days. Dust control BMPs are provided in **Table 16**.

*[Select particulate and dust control BMPs from Table 16.]*

Table 16. 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, provide explanation: | | | |
| Describe any additional particulate and dust control BMPs to be implemented: | | | |
| Describe where particulate and dust control BMPs will be implemented: | | | |

# 3.5 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, sediment capture, and offsite sediment tracking control (as described below) are required year-round and must be installed and maintained to comply with performance standards of the City’s *Storm Water Standards – Part 2* (2018), Chapter 5. Sediment control BMPs are provided in **Tables 17–19** and shall be used in conjunction with erosion controls.

## 3.5.1 Perimeter Controls/Linear Sediment Controls

Perimeter control BMPs must be installed and maintained year-round to comply with performance standards from the City’s *Storm Water Standards - Part 2* (2018), Chapter 5. They may consist of silt fencing, gravel bag berms, fiber rolls (straw wattles), manufactured linear sediment controls, sand bag barriers, or compost socks/berms. Silt fencing, fiber rolls, and manufactured linear sediment controls must be trenched in and backfilled to be effective. Fiber rolls may also be used as a perimeter control on impervious surfaces only if they are properly secured at 4-ft intervals using gravel bags or an equivalent measure. Fiber roll perimeter control can be used at temporary perimeter control in active work areas on pervious surfaces where perimeter controls need to be removed during work hours and replaced at the end of the day. Gravel bags and fiber rolls shall be stacked if necessary so that storm water cannot flow over the top.

Perimeter controls must be inspected/maintained daily and as needed. BMPs must be maintained when there is visible damage (e.g., holes, slumping/sagging). Deteriorated BMPs must be removed from the perimeter and managed in accordance with applicable waste requirements. Accumulated sediment must be removed from perimeter controls when sediment reaches 1/3 of the BMP height. Areas where sediment has accumulated to a height of 1-inch or greater must be removed immediately. Sediment near and along gravel bags must be removed at the end of each day and prior to a rain event.

Linear sediment controls must be implemented at the boundaries of interior work areas (e.g., transitions from lots to interior or private streets). Prior to rain as part of the WTAP and when areas are inactive, linear sediment controls must be implemented on slopes, graded lots, dirt roads, and pads. Install linear sediment controls along the top and toe of the slope and at grade breaks of exposed slopes to comply with the sheet flow lengths provided in the Linear Sediment Controls BMP description in Chapter 5, Table 5-5 of the City’s *Storm Water Standards – Part 2* (2018). Linear sediment controls have a very limited sediment capture zone, which can be easily overwhelmed, and must be used in combination with other BMPs to prevent discharges.

*[Select perimeter control and linear sediment control BMPs from Table 17.]*

Table 17. Perimeter and Linear Sediment Control BMPs

|  |  |  |  |
| --- | --- | --- | --- |
| **Best Management Practices** | **References** | | **Check at least one BMP** |
| **CASQA BMP** | **Caltrans BMP** |
| **Silt Fence** | SE-1 | SC-01 |  |
| **Gravel Bag Berm** | SE-6 | SC-06 |  |
| **Sand Bag Barrier** | SE-8 | SC-08 |  |
| **Fiber Rolls or Straw Wattles** | SE-5 | SC-05 |  |
| **Manufactured Linear Sediment Controls** | SE-12 | - |  |
| **Compost Socks and Berms** | SE-13 | - |  |
| If no BMPs were selected, provide explanation: | | | |
| Describe any additional perimeter/linear control BMPs to be implemented: | | | |
| Describe where perimeter/linear control BMPs will be installed: | | | |

## 3.5.2 Sediment Capture

Sediment in storm water is generally captured by gravity-based measures (e.g., sediment traps and basins) and passive systems (e.g., silt fence, fiber rolls, etc.).

Storm drain inlet filters are considered “last resort” BMPs, which are designed to capture only small amounts of sediment. Controlling sediment shall begin upstream of the storm drain inlet, via erosion and sediment controls installed at the source. Good housekeeping (e.g., street sweeping and maintaining stabilized entrances/exits) must 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.

