

**CONSTRUCTION STORMWATER  
POLLUTION PREVENTION PLAN  
(SWPPP)**

**(FOR LAND DISTURBANCES OF  
GREATER THAN ONE ACRE OR  
EQUAL TO ONE ACRE)**

PROJECT NAME: \_\_\_\_\_

CONTRACTOR NAME: \_\_\_\_\_

RISK LEVEL: \_\_\_\_\_

WDID NO.: \_\_\_\_\_

DATE: \_\_\_\_\_

*Prepared for:*

Port of San Diego  
3165 Pacific Highway  
San Diego, CA 92101-1128

**Note:** This Construction SWPPP must be maintained at the site and available for review upon request by the Port of San Diego and the Regional Water Quality Control Board.



Page intentionally left blank.

## **Disclaimer**

The Template Construction Activities Stormwater Pollution Prevention Plan (Template Construction SWPPP) was prepared by the San Diego Unified Port District (District) to assist in complying with the Order No. R9-2013-0001 Municipal Stormwater Permit for the San Diego Region (Municipal Permit) and the District's Jurisdictional Runoff Management Program (JRMP) requirements. Minimum best management practices (BMPs) required by the District for construction activities have been incorporated into the template. Refer to Chapter 5 of the District JRMP located on the District's website at [www.portofsandiego.org](http://www.portofsandiego.org) for further information regarding BMPs and the management of construction activities on District tidelands.

The Template SWPPP is based on the California Stormwater Quality Association (CASQA) SWPPP template that is designed to comply with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order No. 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ (NPDES No. CAS000002) issued by the State Water Resources Control Board (SWRCB). The template herein is provided for information purposes to assist the Qualified SWPPP Developer (QSD) in preparing a Risk Level 1 or Risk Level 2 SWPPP. The San Diego Bay is currently not listed for sediment impairment and does not satisfy the criteria for beneficial uses as defined by the General Permit, therefore Receiving Water Risk for all District projects is currently considered LOW.

Due to the multitude of applications of BMPs, the SWPPP template does not address site-specific applications. Users of this template should use their professional judgment, and seek advice from appropriately qualified professionals to determine the applicability of the information provided for general use or site-specific application. Users of this template assume all liability directly or indirectly arising from the use of the template.

---

## GENERAL INSTRUCTIONS AND CAVEATS

This template presents a recommended structure and content for preparation of a Stormwater Pollution Prevention Plan (SWPPP) including a Construction Site Monitoring Program (CSMP). The structure and content is based on a combination of specific District JRMP and General Permit requirements and other suggested content to meet the overall General Permit requirements.

- This template has been prepared to address traditional Risk Level 1 and 2 projects and does not address the specific requirements of Linear Underground/Overhead Projects.
- Instructions are identified in blue and red and should be deleted upon SWPPP completion
- Delete Disclaimer and General Instructions and Caveats upon SWPPP completion
- Project specific text is identified with gray highlighted, and should be replaced to reflect the actual project condition. Remove highlighting upon SWPPP completion
- References within the SWPPP template to other sections of the SWPPP are yellow highlighted to facilitate update by the Qualified SWPPP Developer (QSD) during the SWPPP development process. Remove highlighting upon SWPPP completion
- Periodically you will be prompted to select text for an appropriate risk level or other scenario, delete all text that does not pertain to your project.

# Table of Contents

Table of Contents .....	1
Qualified SWPPP Developer .....	4
Amendment Log .....	5
Section 1 SWPPP Requirements.....	6
1.1 Introduction.....	6
1.2 General Permit Coverage.....	6
1.3 SWPPP Availability and Implementation.....	7
1.4 SWPPP Amendments.....	7
1.5 Retention of Records.....	9
1.6 Required Non-Compliance Reporting .....	9
1.7 Annual Reporting.....	9
1.8 Changes to Permit Coverage.....	10
1.9 Project Close out.....	10
Section 2 Project Information .....	12
2.1 Project and Site Description.....	12
2.1.1 Site Description.....	12
2.1.2 Existing Conditions.....	12
2.1.3 Existing Drainage.....	12
2.1.4 Historic Sources of Contamination.....	12
2.1.5 Geology and Groundwater.....	12
2.1.6 Project Description.....	13
2.1.7 Developed Condition .....	13
2.1.8 Construction Quantities .....	13
2.2 Permits and Governing Documents .....	13
2.3 Stormwater Run-On from Offsite Areas.....	14
2.4 Sediment and Receiving Water Risk Determination .....	15
2.5 Construction Schedule .....	16
2.6 Potential Construction Activity and Pollutant Sources.....	17
2.7 Identification of Non-Stormwater Discharges .....	17
2.8 Required Site Map Information .....	18
Section 3 Best Management Practices .....	20
3.1 Schedule for BMP Implementation .....	20
3.2 Erosion and Sediment Control.....	21
3.2.1 Erosion Control.....	21
3.2.2 Sediment Controls.....	24
3.2.3 Drainage Controls .....	27
3.3.1 Non-Stormwater Controls.....	29
3.3.2 Materials Management and Waste Management.....	31
3.3.3 District Spill Responses and Reporting Procedures .....	36
3.4 Post construction Stormwater Management Measures.....	38
Section 4 BMP Inspection, [and] Maintenance [, and Rain Event Action Plans] .....	40
4.1 BMP Inspection and Maintenance .....	40
4.2 Rain Event Action Plans .....	40
Section 5 Training.....	42

---

Section 6	Responsible Parties and Operators.....	43
6.1	Responsible Parties .....	43
6.2	Contractor List .....	44
Section 7	Construction Site Monitoring Program.....	45
7.1	Purpose.....	45
7.2	Applicability of Permit Requirements .....	45
7.3	Weather and Rain Event Tracking.....	46
7.3.1	Weather Tracking.....	46
7.3.2	Rain Gauges .....	47
7.4	Monitoring Location and Personnel.....	47
7.5	Safety and Monitoring Exemptions .....	48
7.6	Visual Monitoring .....	48
7.6.1	Routine Observations and Inspections.....	49
7.6.1.1	Routine BMP Inspections .....	49
7.6.1.2	Non-Stormwater Discharge Observations .....	49
7.6.2	Rain-Event Triggered Observations and Inspections .....	50
7.6.2.1	Visual Observations Prior to a Forecasted Qualifying Rain Event.....	50
7.6.2.3	Visual Observations Following a Qualifying Rain Event.....	50
7.6.3	Visual Monitoring Procedures .....	51
7.6.4	Visual Monitoring Follow-Up and Reporting.....	51
7.6.5	Visual Monitoring Locations .....	51
7.7	Water Quality Sampling and Analysis.....	52
7.7.1	Non-Visible Pollutants in Stormwater Runoff Discharges .....	52
7.7.1.1	Non-Visible Pollutants Sampling Schedule.....	53
7.7.1.2	Non-Visible Pollutants Sampling Locations, Collection and Analysis .....	53
7.7.1.3	Analytical Constituents.....	56
7.7.1.4	Non-Visible Pollutants Data Evaluation and Reporting.....	57
7.7.2	pH and Turbidity in Stormwater Runoff Discharges.....	59
7.7.2.1	pH and Turbidity Sampling Schedule.....	59
7.7.2.2	pH and Turbidity Sampling Locations and Collection .....	59
7.7.2.3	Field Parameters and Measurements .....	60
7.7.2.4	Data Evaluation and Reporting .....	61
7.7.3	Non-Stormwater Discharges .....	62
7.7.3.1	Non-Stormwater Sampling Schedule.....	63
7.7.3.2	Non-Stormwater Sampling Locations, Collection and Analysis .....	63
7.7.3.3	Analytical Constituents.....	64
7.7.3.4	Data Evaluation and Reporting.....	64
7.7.4	Other Pollutants Required by the Regional Water Quality Control Board.....	65
7.7.4.1	RWQCB Required Sampling Schedule .....	65
7.7.4.2	RWQCB Required Sampling Locations, Collection and Analysis.....	65
7.7.4.3	RWQCB Required Data Evaluation and Reporting.....	66
7.7.5	Active Treatment System.....	66
7.8	Training of Sampling Personnel .....	66
7.9	Sample Collection, Preservation and Delivery .....	66
7.9.1	Sample Collection Methods.....	67
7.9.1.1	Detailed Grab Sample Collection Procedures for Each Monitoring Site .....	67

7.9.2	Field Measurement Methods.....	67
7.9.3	Sample Containers and Handling.....	68
7.9.4	Forms and Procedures for Documenting Sample Collection and Field Measurements 68	
7.9.5	Laboratory Communication Procedures .....	68
7.9.6	Sample Shipping/Delivery and Chain of Custody .....	68
7.9.7	Sample Preservation and Filtration.....	69
7.10	Quality Assurance and Quality Control.....	69
7.10.1	Field Logs .....	69
7.10.2	Clean Sampling Techniques .....	69
7.10.3	Chain of Custody .....	70
7.10.4	QA/QC Samples.....	70
7.10.4.1	Field Duplicates.....	70
7.10.4.2	Equipment Blanks .....	70
7.10.4.3	Field Blanks.....	71
7.10.4.4	Travel Blanks .....	71
7.10.5	Data Verification.....	71
7.11	Data Management and Reporting .....	72
7.11.1	Analytical Data Validation .....	72
7.11.2	Electronic Data Transfer .....	72
Appendix A:	Calculations .....	74
Appendix B:	Site Maps.....	76
Appendix C:	Permit Registration Documents and LRP Certification .....	78
Appendix D:	SWPPP Amendment Certifications .....	80
Appendix E:	Annual Reporting.....	83
Appendix F:	Submitted Changes to PRDs .....	97
Appendix G:	Construction Schedule.....	99
Appendix H:	Construction Activities, Materials Used, and Associated Pollutants .....	101
Appendix I:	CASQA Stormwater BMP Handbook Portal: Construction Fact Sheets.....	105
Appendix J:	Inspection and Monitoring Forms .....	112
Appendix K:	Weather Reports & Rain Event Action Plan.....	124
Appendix L:	Training Reporting Form.....	128
Appendix M:	Responsible Parties .....	130
Appendix N:	Contractors and Subcontractors.....	135
Appendix O:	Construction General Permit .....	136
CSMP Attachment 1:	Chain of Custody Form .....	138
CSMP Attachment 2:	<b>Field Meter Instructions</b> .....	140
CSMP Attachment 3:	<b>Supplemental Information</b> .....	142

---

## Qualified SWPPP Developer

---

### Approval and Certification of the Stormwater Pollution Prevention Plan

“This Stormwater Pollution Prevention Plan and Attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Orders No. 2009-009-DWQ as amended by Order 2010-0014-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below.”

---

QSD Signature

---

Date

---

QSD Name

---

QSD Certificate Number  
include certificate in **Appendix M**

---

Title and Affiliation

---

Email

---

Telephone Number



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

[illegible]

## Section 1 SWPPP Requirements

### 1.1 INTRODUCTION

#### RECOMMENDED TEXT

This Stormwater Pollution Prevention Plan (SWPPP) was prepared for construction activities at the (acres/square feet)-property located at (project address or description of project location if no address available), in the San Diego Unified Port District (District) tidelands within the County of San Diego, CA (project site). The project location is shown on the Site Map included in **Appendix B**.

This SWPPP is designed to assist the project's compliance with the District's Jurisdictional Runoff Management Program (JRMP), Order No. R9-2013-0001 Municipal Stormwater Permit and with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order No. 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ (NPDES No. CAS000002) issued by the State Water Resources Control Board (SWRCB). This SWPPP has been prepared following the SWPPP Template provided by the District. In accordance with the General Permit, Section XIV, this SWPPP is designed to address the following objectives:

- "Pollutants and their sources, including sources of sediment associated with construction, construction site erosion and other activities associated with construction activity are controlled;
- "Where not otherwise required to be under a Regional Water Quality Control Board (RWQCB) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- "Site Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard."

Calculations and design details for BMP controls applicable to this project are included in, **Appendix A**.

### 1.2 GENERAL PERMIT COVERAGE

#### INSTRUCTIONS

The WDID number is generally issued after the Permit registration documents (including the SWPPP) are uploaded to SMARTS and the annual fee received by SWRCB. Fill in the WDID number in the Site copy upon receipt.

*The following text should be modified accordingly.*

#### RECOMMENDED TEXT

The Legally Responsible Party (LRP), (name), has submitted the Permit Registration Documents (PRDs) to the SWRCB Stormwater Multi-Application and Report tracking system (SMARTS). The SWRCB has issued a Waste Discharge Identification (WDID) number as indicated below:

WDID: \_\_\_\_\_ (to be completed upon receipt of WDID ) \_\_\_\_\_

### 1.3 SWPPP AVAILABILITY AND IMPLEMENTATION

#### RECOMMENDED TEXT

The SWPPP is available at the construction site during working hours (see Section 7.5 of CSMP for working hours) while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone. (General Permit Section XIV.C)

The SWPPP shall be implemented concurrently with the start of ground disturbing activities.

### 1.4 SWPPP AMENDMENTS

#### INSTRUCTIONS

*This section provides direction regarding when SWPPP amendments are required, and when deemed necessary by the QSD. Table I.1 includes typical construction site changes that the QSD can choose the allow field determination by QSP.*

*The following text should be modified accordingly*

#### RECOMMENDED TEXT

The General Permit requires the SWPPP to be revised when:

- If there is a General Permit violation. *“This General Permit requires dischargers with NAL exceedances to immediately implement additional BMPs and revise their Stormwater Pollution Prevention Plans (SWPPPs) accordingly to either prevent pollutants and authorized non-stormwater discharges from contaminating stormwater, or to substantially reduce the pollutants to levels consistently below the NALs or NELs.” (General Permit Section I Part H No. 57 and 59)*
- When there is a reduction or increase in total disturbed acreage. *“Within 30 days of a reduction or increase in total disturbed acreage, the discharger shall electronically file revisions to the PRDs that include: ... SWPPP revisions, as appropriate ...” (General Permit Section II Part C)*
- BMPs do not meet the objectives of reducing or eliminating pollutants in stormwater discharges. *“Within two business days (48 hours) after each qualifying rain event, dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly”. (General Permit, Attachment C, D, or E part I.3.G).*

Additionally, the SWPPP shall be revised when:

- There is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
- When there is a change in the project duration that changes the project’s risk level;
- To identify any new contractor and or subcontractor that will implement a measure of the SWPPP; or

- When deemed necessary by the QSD. The QSD has determined that the changes listed in Table 1.1 can be field determined by the QSP. All other changes shall be made by the QSD as formal amendments to the SWPPP.

The following items shall be included in each amendment:

- Who requested the amendment;
- The location of proposed change;
- The reason for change;
- The original BMP proposed, if any; and
- The new BMP proposed.

The SWPPP text shall be revised replaced, and/or hand annotated as necessary to properly convey the amendment. SWPPP amendments must be made by a QSD and logged in the Amendment Log on page 2 of the SWPPP. Additionally a SWPPP Amendment Certification shall be completed by the QSD and maintained in Appendix D, for each amendment.

The following changes listed in Table 1.1 have been designated by the QSD as "to be field determined" and constitute minor changes that the QSP may implement based on field conditions, and do not required a SWPPP amendment. The SWPPP progress map shall be updated to reflect field changes.

*The QSD shall expand or reduce table as needed for construction site*

**Table 1.1 List of Changes to be Field Determined**

Changes for field location or determination by QSP <sup>(1)</sup>	Check changes that can be field located or field determined by QSP
Increase quantity of an erosion or sediment control measure	
Relocate/Add stockpiles or stored materials	
Relocate or add toilets	
Relocate vehicle storage and/or fueling locations	
Relocate areas for waste storage	
Relocate water storage and/or water transfer location	
Changes to access points (entrance/exits)	
Change type of erosion or sediment control measure	
Changes to location of erosion or sediment control	
Minor changes to schedule or phases	
Changes in construction materials	
<i>(1) Any field changes not identified for field location or field determination by QSP must be approved by QSD</i>	

## 1.5 RETENTION OF RECORDS

### RECOMMENDED TEXT

The contractor must provide a copy of the SWPPP, all required PRDs, inspection reports, compliance certifications and annual reports, non-compliance reports, and training records to the LRP upon project completion. The LRP will retain this information for at least 3 years from the date that the site is finally stabilized. The contractor must retain a copy of the SWPPP and inspection reports at the construction site from the date of project initiation to the date coverage under the General Permit are terminated.

## 1.6 REQUIRED NON-COMPLIANCE REPORTING

### INSTRUCTIONS

*Select text for project Risk Level and modify accordingly*

### RECOMMENDED TEXT

#### *All projects*

Corrective measures will be implemented immediately following pollutant laden discharges (e.g. sediment, concrete) or following written notice of non-compliance from the San Diego Regional Water Quality Control Board (RWQCB). The District's Environmental Protection (EP) requires that any instances of noncompliance with the requirements of the General Permit must be reported to them within 48 hours of detection of the noncompliance. Discharges and corrective actions will be documented on the Effluent Sampling Form in **Appendix J**.

The report to the District will contain the following items:

- The date, time, location, nature of operation and type of unauthorized discharge.
- The cause or nature of the notice or order.
- The control measures (BMPs) deployed before the discharge, or prior to receiving notice or order.
- The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence.
- [Include the San Diego RWQCB requirements if any]

#### *Risk Level 2 Only*

Reporting requirements for Numeric Action Levels (NALs) exceedances are discussed in Section 7.7.2.6.

## 1.7 ANNUAL REPORTING

### INSTRUCTIONS

*Select appropriate scenario*

### RECOMMENDED TEXT

#### *District Capital Improvement Projects*

The General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements.

The primary purpose of this requirement is to provide information needed for overall program evaluation and public information.

An annual report must be completed by September 1 of each year until a NOT has been filed in the SWRCB's SMARTS database. The contractor is responsible for submitting the annual report information to the District by August 1 of each year. The District will review the report information for completeness and accuracy and upload the required information to the SWRCB's SMARTS database by September 1 of each year. Use the Annual Report form in Appendix E to prepare the Annual Report submittal to the District.

#### *For projects where District is not the LRP*

The General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and public information.

An annual report, for the reporting year of July 1 – June 30, must be completed, by September 1 of each year until a NOT has been filed in the SWRCB's SMARTS database. The QSP is responsible for submitting the annual report information to the LRP by August 1 of each year. The LRP will review the report information for completeness and accuracy and upload the required information to the SWRCB's SMARTS database by September 1 of each year. Use the Annual Report form in Appendix E to prepare the Annual Report submittal to the LRP.

## **1.8 CHANGES TO PERMIT COVERAGE**

### **RECOMMENDED TEXT**

The General Permit allows for the reduction or increase of the total acreage covered under the General Permit when: a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs shall be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit covered acreage is to be sought. The SWPPP shall be modified appropriately, shall be documented in the Amendment Log on page 2 of this SWPPP. QSD certification of SWPPP amendments are to be kept in **Appendix D**. Updated PRDs submitted electronically via SMARTS can be found in **Appendix F**.

## **1.9 PROJECT CLOSE OUT**

### **INSTRUCTIONS**

*Select appropriate scenario*

### **RECOMMENDED TEXT**

#### *District Capital Improvement Projects*

The contractor will contact the District within 60 days of project completion. In order to submit the Notice of Termination (NOT), the contractor will provide the District a copy of the SWPPP, approved implemented SWPPP Site Maps, and all documents per Annual Reporting (**Section 1.7**) submittal requirements. To terminate coverage under the General Permit, a NOT must be filed in the SWRCBs' SMARTS database. The NOT will be submitted when the following conditions have been 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 stormwater pollution.
- All elements of the SWPPP have been completed and final stabilization has been reached.
- Construction materials and waste have been properly disposed.
- An Annual Report has been filed for project longer than three (3) months.
- The site is in compliance with all local stormwater management requirements.

The District prepares and submits the NOT for construction projects within its jurisdictional tidelands areas.

*For projects where District is not the LRP*

- A Notice of Termination (NOT) must be submitted electronically by the LRP via SMARTS to terminate coverage under the General Permit. The NOT must include a final Site Map and representative photographs of the project site that demonstrate final stabilization has been achieved. The NOT shall be submitted within 90 days of completion of construction. The RWQCB will consider a construction site complete when the conditions of the General Permit, Section II.D have been 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 stormwater pollution.
- All elements of the SWPPP have been completed and final stabilization has been reached.
- Construction materials and waste have been properly disposed.
- An Annual Report has been filed for project longer than three (3) months.
- The site is in compliance with all local stormwater management requirements.
-

---

## Section 2 Project Information

---

### 2.1 PROJECT AND SITE DESCRIPTION

#### RECOMMENDED TEXT

#### 2.1.1 Site Description

The [name] project site comprises approximately [acres] and is located at [address or description of location], in [City], California. The project site is located approximately [distance and direction] of [describe major roads (e.g., Interstate-5), and/or community areas]. The project site is located approximately [distance and direction] of [describe nearby water bodies (e.g., San Diego Bay)]. The project is located at [Lat/Long] and is identified on the Site Map in **Appendix B**.

#### 2.1.2 Existing Conditions

As of the initial date of this SWPPP, the project site is [describe if site is undeveloped or describe existing development; include description of vegetated areas; or impervious areas such as parking lots]. The project site was previously developed with [describe previous land use]. Any historic sources of contamination are described in Section 2.1.3.

#### 2.1.3 Existing Drainage

The project site is [describe topography (e.g., relatively level, slopes to the west, etc.)]. The elevation of the project site ranges from [elevation or range of elevations] feet above mean sea level (msl). Surface drainage at the site currently flows to the [direction], towards [describe discharge locations [storm drain inlet, bay, ocean, etc.]]. Stormwater is conveyed through [surface runoff, storm drain systems, etc.]. Stormwater discharges, from the site, [are/are not] considered direct discharges, as defined by the SWRCB into [(list water body)]. Existing site topography, drainage patterns, and stormwater conveyance systems are shown on [names of drawings or plans].

#### 2.1.4 Historic Sources of Contamination

##### *No historic sources of contamination*

This site has no historical sources of contamination.

##### *Site has historic sources of contamination*

The Site was historically used for [describe activities] that could potentially contribute pollutants to stormwater. [Describe locations and sources of contaminants]

[Include recent investigations and findings] Potential pollutants from these former land use activities include [list contaminants]. Sampling for non-visible pollutants is described in Section 7.

#### 2.1.5 Geology and Groundwater

The site is underlain by [describe underlying soil and geologic conditions (e.g., fill material, clay, sandy loam, alluvium, etc.)], including approximate thickness of each material if known. Reference soils reports if applicable]. Groundwater occurs beneath the site at approximately [depth] feet below ground surface. The groundwater gradient is toward [direction].



