

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

For

MANZANITA RANCH ESTATES, LLC

RISK LEVEL 2

Prepared for/ Legally Responsible Person:

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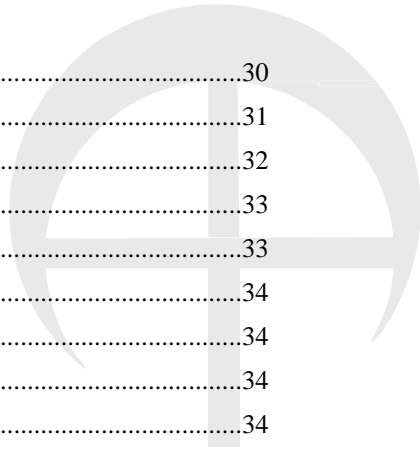
WDID NO. APPLIED FOR:

Estimated Construction Start Date
February 2020

End Date
October 2020

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SWPPP Attachments

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| Attachment B..... | Water Pollution Control Drawings |
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| Attachment D..... | Notice of Construction (NOC)/Notice of Intent (NOI) |
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Section 1: SWPPP Requirements

1.1 Certifications and Approval

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

Jason Vine, P.E.
Name, Title

10/14/2019
Date of Preparation

PREPARER'S SIGNATURE

LRP SIGNATURE

1.2 Amendments

This SWPPP shall be amended as follows:

Whenever 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); or

If any condition of the Permits is violated or the general objective of reducing or eliminating pollutants in stormwater discharges has not been achieved. If the RWQCB determines that a Permit violation has occurred, the SWPPP shall be amended and implemented within 14 calendar days after notification by the RWQCB;

Annually, prior to the defined rainy season, when required by the project's Special Provisions; and \When deemed necessary by the Engineer.

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.

| Amendment No. | Date | Brief Description Of Amendment | Prepared By |
|---------------|------|-----------------------------------|-------------|
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1.3 SWPPP Availability and Implementation

SWPPP Purpose:

This SWPPP was prepared to comply with the *California State Water Resources Control Boards National Pollution Discharge Elimination System (NPDES), General Permit for Storm Water Discharges Associated with Construction Activities (General Permit)*.

This SWPPP shall be reviewed and discussed at the pre-construction meeting for this project, and regularly as needed to ensure stable site conditions can be maintained. A copy of this SWPPP and regular training shall be made available to employees, contractors or sub-contractors associated with the development and construction of this project. A record shall be kept of meeting attendance, discussion topics, and training provided or scheduled.

The intent of the regulations, and ultimately the SWPPP, is to protect water quality by reducing construction-related pollution that commonly occurs during storm events. The SWPPP is to be used by the project's property Utility Operations Officer, developer, contractor, and subcontractors to achieve the intent of the regulation.

The Best Management Practices (BMPs) advanced within this SWPPP are the fundamental means to achieving the intent of the regulation. BMPs must be installed and maintained before every storm event, as well as reassessed and corrected, as needed, after every event. Hence, the SWPPP is not a static document. Diligence is essential in maintaining an effective SWPPP and will require modification as new and unforeseen problems occur.

Even though this document provides instructions to meet compliance, all reasonable parties are strongly advised to read the General Permit for the project to fully understand the requirements they have agreed to. Additionally, a SWPPP is not all-inclusive in complying with the full scope of federal, state, regional, and local laws, regulations, and ordinances. The burden of comprehensive compliance rests fully with the project's designated responsible parties. Realm does not assume any responsibility for non-compliance with the General Permit as a result of the information provided in this SWPPP.

Further, this SWPPP is not designed or intended to address project site structural or subsurface soil conditions. Realm Inc. assumes no responsibility for the instability or movement of any soils, slopes, or hillsides with regard to project site structural or subsurface soil conditions.

1.4 Introduction and Annual Compliance Certification

Unique Proposed Project Features:

The proposed action involves the leveling of a site on each parcel for future activities and subsequent implementation of BMPs to ensure that the graded surfaces are protected against erosion.

The plan will disturb approximately 5.86 acres of an approximately 12.80-acre property. The Site does not yet have an address as it is not yet developed, but is located on Ashby Road in Shasta Lake City, California, and further designated by Shasta County Assessors Parcel Numbers (APN) 006-020-056 & 057.

Entrance location off of Ashby Road: Latitude 40°40'22.06" North, Longitude 122°22'50.08" West

The project construction shall commence in February 2020 and extend through October 2020.

A site map showing existing topography, location of structural controls for BMPs is included in Attachment B of the SWPPP.

This SWPPP 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 in 2010 and 2012 (NPDES No. CA S000002) issued by the State Water Resources Control Board (SWRCB). This SWPPP has been prepared following the SWPPP Template provided on the California Stormwater Quality Association Stormwater Best Management Practice Handbook Portal: Construction (CASQA, 2012). In accordance with the General Permit, Section XIV, this SWPPP is designed to address the following:

- 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 (Regional Water Board) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- Site 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.

ANNUAL COMPLIANCE CERTIFICATION:

By September 1st of each year, the contractor shall submit an Annual Certification of Compliance to SWRCB stating compliance with the terms and conditions of the Permits and SWPPP. The Annual Certification of Compliance Form and Engineer of Record Approval form are included in this SWPPP.

1.5 Retention of Records

A copy of the SWPPP will be kept on the construction site at all times and at the QSD's office (REALM Engineering). All records of stormwater monitoring information and copies of reports must be retained for a period of at least three years from date of submittal or longer if required by the Regional Water Board.

1.6 Contact Information/List of Responsible Parties

The Water Pollution Control Manager (WPCM) assigned to this project is:

REALM Engineering
Jason Vine, P.E.
1767 Market St., Suite C
Redding, CA 96001

The WPCM shall have primary responsibility and significant authority for the implementation, maintenance, inspection and amendments to the approved SWPPP. The WPCM will be available at all times throughout the duration of the project. Duties of the Contractor's WPCM include but are not limited to:

- 1) Ensuring full compliance with the SWPPP and the Permit;
- 2) Implementing all elements of the SWPPP;
- 3) Implementing prompt and effective erosion and sediment control measures;
- 4) Implementing all non-stormwater management, and materials and waste management activities such as: monitoring discharges (dewatering, diversion devices);
- 5) General site clean-up;
- 6) Vehicle and equipment cleaning, fueling and maintenance;
- 7) Spill control – WPCM shall ensure that no materials other than stormwater are discharged in quantities, which will have an adverse effect on receiving waters, etc.;
- 8) Conducting pre-storm, post-storm, and storm event inspections;
- 9) Conducting routine inspections as specified in the Special Provisions or described in the SWPPP;
- 10) Preparing annual compliance certification;
- 11) Ensuring elimination of all unauthorized discharges;

- 12) Mobilizing crews in order to make immediate repairs to the control measures (the Contractor's WPCM shall be assigned authority by the Contractor to mobilize crews) and;
- 13) Coordinating with the Resident Engineer to assure all of the necessary corrections/repairs are made immediately, and that the project complies with the SWPPP, the Permit and approved plans at all times.

1.7 Construction Site Estimates

| | | |
|--|-------|-------|
| Construction Site Area | | Acres |
| Percent Impervious Before Construction | 0 | % |
| Runoff Coefficient Before Construction | 0.28 | |
| Percent Impervious After Construction | 31.97 | % |
| Runoff Coefficient After Construction | 0.35 | |

1.8 References, Other Plans, Permits, and Agreements

The following documents are made a part of this SWPPP by reference:

- 1) SWRCB Order No. 52-2011-0090, NPDES No. CA.0082066 ("Permit"), NPDES Permit, Statewide Storm Water Permit and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation, July 1999.
- 2) Modification of SWRCB Order 99-08-DWQ, NPDES General Permit No. CAS000002 ("General Permit"), WDRs for Discharges of Storm Water Runoff Associated with Construction Activity to include Small Construction Activity (One to Five Acres).
- 3) SWRCB Resolution No. 2001-046, "Modification of Water Quality Order 99-08-DWQ SWRCB NPDES General Permit For Storm Water Discharges Associated With Construction Activity (CGP)" to amend the monitoring provisions of the General Permit for sampling and analysis requirements.
- 4) SWRCB Order No. 99-08-DWQ, NPDES General Permit No. CAS000002 ("General Permit"), WDRs for Discharges of Storm Water Runoff Associated with Construction Activity, August 1999.

PERMIT REGISTRATION DOCUMENTS:

This SWPPP conforms with the required elements of the Permit and with the required elements of the Construction General Permit issued by the State of California, SWRCB. This SWPPP will be modified and amended to reflect any amendments to the Permits, or any changes in construction or operations that may affect the discharge of pollutants from the construction site to surface water, groundwater, or the municipal separate storm sewer.

The discharger shall make the SWPPP available at the construction site during 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 crew member 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 (CGP Section XIV.C). The SWPPP shall be implemented concurrently with the start of ground disturbing activities.

1.9 Notice of Termination

A Notice of Termination (NOT) must be electronically submitted by the AS 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 Regional Water Board will consider a construction site complete when the conditions of the General Permit, Section II.D have been met.

1.10 Objectives

This SWPPP has six main objectives:

- 1) Identify all pollutant sources, including sources of sediment associated with construction, construction site erosion and all other activities that affect the quality of stormwater discharges;
- 2) Identify non-stormwater discharges that must be eliminated, controlled, or treated;
- 3) Identify, construct, implement in accordance with a time schedule, and maintain BMPs to reduce or eliminate sediment or other pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction;
- 4) Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs);
- 5) Identify a sampling and analysis strategy and sampling schedule for discharges from construction activity which discharge directly into water bodies listed on Attachment 3 of the Construction General Permit (Clean Water Act Section 303(d) [303(d)] Water Bodies listed for Sedimentation); and
- 6) For all construction activity, identify a sampling and analysis strategy and sampling schedule for discharges that have been discovered through visual monitoring to be potentially contaminated by pollutants not visually detectable in the runoff.

Section 2: Project Information

2.1 Project Site and Description

2.1.1 Site Description

The project site (site) is located on the northern portion of Ashby Road, in Shasta Lake City, California whose address is not yet determined due to it being undeveloped. It is located approximately .64 miles north from the corner of Ashby Road and Walker Mine Road. The approximate location of the site is Latitude 40°40'18.80" North, Longitude 122°22'52.16" West. The property's location is shown on the Regional and Vicinity Maps in Attachment A.

2.1.2 Existing Conditions

The existing 12.86 project site is currently undeveloped. It is located south of an established lumber yard. There are existing entranceways to each parcel but no roads. There is partial fencing, but has been uncompleted. There is an unnamed seasonal creek that run along the southwestern parcel line.

2.1.3 Existing Drainage

Elevations at the site range from approximately 750 to 816 ft above msl, with general flat topography. Surface water at the site generally follows surface topography, flowing to the southwest. See Attachment B for the existing site topography, drainage patterns, sampling areas, required BMPs, and all of the stormwater conveyance systems.