Storm drain inlet protection must be implemented during dry weather at every storm drain inlet that has the potential to receive construction related pollutants from active construction areas. Inlet protection within City streets must be removed prior to rain or during emergency water main breaks to ensure no flooding occurs. Remove inlet protection prior to the end of the day or weekend if rain is forecast during those periods. Inlet protection must be replaced prior to restarting construction. Storm drain inlet protection measures must be inspected/maintained daily and as needed. Maintaining storm drain inlet protection measures must include replacing damaged BMPs and removing and disposing of accumulated sediment, trash, and debris. Removal must occur when accumulation is 1/3 the height or depth of the BMP. Areas where sediment has accumulated to a height of 1-inch or greater must be removed immediately. Sediment near and along gravel bags must be removed at the end of each day and prior to a rain event.

Sediment traps and basins may be implemented within the downstream section of a construction site or at discharge points. Any construction site with a sediment trap or basin must include site specific dewatering protocols in the WPCP that includes the means and methods to dewater retained water within 96 hours to prevent vector production or to maintain capacity and document that sediment or other pollutants are not discharged during dewatering. Sediment traps are only allowed for tributary drainage areas below 5 acres and must meet the requirements of CASQA Fact Sheet SE-3 or Caltrans Fact Sheet SC-03, including depth limits and overflow requirements. Sediment basins must be used for tributary drainage areas between 5 and 75 acres. A California Registered Civil Engineer is required to design the sediment basin in accordance with CASQA Fact Sheet SE-2 to ensure it has sufficient capacity. Sediment basins must be designed in accordance with an industry standard, such as Caltrans's *Construction Site Best Management Practices Manual* (2017). 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. Sediment shall be removed when the sediment accumulation reaches 1/3 of the trap or basin capacity.

*[Select from the sediment capture BMPs from Table 18.]*

Table 18. 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 |  |
|  |  |  |  |
| 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: | | | |
| Describe procedures for dewatering to address vector control and for maintaining capacity of BMP: | | | |

## 3.5.3 Offsite Sediment Tracking

Offsite sediment tracking BMPs must be installed and maintained year-round at construction entrances/exits to comply with performance standards from the City’s *Storm Water Standards – Part 2 (2018)*. The construction site entrance/exit must be stabilized to control and prevent sediment tracking from the site. Construction site entrances/exits must be constructed with a length of 50 feet or as allowable by project site conditions and width of 10 feet or the minimum necessary to accommodate vehicles and constructed per material specifications in the corresponding CASQA or Caltrans Fact Sheet. 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 must be designed so that vehicles and equipment cannot be driven around the stabilization measures. Additional controls such as stabilized construction roads must be implemented if tracking cannot be controlled by other methods.

Roads adjacent to the site must be swept or vacuumed when sediment or construction debris has been deposited. Adjacent roads must be inspected daily to ensure tracking is not occurring. Stabilized construction entrances and exits must be removed post-construction.

*[Select from the offsite sediment tracking BMPs from Table 19.]*

Table 19. Offsite Sediment Tracking BMPs

|  |  |  |  |
| --- | --- | --- | --- |
| **Best Management Practices** | **References** | | **Check at least one BMP** |
| **CASQA BMP** | **Caltrans BMP** |
| **Stabilized Construction Entrance/Exit** | TC-1 | TC-01 |  |
| **Stabilized Construction Roadway** | TC-2 | TC-02 |  |
| **Tire Wash** | TC-3 | TC-03 |  |
| **Street Sweeping and Vacuuming** | SE-7 | SC-07 |  |
| If no BMPs were selected, provide explanation: | | | |
| Describe any additional offsite sediment tracking BMPs to be implemented: | | | |
| Describe where offsite sediment tracking BMPs will be implemented/installed: | | | |

# 3.6 Run-on and Runoff Controls

All run-on, storm water conveyances through the site, and runoff that discharges offsite must be managed to prevent erosive flows. Runoff from the site must be directed away from all disturbed areas. If runoff or dewatering operation discharges are concentrated, the velocity must be controlled using a temporary energy dissipater. Discharge points and discharge flows must be free of pollutants, including sediment.