### 2.1.6 Project Description

Project grading will occur on approximately [acres/square-feet] of the project, which comprises approximately [number] percent of the total area. The limits of grading are shown on [map/drawing name and number] in Appendix B. Grading will include [both cut and fill activities], with the total graded material estimated to be [number] cubic yards. Approximately [number] cubic yards of fill material will be imported during grading activities. Graded materials are expected to be [balanced onsite/hailed away]. Soil will be stockpiled [describe locations] as shown on [map/drawing name and number] in Appendix B. Construction activities will be [phased/not phased include description of each phase if appropriate and reference drawings that show limits of each phase].

### 2.1.7 Developed Condition

Post construction surface drainage will be directed to the [direction] as surface flow through stormwater conveyance systems [and/or sheet flow] towards and will discharge [describe discharge points – If project discharges directly to a public storm drain system, state so and state owner of storm drain (e.g., city or District)].

Post construction drainage patterns and conveyance systems are presented on [figure name and/or number] in Appendix B.

### 2.1.8 Construction Quantities

Complete Table 2.1 presents construction site area, % impervious and curve number, for existing and developed conditions. This information is required to complete site information in the PRDs in SMARTS.

**Table 2.1 Construction Site Estimates**

Construction site area		acres
Disturbed Soil Area		acres
Percent impervious before construction		%
Runoff coefficient before construction		
Percent impervious after construction		%
Runoff coefficient after construction		

## 2.2 PERMITS AND GOVERNING DOCUMENTS

### INSTRUCTIONS

**Note:** Dischargers located in a drainage area where a Total Maximum Daily Limit (TMDL) has been adopted or approved by the RWQCB or EPA may be required by a separate RWQCB action to implement additional BMPs, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule.

## RECOMMENDED TEXT

In addition to the General Permit, the following documents have been taken into account while preparing this SWPPP:

Regional Water Quality Control Board requirements

San Diego Unified Port District USMP

Basin Plan Requirements

Contract Documents

Air Quality Regulations and Permits

Federal Endangered Species Act

National Historic Preservation Act/Requirements of the State Historic Preservation Office

State of California Endangered Species Act

Clean Water Act Section 401 Water Quality Certifications

US Army Corps of Engineers 404 Permits

CA Department of Fish and Game 1600 Streambed Alteration Agreement

## 2.3 STORMWATER RUN-ON FROM OFFSITE AREAS

### INSTRUCTIONS

*Select appropriate scenario and modify accordingly*

## RECOMMENDED TEXT

### *No anticipated offsite run-on*

There is no anticipated offsite run-on to this construction site because [Describe reasons for no offsite run-on [e.g., existing BMPs or stormwater conveyance system to prevent on-site flow, no up-gradient drainage area, etc.)].

### *Anticipated offsite run-on*

Run-on to the site is generated by [describe sources of offsite run-on to the project, such sources may include one or more of the following: “point source discharges from upgradient developed land uses, creeks; streams or other water bodies that run through or discharge from the site; and upgradient non-point source discharges (dry weather and stormwater runoff)”. Run-on from offsite shall be directed away from disturbed areas or shall collectively be in compliance with the effluent limitation of the General Permit (Item F of Attachments C or D).

The stormwater runoff drainage area contributing to offsite run-on is estimated to be approximately [acreage/square-feet]. The anticipated runoff coefficients range from [range of runoff coefficients]. The anticipated offsite run-on to the project site is estimated to be [flow/volume]; calculations are included in **Appendix A**.

The General Permit requires that temporary BMPs be implemented to direct offsite run-on away from disturbed areas through the use of runoff controls. The following BMPs will be implemented [description of proposed BMPs (e.g., berms or lined channel) including flow capacity if appropriate]. These BMPs will be located [describe location of BMP]. The offsite drainage areas and associated stormwater conveyance facilities or BMPs are shown on [figure name and number] in **Appendix B**.

## 2.4 SEDIMENT AND RECEIVING WATER RISK DETERMINATION

### INSTRUCTIONS

*Part A should be completed for all SWPPPs, and Part B is an optional summary of risk level assessment*

### RECOMMENDED TEXT

#### Part A

A construction site risk assessment has been performed for the project and the resultant risk level is Risk Level [1, 2].

The risk level was determined through the use of the [describe method (e.g. K, LS provided in SMARTS, a site specific analysis)]. The risk level is based on project duration, location, proximity to impaired receiving waters and soil conditions. A copy of the Risk Level determination submitted on SMARTS with the PRDs is included in **Appendix C**.

#### Part B

Table 2.2 and Table 2.3 summarize the sediment and receiving water risk factors and document the sources of information used to derive the factors.

**Table 2.2 Summary of Sediment Risk**

RUSLE Factor	Value	Method for establishing value
R		
K		
LS		
<b>Total Predicted Sediment Loss (tons/acre)</b>		
<b>Overall Sediment Risk</b> Low Sediment Risk < 15 tons/ acre Medium Sediment Risk >= 15 and < 75 tons/acre High Sediment Risk >= 75 tons/acre		<input type="checkbox"/> <b>Low</b> <input type="checkbox"/> <b>Medium</b> <input type="checkbox"/> <b>High</b>

Runoff from the project site discharges into [description (e.g., moderately defined channels that are intercepted by irrigation canals)] that discharge into [water body, and eventually into the water body]. The San Diego Bay is currently not listed for sediment impairment and does not have combined beneficial uses of “Cold”, “Spawn” and “Migratory” therefore Receiving Water Risk for all District projects is currently considered LOW.

*For all SWPPPs select the appropriate Risk Level and modify accordingly*

#### Risk Level 1

Risk Level 1 sites are subject to the narrative effluent limitations specified in the General Permit. The narrative effluent limitations require stormwater discharges associated with construction activity to minimize or prevent pollutants in stormwater and authorized non-stormwater through the use of controls,

structures, and best management practices. This SWPPP has been prepared to address Risk Level 1 requirements (General Permit Attachment C).

### **Risk Level 2**

Risk Level 2 sites are subject to both the narrative effluent limitations and numeric effluent standards. The narrative effluent limitations require stormwater discharges associated with construction activity to minimize or prevent pollutants in stormwater and authorized non-stormwater through the use of controls, structures and best management practices. Discharges from Risk Level 2 site are subject to Numeric Action Levels (NAL) for pH and turbidity shown in Table 2-3. This SWPPP has been prepared to address Risk Level 2 requirements (General Permit Attachment D).

<b>Table 2.3      Numeric Action Levels</b>		
<b>Parameter</b>	<b>Unit</b>	<b>Numeric Action Level Daily Average</b>
pH	pH units	Lower NAL = 6.5 Upper NAL = 8.5
Turbidity	NTU	250 NTU

## **2.5                      CONSTRUCTION SCHEDULE**

### **RECOMMENDED TEXT**

The site sediment risk was determined based on construction taking place between [start date] and [end date]. Modification or extension of the schedule (start and end dates) may affect risk determination and permit requirements. The contractor shall contact the (District or LRP) immediately if the schedule changes and the (District or LRP) and its QSD will assess potential impacts to the SWPPP. The estimated schedule for planned work can be found in Appendix G.

[Include additional descriptions of significant grading phases and work near drainages or receiving water.]

Table 2.4 Construction Activity Milestones

<b>Milestone</b>	<b>Start Date</b>	<b>End Date</b>
Date PRDs and filing fee submitted to SWRCB.		
Project covered by General Construction Permit. A construction site is covered by the General Permit upon filing PRDs, fees and receipt of WDID number.		
Initial ground-breaking (must occur after completion of SWPPP and receipt of WDID).		
Implement erosion control measures*		
Implement sediment control measures (perimeter control, stabilized entrance, inlet protection).		

Grading/excavation/trenching activities.		
Paving activities.		
Construction of structures and paved surfaces.		
Site clean-up.		
Anticipated construction completion date.		
Anticipated filing of Notice of Termination (NOT).		

\*Per the District's JRMP, erosion control measures are a required minimum BMP that must be implemented at all inactive areas of a construction site. An area is considered "inactive" if no construction activity including soil disturbing activities such as clearing, grading, disturbances to ground such as stockpiling and excavation, is occurring. An area is also considered inactive if soil disturbing activities had previously occurred but are not scheduled or planned to be re-disturbed for at least 14 days. Disturbed areas of the construction site that will not be re-disturbed will be stabilized by the day after the last disturbance

## 2.6 POTENTIAL CONSTRUCTION ACTIVITY AND POLLUTANT SOURCES

### RECOMMENDED TEXT

Appendix H includes a list of construction activities and associated materials that are anticipated to be used onsite. These activities and associated materials will or could potentially contribute pollutants, other than sediment, to stormwater runoff.

The anticipated activities and associated pollutants were used in Section 3 to select the BMP for the project. Location of anticipated pollutants and associated BMPs are show on the Site Map in Appendix B.

For sampling requirements for non-visible pollutants associated with construction activity refer to Section 7.7.1. For a full and complete list of onsite pollutants, refer to the Material Safety Data Sheets (MSDS), which are retained onsite at the construction trailer.

## 2.7 IDENTIFICATION OF NON-STORMWATER DISCHARGES

### RECOMMENDED TEXT

Non-stormwater discharges consist of discharges which do not originate from precipitation events. Per the District's stormwater ordinance, Article 10 all non-stormwater discharges to the stormwater conveyance system that do not have a NPDES permit are considered illicit discharges and subject to enforcement. Discharges from potable water sources are allowable provided the discharge does not cause erosion or carry other pollutants. Building fire suppression systems maintenance discharges will be addressed as an illicit discharge unless BMPs are implemented to prevent pollutants associated with such discharges to the storm water conveyance system. Refer to Section 10.04 of Article 10 for a complete list of illicit discharges.

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the Article 10 or the General Permit and listed in the SWPPP, or authorized under a separate NPDES permit, are prohibited.

Non-stormwater discharges that are authorized from this project site include the following:

(List or State NONE)

(List or State NONE)

These authorized non-stormwater discharges will be managed with the stormwater and non-stormwater BMPs described in **Section 3** of this SWPPP and will be minimized by the QSP.

Activities at this site that may result in unauthorized non-stormwater discharges include:

(List or State NONE)

(List or State NONE)

Steps will be taken, including the implementation of appropriate BMPs, to ensure that unauthorized discharges are eliminated, controlled, disposed, or treated on-site.

Discharges of construction materials and wastes, such as fuel or paint, resulting from dumping, spills, or direct contact with rainwater or stormwater runoff, are also prohibited.

***Consider including the following text, not required by General Permit***

The District Stormwater Ordinance allows the following categories of non-stormwater discharges unless identified to be a source of pollutants: diverted stream flows, rising ground waters, uncontaminated ground water infiltration to stormwater conveyance systems, uncontaminated pumped ground water, foundation drains, springs, water from crawl space pumps, footing drains, , flow from riparian habitats and wetlands, water line flushing, landscape irrigation, and discharges from potable water sources other than water main breaks. .,

The following discharge(s) have been authorized for this site under [regional NPDES permit or other]:

(List or State NONE)

(List or State NONE)

## 2.8 REQUIRED SITE MAP INFORMATION

### RECOMMENDED TEXT

The construction project's Site Map(s) showing the project location, surface water boundaries, geographic features, construction site perimeter and general topography and other requirements identified in Attachment B of the General Permit are located in **Appendix B. Table 2.5** identifies Map or Sheet Nos. where required elements are illustrated.

**Table 2.5 Required Map Information**

Included on Map/Plan Sheet No. <sup>(1)</sup>	Required Element
	The project's surrounding area (vicinity)
	Site layout
	Construction site boundaries
	Drainage areas
	Discharge locations
	Sampling locations
	Areas of soil disturbance (temporary or permanent)

**Table 2.5 Required Map Information**

Included on Map/Plan Sheet No. <sup>(1)</sup>	Required Element
	Active areas of soil disturbance (cut or fill)
	Locations of runoff BMPs
	Locations of erosion control BMPs
	Locations of sediment control BMPs
	Advanced Treatment System (ATS) location (if applicable)
	Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
	Locations of all post construction BMPs
	Waste storage areas
	Vehicle storage areas
	Material storage areas
	Entrance and Exits
	Fueling locations

Notes: (1) Indicate maps or drawings that information is included on (e.g., Vicinity Map, Site Map, Drainage Plans, Grading Plans, Progress Maps, etc.)

## Section 3 Best Management Practices

### 3.1 SCHEDULE FOR BMP IMPLEMENTATION

#### INSTRUCTIONS

*In Table 3.1 list construction phases, associated BMPs and a timeline for implementing BMPs. Typical BMP implementation has been provided. Include additional descriptions of significant grading phases and work near drainages or receiving water. Delete phases that are not a part of the project and add lines as needed.*

*Complete BMP Implementation Schedule,*

#### RECOMMENDED TEXT

The General Permit recognizes four phases of construction (1)Grading and Land Development Phase, (2)Streets and Utilities Phase, (3) Vertical Construction Phase, and (4)Final Landscaping and Site Stabilization Phase. Each phase has activities that can result in different water quality effects from different water quality pollutants. BMPs for the site are to be implemented and maintained throughout the year on an as-needed basis. BMPs should be implemented in a proactive manner, as appropriate, to protect water quality.

This SWPPP addresses (number) phases of construction (list phases). Table 3.1 describes the major construction activities that are covered by this SWPPP. The sequence of BMP installation activities for each phase is described. Activities are presented in the order (sequence) they are expected to be completed.

**Table 3.1 BMP Implementation Schedule**

	BMP	Implementation	Duration
Erosion Control	Scheduling	Prior to Construction	Entirety of Project
Sediment Control	Silt Fence	Prior to construction	Entirety of Project
	Check dams	In conjunction with construction	Phases 1,2,3, or 4
Grading Construction	Street Sweeping	Start of Construction	As needed



**Table 3.1 BMP Implementation Schedule**

	<b>BMP</b>	<b>Implementation</b>	<b>Duration</b>
	Stabilized Construction Entrance	Start of Construction	As needed
Wind Erosion	Wind Erosion Control	Start of Construction	Entirety of Project

## 3.2 EROSION AND SEDIMENT CONTROL

### INSTRUCTIONS

*Worksheets are provided in Appendix I “BMP Fact Sheets” for the QSD to use in cross-referencing the General Permit required minimum BMPs to the CASQA BMP Fact Sheets available on the CASQA Stormwater BMP Handbook Portal: Construction.*

### RECOMMENDED TEXT

Erosion and sediment controls are required by the General Permit to provide effective reduction or elimination of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges from the Site. Applicable BMPs are identified in this section for erosion control, sediment control, tracking control, and wind erosion control.

#### 3.2.1 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles.

**A project’s total disturbed soil area (DSA) shall not exceed 5 acres during the rainy season (October 1- April 30) and 17 acres during the non-rainy (May 1- September 30) season. The District may temporarily increase these limits if the individual site is in compliance with applicable stormwater regulations and the site has adequate control practices implemented to prevent stormwater pollution. The Contractor must provide a mobilization plan, including a description of the delivery and deployment of appropriate BMP material to the jobsite prior to all predicted rain events, to the District for approval prior to increasing the DSA.**

This construction project will implement the following practices to provide effective temporary and final erosion control during construction:

1. Preserve existing vegetation where required and when feasible.
2. Minimize the areas that are cleared and graded.
3. The area of soil disturbing operations shall be controlled such that the Contractor is able to implement erosion control BMPs quickly and effectively.
4. Stabilize inactive areas or areas scheduled to be inactive at the cessation of construction activities.
5. Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding or alternate methods.
6. Prior to the completion of construction, apply permanent erosion control to remaining disturbed soil areas.

Sufficient erosion control materials shall be maintained onsite to allow implementation in conformance with this SWPPP.

This SWPPP has been designed to meet the requirements of the General Permit:

Implement effective wind erosion control (D.1)<sup>1</sup>.

- ☐ Yes ☐ N/A (provide explanation)

Provide effective soil cover for inactive area and all finished slopes, open space, utility back fill and complete lots (D.2)<sup>1</sup>.

- ☐ Yes ☐ N/A (provide explanation)

Limit the use of plastic material when more sustainable environmentally friendly alternatives exist (D.3)<sup>1</sup>.

- ☐ Yes ☐ N/A (provide explanation)

Specific erosion controls measures to be implemented and maintained at the project site are denoted with an “X” and described below. BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in **Appendix I**. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP and over guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the BMP Fact Sheets. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

*Type an “X” in the box next to the BMP that will be implemented.*

Erosion Controls
<b>Scheduling (EC-1)</b> <ul style="list-style-type: none"><li><input type="checkbox"/> All BMPs shall be in place year-round. Construction activities shall be planned and performed to minimize the area and duration of exposure of soil to erosion by wind, rain, runoff and vehicle tracking.</li><li><input type="checkbox"/> The area that can be cleared or graded and left exposed at one time will be limited to the amount of acreage that the Contractor can adequately protect prior to a predicted rainstorm. A predicted storm event is defined as a forecasted 50% chance of rain.</li><li><input type="checkbox"/> Timing of construction will be considered when scheduling work to minimize soil disturbing activities and major grading operations during the rainy season.</li><li><input type="checkbox"/> Grading of the site will be phased to minimize the total area of exposed soil and the duration of exposure.</li></ul>

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

<b>Preserve Existing Vegetation (EC-2)</b> <ul style="list-style-type: none"><li>❑ Existing vegetation will be retained (EC-2) in undisturbed areas to the extent possible. If possible, vegetative buffer strips will be left adjacent to watercourses and along the site perimeter.</li></ul>
<b>Slope Roughening (EC-15)</b> <ul style="list-style-type: none"><li>❑ Slopes will be roughened perpendicular to the direction of runoff by track walking, sheepsfoot rolling, imprinting, or other appropriate technique.</li></ul>
<b>Temporary Soil Stabilization</b> <ul style="list-style-type: none"><li>❑ Soil stabilizers (binders) (EC-5), blankets (i.e., rolled erosion control products) (EC-7), straw mulches (EC-6), hydraulic mulches (EC-3), temporary vegetation, and/or temporary seeding will be used on disturbed soil areas as a temporary surface cover until soils can be prepared for re-vegetation and permanent vegetation is established. At a minimum, disturbed areas that will remain bare and un-worked for over two weeks. Any hydraulic soil stabilizers applied will include mulch, so that any potential pollutant transport to the storm drain system is visually detectable.</li></ul>
<b>Geotextiles, Plastic Covers, and Erosion Control Blankets, (EC-7)</b> <ul style="list-style-type: none"><li>❑ Erosion control blankets will be placed on critical areas where maximum protection is desirable and on steep slopes that are inaccessible by hydraulic equipment or where other temporary soil stabilization methods such as hydraulic mulch, BFM, soil binders, straw mulch, etc. are not feasible.</li><li>❑ Any plastic covers used for erosion control shall be properly installed, be used only for small areas due to increased runoff, and only be used for short term application, such as rapid deployment to cover an exposed soil area or stockpile prior to a storm event.</li></ul>
<b>Dust Control</b> <ul style="list-style-type: none"><li>❑ Wind Erosion Controls (WE-1) shall be provided to prevent or alleviate dust generated by construction activities. Care will be taken to prevent over-watering, which may result in runoff or erosion.</li><li>❑ Construction roads will be stabilized to prevent tracking of sediments. (TC-2)</li></ul>

Grading activities are anticipated to occur between (insert dates). Insert description of construction scheduling activities e.g. all BMPs shall be in place year-round. Construction activities shall be scheduled and performed to minimize the area and duration of exposure of soil to erosion by wind, rain, runoff and vehicle tracking. The area that can be cleared or graded and left exposed at one time is limited to the amount of acreage that the Contractor can adequately protect prior to a predicted rainstorm. A predicted storm event is defined as a forecasted 50% chance of rain. Timing of construction shall be considered when scheduling work to minimize soil-disturbing activities and major grading operations during the rainy season.

The following erosion controls will be implemented at the project construction site. Insert description of BMPs e.g. vegetation will be preserved to the maximum extent practicable (EC-2). Only areas necessary for construction will be disturbed, cleared, or graded. Areas of vegetation to be protected will be clearly designated as no disturbance areas on the plans, and flagged in the field to exclude construction vehicles. Specific shrubs and trees to be preserved should be clearly marked.

Disturbed areas on the site include (describe areas of disturbance [e.g. graded earth pads, cut and fill slopes, and graded streets]). Land grading will be performed to minimize erosion and protect

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

vegetation. Disturbed areas of the construction site that will not be re-disturbed will be stabilized by the day after the last disturbance. The following stabilization measures will be applied to disturbed areas (insert description of stabilization methods that will be implemented).

Final cut and fill slopes shall be no steeper than (slope [e.g. 2:1] (horizontal to vertical)). For long slopes, benching may be required to reduce the slope length. Fill slopes shall be constructed in accordance with project specifications.

Graded cut and fill slopes will be roughened (describe method [e.g. track walking], if applicable) with the texture of the roughened surface trending perpendicular to the direction of runoff. The slope will be left in the roughened condition to slow flow velocities, enhance water infiltration, and enhance vegetative growth. Where the slope is too steep to allow construction traffic to travel parallel to the slope, clefted dozers traveling up and down the slope can produce a satisfactory texture on newly compacted soil.

Wind Erosion Control measures (WE-1) will be used to stabilize soil from wind erosion, and reduce dust generated by construction activities including grading, demolition and travel on unpaved temporary roads. Dust control shall be provided daily or more often by the application of water. Care shall be taken to prevent over-watering, which may result in runoff or erosion.

Heavily traveled earthen roads will be stabilized (TC-2) and/or sprayed daily by a water truck for dust suppression. Care will be taken to spray additional areas of exposed soil as necessary during windy periods. Only the minimum amount of water will be used; no runoff will result from this practice

Locations for specific erosion control measures for the project are included on the site map(s) or Contractor Drawing No. (insert drawing number and title of drawing) prepared by (insert name of firm) and contained in Appendix B of this SWPPP.

### 3.2.2 Sediment Controls

Sediment controls are temporary or permanent structural measures that are intended to complement the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water.

This SWPPP has been designed to meet the requirements of the General Permit:

Establish and maintain effective perimeter controls and stabilize all construction entrances and exits (E.1)<sup>1</sup>.

- ☐ Yes ☐ N/A (provide explanation)

Onsite where sediment basins are used, design sediment basins according to the method provide in the latest update of Fact Sheet SE-2 of the CASQA Construction BMP Hand Book (E.2)<sup>1</sup>.

- ☐ Yes ☐ N/A (provide explanation)

#### *Included the following for Risk Level 2 projects*

Implement appropriate erosion control BMPs in conjunction with sediment control BMPs for areas under active construction (E.3)<sup>1</sup>.

- ☐ Yes ☐ N/A (provide explanation)

Apply linear sediment controls along the toe of the slope, face of the slop and at grade breaks (E.4)<sup>1</sup>.