2.1.4 Geology and Groundwater

The Shasta area is underlain by sedimentary, volcanic, and intrusive rocks that range in age from probable Middle Devonian to Late Jurassic or possibly Early Cretaceous. These rocks constitute what is referred to as the "basement rocks." In general, except for intrusive units, the oldest formations in the basement-rock sequence crop out in the western part of the area and successively younger units crop out toward the east. About 50 to 60 percent of the layered basement rocks are of volcanic origin, irregularly distributed through the stratigraphic column. Virtually all are hydrothermally metamorphosed and they now range in composition from mafic spilite to silicic quartz keratophyre. A noteworthy stratigraphic feature is the occurrence of two markedly similar lithologic sequences in different parts of the column. The Copley greenstone of probable Devonian age, and the BalaHala rhyolite and Kennett formation of Devonian age, are similar lithologically to the Dekkas andesite of Permian age, and the Bully Hill rhyolite and Pit formation of Triassic age.

Mafic and intermediate volcanic rocks make up the lower part of each of these two sequences; silicic volcanic rocks overlain by shale and tuff make up the middle and upper part; and limestone occurs in the upper part. The existence of two different sequences rather than a single repeated sequence is conclusively shown by paleontologic, lithologic, and structural data. Intruding the layered basement rocks is a small stock composed of granodiorite and albite granite, an irregular, elongate, dike-like mass of mafic quartz diorite, and many dikes and sills of fine-grained igneous rocks, chiefly of mafic character.

The thickness of the sedimentary and volcanic basement rocks could not be accurately measured owing to the lenticular nature of most of the units, to marked facies changes within short distances, to recurrent lithologic types, to complex structure, and to poor outcrop.

The outstanding feature in the geologic history of the East Shasta area is the dominant and persistent role played by volcanism in the buildup of the stratigraphic column. Volcanic rocks occur in 10 of the 12 geologic units exposed within the area, and according to Diller (1906, columnar section), they also occur in 3 of the 4 formations of Triassic and Jurassic age exposed east of the area. Only the McCloud and Hosselkus limestones, of the basement-rock sequences are lacking in volcanic constituents. Much of the volcanic material was extruded into the sea as indicated by the intimate interbedding of volcanic rocks with sedimentary rocks containing marine fossils in many parts of the column.

Shasta County is located at the headwaters of the Sacramento River Basin. This watershed, the largest in the state, is a major source of domestic and agricultural water supply for California. Most of Shasta County's available water flows from the mountainous regions carried by rivers, streams, and creeks to lower elevations. A portion of this water is stored in lakes, reservoirs, and groundwater basins. Two major surface water storage facilities in the County are Whiskeytown Reservoir and Shasta Lake with a combined capacity of 4,734,100 acre-feet. Surface water accounts for 258,550 acre-feet of all diversions for beneficial uses in the County.

The County contains two major groundwater basins, the Redding and Fall River Valley basins. Other basins include the Hot Springs Valley, Cayton Valley, Lake Britton area, Goose Valley, Burney Creek Valley, Dry Burney Creek Valley, and North Fork Valley Creek basins. Additionally, water bearing soils (volcanic and alluvial soils that contain groundwater) are located throughout the County. The combined storage capacity of the Redding and Fall River Valley basins is estimated to be approximately 6.5 million acre-feet. The project, which will use an on-site well for all potable water, is located in the Redding groundwater basin.

2.1.5 Project Description

The proposed action involves moderate grading of the site for future construction of a driveway, parking lot, multiple 5,040 sqft greenhouses, immature plant area and distribution, processing and one 20,000 sqft processing buildings. The proposed action will also include implementation of BMPs to ensure that the graded surfaces are protected against erosion.

The plan will disturb approximately 3.18 acres of an approximately 12.80-acre property. Some minor clearing/ grubbing activities are proposed. Grading will include minor cut and fill activities which will be balanced onsite. Materials will be stockpiled as shown on WPCDs in Attachment B.

2.1.6 Developed Condition

The developed condition of the site will include leveled building pads for the buildings, greenhouses, driveways, parking lots, storage tanks and the implementation of BMPs to ensure a stabilized property as shown in the WPCDs in Attachment B.

2.2 Permits and Governing Documents

In addition to the General Permit, the following documents have been taken into account while preparing this SWPPP: Regional Water Board requirements, Contract Documents, Air Quality Regulations and Permits, 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, and Section 404 Permits, and finally the CA Department of Fish and Game 1600 Streambed Alteration Agreement.

2.3 Stormwater Run-On From Offsite Areas

All of the offsite run-on to the site is currently carried through the site and off the site. This project does not alter the amount of water coming in or leaving the site.

2.4 Findings of the Construction Site Sediment and Receiving Water Risk Determination

A construction site risk assessment has been performed for the project and the resultant risk level is Risk Level 2. The risk level was determined through the use of the LS provided in SMARTS. The risk level is based on project duration, location, proximity to impaired receiving waters and soil conditions.

Risk Level 2 sites are subject to both the narrative effluent limitations and numeric effluent standards. The narrative effluent limitations require storm water discharges associated with construction activity to minimize or prevent pollutants in storm water and authorized non storm water through the use of controls, structures and best management practices.

Discharges from Risk Level 2 sites are subject to NALs for pH and turbidity shown in Table 2-4. This SWPPP has been prepared to address Risk Level 2 requirements.

Table 1: Numeric Action Levels

| Parameter | Unit | Numeric Action Level Daily Average |
|-----------|----------|---------------------------------------|
| pH | pH units | Lower NAL = 6.5 Upper NAL = 8.5 |
| Turbidity | NTU | 250 NTU |

2.5 Construction Schedule

To be determined.

2.6 Potential Construction Activity and Pollutant Sources

The following is a list of construction materials that will be used and activities that will be performed that will have the potential to contribute pollutants, other than sediment, to storm water runoff (control practices for each activity are identified in the WPCDs provided).

- 1) Vehicle fluids, including oil, grease, petroleum, batteries, refrigerants, and coolants;
- 2) Concrete rinse waters;
- 3) Cement materials associated with foundations, walkways, and curbs;
- 4) Base and sub-base material;
- 5) Raw landscaping materials and wastes (topsoil, plant materials, herbicides, fertilizers, pesticides, mulch);
- 6) BMP materials (sandbags, liquid copolymer);
- 7) Treated lumber (materials and wastes);
- 8) PCC rubble Masonry block rubble;
- 9) Glues and adhesives;
- 10) Soil Amendments
- 11) Paints and stains;
- 12) Solvents, thinners, acids;
- 13) Mortar mix and masonry products, and
- 14) Sanitary/septic waste.

The following is a list of construction activities that have the potential to contribute sediment to storm water discharges include control practices for each activity are identified in the WPCDs provided:

- 1) Clearing and grubbing operations;
- 2) Grading operations;
- 3) Construction operations;
- 4) Any soil import/export operations;
- 5) Utility excavation activities;
- 6) Soil stockpiling;
- 7) BMPs, and
- 8) Landscaping operations.

Alert construction personnel of the possibility of discovering toxic or hazardous waste on-site from the use of the above materials. If contamination is suspected, test for pollutants, and call the Regional Water Quality Control Board. To prevent and control pollution from toxic materials, dispose of waste in accordance with Federal, State and local regulations.

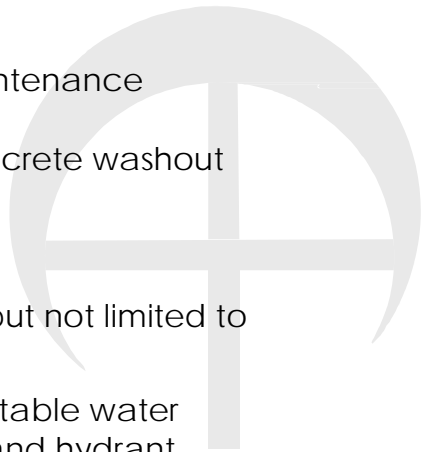
Waste likely to contain toxic or hazardous materials include those listed above. Do not apply herbicides or pesticides just before it rains. Instead, apply surface dressing in small applications to allow time for infiltration. The main concern during construction activities is controlling sediment produced by grading. The other potential sources are mainly minor items that can be mitigated with good housekeeping measures. Each of these items are discussed as to the type of potential pollution to storm water, the BMPs employed to reduce pollution of storm water and when the BMPs are to be installed.

2.7 Identification of Non-Stormwater Discharges (NSWDs)

Discharging of water is only permitted for the performance and completion of project, permitting that the discharge does not cause or contribute to a violation of any water quality standards and has no adverse effect on receiving waters; and feasible alternatives to discharge waters are not available. Non-storm waters that typically meet these conditions are as follows: irrigation runoff during construction, water sprayed for dust control and dewatering of any excavation. Polluted water may only be discharged if treated and otherwise is in accordance with an NPDES permit specifically issued for such discharges.

2.7.1 Prohibited (Illicit) Discharges:

NSWDs into storm drainage systems or waterways, which are not authorized under the General Permit or authorized under a separate NPDES permit, are prohibited. Examples of prohibited discharges common to construction activities include but are not limited to:

- 
- 1) Vehicle and equipment cleaning, fueling and maintenance operations;
 - 2) Vehicle and equipment wash water, including concrete washout water;
 - 3) Washing streets into DIs or roadside ditches;
 - 4) Slurries from drilling or boring operations;
 - 5) Chemical leaks and/or spills of any kind including but not limited to petroleum, paints, cure compounds, etc.

Examples of authorized NSWDS include dechlorinated potable water sources such as: landscape irrigation, dust control, pipe and hydrant flushing, and uncontaminated groundwater.

Table 5 indicates the BMPs that have been selected to control non-storm water pollution on the construction site. The steps outlined in the instructions for this section for identifying non-storm water pollution control BMPs to be included in the SWPPP have been followed. Locations and details of applicable non-storm water control BMPs are shown on the WPCDs in Attachment B.

2.7.2 Existing (Pre-Construction) Control Measures:

Erosion and sediment control barriers shall be placed in designated areas, per Attachment B, at the earliest possible time upon completion of clearing site of local debris.

2.8 Required Site Map Information

See "Attachment A" for Regional and Vicinity Maps.

Section 3: Best Management Practices

The Best Management Practices (BMP's) advanced within this SWPPP are the fundamental means to achieving the intent of the regulation. BMP's must be installed and maintained before every storm event, as well as reassessed and corrected, as needed, after every event.

3.1 Schedule for BMP Implementation

The BMP implementation schedule shall be created, updated and maintained by the QSP on-site based on close coordination with the contractor and construction schedule. It shall show the timeline for when BMPs will be installed so that the project is in compliance with the General Permit.

The schedule shall provide information necessary to plan for adequate materials and crews to install BMPs at the right time so that they are effective. BMPs must be implemented, modified, and maintained to reflect the phase of construction and the weather conditions. In

order to be effective, some BMPs must be installed before the site is disturbed (e.g., to provide protection during grading operations or to reduce or minimize pollution from historic areas of contamination during construction).

The BMP schedule shall show implementation by location for the deployment of the following BMPs: temporary soil stabilization, sediment control, wind erosion control, tracking control, non-stormwater, waste management and material pollution control BMPs. The Contractor shall follow the BMP implementation schedule as outlined in Table 2.