Run-on to the site shall 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 gutters to reduce sediment loading to storm drain inlets. Dikes, swales, and slope drains can be utilized to safely convey runoff down a slope, direct runoff to a stabilized channel, reduce potential for flooding, or direct runoff to sediment traps/basins. Vegetation, geotextiles, or mats must be used to stabilize swales and dikes. Slope drains and sediment trap/basin outlets require outlet protection to prevent erosion in this area. Swales and dikes shall be monitored for erosion and cleared of debris, silt, and mud after each rain event. If riling greater than 1-inch deep occurs, the swale or dike shall be repaired within 72 hours or before the next forecasted rain event, whichever is sooner. Run-on and runoff BMPs are provided in **Table 20**.

*[Select run-on and site storm water management BMPs from Table 20.]*

Table 20. Run-On and Runoff Control BMPs

| **Best Management Practices** | **References** | | **Check at least one BMP** |
| --- | --- | --- | --- |
| **CASQA BMP** | **Caltrans BMP** |
| **Check Dams** | SE-4 | SC-04 |  |
| **Earth Dikes, Drainage Swales, and Slope Drains** | EC-9, EC-11 | SS-09, SS-11 |  |
| **Temporary Energy Dissipation** | EC-10 | SS-10 |  |
| If no BMPs were selected, provide explanation: | | | |
| Describe any additional run-on and runoff control BMPs to be implemented: | | | |
| Describe where run-on and runoff control BMPs will be implemented/installed: | | | |

# 3.7 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 measures[[1]](#footnote-2), 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.
* All disturbed areas have been stabilized in accordance with the project’s final stabilization plan as described in **Table 21**.
* 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.]*

Table 21. Final Stabilization BMPs

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

# 

# 4.0 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 may require relocation, revision and re-installation, particularly as project grading progresses.

# 4.1 BMP Maintenance

BMP maintenance requirements are listed in **Table 22**. The following subsections describe the inspection program responsibilities and requirements.