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

- ☐ Yes ☐ N/A (provide explanation)

Ensure construction activity to and from the site is limited to entrances and exits that employ effective controls to prevent offsite tracking. (E.5)<sup>1</sup>.

- ☐ Yes ☐ N/A (provide explanation)

Ensure that all storm drain inlets and perimeter controls, runoff control BMPs and pollutant controls at entrances and exits are maintained and protected from activities that reduces their effectiveness. (E.6)<sup>1</sup>.

- ☐ Yes ☐ N/A (provide explanation)

Inspect all access roads daily (E.7)<sup>1</sup>.

- ☐ Yes ☐ N/A (provide explanation)

Specific sediment controls measures to be implemented and maintained at the project site are denoted with an “X” and described below. BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in **Appendix I**. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP and over guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the BMP Fact Sheets. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

*Type an “X” in the box next to the BMP that will be implemented.*

Sediment Controls
<p><b>Stabilize Perimeter</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Before commencing grading or clearing of the site, clearing limits, easements, setbacks, and vegetation to be preserved will be delineated by marking in the field (<b>EC-2</b>) and/or stabilized with non-vegetative controls such as geotextiles (<b>EC-7</b>), riprap or gabions (wire mesh boxes filled with rock), and mulches such as straw (<b>EC-6</b>).</li><li><input type="checkbox"/> To prevent transport of sediment into existing storm drain inlets and onto adjacent properties and roadways, before grading or clearing, the site perimeter will be stabilized using controls such as silt fences (<b>SE-1</b>) or straw bale barriers (<b>SE-9</b>); tracking controls such as stabilized construction entrances (<b>TC-1</b>); storm drain inlets will be protected (<b>SE-10</b>); and sediment traps (if applicable) (<b>SE-3</b>) will be constructed.</li></ul>
<p><b>Silt Fence (SE-1)</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Temporary silt fences will be constructed and maintained at the toe of exposed and erodible slopes, down slope of exposed soil areas, along the perimeter of the site, or around temporary soil stockpiles to allow sediment to settle from runoff before water leaves the site.</li><li><input type="checkbox"/> Silt fence shall be properly installed and maintained regularly by the Contractor including but not limited to trenching and keying in the bottom of the silt fence fabric, replacing worn fabric, and providing adequate sediment capacity (i.e., clean when sediment reaches 1/3 of the barrier height). Silt fence is not effective in concentrated flow areas.</li></ul>

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

<p><b>Sediment Basin (SE-2)</b></p> <ul style="list-style-type: none"> <li>❑ In general sediment basins are suitable for drainage areas of 5 acres or more, but not appropriate for drainage areas greater than 75 acres. Remove standing water from basin within 96 hours after accumulation. The outflow from the basin will be designed to prevent erosion and/or scouring of the basin embankment and channel. Stormwater sediment basin(s) will be constructed early in the site grading process to collect sediment from all areas during construction.</li> </ul>
<p><b>Sediment Traps (SE-3)</b></p> <ul style="list-style-type: none"> <li>❑ Temporary sediment traps (temporary basin with a controlled release structure) will be used to reduce sediment prior to entering the storm drain, and around and/or up-slope from storm drain inlet protection measures.</li> </ul>
<p><b>Check Dams (SE-4)</b></p> <ul style="list-style-type: none"> <li>❑ Check dams will be used in unlined drainage channels to slow runoff velocity and encourage settlement of sediment.</li> </ul>
<p><b>Fiber Rolls (SE-5)</b></p> <ul style="list-style-type: none"> <li>❑ Fiber rolls will be used to reduce flow velocity (as slope interrupters or temporary check dams) and provide some removal of sediment, predominantly along the face or toe of erodible slopes and for perimeter sediment control. Fiber rolls are not appropriate as the only BMP at a site and should be used in conjunction with other erosion and sediment control measures to reduce pollutant discharges and shall be maintained by the Contractor for effective sediment control.</li> </ul>
<p><b>Gravel bag berms (SE-6)</b></p> <ul style="list-style-type: none"> <li>❑ Gravel bag berms will be used to reduce flow velocity (as slope interrupters or temporary check dams) and provide some removal of sediment.</li> <li>❑ Gravel bag barriers will be used for perimeter site control or along streams or channels or around stockpiles to intercept sediment laden sheet flow or moderately concentrated flows.</li> </ul>
<p><b>Tracking Controls</b></p> <ul style="list-style-type: none"> <li>❑ A stabilized construction entrance will be used to reduce offsite tracking (TC-1).</li> <li>❑ All dirt and debris tracked or transported to offsite paved surfaces will be removed at the end of each work day by manual or mechanical sweeping (SE-7).</li> <li>❑ Construction roads will be stabilized to prevent tracking of sediments. (TC-2)</li> <li>❑ A wheel wash will be used if offsite tracking cannot be controlled by a stabilized entrance and sweeping (TC-3).</li> </ul>
<p><b>Straw Bale Barriers (SE-9)</b></p> <ul style="list-style-type: none"> <li>❑ Straw bale barriers will be constructed and maintained at the toe of exposed and erodible slopes down slope of exposed soil areas or around temporary soil stockpiles to allow sediment to settle from runoff before water leaves the site.</li> </ul>
<p><b>Storm Drain Inlet Protection (SE-10)</b></p> <ul style="list-style-type: none"> <li>❑ All storm drains in the project area and offsite where inlets can receive flow downstream of sediment tracked from the site will be protected with appropriate storm drain inlet protection such as filter fabrics, block and gravel filters, gravel and wire mesh filters, or gravel bag barriers.</li> </ul>

Prior to any ground-disturbing activities, including grading, demolition, or vegetation removal, silt fences and/or fiber roll will be placed around the site perimeter. Vegetative buffers will be maintained wherever possible.

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

Construction entrances and exits will be stabilized with gravel and gravel bags will be placed at all storm drain inlets that could receive runoff from the construction site.

During construction, stormwater runoff shall be directed away from disturbed areas. Properly installed (describe method [e.g. earthen dike and drainage swales [EC-9], silt fences (SE-1) (with the toe embedded into the soil); and sediment basins (SE-2)]) shall be used to limit the discharge of sediment and pollutants from the site, as described below.

In general sediment basins are suitable for drainage areas of 5 acres or more, but not appropriate for drainage areas greater than 75 acres. For drainage locations with 5 or fewer disturbed acres, temporary sediment traps, silt fences or equivalent measures will be installed along the downhill boundary of the construction site. It is anticipated that the majority of the site will be provided with (describe method [e.g. temporary sediment traps]).

Perimeter sediment controls, including controls along the physical site perimeter and at active storm drain inlets, and sediment traps, shall be implemented prior to the start of construction and maintained throughout the duration of construction activities. Perimeter sediment controls will include (describe perimeter sediment controls [e.g. silt fence (SE-1)]).

Locations for specific sediment control measures for the project are included on the site map(s) or Contractor Drawing No. (drawing number and title of drawing) prepared by (name of firm) and contained in Appendix B of this SWPPP.

The construction site will be managed to minimize the amount of dirt, mud, or dust that is generated and can thus be tracked or blown off the site. The Contractor shall provide a stabilized construction entrance (TC-1) to reduce offsite tracking. A wheel wash (TC-3) shall be used in problem areas with fine grain soils or where offsite tracking cannot be controlled by a stabilized construction entrance and sweeping. All dirt and/or debris tracked or transported to offsite paved surfaces shall be removed at the end of each workday by hand sweeping or mechanized sweeper. Washing of sediment from the right-of-way shall be prohibited.

Locations for specific tracking control BMPs for the project are included on the site map(s) or Contractor Drawing No. (drawing number and title of drawing) prepared by (name of firm) and contained in Appendix B of this SWPPP.

### 3.2.3 Drainage Controls

Drainage controls have been selected and designed to effectively manage all run-on and run-off within the site and all run-off that discharges off the site.

This SWPPP has been designed to meet the requirements of the General Permit:

Run-on from offsite shall be directed away from all disturbed area or shall be collectively in compliance with the effluent limitation in the General Permit (F.1)<sup>1</sup>.

☐ Yes ☐ N/A (provide explanation)

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

Specific drainage control measures to be implemented and maintained at the project site are denoted with an “X” and described below. BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix I. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP and over guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the BMP Fact Sheets. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

*Type an “X” in the box next to the BMP that will be implemented.*

<p><b>Earth Dikes, Drainage Swales and Ditches (EC-9)</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Diversion ditches to prevent run-on from offsite areas will be constructed and maintained.</li><li><input type="checkbox"/> Level spreaders, outlets for dikes and flow channels consisting of an excavated depression constructed at zero grade across a slope, will be used to convert concentrated runoff into diffuse flow to be released onto areas stabilized by existing vegetation.</li></ul>
<p><b>Outlet Protection (EC-10)</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Runoff velocities, both on slopes and at discharge points, will be retarded to prevent erosion.</li><li><input type="checkbox"/> Rock outlet protection (i.e. rip rap) will be placed at pipe outlets to prevent scour and reduce the velocity and/or energy of exiting stormwater flows.</li></ul>
<p><b>Slope Drains (EC-11)</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Pipe slope and/or subsurface drains will be installed to protect slopes against erosion by collecting surface runoff from the road bed, the tops of cuts or from benches in cut or fill slopes and conveying it down the slope to a stabilized drainage ditch or area.</li></ul>

To prevent the development of rills and gullies in graded slopes, runoff will be directed to stabilized conveyance channels and drains. No concentrated flow of water will be allowed to flow down a graded slope face.

Every effort will be made to maintain runoff water in its natural course and direction of flow. Access road surfaces shall be stabilized (TC-2) and compacted to obtain a dense, smooth and uniform surface for construction vehicles. Access roads shall be sloped in a manner that will prevent ponding and damage from water flow. Roads that will remain unpaved for more than 21 days will be provided with adequate drainage features to reduce erosion. These measures will include (describe methods e.g. rolling dips, water bars, crowning, drainage swales (EC-9) with check dams (SE-4), and slope drains (EC-11)).

Where flow is concentrated into stormwater conveyance systems, they will be designed to reduce scour and erosion. Measures to reduce erosion will include (describe methods [e.g. slope drains (EC-11), check dams (SE-4), and energy dissipaters]).

Locations for specific drainage control BMPs for the project are included on the site map(s) or Contractor Drawing No. (drawing number and title of drawing) prepared by (name of firm) and contained in Appendix B of this SWPPP.

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2



### 3.3 NON-STORMWATER CONTROLS AND WASTE AND MATERIALS MANAGEMENT

#### INSTRUCTIONS

*Worksheets are provided in Appendix I “BMP Fact Sheets” for the QSD to use in cross-referencing the General Permit required minimum BMPs to the CASQA BMP Fact Sheets available on the CASQA Stormwater BMP Handbook Portal: Construction.*

#### RECOMMENDED TEXT

##### 3.3.1 Non-Stormwater Controls

Non-stormwater management BMPs involve good housekeeping practices to prevent non-stormwater discharges from entering the storm drain and source control of potential pollutants to prevent them from coming into contact with runoff. Categories of non-stormwater management include paving operations management, pesticide and fertilizer management, vehicle and equipment cleaning, fueling, and maintenance, and painting controls. The selection of non-stormwater BMPs is based on the list of construction activities with a potential for non-stormwater discharges identified in **Section 2.7** of this SWPPP.

This SWPPP has been designed to meet the requirements of the General Permit:

Implement good site management measures for Vehicle Storage and Maintenance (B.3)<sup>1</sup>

- ☐ Yes ☐ N/A (provide explanation)

Implement good site management measures for Landscape Materials (B.4)<sup>1</sup>

- ☐ Yes ☐ N/A (provide explanation)

Implement measures to control all non-stormwater discharges (C.1)<sup>1</sup>

- ☐ Yes ☐ N/A (provide explanation)

Shall wash vehicles in such a manner as to prevent non-stormwater discharges to surface waters or MS4 drainage systems (C.2)<sup>1</sup>

- ☐ Yes ☐ N/A (provide explanation)

Shall clean streets in such a manner as to prevent unauthorized non-stormwater discharges from reaching surface water or MS4 drainage systems (C.3)<sup>1</sup>

- ☐ Yes ☐ N/A (provide explanation)

Specific non-stormwater measures to be implemented and maintained at the project site are denoted with an “X” and described below. Fact Sheets for temporary non-stormwater BMPs are provided in **Appendix I**.

*Type an “X” in the box next to the BMP that will be implemented.*

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

**Paving and Grinding Operations (NS-3)**

- ☐ Saw-cut slurry will be shoveled, vacuumed and removed from site.
- ☐ Storm drains inlets and manholes will be covered or barricaded and runoff and run-on diverted during saw cutting, paving or grinding operations.
- ☐ Paving materials and machinery will be stored away from storm drains and water bodies.
- ☐ Secondary containment will be used to catch drips, leaks or spills where applicable.
- ☐ Paving will not take place within 72 hours of a predicted storm event or during rainfall.
- ☐ Excess materials (e.g. asphalt, concrete) will be collected, properly stored, and then disposed upon completion of paving operations.

**Pesticide and Fertilizer Use**

- ☐ Only trained personnel, certified in accordance with federal and state regulations, will perform pesticide application.
- ☐ Recommended usage instructions will be followed for application of pesticides, herbicides and fertilizers.
- ☐ Herbicides and pesticides will not be over applied. Only the amount needed will be prepared.
- ☐ Application of pesticides, fertilizers and herbicides will be avoided when precipitation is forecasted and will be prohibited during precipitation events.
- ☐ Fertilizers will be applied in multiple smaller applications, as opposed to one large application.
- ☐ Vegetative debris will be disposed as green waste or solid waste.

**Vehicle and Equipment Cleaning (NS-8)**

- ☐ All vehicle, equipment, and machinery washing will be done offsite at commercial wash facilities or at a facility that is properly permitted and discharges wash water to a recycle/reuse system or to the sanitary sewer. On-site vehicle and equipment cleaning is prohibited unless approved by District.
- ☐ District approval obtained for vehicle and equipment cleaning.

**Vehicle and Equipment Fueling (NS-9) and Maintenance (NS-10)**

- ☐ All vehicle and equipment fueling and maintenance will be conducted offsite unless approved by District.
- ☐ District approval obtained for vehicle fueling
- ☐ District approval obtained for vehicle maintenance.

- ☐ Paint brushes, paint containers, or any other chemical-holding containers will not be rinsed or cleaned onto dirt, stone or paved areas of the site, or into streets, gutters, storm drains, or drainage channels (natural or man-made). Brushes will be “painted out” as much as possible. Water-based paints will be rinsed into waste buckets to be disposed to the sanitary sewer (offsite). Thinners and solvents will be filtered and re-used to the extent feasible. Excess oil-based paints and sludge will be disposed in accordance with applicable waste regulations.
- ☐ All paints, thinners and solvents will be stored in a covered storage area.
- ☐ Outdoor painting will not be conducted during rain events.
- ☐ Waste from scraping or sandblasting will be collected for proper disposal.
- ☐ Painting operations will be properly enclosed or covered to avoid drift.
- ☐ Air quality and OSHA standards for wind drift while painting will be followed.
- ☐ Paint will be mixed indoors or in a containment area.

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

### **Paving and Grinding Operations**

In order to reduce the potential for the transport of pollutants in stormwater runoff from paving operations, paving shall be rescheduled if rain is forecasted. If paving does occur within 72 hours of a storm event, catch basin filters, or other appropriate BMPs will be utilized to trap hydrocarbons.

Any pavement cutting waste, generated by pavement cutting activities, shall be vacuumed up and disposed of immediately (NS-3)

### **Pesticide and Fertilizer Use**

Apply pesticides only as specified on the “Pesticide Use Recommendation” on the label. The pesticide label is considered the law. Use of a pesticide inconsistent with the label is considered a violation. Minimize the use of pesticides in and near the storm drainage system or watercourses. Record the use of all pesticides. Avoid applying pesticides before a predicted rain event.

Apply only the type and quantity of fertilizer needed, based on the fertility of the soil and the type of vegetation. Do not over-irrigate following fertilizer application. Do not apply fertilizer before a predicted rain event.

### **Vehicle and Equipment Cleaning, Fueling and Maintenance**

Vehicles and heavy machinery are a potential source of pollutants such as petroleum products, antifreeze, and exhaust and waste oil containing heavy metals. Pollutants may enter stormwater runoff by means of direct contact with machine parts and by contact with spills on surfaces and the ground. On-site vehicle and equipment fueling and maintenance are prohibited unless specific provisions to contain and dispose of fluid drips and spills are implemented and approved by District in the SWPPP.

## **RECOMMENDED TEXT**

### **3.3.2 Materials Management and Waste Management**

Materials management control practices consist of implementing procedural and structural BMPs for handling, storing and using construction materials to prevent the release of those materials into stormwater discharges. The amount and type of construction materials to be utilized at the Site will depend upon the type of construction and the length of the construction period. The materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as soil binders for temporary stabilization.

Waste management consist of implementing procedural and structural BMPs for handling, storing and ensuring proper disposal of wastes to prevent the release of those wastes into stormwater discharges. [If applicable to the project site, waste management should be conducted in accordance with the Project’s Construction Waste Management Plan.]

Materials and waste management pollution control BMPs shall be implemented to minimize stormwater contact with construction materials, wastes and service areas; and to prevent materials and wastes from being discharged offsite. The primary mechanisms for stormwater contact that shall be addressed include:

- Direct contact with precipitation.
- Contact with stormwater run-on and runoff.
- Wind dispersion of loose materials.
- Direct discharge to the storm drain system through spills or dumping.

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

- Extended contact with some materials and wastes, such as asphalt cold mix and treated wood products, which can leach pollutants into stormwater.

This SWPPP has been designed to meet the requirements of the District JRMP and the General Permit:

Implement good site management measures for Construction Material that could potentially be a threat to water quality if discharge (B.1)<sup>1</sup>.

- ☐ Yes ☐ N/A (provide explanation)

Implement good site management measures for Waste Management (B.2)<sup>1</sup>.

- ☐ Yes ☐ N/A (provide explanation)

Specific material management and waste management control measures to be implemented and maintained at the project site are denoted with an “X” and described below. BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in **Appendix I**. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP and over guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the BMP Fact Sheets. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

*Type an “X” in the box next to the BMP that will be implemented.*

**Materials Delivery and Storage (WM-1)**

- ☐ Designate areas of the construction site for material delivery and storage. Material storage areas will be placed near construction site entrances, away from drain inlets, culverts and surface water bodies.
- ☐ District specific requirement: Keep all materials stockpiles of treated wood and metals covered during wet weather.
- ☐ Designated storage areas will be kept clean and well organized.
- ☐ Any materials being stored which could release pollutants by wind or runoff transport shall be protected by overhead cover, secondary containment, tarpaulins, or other appropriate method.
- ☐ Regular inspections of storage areas will be conducted to monitor inventory and check for leaking containers.
- ☐ Any chemicals, drums or bagged materials not stored in a covered location, will be stored on pallets, and when possible in secondary containment.
- ☐ Secondary containment will be provided for liquids.
- ☐ Secondary containment areas will be covered to prevent accumulation of rainwater.

**Materials Use (WM-2)**

- ☐ Materials will be used in accordance with manufacturer directions and in a manner to prevent release of pollutants.
- ☐ An accurate, up-to-date inventory of materials delivered and stored on-site will be kept.
- ☐ Required: Application of any erodible landscape material will be discontinued 2 days prior to a forecasted rain event or during periods of precipitation.

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

**Stockpile Management (WM-3)**

- ❑ Stockpiles will be covered or protected by soil stabilization measures when not in use and at the end of each day throughout the term of the contract (WM-3). Stockpiles shall be protected with temporary perimeter sediment barriers.

**Spill Prevention and Control (WM-4)**

- ❑ If a spill were to occur at the site, it will never be cleaned-up by hosing off the area. Dry material spills will never be hosed down or buried.
- ❑ Any fuel products, lubricating fluids, grease or other products and/or waste released from the Contractor's vehicles, equipment, or operations shall be collected and disposed of immediately in accordance with State, Federal and local laws.
- ❑ If the spill has occurred during a rain event, the area will be covered as quickly as possible. The spill will be cleaned up as soon as possible after cessation of rain.
- ❑ Spill cleanup materials will be stored near potential spill areas (e.g., painting, vehicle maintenance areas).

**Solid Waste Management (WM-5)**

- ❑ There will be designated temporary waste storage areas on the site.
- ❑ The site will be kept clean of litter and waste.
- ❑ Non-hazardous construction wastes (e.g., vegetation, trash, and construction debris) will be collected from throughout the site regularly and deposited at the designated waste storage areas. Additional containers and more frequent pickup will be provided during the demolition phase of construction.
- ❑ When practical, non-hazardous site wastes will be stored within covered, water-tight dumpsters and/or containers that prevent exposure to rain and prevent loss of wastes when it is windy.
- ❑ All waste materials will be removed from the storage areas by the Contractor or a licensed subcontractor on a weekly basis and disposed or recycled in accordance with all Federal, State, and local regulations.
- ❑ Dumpsters will not be hosed out on the construction site. Any required dumpster cleaning will be done offsite by the trash hauling contractor.
- ❑ Any solid waste that accumulates at erosion and sediment control devices will be removed immediately.
- ❑ Dumpsters shall be closed at the end of every business day and during rain event.

**Sanitary/Septic Control Measures (WM-9)**

- ❑ Portable sanitary facilities will be transported to and from the site by a licensed contractor, placed in a convenient location and maintained in good working order by a licensed service.
- ❑ Untreated wastewater will never be discharged to surface waters or on-site storm drains and will never be buried.