Table 2: BMP Schedule

| | BMP | Implementation | Duration |
|-------------------------|---|-----------------------|---------------------|
| ErosionControl | EC-1, Scheduling | Prior to Construction | Entirety of Project |
| | EC-2, Preservation of Existing Vegetation (as applicable) | Start of Construction | Entirety of Project |
| | | | |
| | | | |
| | | | |
| Sediment Control | Storm water Discharge barriers ie: straw wattles etc | Start of Construction | Entirety of Project |
| | | | |
| | | | |
| | | | |
| Tracking Control | Construction entrance | Start of Construction | Entirety of Project |
| | | | |
| | | | |
| WindErosion | | | |

3.2 Erosion and Sediment Control

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. Soil stabilization, also referred to as erosion control, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. 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.

Applicable BMPs are identified in this section for erosion control, sediment control, tracking control, and wind erosion control.

3.2.1 Erosion Control Practice:

Soil stabilization BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate minimum temporary soil stabilization requirements, temporary soil stabilization measures required by the contract documents, and other measures selected by the contractor. The steps outlined in the instructions for this section for identifying soil stabilization BMPs to be included in the SWPPP have been followed.

- 1) Preserve existing vegetation where required and when feasible.
- 2) Apply temporary soil stabilization (erosion control) to remaining active and non-active areas as required by the Contract Specifications and Special Provisions and the SWPPP/WPCP Preparation Manual, Tables 1-3 and 1-4, and Appendix D. Reapply as necessary to maintain effectiveness.
- 3) Implement temporary soil stabilization measures at regular intervals throughout the defined rainy season to achieve and maintain the contract's disturbed soil area requirements. When the Contract Special Provisions require it, temporary soil stabilization will be implemented 20 days prior to the defined rainy season.
- 4) In accordance with Table 1-3 of the SWPPP/WPCP Preparation Manual, stabilize non-active areas within 14 days of cessation of construction activities, or one day prior to all predicted rain events, whichever comes first.
- 5) Control erosion in concentrated flow paths by installing a channel lining to prevent scour, installing checks at intervals to reduce velocity and capture sediment particles, and stabilizing the outlet of any concentrated flow as required in the Special Provisions and/or as shown on plans.
- 6) Apply seed to areas deemed substantially complete by the Resident Engineer during the defined rainy season.
- 7) At completion of construction, apply permanent erosion control to all remaining disturbed soil areas as required in the Special Provisions and/or as shown on Attachment B.

Sufficient soil stabilization materials will be maintained onsite to allow implementation in conformance as described in this SWPPP. This includes implementation requirements for active and non-active areas that require deployment before the onset of rain.

3.2.1.1 Grading Practice:

Grade small areas at a time so there is less impact to the overall site. All disturbed areas shall be covered with soil stabilization BMP products listed in Table 3. The contractor shall conduct all operations as to prevent any unnecessary disturbance of soil or existing vegetation.

3.2.1.2 Preserve Existing vegetation:

Natural vegetation shall be protected from heavy equipment with safety fencing.

Phased grubbing and grading in only portions of the site, limits the amount of exposed soil at one time.

3.2.1.3 Vegetation Buffer Zones:

Buffer zones or vegetative buffer strips serve as erosion, runoff, and sediment control. They minimize the rain drop impact, reduce the velocity of the runoff which drops out sediment.

The Contractor shall control material pollution and manage waste and non-storm water existing at the construction site by implementing effective handling, storage, use, and disposal practices.

3.2.1.4 Protect Trees and ESAs:

Tree protection should be one of the first items on the BMP implementation schedule. Tree protection should be installed along the drip line. Sediment controls should be installed around ESAs to prevent sediment from entering sensitive areas such as wetlands or endangered species habitat.

Table 3 indicates the BMPs that shall be implemented to control erosion on the construction site. Locations and details of temporary soil stabilization BMPs are shown on the WPCDs in Attachment B.

Table 3: Temporary Soil Stabilization BMPs

| CONSTRUCTION BMP ID NO ⁽¹⁾ | Scheduling | MINIMUM REQUIRE- MENT ⁽³⁾ | CONTRACT BID ITEM | BMP USED | | IF NOT USED, STATE REASON |
|--|--|--|----------------------|----------|----|---------------------------|
| | | | | YES | NO | |
| SS-1 | Preservation of Property/ Preservation of Existing Vegetation | ✓ | | ✓ | | |
| SS-2 | Temporary Hydraulic Mulch (Bonded Fiber Matrix) | | | | ✓ | Not needed |
| SS-3 | Temporary Hydraulic Mulch (Polymer Stabilized Fiber Matrix) | | | | ✓ | Not needed |
| | Temporary Erosion Control (With Temporary Seeding) | ✓ | | ✓ | | |
| SS-4 | Temporary Soil Stabilizer | | | | ✓ | Not needed |
| SS-5 | Temporary Erosion Control (Straw Mulch with Stabilizing Emulsion) | ✓ | | ✓ | | |
| SS-6 | Temporary Erosion Control Blanket (On Slope) | | | | ✓ | Not needed |
| SS-7 | Temporary Erosion Control Blanket (In swale or ditch) | | | | ✓ | Not needed |
| | Temporary Cover (Plastic Covers) | ✓ | | ✓ | | |
| SS-7 | Temporary Mulch (Wood) | ✓ | | ✓ | | |
| SS-8 | Earth Dikes / Drainage Swales & Lined Swales | ✓ | | ✓ | | |
| SS-9 | Outlet Protection/ Velocity Dissipation Devices | ✓ | | ✓ | | |
| SS-10 | Slope Drains | | | | ✓ | Not needed |

| TEMPORARY SOIL STABILIZATION BMPs | | | | | | |
|---|--------------------------|--|--|--|---|----------------------|
| SS-12 | Streambank Stabilization | | | | ✓ | Not needed |
| ALTERNATIVE SOIL STABILIZATION BMPs USED ⁽⁴⁾ | | | | | | IFUSED, STATE REASON |
| CONSTRUCTION BMP ID NO ⁽¹⁾ | BMP NAME | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Notes:
⁽¹⁾The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing documents and are not provided to imply that the Construction Site BMP Reference Manual is a required contract document.
⁽²⁾The Contractor shall ensure implementation of one of the two measures listed or a combination thereof to achieve and maintain the contract's rainy and non-rainy season requirements.
⁽³⁾Not all minimum requirements may be applicable to every project. Applicability to specific project shall be determined by the Contractor and approved by the Engineer.
⁽⁴⁾Use of alternative BMPs will require written approval by the Engineer.

3.2.2 Sediment Controls

Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. Table 4 indicates the BMPs that shall be implemented to control sediment on the construction site.

To decrease the amount of sediment load into the Storm Water Discharge install the following:

- 1) Place gravel in the entrance of the road leading to the construction site per Attachment B.
- 2) Place straw wattles or block sediment barriers around the edge of the disturbance area per Attachment B.

This project will incorporate minimum temporary sediment control requirements, temporary sediment control measures required by the contract documents, and other measures selected by the contractor. The steps outlined in the instructions for this section for identifying sediment control BMPs to be included in the SWPPP have been followed.

During the non-rainy season, adequate sediment control materials will be available to control sediment discharges at the downgrade perimeter in the event of a predicted storm. Temporary sediment control materials, equivalent to 10% of the installed quantities on the site during the rainy

and non-rainy seasons will be maintained onsite throughout the duration of the project for implementation in event of predicted rain, rapid response to failures or emergencies, as described in the SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

Prior to the opening of a new DSA in the rainy season, additional temporary sediment control materials necessary to protect this DSA will be stored onsite. The following sediment control BMP implementation table indicates the BMPs that shall be implemented to control sediment on the construction site. Implementation and locations of temporary sediment control BMPs are shown on the WPCDs in Attachment B and described in this section. The BMP working details can also be found in Attachment B of this SWPPP.

3.2.2.1 Sediment Tracking Control

Table 4 indicates the BMPs that shall be implemented to reduce sediment tracking from the construction site onto private or public roads. The steps outlined in the instructions for this section for identifying tracking control BMPs to be included in the SWPPP have been followed. The applicable Contract Special Provisions, Contract Plans, Standard Plans, and Standard Specifications are provided or listed in Attachment B. Implementation and locations of sediment tracking BMPs are shown on the WPCDs in Attachment B and described in this section. The BMP working details can also be found in Attachment B of this SWPPP.

Table 4: Sediment Control BMP Selection Table

| CASQA Fact Sheet | BMP Name | Meets a Minimum Requirement(1) | BMP Used | | If not used, state reason |
|---|---|-----------------------------------|-------------|----|---------------------------------|
| | | | YES | NO | |
| SE-1 | Silt Fence | ✓ | ✓ | | |
| SE-2 | Sediment Basin | | | ✓ | Not needed |
| SE-3 | Sediment Trap | | | ✓ | Not needed |
| SE-4 | Check Dams | ✓ | ✓ | | |
| SE-5 | Fiber Rolls | ✓ | ✓ | | |
| SE-6 | Gravel Bag Berm | | | ✓ | Not needed |
| SE-7 | Street Sweeping | | ✓ | | |
| SE-8 | Sandbag Barrier | | | ✓ | Not needed |
| SE-9 | Straw Bale Barrier | | | ✓ | Not needed |
| SE-10 | Storm Drain Inlet Protection | ✓ | ✓ | | |
| SE-11 | ATS | | | ✓ | Not needed |
| SE-12 | Temporary Silt Dike | | | ✓ | Not needed |
| SE-13 | Compost Sock and Berm | | | ✓ | Not needed |
| SE-14 | Biofilter Bags | | | ✓ | Not needed |
| TC-1 | Stabilized Construction Entrance and Exit | ✓ | ✓ | | |
| TC-2 | Stabilized Construction Roadway | | ✓ | | Not needed |
| TC-3 | Entrance Outlet Tire Wash | | | ✓ | Not needed |
| Alternate BMPs Used: | | | | | If used, state reason |
| | | | | | |
| (1) Applicability to a specific project shall be determined by the QSD (2) The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements (3)Risk Level 2 & 3 shall provide linear sediment control along toe of slope, face of slope, and at the grade breaks of exposed slope | | | | | |

3.2.3 Wind Erosion Control:

The steps outlined in the instructions for this section for identifying wind erosion control BMPs to be included in the SWPPP have been followed. The applicable Contract Special Provisions, Contract Plans, Standard Plans, and Standard Specifications are provided or listed in Attachment B. Locations and details of wind erosion control BMPs are shown on the WPCDs in Attachment B (as applicable).

3.2.4 Construction Site Management:

Responsible for oversight of inspection, maintenance and repair of Structural Controls:

Emergency Contact People:
Jason Vine, (530) 526-7493

Construction site management consists of controlling potential sources of water pollution before they come in contact with storm water systems or watercourses, managing the disturbance area size, and performing grading operations during dry weather conditions.

All construction waste will be disposed of in designated waste collection areas and containers that shall be disposed of on a regular schedule. All miscellaneous waste on site will be cleaned up and disposed of on a weekly base.

3.2.5 Dust:

Dust is created primarily by construction equipment and vehicles during grading activities. Control dust by the use of water during the construction period and by minimizing the amount of exposed soil at one time.