Table 22. BMP Maintenance Requirements

| **Best Management Practices** | **Maintenance Requirements** |
| --- | --- |
| **Planning and Scheduling** | Periodically review construction schedule to determine if activities are up to date and disturbed areas during periods of high precipitation potential can be minimized. |
| **Resource Protection** | Not applicable. |
| **Material Storage** **and Handling** | Store ample supplies of spill cleanup materials onsite. Clean and organize storage areas. Stage materials on pallets and cover when not in use, at the end of every work day, during rain events, and at least 24 hours prior to rain, in accordance with the WTAP implementation schedule. 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 effective cover. If saw cutting slurry is not fully removed from vacuumed operations, the remainder shall be removed with an appropriate method until no residue is visible. |
| **Landscape Material Management** | Stage materials on pallets and cover when not in use. |
| **Solid Waste Management** | Waste disposal containers must be inspected for leaks on a weekly basis and must be emptied when they become 95% full. Remove deposited solids in containment areas and collection devices. Inspect and repair containment areas and capturing devices on a weekly basis. |
| **Liquid Waste Management** | Arrange for waste collection as necessary. Remove liquid wastes in containment areas and collection devices. Inspect and repair containment areas and capturing devices. Store liquid wastes in a structurally sound and leak-free container and stored in a controlled area with perimeter controls. |
| **Contaminated Soil Management** | Ensure that contaminated soil stored onsite is covered and bermed at all times and does not have the potential to contact storm water or groundwater. |
| **Sanitary/Septic Waste Management** | Coordinate with a local contractor for routine maintenance. Ensure that sanitary/septic facilities are maintained in good working order by a licensed service. |
| **Concrete Waste Management** | Repair concrete washout when damaged. Ensure adequate freeboard prior to rain events. 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.) on a weekly basis. Repair all identified damage. |
| **Hazardous Waste Management** | Store all hazardous waste in watertight containers in storage areas with watertight secondary containment. Keep storage areas clean and organized. Store ample spill cleanup supplies onsite. Control storage area perimeter. Repair containment structures, covers, and liners as necessary. |
| **Stockpile Management** | Cover and berm all stockpiles at the end of every day and prior to rain. Replace damaged covers and berms. Inspect perimeter controls for soil stockpiles on a daily basis for sediment accumulation and remove when sediment is accumulated to a 1-inch or greater height. Ensure stockpiled material is within the bermed area. Store ample supplies of cover material and perimeter controls onsite. |
| **Vehicle and Equipment Cleaning** | Store ample spill clean up supplies onsite. Clean up spills and properly dispose of materials. Ensure as little water as possible is used. |
| **Vehicle and Equipment Fueling** | Store ample spill clean up supplies onsite. Clean up spills and properly dispose of materials. Ensure fueling is performed using drip pans or secondary containment. |
| **Vehicle and Equipment Maintenance** | Inspect vehicles and equipment for leaks on a daily basis. Ensure maintenance is performed using drip pans or secondary containment. Drain fluids from inoperable vehicles and equipment. |
| **Spill Prevention and Control** | Ensure that ample supplies of spill cleanup materials are available in work areas and at material staging yards. |
| **Reporting Significant Spills** | Ensure that onsite staff receives spill cleanup and reporting training. Significant spills shall be reported as described in **Section 3.2.4** |
| **Illicit Connection/Discharge Detection and Reporting** | Inspect site and notify owner/operator of illicit connections or discharge incidents immediately. Ensure construction-related materials and wastes are prevented from leaving the construction site. |
| **Potable Water/Irrigation** | Repair broken lines and correct irrigation overspray as soon as possible. |
| **Water Conservation Practices** | Repair water equipment as needed to prevent non-storm water discharges. |
| **Dewatering Operations** | Dewatering must be done in accordance with the *Storm Water Standards – Part 2* (2018). |
| **Geotextiles and Mats** | Replace damaged 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. |
| **Straw and Wood Mulch** | Reapply where soil is exposed. |
| **Compost Blankets** | Reapply where soil is exposed. |
| **Soil Preparation/Roughening** | Repair and restore as applicable. |
| **Topsoil Reapplication** | Repair and reapply as applicable. |
| **Permanent Stabilization (e.g., retaining walls, rock gabions, rock riprap, etc.)** | Remove accumulated sediment and debris. |
| **Other Material – Non-Vegetative Stabilization (to be approved by the City)** | Remove accumulated sediment and debris. |
| **Preserve Existing Vegetation** | Ensure protected vegetation is clearly marked. |
| **Establish Interim Vegetation (Hydroseeding)** | 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. |
| **Wind Erosion Control** | Ensure dust control is applied over exposed soils and in a way that avoids overwatering and oversaturation. |
| **Silt Fence** | Replace damaged silt fence. Ensure fence is trenched and backfilled. Inspect daily and remove sediment accumulated to 1/3 the fence height. Areas where sediment has accumulated to a height of 1-inch or greater must be removed immediately. |
| **Gravel Bag Berm** | Replace as bags deteriorate. Inspect daily and remove sediment accumulated to 1/3 the bag height. Areas were sediment has accumulated to a height of 1-inch or greater must be removed immediately. Sediment near and along gravel bags must be removed at the end of each day and prior to a rain event. |
| **Sand Bag Barrier** | Replace as bags deteriorate. Inspect daily and remove sediment accumulated to 1/3 the bag height. Areas were sediment has accumulated to a height of 1-inch or greater must be removed immediately. Sediment near and along sand bags must be removed at the end of each day and prior to a rain event. |
| **Fiber Rolls or Straw Wattles** | Replace damaged fiber rolls. Ensure rolls are trenched in and backfilled in pervious areas. Inspect daily and remove sediment accumulated to 1/3 the roll height. Areas where sediment has accumulated to a height of 1-inch or greater must be removed immediately. |
| **Manufactured Linear Sediment Controls** | Inspect daily and maintain in accordance with manufacturer’s recommendations. |
| **Compost Socks and Berms** | Replace damaged socks. Inspect daily and remove sediment accumulated to 1/3 the sock height. Areas where sediment has accumulated to a height of 1-inch or greater must be removed immediately |
| **Storm Drain Inlet Protection** | Inspect and maintain daily and as needed. Repair damaged inlet protection. Remove sediment and debris accumulated to 1/3 the height or depth of the BMP. Areas where sediment has accumulated to a height of 1-inch or greater must be removed immediately. Sediment near and along gravel bags must be removed at the end of each day and prior to a rain event. |
| **Sediment Trap** | Corrective measures must be taken if the BMP does not dewater completely in 96 hours or less to prevent vector production. Repair if trap is damaged or signs of erosion are noted at the outlet. |
| **Sediment Basin** | Corrective measures must be taken if the BMP does not dewater completely in 96 hours or less to prevent vector production. Repair if basin is damaged or signs of erosion are noted at the outlet. |
| **Stabilized Construction Entrance/Exit** | Install prior to construction start. Replace gravel when surface voids are visible. Remove post-construction. |
| **Stabilized Construction Roadway** | Install prior to construction start. Apply additional aggregate on gravel roads as-needed. 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 daily and as-needed. |
| **Run-on Diversion** | Ensure that diversions are effective. |
| **Check Dams** | Remove accumulated sediment and debris when it reaches 1/3 the height of the dam. Areas where sediment has accumulated to a height of 1-inch or greater must be removed immediately. Sediment near and along gravel bags must be removed at the end of each day and prior to a rain event. |
| **Dikes, Swales, and Slope Drains** | Monitor for erosion and clear of debris, silt, and mud after each rain event. If rilling greater than 1-inch deep occurs, the swale or dike shall be repaired within 72 hours or before the next forecasted rain even, whichever is sooner. |
| **Temporary Energy Dissipation** | Remove accumulated sediment and debris when observed in protection devices. |