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

#### **Hazardous Materials Management (WM-1)**

- ❑ Storage of hazardous materials on site will be minimized. Any hazardous materials generated during construction will be containerized and kept closed during work activities.
- ❑ Hazardous materials will be stored in covered, sealed containers within a bermed storage area. Lids alone will not be considered adequate cover.
- ❑ Bermed storage area will be covered.
- ❑ Designate areas of the construction site for hazardous material delivery and storage. Material storage areas will be placed near construction site entrances, away from drain inlets, culverts and surface water bodies.
- ❑ Designated storage areas will be kept clean and well organized.
- ❑ The following types of materials will be stored in a covered storage area: fertilizers, herbicides, pesticides, detergents, fuels, oil, grease, glues, paints, plaster, solvents, curing compounds materials, and other similar materials that could be considered potential pollutants in stormwater discharge.
- ❑ Regular inspections of storage areas will be conducted to monitor inventory and check for leaking containers

#### **Hazardous Waste Management (WM-6)**

- ❑ Hazardous wastes and containers will be placed in a designated hazardous waste storage area that is covered and has an impermeable bottom surface surrounded by secondary containment to minimize the mixing of wastes with stormwater and to prevent the direct release of liquid waste to stormwater. The temporary storage and removal of hazardous wastes from the site will be in accordance with all applicable state and federal laws.
- ❑ Wastes will be segregated and recycled where feasible (e.g., paints, solvents, used oil, batteries, anti-freeze). Wastes will not be mixed since this can cause chemical reactions, will make recycling impossible and complicate disposal.
- ❑ Covered waste bins will be designated for the disposal of all empty product (e.g., paints, solvents, glues, petroleum products, concrete, exterior finishes, pesticides, fertilizers, etc.) containers. The original product label will not be removed as it contains important safety and disposal information.
- ❑ Toxic wastes and chemicals will not be disposed of in dumpsters designated for construction debris.
- ❑ If any asbestos is discovered in the demolished materials, asbestos removal and disposal will be performed by a licensed contractor or licensed subcontractor trained in asbestos removal. All removal and disposal will be done in accordance with state and federal regulations. Any asbestos wastes stored on-site prior to removal will be stored within dumpsters (roll-offs) covered with tarps or other appropriate method to prevent contact with rain and minimize exposure to wind.
- ❑ Universal waste shall be handled and disposed of in accordance with applicable local, State and Federal regulation.
- ❑ Employees and subcontractors will be trained on proper storage practices

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

#### **Concrete Waste Management (WM-8)**

- ❑ No raw cement materials will be stored on site.
- ❑ Concrete trucks and transfer chutes will be washed-out on-site utilizing a concrete washout to collect all washwater and concrete waste. The washout area will be located away from storm drains, open ditches or water bodies.
- ❑ No concrete washout water or concrete sawcutting wastewater will be discharged offsite.
- ❑ Gravel bags will be used to prevent offsite discharge of saw-cut slurry and sediment will be cleaned up when dry.
- ❑ On a regular basis during concrete work, solid concrete that has accumulated on-site will be broken up, removed and hauled away. Washing of fresh concrete will be avoided to the extent possible.
- ❑ Excess concrete will not be dumped on-site, except in designated areas.
- ❑ Sweepings from exposed aggregate concrete will not be washed into the street or storm drain. The sweepings will be collected and returned to the aggregate stockpile or disposed in the trash.
- ❑ Employees and subcontractors will be trained in proper concrete waste management.

Many materials used in construction can contribute pollutants to stormwater runoff. Examples of such materials include vehicle fuels, oils, and antifreeze. Any materials being stored which could release constituents by wind or runoff transport shall be protected by overhead cover, secondary containment, tarpaulins, or other methods approved by the Engineer. All construction materials will be delivered to and stored in designated areas at the construction site (WM-1). The main loading, unloading, and access areas should be located away from storm drain inlets and channels. The Contractor will construct enclosures or flow barriers (berms) around these areas to prevent stormwater flows from entering storm drains or receiving waters, and to control the discharge of sediments and other pollutants.

#### **Material Use**

All hazardous material will be stored in covered, sealed containers, within a bermed area. The bermed storage area will be covered to prevent contact with stormwater.

#### **Stockpiles**

Stockpiles will be covered or protected by soil stabilization measures when not in use and at the end of each day throughout the term of the contract (WM-3). Stockpiles shall be protected with temporary perimeter sediment barriers.

#### **Spill Prevention and Control**

The following measures will be undertaken at the site to prevent or reduce the discharge of pollutants to stormwater from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees (describe BMP measures):

The spill equipment will be located in the following areas: (list areas)

In the event of a spill, follow reporting procedures presented in **Section 3.3.3.**

#### **Waste Management**

There will be designated temporary waste storage areas on the site. The sites will be contained within (describe methods [e.g. earthen berms (EC-9)]). Non-hazardous construction wastes (e.g., vegetation, trash, and

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

construction debris) will be collected from throughout the site once a day and deposited in central piles at the designated waste storage areas. When practical, wastes will be stored within covered dumpsters. All waste materials will be removed from the storage areas by the Contractor or a licensed subcontractor on a weekly basis and transported to an offsite landfill or to the appropriate recycling facility. The disposal of excess material offsite will comply with all Federal, State, and local regulations.

### **Compliance with State/Local Sanitary Waste Regulations**

The following measures will be implemented to ensure compliance with local, State and Federal waste disposal, sanitary sewer or septic system regulations:

- Portable sanitary facilities will be transported to and from the site by a licensed contractor, placed in a convenient location and maintained in good working order by a licensed service.
- Untreated wastewater will never be discharged to surface waters or on-site storm drains and will never be buried.

### **Hazardous Materials and Waste Management**

The following BMPs will be implemented to minimize or eliminate the discharge of pollutants from construction site hazardous waste and materials to the storm drain system or to watercourses (insert BMPs e.g. store within bermed and covered area).

### **Contaminated Soil Management**

A number of practices occurring during construction may lead to contamination of soils. For example, leaks and spills of petroleum products from leaking vehicles and routine vehicle and equipment maintenance can cause soil contamination or areas of historic contamination may be encountered. All contaminated soils resulting from vehicle leaks or maintenance must be removed and disposed of correctly (WM-7). No contaminated soils shall be buried or otherwise disposed on site.

### **Concrete Waste Management**

Whenever possible, concrete trucks will be washed-out offsite in designated areas. If washout must occur on site, concrete washout facilities shall be provided and properly maintained by the Contractor. Facilities shall be maintained with a minimum 12" freeboard and cleaned or replaced when the washout is 75% full. No overflow from concrete washouts is permitted to runoff the site. Upon completion of the concrete work, the concrete will be broken up, removed, and reused on site or hauled away (WM-8). Washing of fresh concrete will be avoided, unless runoff can be drained to a bermed or level area, away from storm drain inlets and channels.

## **3.3.3 District Spill Repponses and Reporting Procedures**

Proper disposal of all spill cleanup material will be done within 24 hours of the incident.

### **Non-Stormwater Discharges**

All non-stormwater discharges that enter a storm drain and/or enter San Diego Bay shall be immediately abated and cleaned. Notification of the spill is to be made to the District EP Department at 619-686-6254. Sampling of non-stormwater shall be in accordance with the CSMP Section 7.7.3. Documentation of the non-stormwater release and response activities will be recorded on "Quarterly Visual Observation of Non-Stormwater Discharges" Form in Appendix J.

---

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2



## Sewage and Petroleum Discharges

All sewage or petroleum spills that enter a storm drain and are not fully contained, and/or reach San Diego Bay, or spills 5 gallons or greater of potentially hazardous materials, and/or any spill of hazardous material of Federal Reportable Quantity (as established under 40 CFR Parts 110, 117, or 302), shall be documented in Table 3.1 and the Project Superintendent shall notify the San Diego Harbor Police Department (619-686-6272) who will notify the National Response Center by telephone at (800) 424-8802, if appropriate. Additionally, the Project Superintendent will notify the Coast Guard (619-295-3121) of any petroleum spill that reaches San Diego Bay, or the County of San Diego Department of Environmental Health (619-338-2222) of any sewage spill that reaches San Diego Bay or any waters of the state. The Project Superintendent will submit a written description of the release to EPA Region 9, including the date, circumstances of the incident, and steps taken to prevent another release within 14 days, if a Federal Reportable Release occurred. A copy of this report is to be submitted to the District EP Department.

## SWPPP Reportable Quantity Releases

This table will be completed for any release of petroleum products or sewage that enters a storm drain and are not fully contained and/or reach San Diego Bay; any release 5 gallons or greater of potentially hazardous material, and/or any Reportable Quantity spill of hazardous materials (as established under 40 CFR Part 110<sup>1</sup>, 40 CFR Part 117<sup>2</sup>, or 40 CFR 302<sup>3</sup>) that occurs on site.

1. 40 CFR Part 110 addresses the discharge of oil in such quantities as may be harmful pursuant to Section 311(b)(4) of the Clean Water Act.
2. 40 CFR Part 117 addresses the determination of such quantities of hazardous substances that may be harmful pursuant to Section 311(b)(3) of the Clean Water Act.
3. 40 CFR Part 302 addresses the designation, reportable quantities, and notification requirements for the release of substances designated under Section 311(b)(2)(A) of the Clean Water Act.
4. Copies of the above regulations are available by contacting the Port of San Diego Planning and Green Port (619-686-6254) or on the District website ([www.portofsandiego.org](http://www.portofsandiego.org)).

**Table 3.2 Spill Quantities**

Date of Spill	Material Spilled	Approximate Quantity	Agencies Notified	Date Notified

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

### 3.4 POST CONSTRUCTION STORMWATER MANAGEMENT MEASURES

#### INSTRUCTIONS

*Select Appropriate Scenario and modify text accordingly*

#### RECOMENDED TEXT

Post construction BMPs are permanent measures installed during construction, designed to reduce or eliminate pollutant discharges from the site after construction is completed.

*The following text is for all projects and should be modified accordingly*

Proper operation and maintenance will be implemented by the (District or tenant) for permanent structural BMPs so that they continue to function as designed. This is especially important for treatment controls (e.g., on-site retention or detention basins, vegetated swales, catch basin filters or inserts), since their routine maintenance involves activities such as sediment removal, vegetation management, and replacement of filters or inserts.

A plan for post construction BMP funding and maintenance has been developed to address at minimum five years following construction. The post construction BMPs that are described (USMP Reference or below in tables 3.2 and 3.3) shall be funded and maintained by the (District or LRP). If required, post construction funding and maintenance will be submitted with the NOT.

*For projects with a site specific USMP*

This site is subject to a Phase I MS4 permit. Post construction runoff reduction requirements have been satisfied through the MS4 program, this project is exempt from provision XIII A of the General Permit. All required treatment BMPs have been designed to meet Standard Urban Stormwater Mitigation Plan (SUSMP) numerical sizing requirements and are described in the project Urban Stormwater Management Plan (USMP) (USMP reference).

*For project without a site specific USMP*

This site is subject to a Phase I MS4 permits and post construction runoff reduction requirements have been satisfied through the MS4 program, this project is exempt from provision XIII A of the General Permit. This project does not have a site specific USMP, the post construction BMPs that will be implemented are described below.

#### Post Construction Site Design BMP

##### Minimizing Impervious Areas

- ☐ Reduce sidewalk widths
- ☐ Incorporate landscaped buffer areas between sidewalks and streets.
- ☐ Design residential streets for the minimum required pavement widths.
- ☐ Minimize the number of residential street cul-de-sacs and incorporate landscaped areas to reduce their impervious cover.
- ☐ Use open space development that incorporates smaller lot sizes.
- ☐ Increase building density while decreasing the building footprint.
- ☐ Reduce overall lot imperviousness by promoting alternative driveway surfaces and shared driveways that connect two or more homes together.
- ☐ Reduce overall imperviousness associated with parking lots by providing compact car spaces, minimizing stall dimensions, incorporating efficient parking lanes, and using pervious materials in spillover parking areas.

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

<b>Increase Rainfall Infiltration</b>
<input type="checkbox"/> Use permeable materials for private sidewalks, driveways, parking lots, and interior roadway surfaces (examples: hybrid lots, parking groves, permeable overflow parking, etc.). <input type="checkbox"/> Direct rooftop runoff to pervious areas such as yards, open channels, or vegetated areas, and avoid routing rooftop runoff to the roadway or the urban runoff conveyance system.
<b>Maximize Rainfall Interception</b>
<input type="checkbox"/> Maximizing canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought tolerant trees and large shrubs.
<b>Minimize Directly Connected Impervious Areas (DCIAs)</b>
<input type="checkbox"/> Draining rooftops into adjacent landscaping prior to discharging to the storm drain. <input type="checkbox"/> Draining parking lots into landscape areas co-designed as biofiltration areas. <input type="checkbox"/> Draining roads, sidewalks, and impervious trails into adjacent landscaping.
<b>Slope and Channel Protection</b>
<input type="checkbox"/> Use of natural drainage systems to the maximum extent practicable. <input type="checkbox"/> Stabilized permanent channel crossings. <input type="checkbox"/> Planting native or drought tolerant vegetation on slopes. <input type="checkbox"/> Energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels.
<b>Maximize Rainfall Interception</b>
<input type="checkbox"/> Cisterns. <input type="checkbox"/> Foundation planting.
<b>Increase Rainfall Infiltration</b>
<input type="checkbox"/> Dry wells.
Other BMPs (describe and add lines as necessary)

The following source control post-construction BMPs to comply with General Permit Section XIII.B and local requirements have been identified for the site:

#### Post Construction Source Control BMPs

<input type="checkbox"/> Storm drain system stenciling and signage.
<input type="checkbox"/> Outdoor material and trash storage area designed to reduce or control rainfall runoff.
<input type="checkbox"/> Landscape Irrigation Controls.
<input type="checkbox"/> Street Sweeping and Catch Basin Cleaning.
<input type="checkbox"/> Other BMPs (describe/ add lines as necessary).
<b>Public Education</b>
<input type="checkbox"/> Training for building owners/managers.
<input type="checkbox"/> Brochures/flyers on stormwater pollution control.
<input type="checkbox"/> Good housekeeping practices (proper waste disposal, etc.).
<input type="checkbox"/> Hazardous Waste Collection.
<input type="checkbox"/> Landscape Irrigation Controls.
<input type="checkbox"/> Reduction of Vehicle Use Impacts.
<input type="checkbox"/> Storage and Application of Fertilizers, Pesticides and Other Landscape Management Products.

<sup>1</sup> See section in General Permit Appendix C for Risk Level 1 or Appendix D for Risk Level 2

## Section 4 BMP Inspection, [and] Maintenance [, and Rain Event Action Plans]

### 4.1 BMP INSPECTION AND MAINTENANCE

#### RECOMMENDED TEXT

The General Permit requires routine weekly inspections of BMPs, along with inspections before, during, and after qualifying rain events. The construction general permit defines a qualifying rain events as an event that produces 0.5 inches or more precipitation with a 48 hour or greater dry period between events. A BMP inspection checklist must be filled out for inspections and maintained on-site with the SWPPP. Refer to Construction Site Monitoring Plan (Section 7) for rain event inspection information. The inspection checklist includes the necessary information covered in Section 7.6. Inspection and monitoring records shall be kept in Appendix J.

BMPs shall be maintained regularly to ensure proper and effective functionality. If necessary, corrective actions shall be begin within 72 hours of identified deficiencies and associated amendments to the SWPPP shall be prepared by the QSD.

Specific details for maintenance, inspection, and repair of BMPs selected for this Site can be found in the BMP Factsheets in Appendix I.

### 4.2 RAIN EVENT ACTION PLANS

#### INSTRUCTIONS

*Select text for project Risk Level and modify accordingly*

#### RECOMMENDED TEXT

##### *Risk Level 1*

Rain Event Action Plans (REAPs) are not required for Risk Level 1 projects.

##### *Risk Level 2*

The Rain Event Action Plans (REAP) is written document designed to be used as a planning tool by the QSP to protect disturbed portions of the Site and to ensure that adequate materials and staff are available to implement erosion and sediment control measures. It is the responsibility of the QSP to be aware of precipitation forecast and to obtain and print copies of forecasted precipitation from NOAA's National Weather Service Forecast Office (www.srh.noaa.gov).

A REAP template for each applicable project phase can be found in Appendix K. The QSP shall customize these templates for each rain event and project phase. The QSP shall maintain a paper copy of completed REAPs in compliance with the record retention requirements Section 1.5 of this SWPPP. Completed REAPs shall be maintained in Appendix K.

The QSP will develop event-specific REAP 48 hours prior to precipitation event forecast to have a 50% or greater chance of producing precipitation in the project area. The REAP will be maintained onsite and be implemented 24 hours in advance of the predicted precipitation event.

At minimum the REAP will include the following site and phase-specific information:

- Site Address;
- Calculated Risk Level 2;

- Site Stormwater Manager Information including the name, company and 24-hour emergency telephone number;
- Erosion and Sediment Control Provider information including the name, company and 24-hour emergency telephone number;
- Stormwater Sampling Agent information including the name, company, and 24-hour emergency telephone number;
- Activities associated with each construction phase;
- Trades active on the construction site during each construction phase;
- Trade contractor information; and
- Recommended actions for each project phase.

---

## Section 5 Training

---

### RECOMMENDED TEXT

**Appendix M** identifies the QSP(s) for the project. To promote stormwater management awareness specific for this project, periodic training of job-site personnel shall be included as part of routine project meetings (e.g. daily/weekly tailgate safety meetings), or task specific trainings as needed.

The QSP shall be responsible for providing this information at the meetings, and subsequently completing the training logs shown in **Appendix L**, which identifies the site-specific stormwater topics covered as well as the names of site personnel who attended the meeting. Tasks may be delegated to trained employees by the QSP provided adequate supervision and oversight is provided. Training shall correspond to the specific task delegated including: SWPPP implementation; BMP inspection and maintenance; and record keeping.

Documentation of training activities (formal and informal) is retained in SWPPP **Appendix L**.

---

## Section 6 Responsible Parties and Operators

---

### 6.1 RESPONSIBLE PARTIES

#### RECOMMENDED TEXT

##### Approved Signatory:

Approved Signatory(ies) who are responsible for SWPPP implementation and have authority to sign permit-related documents are identified in Appendix M. Written authorizations from the (District or LRP) for these individuals are provided in Appendix M.

##### Data Submitters:

Data Submitters who are responsible for SMARTS updates are listed in Appendix M.

##### Qualified SWPPP Practitioner:

The QSP shall ensure that all BMPs required by the General Permit and this SWPPP are implemented. In general the QSP is responsible for non-stormwater and stormwater visual observations, sampling and analysis. The QSP contact information and responsibilities for this project are listed below. Note: A QSD can serve the role of the QSP also. The QSP(s) are identified in Appendix M.

##### Responsibilities

- Responsible for overall SWPPP implementation, ensuring that materials and manpower are made available for the successful maintenance of all erosion and sediment control and other BMPs specified in the SWPPP.
- Responsible for maintaining an up-to-date copy of this SWPPP onsite at all times, from commencement of construction to final site stabilization.
- Responsible for making a copy of the SWPPP available for inspection by outside authorized regulatory authorities upon request.
- Responsible for ensuring that field engineering activities are planned and conducted in accordance with the SWPPP.
- Responsible for directing ongoing regular BMP maintenance activities (e.g. silt fence repair, fiber roll replacement, sediment removal, timely waste disposal, etc).
- Responsible for implementing and overseeing necessary corrective actions to the erosion/sediment control devices and other BMPs identified during regular site inspections.
- Responsible for maintaining all site records pertaining to inspection and maintenance of erosion and sediment controls and other BMPs as well as records detailing the dates on which major construction activities began and were completed.
- Responsible for conducting Environmental Awareness Training for site personnel (including subcontractor personnel). This involves increasing awareness of the need to comply with the SWPPP which includes: minimizing sediment in stormwater discharges offsite as well as keeping a clean site and minimizing the potential for construction materials and wastes from entering stormwater discharges.
- Responsible for conducting regular documented inspections of erosion and sediment control devices and other BMPs contained in this SWPPP (as discussed in Section 4.0). The findings of these inspections are discussed with the Project Field Engineer who in turn makes

available the necessary resources to repair/replace any defective control devices identified in the inspection.

- Responsible for acting as the site spill coordinator to document spills, direct clean-up activities, minimize impact to stormwater, and ensure that the proper reporting, if necessary, is completed.
- Responsible for ensuring that all subcontractors involved with construction activities, which may potentially affect stormwater quality at the site, are made aware of, and their contracts reflect that they must comply with the applicable provisions of this SWPPP.

## 6.2 CONTRACTOR LIST

### INSTRUCTIONS

*The General Permit requires (Section VII.B.5) that the SWPPP include a list of names of all contractors, subcontractors and individuals who will be directed by the QSP.*

*Include this list in this section or in [Appendix N](#).*

### RECOMMENDED TEXT

Appendix N includes a list of all contractors, subcontractors and individuals that will be directed by the QSP for actives covered under this SWPPP. At a minimum the following information shall be included:

- Name
- Title
- Company
- Address
- Phone Number
- Number (24/7)



## Section 7 Construction Site Monitoring Program

### 7.1 Purpose

#### INSTRUCTIONS

*This template shall be used to assist the QSD in development of a (Construction Site Monitoring Program) CSMP to meet the specific requirements and objectives identified in the General Permit for Risk Level 1 and 2.*

*The CSMP shall include monitoring procedures and instructions, location maps, forms, and checklists, a description of the project site's watershed, including drainage patterns and all site discharge locations.*

*Additionally, the CSMP should describe the Numeric Action Levels (NAL) thresholds for the site.*

*In general, the CSMP should not include details of ATS monitoring; however, should provide reference to those monitoring documents.*

*Risk Level 1 Projects may delete text related to NALs and REAPs.*

#### RECOMMENDED TEXT FOR ALL PROJECTS

This Construction Site Monitoring Program was developed to address the following objectives:

1. To demonstrate that the project site is in compliance with the Discharge Prohibitions (and applicable Numeric Action Levels (NALs)) of the Construction General Permit;
2. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
3. To determine whether immediate corrective actions, additional Best Management Practices (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in stormwater discharges and authorized non-stormwater discharges; and
4. To determine whether BMPs included in the SWPPP (and REAP) are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges.

### 7.2 Applicability of Permit Requirements

#### INSTRUCTIONS

*Select text for appropriate risk level and delete other text*

#### RECOMMENDED TEXT FOR ALL PROJECTS

This project has been determined to be a Risk Level (Enter Number) project. The General Permit identifies the following types of monitoring as being applicable for a Risk Level (Enter Number) project.

##### Risk Level 1

- Visual inspections of Best Management Practices (BMPs);
- Visual monitoring of the site related to qualifying storm events;
- Visual monitoring of the site for non-stormwater discharges;
- Sampling and analysis of construction site runoff for non-visible pollutants when applicable; and

- Sampling and analysis of construction site runoff as required by the RWQCB when applicable.

#### Risk Level 2

- Visual inspections of BMPs;
- Visual monitoring of the site related to qualifying storm events;
- Visual monitoring of the site for non-stormwater discharges;
- Sampling and analysis of construction site runoff for pH and turbidity;
- Sampling and analysis of construction site runoff for non-visible pollutants when applicable; and
- Sampling and analysis of non-stormwater discharges when applicable.

### 7.3 Weather and Rain Event Tracking

#### INSTRUCTIONS

*Select appropriate risk level and delete other text*

#### RECOMMENDED TEXT

##### *Risk Level 1*

Visual monitoring and inspection requirements of the General Permit are triggered by a qualifying rain event. The General Permit defines a qualifying rain event as any event that produces ½ inch of precipitation. A minimum of 48 hours of dry weather will be used to distinguish between separate qualifying storm events.

##### *Risk Level 2*

Visual monitoring, inspections, and sampling requirements of the General Permit are triggered by a qualifying rain event. The General Permit defines a qualifying rain event as any event that produces ½ inch of precipitation. A minimum of 48 hours of dry weather will be used to distinguish between separate qualifying storm events.