A water truck will not have to be used if a pump from the ground water can be used. Water truck shall not be used to wash streets of sediment.

Unloading and loading of construction vehicles shall be done in designated areas away from drainage sites. Slow speeds and caution will be observed during unloading and loading to prevent any dust or soil erosion. All unloading and loading areas will be accessed by designated gravel entrances or driveways. Do not use dry sweeper equipment to sweep streets.

3.2.5 Activities and Associated BMPs

The following list of BMPs and narratives explain how the selected BMPs shall be incorporated into the project.

3.2.5.1 Grading Activities:

Grading has the potential for sediment entering the natural drainages. The primary concern is erosion from graded surfaces. The main areas of concern are:

1. Protecting natural drainage from sediment.

BMPs:

The following BMPs will be used during construction:

- Temporary erosion and sediment control measures per Tables 3-4.

Period of BMPs:

- Sediment control measures shall be in place from pre-construction until post construction erosion control has occurred. Erosion control measures shall be in place during construction and until post construction erosion control has occurred.
- Gravel entrance shall be removed once construction is finished.

3.2.5.2 Material Storage:

There may be stockpiles of soil, sand and gravel base on site during construction. The locations and size of stockpiles will change during construction as new stockpiles are created and existing ones are used.

BMPs:

- Any stockpiles showing signs of erosion are to be mulched or have a sediment barrier around them.
- Stockpiles are not to be located adjacent to any natural drainages.

Period of BMPs:

- On-going.

3.2.5.3 Paving Activities:

The construction area may have pavement or base rock placed during construction.

BMPs:

- Spills from equipment or excess asphalt are to be cleaned up and disposed of properly.
- Store any materials away from any natural drainage.

Period of BMPs:

- During and after paving.

3.2.5.4 Vehicle Storage, Equipment Maintenance and Fueling:

There may be a wide variety of heavy equipment on the project site during construction. This equipment may include bulldozers, loaders, scrapers, dump trucks, water trucks, graders, backhoes and rollers.

BMPs:

- Good housekeeping practices.
- Check all vehicles regularly and do not allow buildup of oil or grease.
- Vehicle refueling will be done off site.
- Use off site repair shops as much as possible.
- Remove any spills with absorbent materials instead of washing. Clean leaks immediately and properly dispose of leaked materials and cleanup materials.

Period of BMPs:

- On-going.

3.3 Non-Stormwater Controls and Waste Materials Management

3.3.1 Non-Stormwater Controls

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit, are prohibited. Non-stormwater discharges for which a separate NPDES permit is required by the local Regional Water Board are prohibited unless coverage under the separate NPDES permit has been obtained for the discharge. 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. Table 5 indicates the BMPs that shall be implemented to control non-stormwater discharges on the construction site.

Table 5: Temporary Non-Stormwater BMPs

| CASQA Fact Sheet | | BMP Name | Meets a Minimum Requirement(1) | BMP used | | If not used, state reason |
|------------------|--|-------------------------------|--------------------------------|----------|----|---------------------------|
| | | | | YES | NO | |
| NS-1 | | Water Conservation Practices | ✓ | ✓ | | |
| NS-2 | | Dewatering Operation | | | ✓ | Not needed |
| NS-3 | | Paving and Grinding Operation | | ✓ | | Not needed |
| NS-4 | | Temporary Stream Crossing | | | ✓ | Not needed |

| | | | | | | |
|----------------------|--|---|---|-----------------------|---|------------|
| NS-5 | | Clear Water Diversion | | | ✓ | Not needed |
| NS-6 | | Illicit Connection-Illegal Discharge Connection | | | ✓ | Not needed |
| NS-7 | | Potable Water Irrigation Discharge Detection | | | ✓ | Not needed |
| NS-8 | | Vehicle and Equipment Cleaning | | | ✓ | |
| NS-9 | | Vehicle and Equipment Fueling | ✓ | ✓ | | |
| NS-10 | | Vehicle and Equipment Maintenance | ✓ | ✓ | | |
| NS-11 | | Pile Driving Operation | | | ✓ | Not needed |
| NS-12 | | Concrete Curing | | ✓ | | |
| NS-13 | | Concrete Finishing | | ✓ | | |
| NS-14 | | Material and Equipment Use Over Water | | | ✓ | Not needed |
| NS-15 | | Demolition Removal Adjacent to Water | | | ✓ | Not needed |
| NS-16 | | Temporary Batch Plants | | | ✓ | Not needed |
| Alternate BMPs Used: | | | | If used, state reason | | |
| | | | | | | |
| | | | | | | |
| (1) | Applicability to a specific project shall be determined by the QSD | | | | | |

General good housekeeping measures are to be practiced to keep the site clean and prevent unwanted pollution exiting the site. The roadways will be cleaned of dirt and other materials which could enter the drainage areas. Any litter on the site will be removed.

Inspections shall be conducted by the Contractor's WPCM or other 24-hour trained staff at the following minimum frequencies:

- 1) Prior to a forecast storm;
- 2) After a rain event that causes runoff from the construction site;
- 3) At 24-hour intervals during extended rain events;
- 4) Weekly during the rainy season;
- 5) Every 2 weeks during the non-rainy season; and
- 6) At any other time(s) or intervals of time specified in the project Special Provisions.

Completed inspection checklists shall be submitted to Jason Vine the Resident Engineer within 24 hours of inspection. Copies of the completed checklists will be kept with the SWPPP. A tracking or follow-up procedure shall follow any inspection identifying deficiencies in BMPs. A program for

Maintenance, Inspection and Repair of BMPs shall be provided in Attachment G of this SWPPP.

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 consists 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. 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 off-site. The primary mechanisms for stormwater contact that shall be addressed include:

- 1) Direct contact with precipitation;
- 2) Contact with stormwater run-on and runoff;
- 3) Wind dispersion of loose materials;
- 4) Direct discharge to the storm drain system through spills or dumping
- 5) Extended contact with some materials and wastes, such as asphalt cold mix and treated wood products, which can leach pollutants into stormwater.

A list of construction activities is provided in Section 2.6. Table 6 indicates the BMPs that shall be implemented to handle materials and construction site wastes associated with these construction activities. Locations and details of applicable materials handling and waste management BMPs are shown on the WPCDs in Attachment B.


Table 6: Temporary Materials Management BMPs

| CASQA Fact Sheet | BMP Name | Meets a Minimum Requirement(1) | BMP used | | If not used, state reason |
|----------------------|-------------------------------------|--------------------------------------|----------|------------------------|------------------------------|
| | | | YES | NO | |
| WM-01 | Material Delivery and Storage | ✓ | ✓ | | |
| WM-02 | Material Use | ✓ | ✓ | | |
| WM-03 | Stockpile Management | ✓ | ✓ | | |
| WM-04 | Spill Preservation and Control | ✓ | ✓ | | |
| WM-05 | Solid Waste Management | ✓ | ✓ | | |
| WM-06 | Hazardous Waste Management | ✓ | ✓ | | |
| WM-07 | Contaminated Soil Management | | | ✓ | Not needed |
| WM-08 | Concrete Waste Management | | | ✓ | Not needed |
| WM-09 | Sanitary-Septic Waste Management | ✓ | ✓ | | |
| WM-10 | Liquid Waste Management | ✓ | ✓ | | |
| Alternate BMPs Used: | | | | If used, state reason: | |
| | | | | | |

(1) Applicability to a specific project shall be determined by the QSD.

Good site management/housekeeping for materials and waste management include the following:

- 1) Cover and berm loose stockpiled materials (soil, spoils, aggregate, fly-ash, stucco, lime, etc.).
- 2) Store chemicals in watertight containers with proper secondary containment in a storage shed.
- 3) Prevent rinse waters or materials on impervious or pervious site surfaces from entering the storm drain or drainage ditches.
- 4) Ensure the containment of sanitary facilities to prevent discharge.
- 5) Cover waste disposal containers at end of everyday and prior to rain events.
- 6) Ensure the containment of concrete and other washout areas.

- 
- 7) Place sanitary facilities a minimum of 50 feet from any drainage inlet. Anchor them down and place leak tray or secondary containment underneath.
 - 8) Prevent discharges from waste disposal containers.

3.4 Post Construction Stormwater Management Measures

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

Post-Construction Control Practices:

The following post-construction BMPs are to be used at this construction site after all construction is complete:

- Site shall be free of any construction waste and/or materials.
- Soils disturbed during construction shall be hydro-seeded.
- Once native vegetation has been reestablished, all temporary BMPs shall be removed.
- A frequent schedule shall be implemented to oversee erosion and sediment control has been established.

Operation/Maintenance after Project Completion:

The post-construction BMPs described above will be funded and maintained as follows:

Short Term Funding – Manzanita Ranch Estates, LLC.

Long Term Funding– Manzanita Ranch Estates, LLC.

The responsible party for the long-term maintenance of post-construction BMPs is Manzanita Ranch Estates, LLC.

Section 4: BMP Inspection, Maintenance, and Rain Event Action Plans

4.1 BMP Inspection and Maintenance

The General Permit requires routine weekly inspections of BMPs, along with inspections before, during, and after qualifying rain events. A BMP inspection checklist must be filled out for inspections and maintained on-site with the SWPPP. The inspection checklist includes the necessary information covered in Section 7.6.

A blank inspection checklist can be found in Appendix I. Completed checklists shall be kept in CSMP Attachment 2 “Monitoring Records.” BMPs shall be maintained regularly to ensure proper and effective functionality. If necessary, corrective actions shall be implemented 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 Construction Site BMPs can be found in the BMP Factsheets in Appendix H.

4.2 Rain Event Action Plans

The Rain Event Action Plan (REAP) is designed to be used as a planning tool by the QSP to protect exposed portions of project sites and to ensure the discharger has adequate materials, staff, and time to implement erosion and sediment control measures. These measures are intended to reduce the amount of sediment and other pollutants potentially generated during the rain event.

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. The SWPPP includes REAP templates but the QSP will need to customize them for each rain event. Site-specific REAP templates for each applicable project phase can be found in Appendix J.

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 J. The QSP will develop an event-specific REAP 48 hours in advance of a precipitation event forecast to have a 50% chance or greater of producing precipitation in the project area. The REAP will be onsite and implemented 24 hours in advance of any predicted precipitation event. At minimum the REAP will include the following site and phase-specific information:

- 1) Site Address;
- 2) Calculated Risk Level (2 or 3);
- 3) Site Stormwater Manager Information including the name, company and 24-hour emergency telephone number;
- 4) Erosion and Sediment Control Provider information including the name, company and 24-hour emergency telephone number;
- 5) Stormwater Sampling Agent information including the name, company, and 24-hour emergency telephone number;
- 6) Activities associated with each construction phase;
- 7) Trades active on the construction site during each construction phase;
- 8) Trade contractor information; and
- 9) Recommended actions for each project phase.

Section 5: Training

Appendix L identifies the QSPs 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 K, 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 K. The name of the contractor's WPCM is Jason Vine. This person has received the following training:

QSP/QSD Training By Clay Guzi, from Enplan 2010

QSP Training By Mary A. Larsen, from Stormwater Specialists 2013

The training log showing formal and informal training of various personnel is shown in Attachment I. A copy of all training certificate(s) for the WPCM and the SWPPP Preparer are included in Attachment I. Training records shall be updated, documented and reported in the SWPPP quarterly. Documentation of new training shall be submitted to the Resident Engineer within 24-hours of training.