# 4.2 BMP Inspections

Routine inspections are necessary to ensure the integrity and effectiveness of BMPs and help protect a site from unexpected weather events. Project owners or contractors must perform daily inspections to identify BMPs in need of maintenance. Self-inspections are to be performed by a QCP, as described in **Section 1.3.2**. Upon identifying failures or other maintenance items, repairs or design changes to BMPs must be completed as quickly as feasible.

# 4.3 Weather Triggered Action Plan

All projects that require development of a pollution control plan per **Table 5** and have a land disturbance greater than 5,000 square feet or greater than a 5-foot elevation differential over the entire project area are required to develop a Weather Triggered Action Plan (WTAP).

A WTAP is a written document and corresponding site map designed to be used as a planning tool for the QCP to protect areas of exposed soils and materials prior to forecasted rain. The WTAP must be prepared in advance of rain events per the following table to allow for adequate time to implement BMPs. A WTAP template is provided in Appendix D of the City’s *Storm Water Standards Part 2 – Construction BMP Standards* (2018)*.* Completed WTAPs shall be kept in **Appendix G** and must be kept onsite and made available for inspection upon request by a representative of the City, SDRWQCB, or the SWRCB.

Table 23. WTAP Implementation Requirements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Trigger Level** | **Project Applicability** | **WTAP Implementation Trigger [Probability of Precipitation (POP)]1** | **WTAP prepared no later than # hours prior to predicted onset of rain** | **WTAP implementation completed no later than # hours prior to predicted onset of rain** | **Trigger Level Justification and Enforcement Status4** |
| **A** | **All Projects2** | 50% POP | 48 hours | Prior to Rain | Currently compliant based on City Inspection |
| **Enhanced WTAP Trigger per City Inspection Results:** | | | | | |
| **B** | **All Projects2** | 40% POP | 48 hours3 | 24 hours | Escalating Enforcement for non-compliant erosion and sediment control BMPs |

1 BMP deployment and active area stabilization timing is based on National Weather Service probability of precipitation (<http://www.weather.gov/sgx/>); Use project location and hourly forecast. POP shall be checked once per business day during business hours. If there is less than a 50% POP on Friday when the forecast is checked, a WTAP does not need to be prepared for the following Monday (assuming business hours are Mon-Fri). If the POP is greater than 50% on Monday when the forecast is checked, a WTAP shall be prepared.

2 Project that have a land disturbance less than 5,000 square feet and less than a 5-foot elevation differential over the entire project area are exempt from WTAP requirements.

3 Sites must be checked at 24 hours prior to the rain event to ensure the WTAP is consistent with current construction conditions.

4 Trigger Level selected by City RE or City Inspector based on non-compliant site conditions. The project will remain at the assigned Trigger Level until compliance is demonstrated to the satisfaction of the City RE or City Inspector. The City may move a project back to Trigger A, if compliance is demonstrated for three successive inspections by City construction storm water inspectors.

# 4.4 Recordkeeping and Reports

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

* Completed self-inspection forms;
* Completed WTAPs and exhibits;
* Training documentation (if any);
* Discharge reports (if any); and
* WPCP and amendments (if any).