#### 7.3.1 Weather Tracking

#### RECOMMENDED TEXT FOR ALL PROJECTS

The QSP should consult daily the National Oceanographic and Atmospheric Administration (NOAA) for the weather forecasts. These forecasts can be obtained at <http://www.srh.noaa.gov/>. Weather reports should be printed and maintained with the SWPPP in Appendix K “Weather Reports and REAP”. If rain is forecasted the QSP shall perform a Pre-Rain Event “BMP Inspection Report”, are included in Appendix J.

[Optionally, identify any other tools, in addition to NOAA probability of precipitation that the QSP will use to track weather.]

### 7.3.2 Rain Gauges

The QSP shall install [Enter Number and General Location for On-site Gauges] rain gauge(s) on the project site. Locate the gauge in an open area away from obstructions such as trees or overhangs. Mount the gauge on a post at a height of 3 to 5 feet with the gauge extending several inches beyond the post. Make sure that the top of the gauge is level. Make sure the post is not in an area where rainwater can indirectly splash from sheds, equipment, trailers, etc.

The rain gauge(s) shall be read daily during normal site scheduled hours. If there is precipitation QSP shall perform a During-Rain Event “BMP Inspection Report”, include in Appendix J. The rain gauge should be read at approximately the same time every day and the date and time of each reading recorded. Log rain gauge readings in Appendix K “Weather Reports and REAP”

Once the rain gauge reading has been recorded, accumulated rain shall be emptied and the gauge reset. If total rainfall is greater than 0.5 inches the QSP shall prepare a Post-Rain Event “BMP Inspection Report” within 48 hours of the conclusion of the storm, included in Appendix J. [Alternatively, include instructions for an automated recording rain gauge if used.]

For comparison with the site rain gauge, the nearest appropriate governmental rain gauge(s) is located at [Insert location and web site of the applicable governmental rain gauge(s)].

## 7.4 Monitoring Location and Personnel

### INSTRUCTIONS

*Select appropriate scenario and delete other*

### RECOMMENDED TEXT FOR ALL PROJECTS

Monitoring locations are shown on the Site Maps in Appendix B. Monitoring locations are described in the Sections 7.6 and 7.7.

Whenever changes in the construction site might affect the appropriateness of sampling locations, the sampling locations shall be revised accordingly. All such revisions shall be implemented as soon as feasible and the SWPPP amended. Temporary changes that result in a one-time additional sampling location do not require a SWPPP amendment.

The QSP or his/her designee will contact (specify name of laboratory or environmental consultant) 24 hours prior to a predicted rain event or for an unpredicted event, as soon as a rain event begins to ensure that adequate sample collection personnel, supplies for monitoring pH and turbidity are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

Samples will be collected and analyzed by:

Contractor	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Consultant	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Laboratory	<input type="checkbox"/> Yes	<input type="checkbox"/> No

*Include the following text if samples will be collected by contractor and modify accordingly*

Samples on the project site will be collected by the following contractor sampling personnel:

Name/Telephone Number:

Alternate(s)/Telephone Number:

*Include the following text if samples will be collected by consultant or laboratory and modify accordingly*

Samples on the project site will be collected by the following (specify name of laboratory or environmental consultant)

Company Name:   
Street Address:   
City, State, Zip:   
Telephone Number:   
Point of Contact:   
Name of Sampler(s):

## 7.5 Safety and Monitoring Exemptions

### RECOMMENDED TEXT

Safety practices for sample collection will be in accordance with the (enter title and publication date of contractor's health and safety plan for the project or provide specific requirements in this section)

This project is not required to collect samples or conduct visual observations (inspections) under the following conditions:

- During dangerous weather conditions such as flooding and electrical storms.
- Outside of scheduled site business hours.

Scheduled site business hours are: (specify site business day and hours).

If monitoring (visual monitoring or sample collection) of the site is unsafe because of the dangerous conditions noted above then the QSP shall document the conditions for why an exception to performing the monitoring was necessary. The exemption documentation shall be filed in **Appendix J**.

## 7.6 Visual Monitoring

### RECOMMENDED TEXT FOR ALL PROJECTS

Visual monitoring includes observations and inspections. Inspections of BMPs are required to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Visual observations of the site are required to observe stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources.

**Table 7.1** identifies the required frequency of visual observations and inspections. Inspections and observations will be conducted at the locations identified in **Section 7.6.5**.

**Table 7.1 Summary of Visual Monitoring and Inspections**

Type of Inspection	Frequency
<i>Routine Inspections</i>	
BMP Inspections	Weekly <sup>1</sup>

**Table 7.1 Summary of Visual Monitoring and Inspections**

Type of Inspection	Frequency
BMP Inspections – Tracking Control	Daily (RL 2 only)
(add rows as needed)	
Non-Stormwater Discharge Observations	Quarterly during daylight hours
<i>Rain Event Triggered Inspections</i>	
Site Inspections Prior to a Qualifying Event	Within 48 hours prior to qualifying event <sup>2</sup>
BMP Inspections During an Extended Storm Event	Every 24-hour period of a rain event <sup>2,3</sup>
Site Inspections Following a Qualifying Event	Within 48 hours following a qualifying event <sup>2</sup>
<sup>1</sup> Most BMPs must be inspected weekly; those identified below must be inspected more frequently.	
<sup>2</sup> Inspections are only required during scheduled site operating hours.	
<sup>3</sup> These inspections are required daily regardless of the amount of precipitation.	

### 7.6.1 Routine Observations and Inspections

#### RECOMMENDED TEXT FOR ALL PROJECTS

Routine site inspections and visual monitoring are necessary to ensure that the project is in compliance with the requirements of the Construction General Permit.

#### 7.6.1.1 Routine BMP Inspections

Inspections of BMPs are conducted to identify and record:

- BMPs that are properly installed and maintained;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed;
- BMPs that could fail to operate as intended; or
- BMP's previously identified as requiring maintenances have been repaired or replaced.

#### 7.6.1.2 Non-Stormwater Discharge Observations

Each drainage area will be inspected quarterly for the presence of or indications of prior unauthorized and authorized non-stormwater discharges. Inspections will record:

- Presence or evidence of any non-stormwater discharge (authorized or unauthorized);
- Pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc); and
- Source of discharge.

## 7.6.2 Rain-Event Triggered Observations and Inspections

### RECOMMENDED TEXT FOR ALL PROJECTS

Visual observations of the site and inspections of BMPs are required prior to a qualifying rain event; following a qualifying rain event, and every 24-hour period during a qualifying rain event. Pre-rain inspections will be conducted after consulting NOAA and determining that a precipitation event with a 50% or greater probability of precipitation has been predicted.

#### 7.6.2.1 *Visual Observations Prior to a Forecasted Qualifying Rain Event*

Within 48-hours prior to a qualifying event a stormwater visual monitoring site inspection and observations shall be conducted at the following locations:

- Potential pollutant sources are properly stored (i.e. sorted in covered areas, elevated off ground surfaces, etc);
- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- BMPs to identify if they have been properly implemented or require maintenance;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

#### 7.6.2.2 *BMP Inspections During an Extended Storm Event*

During an extended rain event BMP inspections will be conducted every 24 hours during normal business hours to identify and record:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- Evidence of any spills, leaks, or uncontrolled pollutant sources that may have migrated offsite;
- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

If the construction site is not accessible during the rain event, the visual inspections shall be performed at all relevant outfalls, discharge points, and downstream locations. The inspections should record any projected maintenance activities.

#### 7.6.2.3 *Visual Observations Following a Qualifying Rain Event*

Within 48 hours following a qualifying rain event (0.5 inches of rain) a stormwater visual monitoring site inspection is required to observe:

- Evidence of any spills, leaks, or uncontrolled pollutant sources that may have migrated offsite;
- BMPs to identify if they have been properly designed, implemented, and effective;
- Need for additional BMPs or BMP maintenance;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard; and

- Discharge of stored or contained rain water.

### 7.6.3 Visual Monitoring Procedures

#### RECOMMENDED TEXT FOR ALL PROJECTS

Visual monitoring shall be conducted by the QSP or staff trained by and under the supervision of the QSP. The name(s) and contact number(s) of the site visual monitoring personnel provided in Appendix L.

Stormwater observations shall be documented on the “BMP Inspection Report” (Appendix J). BMP inspections shall be documented on the site specific BMP inspection checklist. Any photographs used to document observations will be referenced on stormwater site inspection report and maintained with the Monitoring Records in Attachment 2.

The QSP shall within (Enter Number) days of the inspection submit copies of the completed inspection report to (Name).

The completed reports will be kept in Appendix J.

### 7.6.4 Visual Monitoring Follow-Up and Reporting

#### RECOMMENDED TEXT FOR ALL PROJECTS

Correction of deficiencies identified by the observations or inspections, including required repairs or maintenance of BMPs, shall be initiated and completed as soon as possible.

If identified deficiencies require design changes, including additional BMPs, the implementation of changes will be initiated within 72 hours of identification and be completed as soon as possible. When design changes to BMPs are required, the SWPPP shall be amended to reflect the changes.

Deficiencies identified in site inspection reports and correction of deficiencies will be tracked on the “BMP Inspection Report” and shall be submitted to the QSP and shall be kept in Appendix J.

The QSP shall within (Enter Number) days of the inspection submit copies of the completed “BMP Inspection Reports” with the corrective actions to (Name).

Results of visual monitoring must be summarized and reported in the Annual Report.

### 7.6.5 Visual Monitoring Locations

#### RECOMMENDED TEXT FOR ALL PROJECTS

The inspections and observations identified in Sections 7.6.1 and 7.6.2 will be conducted at the locations identified in this section.

BMP locations are shown on the Site Maps in SWPPP Appendix B.

There are (Enter Number) drainage area(s) on the project site and the contractor’s yard, staging areas, and storage areas. Drainage area(s) are shown on the Site Maps in Appendix B.

There are (Enter Number) stormwater storage or containment area(s) are on the project site. Stormwater storage or containment area(s) are shown on the Site Maps in Appendix B.

There are (Enter Number) discharge location(s) on the project site. Site stormwater discharge location(s) are shown on the Site Maps in Appendix B.

## 7.7 Water Quality Sampling and Analysis

### INSTRUCTIONS

*Select appropriate scenario and modify accordingly*

### RECOMMENDED TEXT FOR ALL PROJECTS

#### *Risk Level 1*

Water quality sampling and analysis serves to demonstrate the project is in compliance with discharge prohibitions. This project is classified as Risk Level 1 and shall perform water quality sampling and analysis for non-visible pollutants.

#### *Risk Level 2*

Water quality sampling and analysis serves to demonstrate the project is in compliance with discharge prohibitions. This project is classified as Risk Level 2 and shall perform water quality sampling and analysis for non-visible pollutants, pH and turbidity during storm events, and for non-stormwater discharges.

### 7.7.1 Non-Visible Pollutants in Stormwater Runoff Discharges

### INSTRUCTIONS

*Risk Level 1 sites are not required to collect run-on samples, however, the QSD should consider if non-visible pollutants that will be sampled in site runoff have the potential to run-on to the project site. In such cases it may be advisable to sample and analyze run-on samples.*

*Select appropriate scenario and modify accordingly*

### RECOMMENDED TEXT FOR ALL PROJECTS

#### *All projects*

This CSMP for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in stormwater runoff discharges from the project site.

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

The following construction materials, erosion control products (e.g tackifiers or soil amendments), wastes, or activities, as identified in **Section 2.6**, are potential sources of non-visible pollutants to stormwater discharges from the project. Storage, use, and operational locations are shown on the **Site Maps in Appendix B**.

- (List construction materials, erosion control products (e.g tackifiers or soil amendments), wastes, or activities,)

The following existing site features, as identified in **Section 2.6**, are potential sources of non-visible pollutants to stormwater discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the **Site Maps in Appendix B**.

- (List existing site features or State NONE)



## **Risk Level 2**

The project has the potential to receive stormwater run-on from the following locations with the potential to contribute non-visible pollutants to stormwater discharges from the project. Locations of such run-on to the project site are shown on the Site Maps in Appendix B.

- (List Run-on or State NONE)

### **7.7.1.1 Non-Visible Pollutants Sampling Schedule**

#### **RECOMMENDED TEXT FOR ALL PROJECTS**

Samples for the potential non-visible pollutant(s) and a sufficiently large unaffected background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during the site's scheduled hours and shall be collected regardless of the time of year and phase of the construction.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during site inspections conducted prior to or during a rain event.

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents stormwater contact and runoff from the storage area.
- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- A construction activity, including but not limited to those in **Section 2.6**, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Stormwater runoff from an area contaminated by historical usage of the site has been observed to combine with stormwater runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

### **7.7.1.2 Non-Visible Pollutants Sampling Locations, Collection and Analysis**

#### **INSTRUCTIONS**

*Use Table 7.2 -7.6 to identify sampling locations, delete tables that do not apply to Project  
Select appropriate scenario and modify accordingly*

#### **RECOMMENDED TEXT FOR ALL PROJECTS**

*Include the following text for all projects*

If a stormwater visual monitoring site inspection conducted prior to or during a storm event identifies the potential for the discharge of non-visible pollutants to surface waters or a storm drain system that was not previously identified on the Site Maps, sampling locations will be selected by the QSP using the same rationale as that used to identify planned locations. Non-visible pollutant sampling locations shall be identified by the QSP on the pre-rain event inspection form (and/or Rain Event Action Plan) prior to a forecasted qualifying rain event.

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, and personnel safety. Planned non-visible pollutant sampling locations are shown on the Site Maps in Appendix B and include the locations identified in Table 7.2 through 7.6.

Samples of discharge shall be collected at the designated non-visible pollutant sampling locations shown on the Site Maps in Appendix B. Samples shall be collected in the locations determined by observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples shall be collected and preserved in accordance with the methods identified in the Table 9, “Table 7.9 List of Non-Visible Laboratory Analytical Constituents” provided in Section 7.7.1.4. Only the QSP, or personnel trained in water quality sampling under the direction of the QSP shall collect samples.

Sample collection and handling requirements are described in Section 7.10.

Samples shall be analyzed using the analytical methods identified in the Table 7.8, and samples will be analyzed by laboratory identified in Section 7.9.

(Enter Number) sampling location(s) on the project site and the contractor’s yard have been identified for the collection of samples of runoff from planned material and waste storage areas and areas where non-visible pollutant producing construction activities are planned.

**Table 7.2 Non-Visible Pollutant Sample Locations – Contractors’ Yard**

Sample Location Number	Sample Location Description	Sample Location Latitude and Longitude (Decimal Degrees)
(Enter Number)	(Enter Location)	(Enter Latitude/Longitude)
(Enter Number)	(Enter Location)	(Enter Latitude/Longitude)

(Enter Number) sampling locations have been identified for the collection of samples of runoff from drainage areas where soil amendments will be applied that have the potential to affect water quality.

**Table 7.3 Non-Visible Pollutant Sample Locations – Soil Amendment Areas**

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
(Enter Number)	(Enter Location)	(Enter Latitude/Longitude)
(Enter Number)	(Enter Location)	(Enter Latitude/Longitude)

(Enter Number) sampling locations have been identified for the collection of samples of runoff from drainage areas contaminated by historical usage of the site.

**Table 7.4 Non-Visible Pollutant Sample Locations – Areas of Historical Contamination**

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
(Enter Number)	(Enter Location)	(Enter Latitude/Longitude)
(Enter Number)	(Enter Location)	(Enter Latitude/Longitude)

(Enter Number) sampling location(s) has been identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location(s) was selected such that the sample will not have come in contact with the operations, activities, or areas identified in **Section 7.7.1** or with disturbed soils areas.

**Table 7.5 Non-Visible Pollutant Sample Locations – Background (Unaffected Sample)**

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
(Enter Number)	(Enter Location)	(Enter Latitude/Longitude)
(Enter Number)	(Enter Location)	(Enter Latitude/Longitude)

*Include for Risk Level 2 projects*

(Enter Number) sampling locations have been identified for the collection of samples of run-on to the project site. Run-on from these locations has the potential to combine with discharges from the site being sampled for non-visible pollutants. These samples are intended to identify potential sources of non-visible pollutants that originate off the project site.

**Table 7.6 Non-Visible Pollutant Sample Locations – Site Run-On**

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
(Enter Number)	(Enter Location)	(Enter Latitude/Longitude)
(Enter Number)	(Enter Location)	(Enter Latitude/Longitude)

### 7.7.1.3 Analytical Constituents

## INSTRUCTIONS

*Table 7.7 can be used as a guide for determining the type of analysis to be performed based on possible pollutant sources. Not all pollutant sources are applicable to the all project site. Analysis for Non-visible pollutants will be performed based the site inspection and direction from the appropriate representative.*

## RECOMMENDED TEXT FOR ALL PROJECTS

**Table 7.7** lists pollutant sources associated with different construction phases, associated field test and water quality indicator constituent(s) for that pollutant.

**Table 7.7 Pollutant Sources, Field Test and Indicator Constituents**

Pollutant Source	Field Test <sup>(1)</sup>	Water Quality Indicator Constituent
<b>Demolition</b>		
Sediment	(visible)	
Paint Strippers	N/A	Volatile Organics
Solvents	N/A	Volatile Organics
Adhesives	N/A	Semi-Volatile Organics
Vehicle Fuels	(visible)	Oil and Grease or TPH
Metals	N/A	Total/Dissolved Metals
Bacteria	N/A	Total/Fecal Coliform
Litter	(visible)	
<b>Utility Installation</b>		
Sediment	(visible)	
Fuels/Lubricants	N/A	Oil and Grease/TPH
Chlorinated Water	Colorimetric	
Concrete	pH	Lab pH
Pesticides/Herbicides	N/A	Pesticide Scan/Semi-Volatile Organics
Fertilizers	N/A	NO <sub>3</sub> /NH <sub>3</sub> /P
Bacteria	N/A	Total/Fecal Coliform
<b>Vertical Construction</b>		
Sediment	(visible)	
Paint Strippers	N/A	Volatile Organics
Solvents, Thinners	N/A	Volatile Organics
Detergents	Colorimetric	MBAS
Adhesives, Sealants, Resins	N/A	Semi-Volatile Organics
Fuels, Lubricants, Hydraulic Fluid	N/A	Oil and Grease or TPH
Concrete	pH	Lab pH
Litter	(visible)	
Bacteria	N/A	Total/Fecal Coliform
Organics	N/A	Semi-Volatile Organics
Paint	(visible)	
Wood (sawdust)	(visible)	
Acid Wash	pH	Lab pH

Asphalt (liquid)	N/A	TPH
<b>Habitat Conservation</b>		
Sediment	(visible)	
Nutrients (Fertilizers)	N/A	NO <sub>3</sub> /NH <sub>3</sub> /P
Bacteria	N/A	Total/Fecal Coliform

Based on consultation with SWPPP preparer or monitoring specialist.

#### 7.7.1.4 Non-Visible Pollutants Data Evaluation and Reporting

### RECOMMENDED TEXT FOR ALL PROJECTS

The QSP shall complete an evaluation of the water quality sample analytical results.

Runoff/downgradient results shall be compared with the associated upgradient/unaffected results and any associated run-on results. Should the runoff/downgradient sample show an increased level of the tested analyte relative to the unaffected background sample, which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

The General Permit prohibits the stormwater discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities shall be immediately reported to the District and other agencies as required by 40 C.F.R. §§ 117.3 and 302.4.

Results of non-visible pollutant monitoring shall be reported in the Annual Report.

**Table 7.9 List of Non-Visible Laboratory Analytical Constituents**

Constituent/ Parameter Name	Constituent Abbreviation	Bottle Type	Volume Required <sup>(1)</sup> (mL)	Preservation	Method Type	EPA Method Number	Holding Time	Units	Target Reporting Limit
Conventional									
Specific Conductance	EC	Poly-Propylene	50	N/A	N/A	120.1	ASAP	umhos/cm	1
pH <sup>(3)</sup>	pH		50	N/A	Electrometric	150.1	ASAP	pH unit	+/- 0.1
Hydrocarbons									
Total Recoverable Petroleum Hydrocarbons	TRPH	Glass	1000	4 degrees Celsius	Gas chromatography	8015b	14 days	µg/L	50
Oil and Grease (HEM/SGT)	O&G		1000	H <sub>2</sub> SO <sub>4</sub> to pH<2	Gravimetric	1664	28 days	mg/L	5
Nutrients									
Nitrate-Nitrogen	NO <sub>3</sub> -N	Poly-Propylene	100	4 degrees Celsius	Ion chromatography	300.0	48 hours	mg/L	0.1
Ammonia-Nitrogen	NH <sub>3</sub> -N		100	None	Titrimetric	350.2	28 days	mg/L	0.1
Total Phosphorus	Total P		100	HNO <sub>3</sub> or H <sub>2</sub> SO <sub>4</sub> to pH<2	Colorimetric	365.2	28 days	mg/L	0.03
Detergents	MBAS		500	4 degrees Celsius	Colorimetric	425.1	48 hours	mg/L	0.1
Bacteriological									
Coliform (Fecal)	FC	Poly-Propylene	50	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Multiple-tube fermentation	9211E	6 hours	MPN/100 ml	1
Coliform (Total)	TC		50	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Multiple-tube fermentation	9221B	6 hours	MPN/100 ml	1
Metals									
Total Recoverable	TR	Poly-Propylene	250	HNO <sub>3</sub> or H <sub>2</sub> SO <sub>4</sub> to pH<2	GFAA; ICP-MS	200.8	Filter for dissolved fraction and preserve within 48 hours; analyze within 6 months.	µg/L	0.2-5 <sup>(5)</sup>
Dissolved <sup>(4)</sup>	Diss		250	HNO <sub>3</sub> or H <sub>2</sub> SO <sub>4</sub> to pH <2 <sup>(2)</sup>	GFAA; ICP-MS	200.8		µg/L	0.2-5 <sup>(5)</sup>
Organics									
Volatile Organics	VOCs	Glass	2 x 40 vials	4 degrees Celsius	GC-MS	8020	14 days	µg/L	0.5-50
Semi-Volatile Organics	SVOCs		1000	4 degrees Celsius	GC-MS	8270	Extract in 7 days, analyze within 40 days	µg/L	0.05-0.25
Pesticides	Pest		1000	4 degrees Celsius	Gas chromatography	8141, 8081		µg/L	0.5-1

Notes:

- (1) For analytical methods, reporting limits, and other specifications, see Table 4-1.
- (2) Dissolved metals preserved after filtration.
- (3) Report pH to nearest 0.1 std. pH unit. Also report temperature at time of measurement.
- (4) Filter dissolved samples prior to analysis.
- (5) Target reporting limit varies by metal.