New and existing personnel will receive training in storm water management. The following will be included in the training:

- 1) Storm water management is a state requirement and the discharger is obligated to reduce or eliminate potential pollutants in storm water.
- 2) Employees and/or contractors shall be informed of potential sources of pollution on the site and the BMPs used to reduce these sources.
- 3) Employees and/or contractors are to report to the monitoring and reporting person any potential sources of pollution to the storm water.

This SWPPP was prepared by:

REALM Engineering
1767 Market St, Suite C
Redding, CA 96001

Section 6: Responsible Parties and Operators

6.1 Responsible Parties

Approved Signatory who are responsible for SWPPP implementation and have authority to sign permit-related documents is listed below. The Approved Signatory assigned to this project is:

Name: David Chimienti

Title: CEO Manzanita Ranch Estates, LLC

Phone Number: (323) 939-3004

The QSP shall have primary responsibility and significant authority for the implementation, maintenance and inspection/monitoring of SWPPP requirements. The QSP will be available at all times throughout the duration of the project. Duties of the QSP include but are not limited to: Implementing all elements of the General Permit and SWPPP, including but not limited to:

- 1) Ensuring all BMPs are implemented, inspected, and properly maintained;
- 2) Performing non-stormwater and stormwater visual observations and inspections;
- 3) Performing non-stormwater and storm sampling and analysis, as required;
- 4) Performing routine inspections and observations; Implementing non-stormwater management, and materials and waste management activities such as: monitoring discharges; general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring no materials other than stormwater are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.;

The QSP may delegate these inspections and activities to an appropriately trained employee, but shall ensure adequacy and adequate deployment. Ensuring elimination of unauthorized discharges.

The QSPs shall be assigned authority by the LRP to mobilize crews in order to make immediate repairs to the control measures. Coordinate with the Contractor to assure all of the necessary corrections/repairs are made immediately and that the project complies with the SWPPP, the General Permit and approved plans at all times. Notifying the LRP or Authorized Signatory immediately of off-site discharges or other non-compliance events.

6.2 Contractor List

6.2.1 Grading Contractor:

Name: R.E Short

Title: Contractor

Company: R E SHORT CONSTRUCTION

Address: P O BOX 8163 Red Bluff, CA 96080

Phone Number: (530) 529-1041



Section 7: Construction Site Monitoring Program

7.1 Purpose

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

- 1) To demonstrate the site is in compliance with the Discharge Prohibitions 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 BMP implementation, or SWPPP revisions are necessary to reduce pollutants in stormwater discharges and authorized non-stormwater discharges;
- 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

This project has been determined to be a Risk Level 2 project. The General Permit identifies the following types of monitoring as being applicable for a Risk Level 2 project.

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

7.3 Weather and Rain Event Tracking

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

The QSP should daily consult NOAA for the weather forecasts at <http://www.srh.noaa.gov/>. Weather reports should be printed and maintained with the SWPPP in CSMP Attachment 1 "Weather Reports."

7.3.2 Rain Gauges

The QSP shall install a rain gauge on the project site. The gauge must be located in an open area away from obstructions such as trees or overhangs where rainwater cannot indirectly splash from sheds, equipment, trailers, etc. The gauge must be mounted on a post at a height of 3 to 5 feet with the gauge extending several inches beyond the post and the top of the gauge level.

The rain gauge shall be read daily during normal site scheduled hours. 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 CSMP Attachment 1 "Weather Records." Follow the rain gauge instructions to obtain accurate measurements. Once the rain gauge reading has been recorded, accumulated rain shall be emptied and the gauge reset. For comparison with the site rain gauge, the nearest appropriate governmental rain gauge(s) is located at <http://water.weather.gov/precip/>.

7.4 Monitoring Locations

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 resulting in a one-time additional sampling location do not require a SWPPP amendment.

7.5 Safety and Monitoring Exemptions

Safety practices for sample collection will be in accordance with the Contractor's health and safety plan for the project. A summary of the safety requirements that apply to sampling personnel is provided below. This project is not required to collect samples or conduct visual observations (inspections) under the following conditions:

- 1) During dangerous weather conditions such as flooding and electrical storms;
- 2) Outside of scheduled site business 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 CSMP Attachment 2 "Monitoring Records."

7.6 Visual Monitoring

Visual monitoring includes observations and inspections. Inspections of BMPs are required to identify and record BMPs that may 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 storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. Table 7 identifies the required frequency of visual observations and inspections. Inspections and observations will be conducted at the locations identified in Section 7.6.3.

Table 7: Visible Observation Frequency

| Type of Inspection | Frequency |
|---|--|
| <i>Routine Inspections</i> | |
| BMP Inspections | Weekly ¹ |
| BMP Inspections- Tracking Control | Daily |
| Non-Stormwater Discharge Observations | Quarterly during daylight hours |
| <i>Rain Event Triggered Inspections</i> | |
| Site Inspections Prior to a Qualifying Event | Within 48 hours of a qualifying event ² |
| BMP Inspections During an Extended Storm Event | Every 24-hour period of a rain event |
| Site Inspections Following a Qualifying Event | Within 48 hours of a qualifying event |
| ¹ Most BMPs must be inspected weekly; those identified below must be inspected more frequently. ² Inspections are only required during scheduled site operating hours. Note however, these inspections are required daily regardless of the amount of precipitation. | |

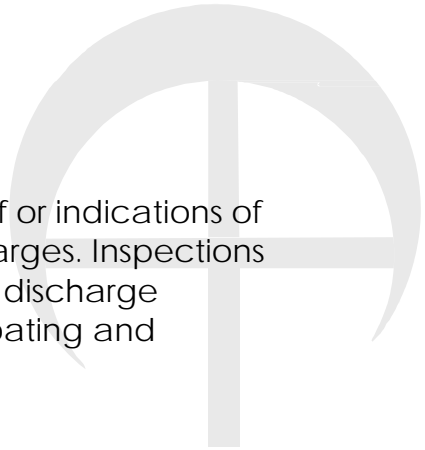
7.6.1 Routine Observations and Inspections

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:

- 1) BMPs that are properly installed;
- 2) BMPs that need maintenance to operate effectively;
- 3) BMPs that have failed; or

- 
- 4) BMPs that could fail to operate as intended.

7.6.1.2 Non-Stormwater Discharge Observations

Each drainage area will be inspected 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

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. The size of a rain event cannot be predicted so an adequate trigger for a pre-storm event visual inspection will be the same trigger used for the REAP (50% or greater probability of producing precipitation based on NOAA).

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 will include observations of the following locations:

- 1) Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- 2) BMPs to identify if they have been properly implemented;
- 3) Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard. [BMP inspections and visual monitoring will be triggered by a NOAA prediction of rain in the project area.]

~Or~

Consistent with guidance from the State Water Resources Control Board, pre-rain BMP inspections and visual monitoring will be triggered by a NOAA forecast that indicates a probability of precipitation of 50% or more in the project area.

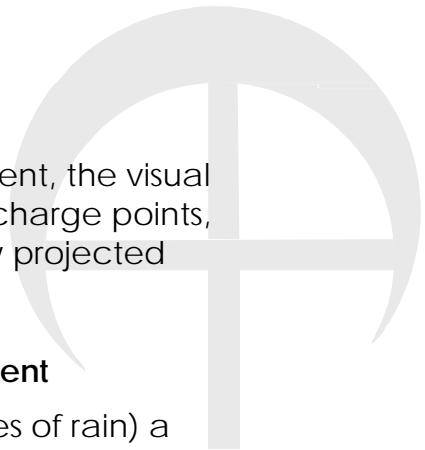
~Or~

BMP inspections and visual monitoring will be triggered by a NOAA quantitative predicted forecast (QPF) that indicates ½-inch or more of rain will occur in the project area.]

7.6.2.2 BMP Inspections During an Extended Storm Event

During an extended rain event BMP inspections will be conducted to identify and record:

- 1) BMPs that are properly installed;
- 2) BMPs that need maintenance to operate effectively;

- 
- 3) BMPs that have failed; or
 - 4) 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, downstream locations. The inspections should record any projected maintenance activities.

7.6.2.2 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: Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources; BMPs to identify if they have been properly designed, implemented, and effective; Need for additional BMPs; 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

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 are listed below and their training qualifications are provided in Appendix K.

Assigned inspector: Jason Vine Contact phone: (530) 526-7493
Alternate inspector: Jackie Hollmer Contact phone: (530) 355-1683

Stormwater observations shall be documented on the *Visual Inspection Field Log Sheet* (see CSMP Attachment 3 "Example Forms"). 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 60 days of the inspection submit copies of the completed inspection report to LRP or the WCMP. The completed reports will be kept in CSMP Attachment 2 "Monitoring Records".

7.6.4 Visual Monitoring Follow-Up and Reporting

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 *Inspection Field Log Sheet* or *BMP*

Inspection Report and shall be submitted to the QSP and shall be kept in CSMP Attachment 2 "Monitoring Records".

The QSP shall within 60 days of the inspection submit copies of the completed *Inspection Field Log Sheet* or *BMP Inspection Report* with the corrective actions to the wcpm. Results of visual monitoring must be summarized and reported in the Annual Report.

7.6.5 Visual Monitoring Locations

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, staging, storage and drainage locations are shown on the Site Maps in SWPPP Attachment B.

7.7 Water Quality Sampling and Analysis

7.7.1 Sampling and Analysis Plan for Non-Visible Pollutants in StormwaterRunoff Discharges

This Sampling and Analysis Plan 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.

Potential sources of nonvisible pollutants to stormwater discharges from the project are identified in Section 2.6 and the storage and operational locations are shown on the Site Maps in Attachment B.

The project does have the potential to receive stormwater run-on which would have the potential to contribute non-visible pollutants to stormwater discharges from the project. Stormwater run-on enters the site at two locations and is carried through the site by an existing stormwater conveyance system.

7.7.1.1 Non-Visible Sampling Schedule

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.

- 1) 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.
- 2) 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.
- 3) 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.
- 4) 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.
- 5) 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 Sampling Locations

Areas of Historical Contamination: Table 8 shows the sampling location for the collection of an historical contaminated runoff sample.

Table 8: Non-Visible Pollutant Sample Locations – Areas of Historical Contamination

| Sample Location Number | Sample Location | Sample Location Latitude and Longitude (Decimal Degrees) |
|------------------------|-----------------|--|
| N/A | | |
| | | |

Non-Visible Background Sampling Location: Table 9 shows the sampling location 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 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 9: Non-Visible Pollutant Sample Locations – Background (Unaffected Sample)

| Sample Location Number | Sample Location | Sample Location Latitude and Longitude (Decimal Degrees) |
|------------------------|----------------------------------|--|
| S-1 | Southwestern most point at creek | (40.671661, -122.381475) |
| S-2 | Northwestern point at creek | (40.671661, -122.383328) |

Non-Visible Run-On Sampling Location: Table 10 shows the sampling location for the collection of a run-on sample of runoff to be analyzed for non-visible pollutants. 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 10: Non-Visible Pollutant Sample Locations – Site Run-On

| Sample Location Number | Sample Location | Sample Location Latitude and Longitude (Decimal Degrees) |
|------------------------|----------------------------------|--|
| S-1 | Southwestern most point at creek | (40.671661, -122.381475) |
| | | |

If a stormwater visual monitoring site inspection conducted prior to or during a storm event identifies the presence of a material storage, waste storage, or operations area with spills or the potential for the discharge of non-visible pollutants to surface waters or a storm drain system that is at a location not listed above and has not been 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.