# 5.0 Post-Construction Pollutant Control

Is this project a Priority Development Project as defined by Part 1 of the City’s *Storm Water Standards* (2018)? ❒ Yes ❒ No

If yes, list the Post-Construction Pollutant Control BMPs to be implemented on the project:

*[Describe the post-construction pollutant control BMPs in Table 24.]*

Table 24. Post-Construction Pollutant Controls

|  |  |
| --- | --- |
| **Pollutant Control BMP** | **Location** |
|  |  |
|  |  |
|  |  |

# 6.0 References

California Department of Transportation (Caltrans)

2011 *Storm Water Quality Handbook SWPPP/WPCP Preparation Manual*. June.

California Stormwater Quality Association (CASQA)

2015 *Construction Stormwater BMP Handbook*. January.

City of San Diego

2018 *Storm Water Standards*. Available online at: https://www.sandiego.gov/planning/programs/landdevcode/landdevmanual#SWstandards2018

San Diego Regional Water Quality Control Board (RWQCB)

2015 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, as amended by Order Nos. R9-2015-0001 and R9-2015-0100*. Available online at: <https://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/docs/2015-1118_AmendedOrder_R9-2013-0001_COMPLETE.pdf>. November 18.

State Water Resources Control Board (SWRCB)

2012 *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 as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ*, General Permit No. CAS000002. Available online at: <http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml>. July 17.

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# Amendment Log

|  |  |
| --- | --- |
| Project Name |  |

Include references to section of WPCP that has been amended, add additional pages as needed.

| **Amendment No.** | **Date** | **Brief Description of Amendment, include section and page number** | **Prepared and Approved By** |
| --- | --- | --- | --- |
|  |  |  | Name:  Title: |
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Appendix C

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:** |  |

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**Self-Inspection Check List**

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| --- | --- | --- |
| **Project Name:** | | **Date/Time of Inspection:** |
| **Inspector Name:** | | **Disturbed Area:** |
| **Weather (current and forecasted):**  **Note WTAP Implementation Trigger for POP.** | | |
| **Y/N or N/A** | **All items below are required, when applicable.** | |
|  | **Project Planning** | |
|  | Is the WPCP Site Map updated and onsite? | |
|  | Are activities consistent with the Scheduling/Phasing Plan? | |
|  | **Good Housekeeping** | |
|  | Has all waste/litter been properly disposed? | |
|  | Are all waste containers covered and secured at the end of the day? | |
|  | Does inactive equipment have drip pans to collect leaking oil? | |
|  | Are chemicals and hazardous materials stored away from inlets and properly contained? (Includes portable toilets) | |
|  | Are stockpiles properly protected? | |
|  | Are landscape materials and wastes properly contained? | |
|  | Is there no evidence of chemical/fuel/oil spills onsite? | |
|  | Are all concrete wash areas onsite properly managed? | |
|  | **Non-Storm Water Management** | |
|  | Is there no evidence of pumping or illegal connections at any inlets/canyons/curbs? | |
|  | Is there no evidence of sediment discharge at any of the discharge points? | |
|  | **Erosion Controls** | |
|  | Do finished or inactive areas have erosion control BMPs? | |
|  | Are construction support areas stabilized? | |
|  | Is dust control properly implemented? | |
|  | **Sediment Controls** | |
|  | Does the perimeter of the site have adequate sediment controls with no gaps? | |
|  | Are the adjacent streets clean with **no tracking of sediment** from the site? | |
|  | Are linear controls installed along boundaries of interior work areas (e.g., transition from lot to paved road)? | |
|  | Are sediment controls installed along slopes and inactive areas at the intervals required per the Storm Water Standards Manual? | |
|  | Are all onsite storm drain inlets (existing or installed) properly protected? | |
|  | Are temporary basins stabilized? | |
|  | Is the basin maintained with full capacity? | |
|  | Is outlet adequately protected to prevent erosion? | |
|  | Is overflow inlet adequately protected to prevent sediment from entering? | |
|  | **Run-on and Runoff controls** | |
|  | Are dikes, swales, and slope drains in good condition? | |
|  | Are temporary energy dissipation devices in good condition? | |
|  | **Weather Triggered Action Plan** | |
|  | Has a WTAP been prepared if rain is forecasted? | |

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1. 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. [↑](#footnote-ref-2)