## 7.7.2 pH and Turbidity in Stormwater Runoff Discharges

### INSTRUCTIONS

*Risk Level 1 project should include the first statement below and delete the rest of Section 7.7.2. Risk Level 2 projects should delete the first statement below and include all of Section 7.7.2.*

### RECOMMENDED TEXT

#### *For Risk Level 1 Projects*

Sampling and analysis of runoff for pH and turbidity is not required for Risk Level 1 projects.

#### *For Risk Level 2 Projects*

Sampling and analysis of runoff for pH and turbidity is required for this project. This CSMP describes the strategy for monitoring turbidity and pH levels of stormwater runoff discharges from the project site and run-on that may contribute to an exceedance of a Numeric Action Level (NAL).

Samples for pH and turbidity will be collected from all drainage areas with disturbed soil areas.

#### *7.7.2.1 pH and Turbidity Sampling Schedule*

Stormwater runoff samples shall be collected for turbidity from all qualifying rain events that result in a discharge from the project site. At minimum, turbidity samples will be collected from each site discharge location draining a disturbed area. A minimum of three samples will be collected per day of discharge during a qualifying event. Samples should be representative of the total discharge from the project each day of discharge during the qualifying rain event. Representative samples will be spaced in time throughout the daily discharge event, to the extent possible.

Stormwater runoff samples shall be collected for pH from all qualifying rain events that result in a discharge from the project site. At minimum, pH samples will be collected from each site discharge location during project phases and drainage areas with a high risk of pH discharge. A minimum of three samples will be collected per day of discharge during a qualifying rain event. Samples should be representative of the total discharge from the location each day of discharge during the qualifying rain event. Typically representative samples will be spaced in time throughout the daily discharge event.

Stored or collected water from a qualifying storm event when discharged shall be tested for turbidity and pH (when applicable). Stored or collected water from a qualifying event may be sampled at the point it is released from the storage or containment area or at the site discharge location.

Run-on samples shall be collected whenever the QSP identifies that run-on has the potential to contribute to an exceedance of a NAL.

#### *7.7.2.2 pH and Turbidity Sampling Locations and Collection*

Sampling locations are based on the site runoff discharge locations and locations where run-on enters the site; accessibility for sampling; and personnel safety. Planned pH and turbidity sampling locations are shown on the **Site Maps in Appendix B** and include the locations identified in **Table 7.10**.

Samples of discharge shall be collected at the designated runoff and run-on sampling locations shown on the **Site Maps in Appendix B**. Run-on samples shall be collected within close proximity of the point of run-on to the project.

Only personnel trained in water quality sampling and field measurements working under the direction of the QSP shall collect samples.

Sample collection and handling requirements are described in **Section 7.9**.

(Enter Number) sampling location(s) on the project site and the contractor's yard have been identified for the collection of runoff samples. **Table 7.10** also provides an estimate of the site's area that drains to each location.

**Table 7.10 Turbidity and pH Runoff Sample Locations**

Sample Location Name or Number	Sample Location Latitude and Longitude <sup>(1)</sup> (Decimal Degrees)	Estimate of Site Drainage Factor <sup>(2)</sup> (%)
(Name or Number)	(Latitude, Longitude)	(%)
(Name or Number)	(Latitude, Longitude)	(%)
(Name or Number)	(Latitude, Longitude)	Run-on

(1) SMARTS requires location in decimal degree to 5 decimal places

(2) Area or flow based percentage

## RECOMMENDED TEXT FOR RISK LEVEL 2 PROJECTS THAT RECEIVE RUN-ON

(Enter Number) sampling locations have been identified for the collection of run-on samples where the run-on has the potential to contribute to an exceedance of a NAL. (Describe locations)

## RECOMMENDED TEXT FOR RISK LEVEL 2 THAT DO NOT RECEIVE RUN-ON

The project does not receive run-on with the potential to exceed NALs.

### 7.7.2.3 Field Parameters and Measurements

Samples shall be analyzed for the constituents indicated in the table below "Sample Collection, and Analysis for Monitoring Turbidity and pH."

**Table 7.11 Sample Collection and Analysis for Monitoring Turbidity and pH**

Parameter	Test Method	Minimum Sample Volume <sup>(1)</sup>	Sample Collection Container Type	Detection Limit (minimum)
Turbidity	Field meter/probe with calibrated portable instrument	50 mL	Polypropylene or Glass (Do not collect in meter sample cells)	1 NTU



**Table 7.11 Sample Collection and Analysis for Monitoring Turbidity and pH**

Parameter	Test Method	Minimum Sample Volume <sup>(1)</sup>	Sample Collection Container Type	Detection Limit (minimum)
pH	Field meter/probe with calibrated portable instrument or calibrated pH test kit	100 mL	Polypropylene	0.2 pH units
Notes: <sup>1</sup> Minimum sample volume recommended. Specific volume requirements will vary by instrument; check instrument manufacturer instructions. L – Liter mL – Milliliter NTU – Nephelometric Turbidity Unit				

Samples collected for field analysis, collection, analysis and equipment calibration shall be in accordance with the field instrument manufacturer's specifications.

Immediately following collection, samples for field analysis shall be tested in accordance with the field instrument manufacturer's instructions and results recorded on the *Effluent Sampling Field Log Sheet*.

The field instrument(s) listed in Table 7.12 will be used to analyze the following constituents:

**Table 7.12 Field Instruments**

Field Instrument (Manufacturer and Model)	Constituent
	pH
	Turbidity

The manufacturers' instructions are included in CSMP Attachment 2 "Field Meter Instructions". Field sampling staff shall review the instructions prior to each sampling event and follow the instructions in completing measurement of the samples.

- The instrument(s) shall be maintained in accordance with manufacturer's instructions.
- The instrument(s) shall be calibrated before each sampling and analysis event.
- Maintenance and calibration records shall be maintained with the SWPPP.

The QSP may authorize alternate equipment provided that the equipment meets the Construction General Permit's requirements and the manufacturers' instructions for calibration and use are added to CSMP Attachment 2 "Field Meter Instructions".

#### 7.7.2.4 Data Evaluation and Reporting

### RECOMMENDED TEXT FOR RISK LEVEL 2 PROJECTS

#### Numeric Action Levels

This project is subject to NALs for pH and turbidity (Table 7.13). Compliance with the NAL for pH and turbidity is based on a (weighted) daily average. Upon receiving the field log sheets, the QSP shall immediately calculate the (weighted) arithmetic average of the pH and turbidity samples to determine if the NALs, shown in the table below, have been exceeded.

**Table 7.13 Numeric Action Levels**

Parameter	Unit	Daily Average
pH	pH units	Lower NAL = 6.5 Upper NAL = 8.5
Turbidity	NTU	250 NTU

Within (enter number) days of the sample collection, the QSP shall submit copies of the completed *Effluent Sampling Field Log Sheets* to (District EP and LRP).

In the event that the pH or turbidity NAL is exceeded, the QSP shall immediately notify (District EP at 619-686-6254 and LRP) and investigate the cause of the exceedance and identify corrective actions.

Exceedances of NALs shall be electronically reported to the SWRCB by (District EP and LRP) through the SMARTs system within 10 days of the conclusion of the storm event. If requested by the RWQCB, a NAL Exceedance report will be submitted. The NAL Exceedance Report must contain the following information:

- Analytical method(s), method reporting unit(s), and MDL(s) of each parameter;
- Date, place, time of sampling, visual observation, and/or measurements, including precipitation; and
- Description of the current BMPs associated with the sample that exceeded the NAL and the proposed corrective actions taken.

### 7.7.3 Non-Stormwater Discharges

#### INSTRUCTIONS

*Risk Level 1 project should include the first statement below and delete the rest of Section 7.7.3. Risk Level 2 projects should delete the first statement below and include all of Section 7.7.3.*

#### RECOMMENDED TEXT FOR RISK LEVEL 2 PROJECTS

##### *For Risk Level 1 Projects*

Sampling and analysis of non-stormwater discharges is not required for Risk Level 1 projects.

##### *For Risk Level 2 Projects*

This CSMP for non-stormwater discharges describes the sampling and analysis strategy and schedule for monitoring pollutants in authorized and unauthorized non-stormwater discharges from the project site in accordance with the requirements of the Construction General Permit.

Sampling of non-stormwater discharges will be conducted when an authorized or unauthorized non-stormwater discharge is observed discharging from the project site. In the event that non-stormwater discharges run-on to the project site from offsite locations, and this run-on has the potential to contribute to a violation of a NAL, the run-on will also be sampled.

Activities that employ water, such as concrete curing, dust control, rinsing or washing tools or equipment are possible sources of unauthorized non-stormwater discharges. Other sources include water line or sewer line breaks.

The following authorized non-stormwater discharges identified in **Section 2.7**, have the potential to be discharged from the project site.

- (List authorized non-stormwater discharges or State NONE)

In addition to the above authorized stormwater discharges, some construction activities have the potential to result in an unplanned (unauthorized) non-stormwater discharge if BMPs fail. These activities include:

- (List contractor activities or State NONE)

#### 7.7.3.1 Non-Stormwater Sampling Schedule

Samples of authorized or unauthorized non-stormwater discharges shall be collected when they are observed.

#### 7.7.3.2 Non-Stormwater Sampling Locations, Collection and Analysis

Samples shall be collected from the discharge point of the construction site where the non-stormwater discharge is running off the project site. Site discharge locations are shown on the **Site Maps in SWPPP Appendix B** and include the locations identified below.

Samples shall be collected at the discharge locations where the non-stormwater discharge is leaving the project site. Potential discharge locations are shown on the **Site Maps in Appendix B** and identified in **Section 7.7.3.2**.

Grab samples shall be collected and preserved in accordance with the methods identified in **Table 7.9**. Only personnel trained in water quality sampling under the direction of the QSP shall collect samples. Sample collection and handling requirements are described in **Section 7.9**.

Samples shall be analyzed for turbidity and ph as described in **7.7.2.6**. For non-visible constituents using the analytical methods identified in **Table 7.9**, and samples will be analyzed by laboratory identified in **Section 7.9**.

(Enter Number) sampling location(s) on the project site and the contractor's yard have been identified where non-stormwater discharges may runoff from the project site.

(Enter Number) sampling locations have been identified for the collection of non-stormwater discharges that run-on to the project site.

**Table 7.14 Sample Collection and Analysis for Monitoring Non-Stormwater Discharges**

Sample Location Name or Number	Sample Location Latitude and Longitude <sup>(1)</sup> (Decimal Degrees)
[Name or Number]	[Latitude, Longitude]
[Name or Number]	[Latitude, Longitude]

(1) SMARTS requires location in decimal degree to 5 decimal places

### 7.7.3.3 Analytical Constituents

All non-stormwater discharges that flow through a disturbed area shall, at minimum, be monitored for turbidity.

All non-stormwater discharges that flow through an area where they are exposed to pH altering materials shall be monitored for pH.

The QSP shall identify additional pollutants to be monitored for each non-stormwater discharge incident based on the source of the non-stormwater discharge. If the source of an unauthorized non-stormwater discharge is not known, monitoring for pH, turbidity, MBAS, TOC, and residual chlorine or chloramines is recommended to help identify the source of the discharge.

Non-stormwater discharge run-on shall be monitored, at minimum, for pH and turbidity. The QSP shall identify additional pollutants to be monitored for each non-stormwater discharge incident based on the source of the non-stormwater discharge. If the source of an unauthorized non-stormwater discharge is not known, monitoring for pH, turbidity, methyl blue active substances (MBAS), total organic carbons (TOC), and residual chlorine or chloramines is recommended to help identify the source of the discharge.

**Table 7.15** lists the specific sources and types of potential non-visible pollutants on the project site and the water quality indicator constituent(s) for that pollutant.

**Table 7.15 Potential Non-Stormwater Discharge Pollutants and Water Quality Indicator Constituents**

Pollutant Source	Pollutant	Water Quality Indicator Constituent
Disturbed Areas	Sediment	Turbidity
Concrete Work	pH	pH

### 7.7.3.4 Data Evaluation and Reporting

The QSP shall complete an evaluation of the water quality sample analytical results.

Turbidity and pH results shall be evaluated for compliance with NALs as identified in **Section 7.7.2.4**.

Should the runoff sample indicate the discharge of a pollutant which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

Non-stormwater discharge results shall be submitted with the Annual Report.

The General Permit prohibits the discharge of non-stormwater discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities shall be immediately reported to the RWQCB

#### 7.7.4 Other Pollutants Required by the Regional Water Quality Control Board

### INSTRUCTIONS

*Delete this sub-section (7.7.4) if RWQCB is not requiring additional monitoring.*

### RECOMMENDED TEXT

The RWQCB has specified monitoring for the following additional pollutants:

- 
- 

This CSMP describes the sampling and analysis strategy and schedule for monitoring additional pollutants as specified in the communication from the RWQCB dated (Enter Date). This communication is included in CSMP Attachment 3 “Supplemental Information”.

#### 7.7.4.1 RWQCB Required Sampling Schedule

Runoff samples shall be collected for (list pollutants) from all qualifying rain events that result in a discharge from the project site. At minimum, samples will be collected from each site discharge location. A minimum of (Enter Number) samples will be collected per day of discharge from a qualifying event. Samples should be representative of the total discharge from the location each day of discharge during the qualifying event. Typically representative samples will be spaced in time throughout the daily discharge event.

Stored or collected water from a qualifying storm event will be sampled when discharged. Stored or collected water from a qualifying event may be sampled at the point it is release from the storage or containment area or at the site discharge location.

#### 7.7.4.2 RWQCB Required Sampling Locations, Collection and Analysis

Sampling locations are based on the site discharge locations; accessibility for sampling; and personnel safety. Planned sample locations are shown on the Site Maps in Appendix B and include the locations identified below.

Runoff samples of discharge shall be collected at the designated sampling locations as identified above and shown on the Site Maps in Appendix B and as identified in Section 7.7.4.2.

Grab samples shall be collected and preserved in accordance with the methods identified in Table 7.9. Only personnel trained in water quality sampling under the direction of the QSP shall collect samples. Sample collection and handling requirements are described in Section 7.10.

Samples shall be analyzed using the analytical methods and laboratory identified in Table 7.9.

(Enter Number) sampling location(s) on the project site and the contractor’s yard have been identified for the collection of runoff samples.

**Table 7.16 Runoff Sample Locations for Other Pollutants Required by the RWQCB**

Sample Location Name or Number	Sample Location Latitude and Longitude <sup>(1)</sup> (Decimal Degrees)
[Name or Number]	[Latitude, Longitude]
[Name or Number]	[Latitude, Longitude]

(1) SMARTS requires location in decimal degree to 5 decimal places

#### 7.7.4.3 RWQCB Required Data Evaluation and Reporting

*[Discuss the data evaluation (e.g., effluent limits, numeric or narrative objectives, basin plan limitations, waste load allocations) established by the RWQCB.]*

*[Identify the RWQCB specified reporting, and at minimum identify that the data will be reported in the Annual Report.]*

#### 7.7.5 Active Treatment System

### INSTRUCTIONS

*This sub-section (7.7.5) applies to projects for which ATS will be used. Delete section if ATS is not used, and re-number following sub-sections*

### RECOMMENDED TEXT FOR PROJECTS WITH AN ATS

The project-specific CSMP for the ATS is provided in the ATS Monitoring and Sampling Plan (MSRP). The ATS MSRP is located (Location of MSRP)

#### 7.8 Training of Sampling Personnel

### RECOMMENDED TEXT FOR ALL PROJECTS

Sampling personnel shall be trained to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring program (SWAMP) 2008 Quality Assurance Program Plan (QAPrP). Training records of designated contractor sampling personnel are provided in Appendix K.

The stormwater sampler(s) and alternate(s) have received the following stormwater sampling training:

Name	Training
	(List Training Courses)
	(List Training Courses)

The stormwater sampler(s) and alternates have the following stormwater sampling experience:

Name	Experience
	(List stormwater sampling experience)
	(List stormwater sampling experience)

#### 7.9 Sample Collection, Preservation and Delivery

### RECOMMENDED TEXT FOR ALL PROJECTS

Samples will be analyzed by:

Laboratory Name:   
Street Address:   
City, State Zip:   
Telephone Number:   
Point of Contact:   
ELAP Certification Number:

Samples will be delivered to the laboratory by:

Driven by Contractor ☐ Yes ☐ No  
Picked up by Laboratory Courier ☐ Yes ☐ No  
Shipped ☐ Yes ☐ No

An adequate stock of monitoring supplies and equipment for monitoring turbidity and will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, field meters, extra batteries; clean powder-free nitrile gloves, sample collection equipment, appropriate sample containers, paper towels, personal rain gear, and Effluent Sampling Report (Appendix J) and Chain of Custody (CoC) forms provided in CSMP Attachment 1 “Chain of Custody Forms”.

### 7.9.1 Sample Collection Methods

If possible, field teams will consist of two persons. Because of the unpredictability of storm events, and the requirement to sample within the first two hours of runoff, field crews must arrive at the monitoring sites before any significant stormwater runoff has been observed.

#### 7.9.1.1 Detailed Grab Sample Collection Procedures for Each Monitoring Site

Inspect general conditions of the site. Note the conditions of the site at the time of sampling.

Once runoff is observed in the area to be sampled (sheet flow, drainpipe, or other stormwater conveyance), manually collect a water sample with a clean polypropylene collection device, or directly into sample container proved by laboratory.

Once sufficient water has been collected in the collection device, carefully pour the water into each of the laboratory sample bottles using a polypropylene funnel. Note: For collection of the oil and grease sample, a glass or metal funnel should be used.

After all water samples have been collected, clean equipment with a 2% Contrad (or equivalent) detergent solution, rinse off the polypropylene collection device and funnels with distilled water and towel dry to prepare for the next sampling event.

### 7.9.2 Field Measurement Methods

Certain grab samples will require field measurement of certain parameters. To accomplish this, pour a subsample of stormwater a clean plastic cup for field measurements. pH and electrical conductivity can be

measured using hand-held devices. The devices will be calibrated prior to mobilization at the monitoring site. At some locations, colorimetric field test kits (e.g., HACH field kits) may be used to test for the presence of chlorine or detergents. Follow manufacturers' instructions on proper use of the test kits. The measurements will be recorded in field notes and on the chain-of-custody forms. The sub-sample will then be discarded following recording of the field measurements.

### **7.9.3 Sample Containers and Handling**

Sampling procedures involving handling items that have direct contact with the samples (i.e., sampling container, container lid, etc.) will be performed in accordance with proper sample handling techniques designed to minimize contamination of the sample. Sampling personnel are required to wear clean powder-free nitrile gloves. If sampling with a two member team, one member of the field team shall be responsible for sample collection and will change gloves between sample collections, or when the gloves have come in contact with any potential source of contamination. The other field team member will be responsible for cleaning of sampling equipment and all other activities that do not involve handling items that have direct contact with the sample. If one person is collecting and documenting all samples, care shall be taken to not cross-contaminate or introduce contaminants to samples.

### **7.9.4 Forms and Procedures for Documenting Sample Collection and Field Measurements**

The following forms are to be completed during each storm monitoring event at each site:

- Monitoring checklist
- Non-Visible Pollutant Monitoring Report.
- Chain-of-custody form (other copies will be retained by the laboratory)

Copies of these forms are included in **Appendix J**.

### **7.9.5 Laboratory Communication Procedures**

Staff will contact the analytical laboratory 24 hours before the anticipated beginning of the storm event. The laboratory will be instructed to prepare sample bottles for use at the monitoring sites and to prepare for receipt of samples during and following the storm event.

### **7.9.6 Sample Shipping/Delivery and Chain of Custody**

After grab samples are collected, staff is responsible for delivery of grab samples to the analytical laboratory as soon as possible to meet sample holding time requirements. If samples are to be analyzed for bacteria, they must be delivered to the laboratory within six hours of sample collection. Samples for all other analyses should be delivered within 24 hours of collection. The laboratory should be notified of estimated time of delivery and be alerted when weekend delivery is required. The following list outlines the packaging and shipping procedures for pick-up:

- Assemble and package all sample bottles in an orderly and secure manner for delivery to the laboratory.
- Verify information on the chain-of-custody form completed by the field crew on a cooler-by-cooler basis.
- If multiple coolers contain bottles from the same station, indicate this on all related forms.
- Use military time (i.e., 2 p.m. = 1400 hours) for all entries.



- If necessary, re-pack coolers with ice to keep samples cool and to prevent breakage.
- Place the completed chain-of-custody form in a re-sealable bag and place the form in the cooler with the bottles.
- Pack any sampler bottles to be cleaned for delivery to lab.

### **7.9.7 Sample Preservation and Filtration**

During collection of grab samples, the field teams will:

- Seal sample bottles in re-sealable plastic bags.
- Place them in a cooler.
- Pack the cooler with ice in order to preserve the samples below 4 degrees Celsius.
- Once samples are at the laboratory, they will be refrigerated until analysis.

Sample filtration and/or preservative may be required for some analyses, including dissolved metals. Because of contamination concerns, this will be performed in the laboratory in accordance with procedures specified by the appropriate analytical method.

### **7.10 Quality Assurance and Quality Control**

#### **RECOMMENDED TEXT FOR ALL PROJECTS**

An effective Quality Assurance and Quality Control (QA/QC) plan shall be implemented as part of the CSMP to ensure that analytical data can be used with confidence. QA/QC procedures to be initiated include the following:

- Field logs;
- Clean sampling techniques;
- CoCs;
- QA/QC Samples; and
- Data verification.

Each of these procedures is discussed in more detail in the following sections.

#### **7.10.1 Field Logs**

The purpose of field logs is to record sampling information and field observations during monitoring that may explain any uncharacteristic analytical results. Sampling information to be included in the field log include the date and time of water quality sample collection, sampling personnel, sample container identification numbers, and types of samples that were collected. Field observations should be noted in the field log for any abnormalities at the sampling location (color, odor, BMPs, etc.). Field measurements for pH and turbidity should also be recorded in the “Effluent Sampling Report”. A “BMP Inspection Report” and “Effluent Sampling Report”, are included in [Appendix J](#).

#### **7.10.2 Clean Sampling Techniques**

Clean sampling techniques involve the use of certified clean containers for sample collection and clean powder-free nitrile gloves during sample collection and handling. Adoption of a clean sampling approach will minimize the chance of field contamination and questionable data results.

### 7.10.3 Chain of Custody

The sample CoC is an important documentation step that tracks samples from collection through analysis to ensure the validity of the sample. Sample CoC procedures include the following:

- Proper labeling of samples;
- Use of CoC forms for all samples; and
- Prompt sample delivery to the analytical laboratory.

Analytical laboratories usually provide CoC forms to be filled out for sample containers. An example CoC is included in CSMP **Attachment 1 “Chain of Custody Forms”**.