7.7.1.3 Non-Visible Monitoring Preparation

Non-visible pollutant samples will be collected by: Basic Labs
Samples on the project site will be collected by the following: Basic Labs

Company Name: Basic Laboratory
Street Address: 2218 Railroad Ave
City, State, Zip: Redding, CA, 96001
Telephone Number: (530)243-7234
Point of Contact:
Name of Sampler:
Name of Alternate:



The QSP or his/her designee will contact Basic Labs 24 hours prior to a predicted rain event or for an unpredicted event, as soon as a rain event begins if one of the triggering conditions is identified during an inspection to ensure that adequate sample collection personnel and supplies for monitoring non-visible pollutants are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

7.7.1.4 Non-Visible Analytical Constituents

Table 11 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 3: Potential Non-Visible Pollutants and Water Quality Indicator Constituents

| Pollutant Source | Pollutant | Water Quality Indicator Constituent |
|-------------------------|--------------------|--|
| Lumber | Wood Preservatives | Cu,Cr |
| Concrete Work | Curing Compunds | pH,VOC,SVOC,Alkalinity,Acidity |
| Vehicles | Batteries | Lead, pH |
| Cleaning products | Acids | pH, Acidity |
| Various Uses | Solvents. Sealants | VOC,SVOC |

7.7.1.5 Non-Visible Sample Collection

Samples of discharge shall be collected at the designated non-visible pollutant sampling locations shown on the Site Maps in Appendix B or 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 Section 7.7.7. Only the QSP, or personnel trained in water quality sampling under the direction of the QSP shall collect samples.

7.7.1.6 Sample Analysis

Samples will be analyzed by: Basic Labs

Company Name: Basic Laboratory

Street Address: 2218 Railroad Ave

City, State, Zip: Redding, CA, 96001

Telephone Number: (530)243-7234

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



7.7.1.7 Non-Visible Data Evaluation and Reporting

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 storm water 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 Regional Water Board 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.

7.7.2 Sampling and Analysis Plan for pH and Turbidity in Stormwater Runoff Discharges

Sampling and analysis of runoff for pH and turbidity is required for this project. This Sampling and Analysis Plan 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 turbidity will be collected from all drainage areas with disturbed soil areas and samples for pH will be collected from all drainage areas with a high risk of pH discharge.

7.7.2.1 Stormwater Runoff 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 event. Typically representative samples will be spaced in time throughout the daily discharge event.

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 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 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 a superfluous amount of NAL.

7.7.2.2 Stormwater Runoff Sampling Locations

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 Attachment B and include the locations identified in Table 12 and Table 13.

One sampling location on the project site and the contractor's yard have been identified for the collection of runoff samples. Table 12 also provides an estimate of the site's area that drains to each location.

Table 4: Turbidity and pH Runoff Sample Locations

| Sample Location Number | Sample Location | Estimate of Site Drainage [Factor] |
|------------------------|-----------------|------------------------------------|
|------------------------|-----------------|------------------------------------|

| | | |
|-----|----------------------------------|-----|
| | | (%) |
| S-1 | Southwestern most point at creek | 90 |

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

7.7.2.3 Stormwater Runoff Monitoring Preparation

Turbidity and pH samples will be collected and analyzed by: Basic Labs
Samples on the project site will be collected by the following: Basic Labs

Company Name: Basic Laboratory

Street Address: 2218 Railroad Ave

City, State, Zip: Redding, CA, 96001

Telephone Number: (530)243-7234

Point of Contact: Basic Labs

Name of Sampler(s): Jason Vine

Name of Alternate(s): or trained designee

The QSP or his/her designee will contact Basic Laboratory 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.

7.7.2.4 Stormwater Runoff Field Parameters

Samples shall be analyzed for the constituents indicated in the Table 13.

Table 5: Sample Collection and Analysis for Monitoring Turbidity and pH

| Parameter | Test Method | Minimum Sample Volume(1) | Sample Collection Container Type | Detection Limit (minimum) |
|--|---|--------------------------|---|---------------------------|
| Turbidity | Field meter/probe with calibrated portable instrument | 500 mL | Polypropylene or Glass (Do not collect in meter sample cells) | 1 NTU |
| pH | Field meter/probe with calibrated portable instrument or calibrated pH test kit | 100 mL | Polypropylene | 0.2 pH units |
| Notes: Minimum sample volume recommended. Specific volume requirements will vary by instrument; check instrument manufacturer instructions. L – Liter mL – Milliliter NTU – Nephelometric Turbidity Unit | | | | |

7.7.2.5 Stormwater Runoff Sample Collection

Samples of discharge shall be collected at the designated runoff and run-on sampling locations shown on the Site Maps in Attachment 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 7.7.7.

7.7.2.6 Stormwater Runoff Field Measurements

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 14 will be used to analyze the following constituents:

Table 6: Field Instruments

| Field Instrument (Manufacturer and Model) | Constituent |
|---|-------------|
| | pH |
| | Turbidity |

The manufacturers' instructions are included in CSMP Attachment 4 "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 4 "Field Meter Instructions".

7.7.2.7 Stormwater Runoff Data Evaluation and Reporting

Numeric Action Levels:

This project is subject to NALs for pH and turbidity. In the event that any sample exceeds the limits in Table 1, an Ad Hoc Report shall be

electronically submitted to SMARTS no later than 10 days after the storm event. The Ad Hoc Reports must be certified by the LRP or AS.

In addition to the Ad Hoc Report, a NAL Exceedance Report also needs to be prepared if the sample exceeds the NAL limits. The NAL Exceedance Report and is inserted into the SWPPP. The report shall include the following:

- 1) Analytical method(s), reporting units, detection limits, parameter
- 2) Date and time of sampling location, visual observations, and precipitation amounts
- 3) Description of current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions.

7.7.3 Additional Monitoring Following an NEL Exceedance

This project is not subject to NELs.

7.7.4 Sampling and Analysis Plan for Non-Stormwater Discharges

This Sampling and Analysis Plan 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. The following authorized non-stormwater discharges identified in Section 2.7, have the potential to be discharged from the project site:

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:

None

7.7.4.1 Non-Stormwater Discharge Sampling Schedule

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

7.7.4.2 Non-Stormwater Discharge Sampling Locations

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 Attachment B and include the locations identified below in Table 15.

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.

Table 15: Non-Stormwater Runoff Sampling Locations

| Sample Location Number | Sample Location | Sample Location Latitude and Longitude (Decimal Degrees) |
|------------------------|-----------------|--|
| N/A | | |
| | | |

Sampling locations have been identified for the collection of non-stormwater discharges that run-on to the project site.

Table 16: Non-Stormwater Run-On Sampling Locations

| Sample Location Number | Sample Location | Sample Location Latitude and Longitude (Decimal Degrees) |
|------------------------|-----------------|--|
| N/A | | |
| | | |

7.7.4.3 Non-Stormwater Discharge Monitoring Preparation

Non-stormwater discharge samples will be collected by: Basic Labs
Samples on the project site will be collected by the following: Basic Labs

Company Name: Basic Laboratory

Street Address: 2218 Railroad Ave

City, State, Zip: Redding, CA, 96001

Telephone Number: (530)243-7234

Point of Contact:

Name of Sampler(s): Jason Vine QSP

Name of Alternate(s): Jackie Hollmer

The QSP or his/her designee will contact Basic Labs, 24 hours prior to a planned non-stormwater discharge or as soon as an unplanned non-stormwater discharge is observed to ensure that adequate sample collection personnel, supplies for non-stormwater discharge monitoring

are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

7.7.4.4 Non-Stormwater Discharge 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, MBAS, TOC, and residual chlorine or chloramines is recommended to help identify the source of the discharge.

Table 17 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: 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 |

7.7.4.5 Non-Stormwater Discharge Sample Collection

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 Attachment B and identified in Section 7.7.4.2.

Grab samples shall be collected and preserved in accordance with the methods identified in Section 7.7.7. Only personnel trained in water quality sampling under the direction of the QSP shall collect samples.

7.7.4.6 Non-Stormwater Discharge Sample Analysis

Samples shall be analyzed using the analytical methods identified earlier.

7.7.4.7 Non-Stormwater Discharge 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 7.7.2.7.

Runoff results shall also be evaluated for the constituents suspected in the non stormwater discharge. 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-storm water discharge results shall be submitted with the Annual Report.

The General Permit prohibits the non-storm water 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 Regional Water Board.

7.7.5 Sampling and Analysis Plan for Other Pollutants Required by the Regional Water Board

The Regional Water Board has not specified monitoring for additional pollutants.

7.7.6 Training of Sampling Personnel

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:

7.7.6.1 Name Training:

QSP/QSD Training By Clay Guzi, from Enplan 2010

QSP Training By Mary A. Larsen, from Stormwater Specialists 2013

7.7.7 Sample Collection and Handling

7.7.7.1 Sample Collection

Samples shall be collected at the designated sampling locations shown on the Site Maps and listed in the preceding sections. Samples shall be collected, maintained and shipped in accordance with the SWAMP 2008 Quality Assurance Program Plan (QAPrP).

Grab samples shall be collected and preserved in accordance following protocols:

- 1) Collect samples (for laboratory analysis) only in analytical laboratory-provided sample containers;
- 2) Wear clean, powder-free nitrile gloves when collecting samples;
- 3) Change gloves whenever something not known to be clean has been touched;
- 4) Change gloves between sites;
- 5) Decontaminate all equipment (e.g. bucket, tubing) prior to sample collection a minimum of 3 times using a trisodium phosphate water wash, distilled water rinse, and final rinse with distilled water. (Dispose of wash and rinse water appropriately, i.e., do not discharge to storm drain or receiving water). Do not decontaminate laboratory provided sample containers;
- 6) Do not smoke during sampling events;
- 7) Never sample near a running vehicle;
- 8) Do not park vehicles in the immediate sample collection area (even non-running vehicles);
- 9) Do not eat or drink during sample collection; and
- 10) Do not breathe, sneeze, or cough in the direction of an open sample container.
- 11) Do not allow rain water to drip from rain gear or other surfaces into the sample bottles.

The most important aspect of grab sampling is to collect a sample that represents the entire runoff stream. Typically, samples are collected by dipping the collection container in the runoff flow paths and streams as noted below.

- 1) For small streams and flow paths, simply dip the bottle facing upstream until full.
- 2) For larger stream that can be safely accessed, collect a sample in the middle of the flow stream by directly dipping the mouth of the bottle. Once again making sure that the opening of the bottle is facing upstream as to avoid any contamination by the sampler.
- 3) For larger streams that cannot be safely waded, pole-samplers may be needed to safely access the representative flow.
- 4) Avoid collecting samples from ponded, sluggish or stagnant water.