### 7.10.4 QA/QC Samples

QA/QC samples provide an indication of the accuracy and precision of the sample collection; sample handling; field measurements; and analytical laboratory methods. The following types of QA/QC will be conducted for this project:

**Table 7.17 QA/QC Sample Frequency**

QA/QC Sample Type	Sampling Frequency
Equipment Blanks	Will be collected from polypropylene grab sampling equipment prior to the sampling season.
Field Duplicates	Will be collected for 10% of the total number of samples collected.
Laboratory Duplicates	Will be collected for 10% of the total number of samples collected.
Matrix Spike/ Matrix Spike Duplicates	Will be collected for 10% of the total number of samples collected.
Method Blanks	Will be run with each QC batch analyzed by the laboratory.

#### 7.10.4.1 Field Duplicates

Field duplicates will be collected and analyzed for 10% of the total number of grab samples collected. Field duplicates provide verification of laboratory or field analysis and sample collection. Duplicate samples shall be collected, handled, and analyzed using the same protocols as primary samples. The sample location where field duplicates are collected shall be randomly selected from the discharge locations. Duplicate samples shall be collected immediately after the primary sample has been collected. Duplicate samples must be collected in the same manner and as close in time as possible to the original sample. Duplicate samples shall not influence any evaluations or conclusions.

#### 7.10.4.2 Equipment Blanks

Equipment blanks provide verification that equipment has not introduced a pollutant into the sample. Equipment blanks are typically collected when:

- New equipment is used;
- Equipment that has been cleaned after use at a contaminated site;
- Equipment that is not dedicated for surface water sampling is used; or

- Whenever a new lot of filters is used when sampling metals.

#### 7.10.4.3 Field Blanks

Field blanks assess potential sample contamination levels that occur during field sampling activities. De-ionized water field blanks are taken to the field, transferred to the appropriate container, and treated the same as the corresponding sample type during the course of a sampling event.

#### 7.10.4.4 Travel Blanks

Travel blanks assess the potential for cross-contamination of volatile constituents between sample containers during shipment from the field to the laboratory. De-ionized water blanks are taken along for the trip and held unopened in the same cooler with the VOC samples.

### 7.10.5 Data Verification

After results are received from the analytical laboratory, the QSP shall verify the data to ensure that it is complete, accurate, and the appropriate QA/QC requirements were met. Data must be verified as soon as the data reports are received. Data verification shall include:

- Check the CoC and laboratory reports.  
*Make sure all requested analyses were performed and all samples are accounted for in the reports.*
- Check laboratory reports to make sure hold times were met and that the reporting levels meet or are lower than the reporting levels agreed to in the contract.
- Check data for outlier values and follow up with the laboratory.  
*Occasionally typographical errors, unit reporting errors, or incomplete results are reported and should be easily detected. These errors need to be identified, clarified, and corrected quickly by the laboratory. The QSP should especially note data that is an order of magnitude or more different than similar locations, or is inconsistent with previous data from the same location.*
- Check laboratory QA/QC results.  
*EPA establishes QA/QC checks and acceptable criteria for laboratory analyses. These data are typically reported along with the sample results. The QSP shall evaluate the reported QA/QC data to check for contamination (method, field, and equipment blanks), precision (laboratory matrix spike duplicates), and accuracy (matrix spikes and laboratory control samples). When QA/QC checks are outside acceptable ranges, the laboratory must flag the data, and usually provides an explanation of the potential impact to the sample results.*
- Check the data set for outlier values and, accordingly, confirm results and re-analyze samples where appropriate.  
*Sample re-analysis should only be undertaken when it appears that some part of the QA/QC resulted in a value out of the accepted range. Sample results may not be discounted unless the analytical laboratory identifies the required QA/QC criteria were not met and confirms this in writing.*

Field data including inspections and observations must be verified as soon as the field logs are received, typically at the end of the sampling event. Field data verification shall include:

- Check field logs to make sure all required measurements were completed and appropriately documented;

- Check reported values that appear out of the typical range or inconsistent; Follow-up immediately to identify potential reporting or equipment problems, if appropriate, recalibrate equipment after sampling;
- Verify equipment calibrations;
- Review observations noted on the field logs; and
- Review notations of any errors and actions taken to correct the equipment or recording errors.

## **7.11 Data Management and Reporting**

### **RECOMMENDED TEXT FOR ALL PROJECTS**

#### **7.11.1 Analytical Data Validation**

Results of precision and accuracy and contamination checks will be reviewed after each storm event. In the event that data quality objectives are not met, data will be qualified and documented as necessary.

- Data collected from the laboratory will be validated through the following procedures:
- Review hard copy data package;
- Compare chain-of-custody forms to logbooks and laboratory data reports to ensure successful data transfer;
- Ensure that laboratory reports are complete;
- Ensure that there are no typographical errors or incongruities in the data;
- Compare QA/QC results with data quality objective criteria;
- Tabulate and analyze the success rate of each QA/QC parameter; and
- Document and report out-of-range values.

#### **7.11.2 Electronic Data Transfer**

Data from the laboratory will be delivered in hard copy and electronic format. Both data packages will include:

- A narrative of any problems, corrections, anomalies, and conclusions; and
- Results/summary of QA/QC elements, including:
  - sample extract and analysis dates
  - method blanks, laboratory control spikes, and matrix spikes
  - analytical accuracy
  - analytical precision
  - reporting limits

## Section 8      References

---

Project Plans and Specifications No. [Insert Number] dated [insert date], prepared by [entity preparing plans and specifications]

Port of San Diego Jurisdictional Runoff Management Program, June 2015.

San Diego Unified Port District Stormwater Management and Discharge Control Ordinance (Article 10)

State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Stormwater Discharge Associated with Construction and Land Disturbing Activities.

Available on-line at:

[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml).

State Water Resources Control Board (2010). Order 2010-0014-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Stormwater Discharge Associated with Construction and Land Disturbing Activities.

Available on-line at:

[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml).

[Include additional references as needed]

Example

CASQA 2009, *Stormwater BMP Handbook Portal: Construction*, November 2009, [www.casqa.org](http://www.casqa.org)

## ***Appendix A: Calculations***

---

## INSTRUCTIONS

- *Include calculations here*

## ***Appendix B: Site Maps***

---



## INSTRUCTIONS

- *Include maps here*

## ***Appendix C: Permit Registration Documents and LRP Certification***

---

## INSTRUCTIONS

- *Include Copies of Permit Registration Documents submitted to SMARTS, other than the SWPPP itself*
  - Notice Of Intent (NOI)
  - Risk Assessment
  - Signed Certification Statement
  - Post Construction Water Balance
  - Copy of Annual Fee Receipt
  - ATS Design Documents (if applicable)
  - Site Map, see Appendix B
- Include the project Waste Discharge Identification (WDID) confirmation

## RECOMMENDED TEXT

Permit Registration Documents included in this Appendix

Y/N	Permit Registration Document
	Notice of Intent
	Risk Assessment
	Certification
	Post Construction Water Balance
	Copy of Annual Fee Receipt
	ATS Design Documents
	Site Map, see Appendix B

## ***Appendix D: SWPPP Amendment Certifications***

---

## INSTRUCTIONS

- *Include certification statements for each SWPPP amendment.*

**SWPPP Amendment No.**

\_\_\_\_\_

Project Name:

\_\_\_\_\_

Project Number:

\_\_\_\_\_

**Qualified SWPPP Developer's Certification of the  
Stormwater Pollution Prevention Plan Amendment**

"This Stormwater Pollution Prevention Plan and attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Order No. 2009-009-DWQ as amended by 2010-0014-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below."

\_\_\_\_\_  
QSD's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
QSD Name

\_\_\_\_\_  
QSD Certificate Number

\_\_\_\_\_  
Title and Affiliation

\_\_\_\_\_  
Telephone

\_\_\_\_\_  
Address

\_\_\_\_\_  
Email

=====

## ***Appendix E: Annual Reporting***

---

**Project Specific Submittal requirements for  
SMARTS Annual Report  
CA Construction General Permit (Order No. 2009-009-DWQ)**

Complete and submit to Planning and Green Port by August 1<sup>st</sup> for the annual  
reporting period ending June 30<sup>th</sup>.

Site: \_\_\_\_\_ WDID No: \_\_\_\_\_

Completed By: \_\_\_\_\_

Date: \_\_\_\_\_



## Checklist of Required Content

	Required Item	SMARTS	Retained on Site
<b>Annual Report Submittal Requirements (Permit Sections XVI and Attachment C.I.9)</b>			
SMARTS Form 1 SMARTS Form 2 SMARTS Form 3	Summary of all violations of the General Permit	X	
SMARTS Form 2 SMARTS Form 3	Summary of all corrective actions taken during the compliance year	X	
SMARTS Form 1 SMARTS Form 2 SMARTS Form 3	Identification of any compliance activities or corrective actions that were not implemented	X	
SMARTS Form 1 Attachment 1	The names of individual(s) who performed the facility inspections, sampling, visual observation (inspections), and/or measurements	X	X
Attachment 2	Inspection Log – Include the date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge)	X (general question)	X
Attachment 3	The visual observation and sample collection exception records and reports (including precipitation measurements) specified in Attachments C of the General Permit,	X (general question)	X
Attachment 4	Documentation of all training for individuals responsible for all activities associated with compliance with the General Permit,	X (general question)	X
<b>Additional Requirement for Projects that Conducted Non-Visible Pollutant Monitoring</b>			
Attachment 4	A summary and evaluation of all sampling and analysis results from the last three years, including copies of laboratory reports, QA/QC, analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit"),		

**FORM 1***This form is designed to be consistent with SMARTS Form 1*

	Yes, No, N/A, if No provide comment	
<b>STORMWATER POLLUTION PREVENTION PLAN (SWPPP) [CGP Section XIV]</b>		
1. Has a SWPPP been prepared by a Qualified SWPPP Developer (QSD) for the construction project?		
2. Does the SWPPP include a Construction Site Monitoring Program (CSMP) section/element?		
3. Are these documents kept onsite?		
<b>GOOD SITE MANAGEMENT "HOUSEKEEPING" [CGP Attachment C, Section B]</b>		
1. Were required good site management "housekeeping" measures for construction materials fully implemented on-site?		
a. Was an inventory of the products used and/or expected to be used conducted?		
2. Were required good site management "housekeeping" measures for waste management fully implemented on-site?		
a. Is there a spill response and implementation element of the SWPPP?		
3. Were required good site management "housekeeping" measures for vehicle storage and maintenance fully implemented on-site?		
4. Were required good site management "housekeeping" measures for landscape materials fully implemented on-site?		
5. Was a list of potential pollutant sources developed?		
6. Were good site management "housekeeping" measures to control air deposition of site materials and from site operations implemented on-site?		

**FORM 1**

*This form is designed to be consistent with SMARTS Form 1 and shall contain the same information provided via SMARTS for annual reporting*

	Yes, No, N/A, if No provide comment	
<b>NON-STORMWATER MANAGEMENT [CGP Attachment C, Section C]</b>		
1. Were measures to control all non-stormwater discharges during construction implemented?		
2. Were vehicles washed in such a manner as to prevent non-stormwater discharges to surface waters or to MS4 drainage systems?		
3. Were streets cleaned in such a manner as to prevent unauthorized non-stormwater discharges from reaching surface waters or MS4 drainage systems?		
<b>EROSION CONTROLS [CGP Attachment C, Section D]</b>		
1. Were required erosion controls implemented in accordance with the CGP and SWPPP?		
<b>SEDIMENT CONTROLS [CGP Attachment C, Section E]</b>		
1. Were required sediment controls fully implemented on your site?		
<b>H. RUN-ON AND RUN-OFF CONTROLS [CGP Attachment C, Section F]</b>		
1. Was all site run-on and run-off effectively managed?		
<b>Inspection Maintenance and Repair</b>		
1. Were all site inspections, maintenance, and repairs performed or supervised by a Qualified SWPPP Practitioner (QSP)?		
2. Were site inspections conducted weekly and at least once each 24-hour period during extended storm events?		
3. Were post rain event inspections conducted?		
4. Do your inspection forms/ checklists meet the minimum criteria listed in <b>CGP Attachment C, Section G.5?</b>		

**FORM 1**

*This form is designed to be consistent with SMARTS Form 1 and shall contain the same information provided via SMARTS for annual reporting*

	Yes, No, N/A, if No provide comment	
5. During any site inspection was BMP maintenance or repairs required?		
6. If BMP maintenance/repair or design change was needed, did implementation begin within 72 hours?		
<b>VISUAL MONITORING [CGP Attachment C, Section I.3]</b>		
1. Were all stormwater discharges that occurred at all discharge locations observed within 2 business days (48 hours) after each qualifying rain event (producing precipitation of ½ inch or more at the time of discharge)?		
2. Were all stormwater discharges that occurred from storage or containment systems visually observed prior to discharge?		
3. Were the time, date, and rain gauge reading recorded for each qualifying rain event?		
4. Within 2 business days (48 hours) prior to each predicted qualifying rain event, were visual inspections conducted in compliance with <b>CGP Attachment C, Section I.3.e&amp;f</b> ?		
5. Are all visual inspection records retained on-site?		
<b>Number of Qualifying Rain Events</b>		
<b>STORMWATER SAMPLING [CGP Attachment C, Section I.6]</b>		
For the sampled events, did you collect three samples, at minimum (representative of the flow and characteristics) each day of discharge per qualified event?		
Were grab samples analyzed for pH and/or turbidity? (Analytical data must be entered in the RAW DATA tab in SMARTS)?		
Were Active Treatment System (ATS) effluent samples taken? (Applies to projects that deployed ATS)		
Was receiving water monitoring conducted? (Analytical data must be entered in the RAW DATA tab in SMARTS)		
<b>NON-STORMWATER DISCHARGE MONITORING [CGP Attachment C, Section I.6]</b>		
1. Were all drainage areas monitored for authorized/unauthorized non-stormwater discharges quarterly? (Complete <b>Form 2</b> )		

2. Did visual observations indicate any authorized/ unauthorized non-stormwater discharges?		
3. Were effluent samples taken of the authorized/ unauthorized non-stormwater discharge? (Analytical data must be entered in the <b>RAW DATA</b> tab in SMARTS)		
4. Were the effluent samples sent to a laboratory certified for such analyses by the State Department of Health Services?		
5. Were unauthorized non-stormwater discharges eliminated?		
<b>L. NON-VISIBLE POLLUTANT MONITORING [CGP Attachment C, Section I.7]</b>		
1. Were any breaches, malfunctions, leakages, or spills observed during a visual inspection?		
2. How many potential discharges of non-visible pollutants were identified?		
3. For each discharge event (of non-visible pollutants), were samples collected in compliance with <b>CGP Attachment C, Section I.7.d</b> ? (Analytical data must be entered in the <b>RAW DATA</b> tab in SMARTS)		
4. For each discharge event was a comparison sample collected (uncontaminated sample that did not come into contact with the pollutant)? (Analytical data must be entered in the <b>RAW DATA</b> tab in SMARTS)		
<b>M. RECORDS [CGP Attachment C, Section I.9]</b>		
1. Are all records of all stormwater monitoring information retained on-site?		
<b>N. TRAINING</b>		
1. Was a Qualified SWPPP Practitioner (QSP) in reasonable charge of SWPPP implementation?		
If <b>Yes</b> , Provide Name and Certificate Number:		
2. Were all individuals conducting BMP installation, inspection, maintenance and repairs trained appropriately?		
3. Are complete training records kept on-site and available upon request?		

**FORM 1**

*This form is designed to be consistent with SMARTS Form 1 and shall contain the same information provided via SMARTS for annual reporting*

	Yes, No, N/A, if No provide comment	
<b>Authorized NSWD</b>		
Were any authorized Non-Stormwater Discharges observed from July-September?		
Were any authorized Non- Stormwater Discharges observed from October-December?		
Were any authorized Non- Stormwater Discharges observed from January-March?		
Were any authorized Non- Stormwater Discharges observed from April-June?		
<b>Unauthorized</b>		
Were any unauthorized Non- Stormwater Discharges observed from July-September?		
Were any unauthorized Non- Stormwater Discharges observed from October-December?		
Were any unauthorized Non- Stormwater Discharges observed from January-March?		
Were any unauthorized Non- Stormwater Discharges observed from April-June?		

## FORM 2

*This form is designed to be consistent with SMARTS Form 2 and shall contain the same information provided via SMARTS for annual reporting*

Quarter	Date	Authorized or Unauthorized	Source and Location of NSW	Described NSW characteristics at the source	Describe NSW Characteristics at Discharge Location	Described any revised or new BMPs
1						
2						
3						
4						

## FORM 3

*This form is designed to be consistent with SMARTS Form 3 and shall contain the same information provided via SMARTS for annual reporting*

**Please enter a general summary of any BMP deficiencies identified for each quarter and the corrective actions taken. Maximum up to 1000 characters.**

July - Sept

Oct-Dec

Jan- March

April-June



QSP	
Name:	ID:
Company:	Phone:

## Appendix E Attachment 2 Inspection Log

# Inspection Log

**Construction Start Date:** \_\_\_\_\_

[illegible]

Appendix E Attachment 3 Inspection Records

## Inspection Records

*Copies of Inspection Reports to be filed here.*

*Copies of Training Records to be filed here*

*Include: A summary and evaluation of all sampling and analysis results, including copies of laboratory reports, QA/QC, the analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit").*

## ***Appendix F: Submitted Changes to PRDs***

---

## Log of Updated PRDs

The General Permit allows for the reduction or increase of the total acreage covered under the General Permit when a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs shall be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit covered acreage is to be sought. The SWPPP shall be modified appropriately, with revisions and amendments recorded in **Appendix C**. Updated PRDs submitted electronically via SMARTS can be found in this Appendix.

This appendix includes all of the following updated PRDs (check all that apply):

- ☐ Revised Notice of Intent (NOI);
- ☐ Revised Site Map;
- ☐ Revised Risk Assessment;
- ☐ New landowner's information (name, address, phone number, email address); and
- ☐ New signed certification statement.

---

Legally Responsible Person [if organization]

---

Signature of [Authorized Representative of] Legally Responsible Person or Approved Signatory

---

Name of [Authorized Representative of] Legally Responsible Person or Approved Signatory

---

Date

---

Telephone Number

## ***Appendix G: Construction Schedule***

---

## INSTRUCTIONS

- *Include a copy of construction schedule*



## ***Appendix H: Construction Activities, Materials Used, and Associated Pollutants***

---

## INSTRUCTIONS

- List construction materials that will be used and construction activities that will have the potential to contribute to the discharge of pollutants to stormwater.
- List construction activities (i.e., construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation) that have the potential to contribute sediment or other pollutants to stormwater discharges.
- Delete phases that are not applicable to Project
- Insert as many lines to **Table G.1** as necessary to complete the list, use **Table G.a** below to assist in the completion of **Table G.1**
- Pollutant Categories identified are consistent with the *CASQA BMP Handbook Portal: Construction: Sediment, Nutrients, Bacteria and Viruses, Oil and Grease, Metals, Synthetic Organics, Pesticides, Gross Pollutants, and Vector Production*
- For sampling requirements for non-visible pollutants associated with construction site activity please refer to **Section 7.7.1**.

**Table H.a POLLUTANTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

General Work Activity/ Products With Potential Stormwater Pollutants	Specific Work Activity/Products With Potential Stormwater Pollutants	Pollutant Categories
Adhesives	<ul style="list-style-type: none"> <li>• Adhesives, glues, resins, epoxy synthetics, PVC cement</li> <li>• Caulks, sealers, putty, sealing agents and</li> <li>• Coal tars (naphtha, pitch)</li> </ul>	Oil and Grease, Synthetic Organics <sup>1</sup>
Asphalt paving/curbs	<ul style="list-style-type: none"> <li>• Hot and cold mix asphalt</li> </ul>	Oil and Grease
Cleaners	<ul style="list-style-type: none"> <li>• Polishes (metal, ceramic, tile)</li> <li>• Etching agents</li> <li>• Cleaners, ammonia, lye, caustic sodas, bleaching agents and chromate salts</li> </ul>	Metals, Synthetic Organics
Concrete / Masonry	<ul style="list-style-type: none"> <li>• Cement and brick dust</li> <li>• Colored chalks</li> <li>• Concrete curing compounds</li> <li>• Glazing compounds</li> <li>• Surfaces cleaners</li> <li>• Saw cut slurries</li> <li>• Tile cutting</li> </ul>	Metals, Synthetic Organics
Drywall	<ul style="list-style-type: none"> <li>• Saw-cutting drywall</li> </ul>	Metals
Framing/Carpentry	<ul style="list-style-type: none"> <li>• Sawdust, particle board dust, and treated woods</li> <li>• Saw cut slurries</li> </ul>	Metals, Synthetic Organics
Heating, Ventilation, Air Conditioning	<ul style="list-style-type: none"> <li>• Demolition or construction of air condition and heating systems</li> </ul>	Metals, Synthetic Organics
Insulation	<ul style="list-style-type: none"> <li>• Demolition or construction involving insulation, venting systems</li> </ul>	Metals, Synthetic Organics
Liquid waste	<ul style="list-style-type: none"> <li>• Wash waters</li> <li>• Irrigation line testing/flushing</li> </ul>	Metals, Synthetic Organics
Painting	<ul style="list-style-type: none"> <li>• Paint thinners, acetone, methyl ethyl ketone, stripper paints, lacquers, varnish, enamels, turpentine, gum spirit, solvents, dyes, stripping pigments and sanding</li> </ul>	Metals, Synthetic Organics

**Table H.a POLLUTANTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

General Work Activity/ Products With Potential Stormwater Pollutants	Specific Work Activity/Products With Potential Stormwater Pollutants	Pollutant Categories
Planting / Vegetation Management	<ul style="list-style-type: none"> <li>• Vegetation control (pesticides/herbicides)</li> <li>• Planting</li> <li>• Plant maintenance</li> <li>• Vegetation removal</li> </ul>	Nutrients, Metals, Synthetic Organics
Plumbing	<ul style="list-style-type: none"> <li>• Solder (lead, tin), flux (zinc chloride), pipe fitting</li> <li>• Galvanized metal in nails, fences, and electric wiring</li> </ul>	Metals, Synthetic Organics
Pools/fountains	<ul style="list-style-type: none"> <li>• Chlorinated water</li> </ul>	Synthetic Organics
Removal of existing structures	<ul style="list-style-type: none"> <li>• Demolition of asphalt, concrete, masonry, framing, roofing, metal structures.</li> </ul>	Metals, Oil and Grease, Synthetic Organics
Roofing	<ul style="list-style-type: none"> <li>• Flashing</li> <li>• Saw cut slurries (tile cutting)</li> <li>• Shingle scrap and debris</li> </ul>	Metals, Oil and Grease, Synthetic Organics
Sanitary waste	<ul style="list-style-type: none"> <li>• Portable toilets</li> <li>• Disturbance of existing sewer lines.</li> </ul>	Nutrients
Soil preparation/amendments	<ul style="list-style-type: none"> <li>• Use of soil additives/amendments</li> </ul>	Nutrients
Solid waste	<ul style="list-style-type: none"> <li>• Litter, trash and debris</li> <li>• Vegetation</li> </ul>	Gross Pollutants
Utility line testing and flushing	<ul style="list-style-type: none"> <li>• Hydrostatic test water</li> <li>• Pipe flushing</li> </ul>	Synthetic Organics
Vehicle and equipment use	<ul style="list-style-type: none"> <li>• Equipment operation</li> <li>• Equipment maintenance</li> <li>• Equipment washing</li> <li>• Equipment fueling</li> </ul>	Oil and Grease
<sup>1</sup> Synthetic Organics are defined in Table 1.2 of the CASQA <i>Stormwater BMP Handbook Portal: Construction</i> as adhesives, cleaners, sealants, solvents, etc. These are generally categorized as VOCs or SVOCs.		

**Table H.1 Construction Activities and Associated Pollutants**

Phase	Activity	Associated Materials or Pollutants	Pollutant Category <sup>(1)</sup>
Grading and Land Development			
Streets and Utilities Phase			
Vertical Construction Phase			
Landscaping and Site Stabilization Phase			

<sup>(1)</sup> Categories per CASQA BMP Handbook (i.e., Sediment, Nutrients, Bacteria and Viruses, Oil and Grease, Metals, Synthetic Organics, Pesticides, Gross Pollutants, and Vector Production)

***Appendix I: CASQA Stormwater BMP Handbook Portal:  
Construction Fact Sheets***

---

General Permit BMP Requirements	SWPPP Section	CGP Pg #	Associated CASQA BMPs	Selected BMPs (or N/A)
<b>BMP Requirements for Erosion and Sediment Control (Attachment C or D parts D and E)</b>				
Implement effective wind erosion control.	3.2.1	Pg 5 of Att. C or D	WE-1	
Provide effective soil cover for inactive areas and finished slopes, open space, utility backfill, and completed lots.	3.2.1	Pg 5 of Att. C or D	EC-5, EC-16	
Limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the QSD shall consider the use of plastic materials resistant to solar degradation.		Pg 5 of Att. C or D	WM-3	
Establish and maintain effective perimeter controls and stabilize construction entrances and exits to sufficiently control erosion and sediment discharges from the site.	3.2.2	Pg 5 of Att. C or D	SE-1 ,SE-5 SE-7, TC-1 TC-2, TC-3 WM-3	
On sites where sediment basins are to be used, at a minimum, design sediment basins according to the method provided in <i>Stormwater BMP Handbook Portal: Construction</i> .	3.2.2	Pg 5 of Att. C or D	SE-02	
Implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active construction.	3.2.2	Pg 5 of Att. C or D	EC-1, EC-2 EC-5, EC-9 EC-10, EC-16 SE-1, SE-4 SE-5,	
Apply linear sediment controls along the toe of the slope; face of the slope; and at the grade breaks of exposed slopes to comply with sheet flow lengths in accordance with General Permit.	3.2.2 RL 2 only	Pg 5 of Att. C or D	SE-1 ,SE-5 SE-7	
Ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent offsite tracking of sediment.	3.2.2 RL 2 only	Pg 6 of Att. C or D	TC-1 , TC-2 TC-3, SE-7	

<b>General Permit BMP Requirements</b>	<b>SWPPP Section</b>	<b>CGP Pg #</b>	<b>Associated CASQA BMPs</b>	<b>Selected BMPs (or N/A)</b>
Ensure that storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire wash-off locations) are maintained and protected from activities that reduce their effectiveness.	3.2.2 RL 2 only	Pg 6 of Att. C or D	All BMPs	
Inspect on a daily basis immediate access roads. At a minimum daily (when necessary) and prior to a rain event. The LRP shall remove sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).	3.2.2 RL 2 only	Pg 6 Att. D	TC-1, TC-2 TC-3 ,SE-7	
The Regional Water Quality Control Board may require implementation of additional site-specific sediment control requirements if the implementation of the other requirements in this section is not adequately protecting the receiving waters.	3.2.2	Pg 5 Att. C Pg 6 Att. D	N/A	
<b>BMP Requirements for Run-on and Runoff Controls (Attachment C, D, parts F)</b>				
Effectively manage run-on, runoff within the site and runoff that discharge off the site.	3.2.3	Pg 5 Att. C Pg 6 Att. D		
Run-on from off-site shall be directed away from disturbed areas or shall collectively be in compliance with the effluent limitation in the CGP.	3.2.3	Pg 5 Att. C Pg 6 Att. D		
<b>BMP Requirements for Construction and Landscape Material (Attachment C and D part B.1 and B4)</b>				
Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced.	3.3.2	Pg 1, Att. C, D		
Cover and berm loose stockpiled construction (or landscape_ materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).	3.3.2	Pg 1, Att. C, D	WM-3	
Store chemicals in watertight containers (with appropriate secondary containment to prevent spillage or leakage) or in a storage shed (completely enclosed).	3.3.2	Pg 2, Att. C, D	WM-1, WM-2 WM-4, WM-6	
Minimize exposure of construction materials to precipitation.	3.3.2	Pg 2, Att.	WM-1, WM-2	

General Permit BMP Requirements	SWPPP Section	CGP Pg #	Associated CASQA BMPs	Selected BMPs (or N/A)
		C, D	WM-4, WM-5 WM-6, WM-7 WM-10	
Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.	3.3.2	Pg 2, Att. C, D	TC-1 TC-2 TC-3	
<b>BMP Requirements for Waste Management (Attachment C and D part B.2)</b>				
Prevent disposal of rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.	3.3.2	Pg 2, Att. C, D & E	NS-1, NS-3 NS-8, NS-12 NS-13	
Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the stormwater drainage system or receiving water.	3.3.2	Pg 2, Att. C, D & E	WM-9	
Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.	3.3.2	Pg 2, Att. C, D & E	WM-9	
Cover waste disposal containers at the end of every business day and during a rain event.	3.3.2	Pg 2, Att. C, D & E	WM-1, M-2 WM-4, M-5 WM-6, WM-7 WM-10	
Prevent discharges from waste disposal containers to the stormwater drainage system or receiving water.	3.3.2	Pg 2, Att. C, D & E	WM-1, WM-2 WM-4, WM-5 WM-6, WM-7 WM-9, WM-10	
Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.	3.3.2	Pg 2, Att. C, D & E	WM-3	
Implement procedures that effectively address hazardous and non-hazardous spills.	3.3.2	Pg 2, Att. C, D & E	WM-4	



<b>General Permit BMP Requirements</b>	<b>SWPPP Section</b>	<b>CGP Pg #</b>	<b>Associated CASQA BMPs</b>	<b>Selected BMPs (or N/A)</b>
Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that: Equipment and materials for cleanup of spills shall be available onsite and that spills and leaks shall be cleaned up immediately and disposed of properly; and appropriate spill response personnel are assigned and trained.	3.3.3	Pg 2, Att. C, D & E	WM-4	
Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.		Pg 3, Att. C, D & E	WM-8	
<b>BMP Requirements for Vehicle Storage and Maintenance (Attachment C and D part B.3)</b>				
Prevent oil, grease, or fuel from leaking into the ground, storm drains or surface waters.	3.3.2	Pg 3, Att. C, D & E	NS-9 NS-10	
Place equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.	3.3.2	Pg 2, Att. C, D & E	WM-2, WM-4 NS-9, NS-10	
Clean leaks immediately and disposing of leaked materials properly.	3.3.2	Pg 2, Att. C, D & E	WM-4	
<b>BMP Requirements for Air Deposition (Attachment C, D, &amp; E parts B.6)</b>				
Control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.	3.2.1	Pg 4 of Att. C or D	WE-1	RL2
<b>BMP Requirements to Control Non-Stormwater Discharges (Attachment C, D and E part C)</b>				
Implement measures to control non-stormwater discharges during construction.	3.3.1	Pg 4, Att. C, D & E	NS-3, NS-8 NS-9, NS-10 NS-12, NS-13 TC-1, TC-2 TC-3	
Wash vehicles in such a manner as to prevent non-stormwater discharges to surface waters or MS4 drainage systems.	3.3.1	Pg 4, Att. C, D & E	NS-8	

General Permit BMP Requirements	SWPPP Section	CGP Pg #	Associated CASQA BMPs	Selected BMPs (or N/A)
Clean streets in such a manner as to prevent non-stormwater discharges from reaching surface water or MS4 drainage systems.	3.3.1	Pg 4, Att. C, D & E	TC-1, TC-2 TC-3, SE-7	

## INSTRUCTIONS

- *Include Fact Sheets for BMPs identified in Section 3 of this SWPPP*

## ***Appendix J: Inspection and Monitoring Forms***

---

## INSTRUCTIONS

- *Identify Risk Level, for Risk Level 2 include highlighted text*

## BMP INSPECTION REPORT

Date and Time of Inspection:		Date Report Written:		
Inspection Type: (Circle one)	Weekly <i>Complete Parts I, II, III and VII</i>	Pre-Storm <i>Complete Parts I, II, III, IV and VII</i>	During Rain Event <i>Complete Parts I, II, III, V, and VII</i>	Post-Storm <i>Complete Parts I, II, III, VI and VII</i>
<b>Part I. General Information</b>				
<b>Site Information</b>				
Construction Site Name:				
Construction stage and completed activities:			Approximate area of site that is exposed:	
Photos Taken: (Circle one)	Yes	No	Photo Reference IDs:	
<b>Weather</b>				
Estimate storm beginning: (date and time)		Estimate storm duration: (hours)		
Estimate time since last storm: (days or hours)		Rain gauge reading and location: (in)		
Is a "Qualifying Event" predicted or did one occur (i.e., 0.5" rain with 48-hrs or greater between events)? (Y/N) If yes, summarize forecast:				
Exemption Documentation (explanation required if inspection could not be conducted). Visual inspections are not required outside of business hours or during dangerous weather conditions such as flooding or electrical storms.				
<b>Inspector Information</b>				
Inspector Name:			Inspector Title:	
Signature:			Date:	

**Part II. BMP Observations. Describe deficiencies in Part III.**

Minimum BMPs for Risk Level ____ Sites	Failures or other short comings (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
<b>Good Housekeeping for Construction Materials</b>			
Inventory of products (excluding materials designed to be outdoors)			
Stockpiled construction materials not actively in use are covered and bermed			
All chemicals are stored in watertight containers with appropriate secondary containment, or in a completely enclosed storage shed			
Construction materials are minimally exposed to precipitation			
BMPs preventing the offsite tracking of materials are implemented and properly effective			
<b>Good Housekeeping for Waste Management</b>			
Wash/rinse water and materials are prevented from being disposed into the storm drain system			
Portable toilets are contained to prevent discharges of waste			
Sanitation facilities are clean and with no apparent for leaks and spills			
Equipment is in place to cover waste disposal containers at the end of business day and during rain events			
Discharges from waste disposal containers are prevented from discharging to the storm drain system / receiving water			
Stockpiled waste material is securely protected from wind and rain if not actively in use			
Procedures are in place for addressing hazardous and non-hazardous spills			
Appropriate spill response personnel are assigned and trained			
Equipment and materials for cleanup of spills is available onsite			
Washout areas (e.g., concrete) are contained appropriately to prevent discharge or infiltration into the underlying soil			
<b>Good Housekeeping for Vehicle Storage and Maintenance</b>			
Measures are in place to prevent oil, grease, or fuel from leaking into the ground, storm drains, or surface waters			
All equipment or vehicles are fueled, maintained, and stored in a designated area with appropriate BMPs			
Vehicle and equipment leaks are cleaned immediately and disposed of properly			

**Part II. BMP Observations Continued. Describe deficiencies in Part III.**

Minimum BMPs for Risk Level ____ Sites	Failures or other short comings (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
<b>Good Housekeeping for Landscape Materials</b>			
Stockpiled landscape materials such as mulches and topsoil are contained and covered when not actively in use			
Erodible landscape material has not been applied 2 days before a forecasted rain event or during an event			
Erodible landscape materials are applied at quantities and rates in accordance with manufacturer recommendations			
Bagged erodible landscape materials are stored on pallets and covered			
<b>Good Housekeeping for Air Deposition of Site Materials</b>			
Good housekeeping measures are implemented onsite to control the air deposition of site materials and from site operations			
<b>Non-Stormwater Management</b>			
Non-Stormwater discharges are properly controlled			
Vehicles are washed in a manner to prevent non-stormwater discharges to surface waters or drainage systems			
Streets are cleaned in a manner to prevent unauthorized non-stormwater discharges to surface waters or drainage systems.			
<b>Erosion Controls</b>			
Wind erosion controls are effectively implemented			
Effective soil cover is provided for disturbed areas inactive (i.e., not scheduled to be disturbed for 14 days) as well as finished slopes, open space, utility backfill, and completed lots			
The use of plastic materials is limited in cases when a more sustainable, environmentally friendly alternative exists.			
<b>Sediment Controls</b>			
Perimeter controls are established and effective at controlling erosion and sediment discharges from the site			
Entrances and exits are stabilized to control erosion and sediment discharges from the site			
Sediment basins are properly maintained			
Linear sediment control along toe of slope, face of slope and at grade breaks (Risk Level 2 Only)			
Limit construction activity to and from site to entrances and exits that employ effective controls to prevent offsite tracking (Risk Level 2 Only)			
Ensure all storm, drain inlets and perimeter controls, runoff control BMPs and pollutants controls at entrances and exits are maintained and protected from activities that reduce their effectiveness (Risk Level 2 Only)			
Inspect all immediate access roads daily (Risk Level 2 Only)			
<b>Run-On and Run-Off Controls</b>			



Run-on to the site is effectively managed and directed away from all disturbed areas.			
<b>Other</b>			
Are the project SWPPP and BMP plan up to date, available on-site and being properly implemented?			

<b>Part III. Descriptions of BMP Deficiencies</b>		
Deficiency	Repairs Implemented: Note - Repairs must begin within 72 hours of identification and, complete repairs as soon as possible.	
	Start Date	Action
1.		
2.		
3.		

<b>Part IV. Additional Pre-Storm Observations. Note the presence or absence of floating and suspended materials, sheen, discoloration, turbidity, odors, and source(s) of pollutants(s).</b>	
	Yes, No, N/A
Do stormwater storage and containment areas have adequate freeboard? If no, complete Part III.	
Are drainage areas free of spills, leaks, or uncontrolled pollutant sources? If no, complete Part VII and describe below.	
Notes:	
Are stormwater storage and containment areas free of leaks? If no, complete Parts III and/or VII and describe below.	
Notes:	

**Part V. Additional During Storm Observations.** If BMPs cannot be inspected during inclement weather, list the results of visual inspections at all relevant outfalls, discharge points, and downstream locations. Note odors or visible sheen on the surface of discharges. Complete Part VII (Corrective Actions) as needed.

Outfall, Discharge Point, or Other Downstream Location

Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description

**Part VI. Additional Post-Storm Observations.** Visually observe (inspect) stormwater discharges at all discharge locations within two business days (48 hours) after each qualifying rain event, and observe (inspect) the discharge of stored or contained stormwater that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Complete Part VII (Corrective Actions) as needed.

Discharge Location, Storage or Containment Area	Visual Observation

**Part VII. Additional Corrective Actions Required.** Identify additional corrective actions not included with BMP Deficiencies (Part III) above. Note if SWPPP change is required.

Required Actions	Implementation Date

**Risk Level 2**

Effluent Sampling Report			
Construction Site Name:		Date:	Time Start:
Sampler:			
Sampling Event Type:	<input type="checkbox"/> Stormwater	<input type="checkbox"/> Non-stormwater	<input type="checkbox"/> Non-visible pollutant
Field Meter Calibration			
pH Meter ID No./Desc.: Calibration Date/Time:		Turbidity Meter ID No./Desc.: Calibration Date/Time:	
Field pH and Turbidity Measurements			
Discharge Location Description	pH	Turbidity	Time
Grab Samples Collected			
Discharge Location Description	Sample Type		Time
Additional Sampling Notes:			
Time End:			

NAL Exceedance Evaluation Summary Report		Page __ of __
Project Name		
Project WDID		
Project Location		
Date of Exceedance		
Type of Exceedance	NAL Daily Average <input type="checkbox"/> pH <input type="checkbox"/> Turbidity <input type="checkbox"/> Other (specify) _____	
Measurement or Analytical Method	<input type="checkbox"/> Field meter (Sensitivity: _____) <input type="checkbox"/> Lab method (specify) _____ (Reporting Limit: _____) (MDL: _____)	
Calculated Daily Average	<input type="checkbox"/> pH _ pH units <input type="checkbox"/> Turbidity __ NTU	
Rain Gauge Measurement	_____ inches	
Visual Observations on Day of Exceedance		
Description of BMPs in Place at Time of Event		
Initial Assessment of Cause		

**Corrective Actions Taken  
(deployed after exceedance)**

**Additional Corrective  
Actions Proposed**

**Report Completed By**

\_\_\_\_\_  
(Print Name, Title)

**Signature**

\_\_\_\_\_

## Quarterly Visual Observations of Non-Stormwater Discharges (NSWD)

☐ January – March

☐ April – June

☐ July-September

☐ October- December

Project Name \_\_\_\_\_ Drainage Area (as identified on SWPPP Map) \_\_\_\_\_

All projects must

- conduct one visual observation (inspection) quarterly
- visually inspect each drainage area for the presence of (or indication of prior) unauthorized and authorized non-stormwater discharges and their sources.
- maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-stormwater discharge was observed, and the response taken

DATE/TIME OF OBSERVATION  OBSERVER NAME AND TITLE	TYPE OF DISCHARGE <sup>1</sup>	SOURCE/ LOCATION  <u>Example</u> Condensate from Air Conditioning units at Building C (Unauthorized)	DESCRIBE POLLUTANT CHARACTERISTICS  (Odors, Floating or Suspended Material, Sheen, Discoloration, Turbidity)	ACTIONS  To eliminate unauthorized NSWD and to reduce/ prevent pollutants from contacting NSWD	DESCRIBE ANY NEW OR REVISED BMPS AND THEIR IMPLEMENTATION DATE
Date: Time: Name: Title:	<input type="checkbox"/> Authorized  <input type="checkbox"/> Unauthorized				
Date: Time: Name: Title:	<input type="checkbox"/> Authorized  <input type="checkbox"/> Unauthorized				
Date: Time: Name: Title:	<input type="checkbox"/> Authorized  <input type="checkbox"/> Unauthorized				
Date: Time: Name: Title:	<input type="checkbox"/> Authorized  <input type="checkbox"/> Unauthorized				
Date: Time: Name: Title:	<input type="checkbox"/> Authorized  <input type="checkbox"/> Unauthorized				
Date: Time: Name: Title:	<input type="checkbox"/> Authorized  <input type="checkbox"/> Unauthorized				

## ***Appendix K: Weather Reports & Rain Event Action Plan***

---



## INSTRUCTIONS

- *Place Printed NOAA Weather forecasts in this Attachment*

## Rain Gauge Log Sheet

Construction Site Name:

WDID #:

[illegible]

## INSTRUCTIONS

- *QSD should modify the CASQA REAP template for use by the QSP*
- *The QSP will modify the project specific template for each phase/rain event*
- *File REAPs completed by the QSP in this Appendix*

## ***Appendix L: Training Reporting Form***

---

# Trained Contractor Personnel Log

## Stormwater Management Training Log and Documentation

Project Name: \_\_\_\_\_

WDID #: \_\_\_\_\_

Stormwater Management Topic: (check as appropriate)

- |  |   |
|--|---|
| <input type="checkbox"/> Erosion Control           | <input type="checkbox"/> Sediment Control                                 |
| <input type="checkbox"/> Wind Erosion Control      | <input type="checkbox"/> Tracking Control                                 |
| <input type="checkbox"/> Non-Stormwater Management | <input type="checkbox"/> Waste Management and Materials Pollution Control |
| <input type="checkbox"/> Stormwater Sampling       |   |

Specific Training Objective: \_\_\_\_\_

Location: \_\_\_\_\_

Date: \_\_\_\_\_

Instructor: \_\_\_\_\_

Telephone: \_\_\_\_\_

Course Length (hours): \_\_\_\_\_

### Attendee Roster (Attach additional forms if necessary)

Name	Company	Phone

As needed, add proof of external training (e.g., course completion certificates, credentials for QSP, QSD).

## ***Appendix M: Responsible Parties***

---

*Include copy of QSD Certificate*

Authorization of Approved Signatories

Project Name: \_

WDID #: \_\_\_\_\_

Name of Personnel	Project Role	Company	Signature	Date

\_\_\_\_\_  
LRP's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
LRP Name and Title

\_\_\_\_\_  
Telephone Number



Identification of QSP

Project Name: \_

WDID #: \_\_\_\_\_

The following are QSPs associated with this project

Name of Personnel <sup>(1)</sup>	Company	Date

(1) If additional QSPs are required on the job site add additional lines and include information here

OPTIONAL

Authorization of Data Submitters

Project Name: \_

WDID #: \_\_\_\_\_

Name of Personnel	Project Role	Company	Signature	Date

\_\_\_\_\_  
Approved Signatory's Signature Date

\_\_\_\_\_  
Approved Signatory      Telephone Number  
Name and Title

## ***Appendix N: Contractors and Subcontractors***

---

## ***Appendix O: Construction General Permit***

---

## INSTRUCTIONS

- Include a copy of the General Permit, or reference permanent location of General Permit that is kept on the construction site.

## ***CSMP Attachment 1: Chain of Custody Form***

---

**CHAIN-OF-CUSTODY****DATE:****Lab ID:**

<b>DESTINATION LAB:</b>  <b>ATTN:</b>  <b>ADDRESS:</b>  <b>Office Phone:</b> <b>Cell Phone:</b>							<b>REQUESTED ANALYSIS</b>				<b>Notes:</b>		
<b>SAMPLED BY:</b>													
<b>Contact:</b>													
<b>Project Name</b>													
<b>Client Sample ID</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Matrix</b>	<b>Container</b>									
				<b>#</b>	<b>Type</b>	<b>Pres.</b>							
<b>SENDER COMMENTS:</b>							<b>RELINQUISHED BY</b>						
							<b>Signature:</b> <b>Print:</b> <b>Company:</b> <b>Date:</b>						
<b>LABORATORY COMMENTS:</b>							<b>RECEIVED BY</b>						
							<b>Signature:</b> <b>Print:</b> <b>Company:</b> <b>Date:</b>						

## ***CSMP Attachment 2:      Field Meter Instructions***

---



## INSTRUCTIONS

Place instructions for field meters that will be used by contractor personnel in this Attachment.

## ***CSMP Attachment 3: Supplemental Information***

---