5) Avoid collecting samples directly downstream from a bridge as the samples can be affected by the bridge structure or runoff from the road surface.

Note, that depending upon the specific analytical test, some containers may contain preservatives. These containers should **never** be dipped into the stream, but filled indirectly from the collection container.

7.7.7.2 Sample Handling

Turbidity and pH measurements must be conducted immediately. Do not store turbidity or pH samples for later measurement. Samples for laboratory analysis must be handled as follows. Immediately following sample collection:

- 1) Cap sample containers;
- 2) Complete sample container labels;
- 3) Sealed containers in a re-sealable storage bag;
- 4) Place sample containers into an ice-chilled cooler;
- 5) Document sample information on the *Effluent Sampling Field Log Sheet*; and Complete the CoC.
- 6) All samples for laboratory analysis must be maintained between 0-6 degrees Celsius during delivery to the laboratory. Samples must be kept on ice, or refrigerated, from sample collection through delivery to the laboratory. Place samples to be shipped inside coolers with ice. Make sure the sample bottles are well packaged to prevent breakage and secure cooler lids with packaging tape.
- 7) Ship samples that will be laboratory analyzed to the analytical laboratory right away. Hold times are measured from the time the sample is collected to the time the sample is analyzed. The General Permit requires that samples be received by the analytical laboratory within 48 hours of the physical sampling.

7.7.7.3 Sample Documentation Procedures

All original data documented on sample bottle identification labels, *Effluent Sampling Field Log Sheet*, and CoCs shall be recorded using waterproof ink. These shall be considered accountable documents. If an error is made on an accountable document, the individual shall make corrections by lining through the error and entering the correct information. The erroneous information shall not be obliterated. All corrections shall be initialed and dated.

Duplicate samples shall be identified consistent with the numbering system for other samples to prevent the laboratory from identifying duplicate samples. Duplicate samples shall be identified in the *Effluent Sampling Field Log Sheet*.

Sample documentation procedures include the following:

Sample Bottle Identification Labels: Sampling personnel shall attach an identification label to each sample bottle. Sample identification shall uniquely identify each sample location.

Field Log Sheets: Sampling personnel shall complete the *Effluent Sampling Field Log Sheet* and *Receiving Water Sampling Field Log Sheet* for each sampling event, as appropriate.

Chain of Custody: Sampling personnel shall complete the CoC for each sampling event for which samples are collected for laboratory analysis. The sampler will sign the CoC when the sample(s) is turned over to the testing laboratory or courier.

7.8 Active Treatment System Monitoring

An Active Treatment System (ATS) will be deployed on the site?

☐ Yes ☒ No

This project does not require a project specific Sampling and Analysis Plan for an ATS because deployment of an ATS is not planned

7.9 Bioassessment Monitoring

This project is not subject to bioassessment monitoring because it is not a Risk Level 3 project.

7.10 Watershed Monitoring Option

This project is not participating in a watershed monitoring option.

7.11 Quality Assurance and Quality Control

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:

- 1) Sampling Field logs;
- 2) Clean sampling techniques;
- 3) Chain of Custody (CoC);
- 4) QA/QC Samples; and
- 5) Data verification.

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

7.11.1 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 field log. A Visual Inspection Field Log, an Effluent Sampling Field Log Sheet, [and a Receiving Water Sampling Field Log Sheet] are included in CSMP Attachment 3 “Example Forms”.

7.11.2 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. As discussed in Section 7.7.7, adoption of a clean sampling approach will minimize the chance of field contamination and questionable data results.

7.11.3 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:

- 1) Proper labeling of samples;
- 2) Use of CoC forms for all samples; and
- 3) 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 3 “Example Forms”.

7.11.4 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:

- 1) Field Duplicates at a frequency of [5 percent or 1 duplicate minimum per sampling event]

7.11.4.1 Field Duplicates

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 conclusion.

7.11.4.2 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.

7.11.4.3 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.

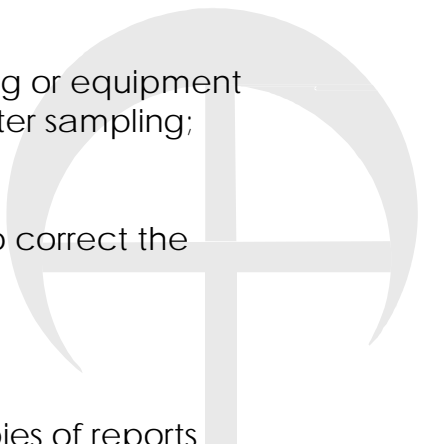
7.11.4.4 Travel Blanks

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.

7.11.5 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:

- 1) Check the CoC and laboratory reports.
- 2) 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.
- 3) Check data for outlier values and follow up with the laboratory.
- 4) Check laboratory QA/QC results.
- 5) Check the data set for outlier values and, accordingly, confirm results and re-analyze samples where appropriate.
- 6) 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:
 - 7) Check field logs to make sure all required measurements were completed and appropriately documented;
 - 8) Check reported values that appear out of the typical range or inconsistent;

- 
- 9) Follow-up immediately to identify potential reporting or equipment problems, if appropriate, recalibrate equipment after sampling;
 - 10) Verify equipment calibrations;
 - 11) Review observations noted on the field logs; and
 - 12) Review notations of any errors and actions taken to correct the equipment or recording errors.

7.12 Records Retention

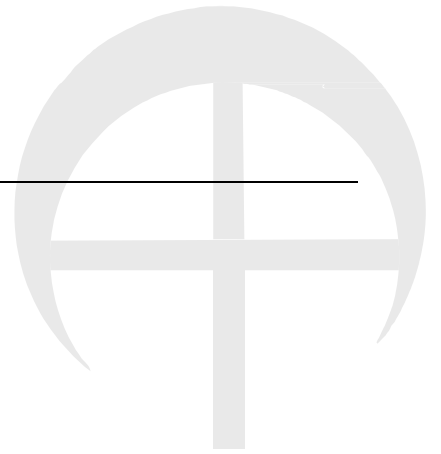
All records of stormwater monitoring information and copies of reports must be retained for a period of at least three years from date of submittal or longer if required by the Regional Water Board. Results of visual monitoring, field measurements, and laboratory analyses must be kept in the SWPPP along with CoCs, and other documentation related to the monitoring. Records are to be kept onsite while construction is ongoing. Records to be retained include:

- 1) The date, place, and time of inspections, sampling, visual observations, and/or measurements, including precipitation;
- 2) The individuals who performed the inspections, sampling, visual observation, and/or field measurements;
- 3) The date and approximate time of field measurements and laboratory analyses;
- 4) The individual(s) who performed the laboratory analyses;
- 5) A summary of all analytical results, the method detection limits and reporting limits, and the analytical techniques or methods used;
- 6) Rain gauge readings from site inspections;
- 7) QA/QC records and results;
- 8) Calibration records;
- 9) Visual observation and sample collection exemption records;
- 10) The records of any corrective actions and follow-up activities that resulted from analytical results, visual observations, or inspections.

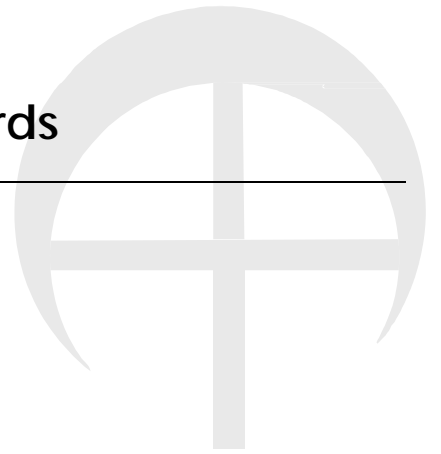
Section 8: References

- 1) SWPPP Project Plans were prepared by REALM Engineering
- 2) State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California
- 3) General Permit for Storm Water Discharge Associated with Construction and Land Disturbing
- 4) Activities. Available on-line at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.
- 5) State Water Resources Control Board (2010). Order 2010-0014-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California
- 6) General Permit for Storm Water Discharge Associated with Construction and Land Disturbing
- 7) Activities. Available on-line at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

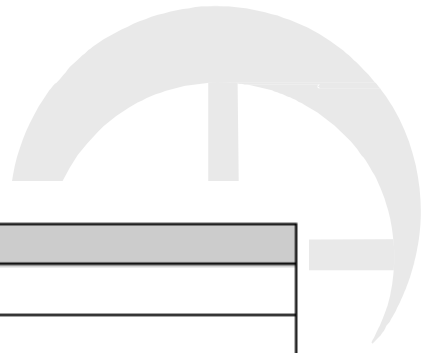
CSMP Attachment 1: Weather Reports



CSMP Attachment 2: Monitoring Records



CSMP Attachment 3: Example Forms

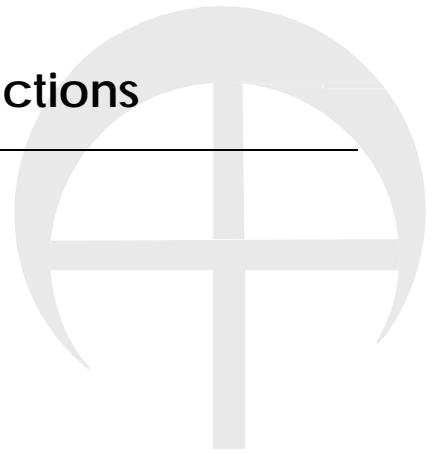


| Rain Gauge Log Sheet | | | | |
|-------------------------|-----------------|----------|----------------------------|--------|
| Construction Site Name: | | | | |
| WDID #: | | | | |
| Date (mm/dd/yy) | Time (24-hr) | Initials | Rainfall Depth (Inches) | Notes: |
| | | | | |
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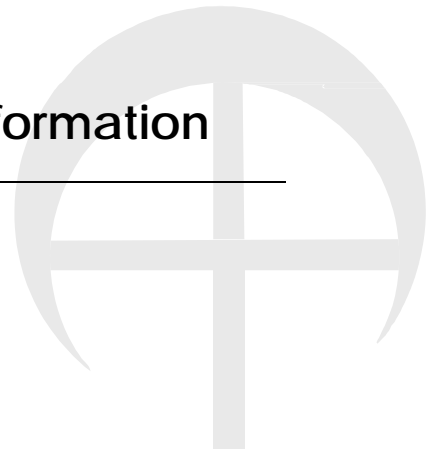
| Risk Level 1, 2, 3 Visual Inspection Field Log Sheet | | | | | | |
|--|--|--|--|--|---|---|
| Date and Time of Inspection: | | | | Report Date: | | |
| Inspection Type: | <input type="checkbox"/> Weekly | <input type="checkbox"/> Before predicted rain | <input type="checkbox"/> During rain event | <input type="checkbox"/> Following qualifying rain event | <input type="checkbox"/> Contained stormwater release | <input type="checkbox"/> Quarterly non-stormwater |
| Site Information | | | | | | |
| Construction Site Name: | | | | | | |
| Construction stage and completed activities: | | | | Approximate area of exposed site: | | |
| Weather and Observations | | | | | | |
| Date Rain Predicted to Occur: | | | | Predicted % chance of rain: | | |
| Estimate storm beginning: (date and time) | Estimate storm duration: (hours) | | Estimate time since last storm: (days or hours) | Rain gauge reading: (inches) | | |
| Observations: If yes identify location | | | | | | |
| Odors | Yes <input type="checkbox"/> No <input type="checkbox"/> | | | | | |
| Floating material | Yes <input type="checkbox"/> No <input type="checkbox"/> | | | | | |
| Suspended Material | Yes <input type="checkbox"/> No <input type="checkbox"/> | | | | | |
| Sheen | Yes <input type="checkbox"/> No <input type="checkbox"/> | | | | | |
| Discolorations | Yes <input type="checkbox"/> No <input type="checkbox"/> | | | | | |
| Turbidity | Yes <input type="checkbox"/> No <input type="checkbox"/> | | | | | |
| Site Inspections | | | | | | |
| Outfalls or BMPs Evaluated | | | Deficiencies Noted | | | |
| (add additional sheets or attached detailed BMP Inspection Checklists) | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Photos Taken: | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Photo Reference IDs: | | | |
| Corrective Actions Identified (note if SWPPP/REAP change is needed) | | | | | | |
| | | | | | | |
| Inspector Information | | | | | | |
| Inspector Name: | | | | Inspector Title: | | |
| Signature: | | | | | Date: | |

| Risk Level 2 Effluent Sampling Field Log Sheets | | | |
|--|-------------------------------------|---|--|
| 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.: | | Turbidity Meter ID No./Desc.: | |
| Calibration Date/Time: | | Calibration Date/Time: | |
| Field pH and Turbidity Measurements | | | |
| Discharge Location Description | pH | Turbidity | Time |
| | | | |
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| | | | |
| Grab Samples Collected | | | |
| Discharge Location Description | Sample Type | | Time |
| | | | |
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| | | | |
| Additional Sampling Notes: | | | |
| Time End: | | | |

CSMP Attachment 4: Field Meter Instructions



CSMP Attachment 5: Supplemental Information





VICINITY MAP

NOT TO SCALE

Attachment C

Computation Sheet for Determining Runoff Coefficients

$$\text{Total Site Area} = \underline{12.86 \text{ acres}} \quad (\text{A})$$

Existing Site Conditions

$$\text{Impervious Site Area}^1 = \underline{0 \text{ acres}} \quad (\text{B})$$

$$\text{Impervious Site Area Runoff Coefficient}^{2,4} = \underline{0.28} \quad (\text{C})$$

$$\text{Pervious Site Area}^3 = \underline{12.86 \text{ acres}} \quad (\text{D})$$

$$\text{Pervious Site Area Runoff Coefficient}^4 = \underline{0.28} \quad (\text{E})$$

$$\text{Existing Site Area Runoff Coefficient} \frac{(B \times C) + (D \times E)}{(A)} = \underline{0.28} \quad (\text{F})$$

Proposed Site Conditions (after construction)

$$\text{Impervious Site Area}^1 = \underline{3.85 \text{ acres}} \quad (\text{G})$$

$$\text{Impervious Site Area Runoff Coefficient}^{2,4} = \underline{0.95} \quad (\text{H})$$

$$\text{Pervious Site Area}^3 = \underline{9.01 \text{ acres}} \quad (\text{I})$$

$$\text{Pervious Site Area Runoff Coefficient}^4 = \underline{0.28} \quad (\text{J})$$

$$\text{Proposed Site Area Runoff Coefficient} \frac{(G \times H) + (I \times J)}{(A)} = \underline{0.49} \quad (\text{K})$$

1. Includes paved areas, areas covered by buildings, and other impervious surfaces.
2. Use 0.95 unless lower or higher runoff coefficient can be verified.
3. Includes areas of vegetation, most unpaved or uncovered soil surfaces, and other pervious areas.
4. See the table on the following page for typical C values.

Figure 819.2A

Runoff Coefficients for Undeveloped Areas
Watershed Types

| | Extreme | High | Normal | Low |
|--------------------------|--|---|--|--|
| Relief | .28 -.35 Steep, rugged terrain with average slopes above 30% | .20 -.28 Hilly, with average slopes of 10 to 30% | .14 -.20 Rolling, with average slopes of 5 to 10% | .08 -.14 Relatively flat land, with average slopes of 0 to 5% |
| Soil Infiltration | .12 -.16 No effective soil cover, either rock or thin soil mantle of negligible infiltration capacity | .08 -.12 Slow to take up water, clay or shallow loam soils of low infiltration capacity, imperfectly or poorly drained | .06 -.08 Normal; well drained light or medium textured soils, sandy loams, silt and silt loams | .04 -.06 High; deep sand or other soil that takes up water readily, very light well drained soils |
| Vegetal Cover | .12 -.16 No effective plant cover, bare or very sparse cover | .08 -.12 Poor to fair, clean cultivation crops, or poor natural cover, less than 20% of drainage area over good cover | .06 -.08 Fair to good; about 50% of area in good grassland or woodland, not more than 50% of area in cultivated crops | .04 -.06 Good to excellent; about 90% of drainage area in good grassland, woodland or equivalent cover. |
| Surface Storage | .10 -.12 Negligible surface depression few and shallow; drainageways steep and small, no marshes | .08 -.10 Low; well defined system of small drainageways; no ponds or marshes | .06 -.08 Normal; considerable surface depression storage; lakes and pond marshes | .04 -.06 High; surface storage, high; drainage system not sharply defined; large flood plain storage or large number of ponds or marshes. |
| Given | An undeveloped watershed consisting of: 1) rolling terrain with average slopes of 5%, 2) clay type soils, 3) good grassland area, and 4) normal surface depressions. | | | Solution: Relief 0.14 Soil Infiltration 0.08 Vegetal Cover 0.04 Surface Storage 0.06 C= 0.32 |
| Find | The runoff coefficient, C, for the above watershed. | | | |

Table 819.2B
Runoff Coefficients for
Developed Areas

| Type of Drainage Area | Runoff Coefficient |
|---------------------------|--------------------|
| Business: | |
| Downtown areas | 0.70 - 0.95 |
| Neighborhood areas | 0.50 - 0.70 |
| Residential: | |
| Single-family areas | 0.30 - 0.50 |
| Multi-units, detached | 0.40 - 0.60 |
| Multi-units, attached | 0.60 - 0.75 |
| Suburban | 0.25 - 0.40 |
| Apartment dwelling areas | 0.50 - 0.70 |
| Industrial: | |
| Light areas | 0.50 - 0.80 |
| Heavy areas | 0.60 - 0.90 |
| Parks, cemeteries: | 0.10 - 0.25 |
| Playgrounds: | 0.20 - 0.40 |
| Railroad yard areas: | 0.20 - 0.40 |
| Unimproved areas: | 0.10 - 0.30 |
| Lawns: | |
| Sandy soil, flat, 2% | 0.05 - 0.10 |
| Sandy soil, average, 2-7% | 0.10 - 0.15 |
| Sandy soil, steep, 7% | 0.15 - 0.20 |
| Heavy soil, flat, 2% | 0.13 - 0.17 |
| Heavy soil, average, 2-7% | 0.18 - 0.25 |
| Heavy soil, steep, 7% | 0.25 - 0.35 |
| Streets: | |
| Asphaltic | 0.70 - 0.95 |
| Concrete | 0.80 - 0.95 |
| Brick | 0.70 - 0.85 |
| Drives and walks | 0.75 - 0.85 |
| Roofs: | 0.75 - 0.95 |



Attachment F

Storm Water Pollution Prevention Plan (SWPPP) Site Inspection Report

Site Inspection Report (note report completion date):

| | | | |
|--|---|--|---|
| Project Site: | Inspection Date: | Type of Inspection: | |
| Project Owner: | Time: | <input type="checkbox"/> Pre-storm Inspection <input type="checkbox"/> Post-storm Inspection <input type="checkbox"/> During storm Inspection | <input type="checkbox"/> Weekly Routine <input type="checkbox"/> Return Compliance |
| Prime Contractor: | SWPPP Revision Necessary: Y <input type="checkbox"/> N <input type="checkbox"/> | Construction Stage: | |
| Primary Contact: | Phone: | <input type="checkbox"/> Initial Grading <input type="checkbox"/> Utilities & Infrastructure <input type="checkbox"/> Buildings, Structures and Final Site Stabilization <input type="checkbox"/> Area of Site Exposed: _____ <input type="checkbox"/> Other _____ | |
| NPDES Permit #: | Photos: Y <input type="checkbox"/> N <input type="checkbox"/> | Inspector Name, Signature, & Date: | |
| Weather (note: current conditions, beginning of storm, duration, and approximate rainfall amt. in inches): | Samples Collected: Y <input type="checkbox"/> N <input type="checkbox"/> On-Site Rain Gauge Rdn: _____ | Inspector's Qualifications: | |
| Executive Summary | | | |
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| Typical Site Problems | Yes | No | Location |
| Off-site tracking observed? | | | |
| Poor Concrete management practices? | | | |
| Odor or sheen present in storm water | | | |
| Lack of BMPs installed or BMPs failing? | | | |
| SWPPP Document stored off-site only? | | | |
| Poor drainage inlet protection | | | |
| Litter problems observed at site? | | | |
| Poor stockpile management? | | | |
| Materials not stored under protective cover? | | | |
| Lack of energy dissipation provided? | | | |
| Portably lavatories improperly located | | | |
| Lack of BMP maintenance | | | |
| Spills and/or leaks observed | | | |
| Other | | | |



Storm Water Pollution Prevention Plan (SWPPP) Site Inspection Report

Field Observations
(identify and describe BMPs evaluated, if corrective actions taken – note date)

| | Observations/Corrective Actions Taken |
|--|---------------------------------------|
| | |
| | Observations/Corrective Actions Taken |
| | |
| | Observations/Corrective Actions Taken |
| | |





Storm Water Pollution Prevention Plan (SWPPP) Site Inspection Report

Field Observations
(identify and describe BMPs evaluated, if corrective actions taken – note date)

| | Observations/Corrective Actions Taken |
|--|---------------------------------------|
| | |
| | Observations/Corrective Actions Taken |
| | |
| | Observations/Corrective Actions Taken |
| | |





Attachment G

Maintenance, Inspection, and Repair of Construction Site BMPs

| SWPPP Inspection, Maintenance and Repair Program | | | |
|--|----------------------|-----------|----------------------------|
| BEST MANAGEMENT PRACTICES (BMPs) | INSPECTION FREQUENCY | | MAINTENANCE/REPAIR PROGRAM |
| | Rainy | Non-Rainy | |
| TEMPORARY SOIL STABILIZATION BMPs | | | |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| TEMPORARY SEDIMENT CONTROL BMPs | | | |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| WIND EROSION CONTROL BMPs | | | |
| | | | |
| TRACKING CONTROL BMPs | | | |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| NON-STORM WATER MANAGEMENT BMPs | | | |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |
| | | | <input type="checkbox"/> |

Attachment H

Trained Contractor Personnel Log

Stormwater Management Training Log

Project Name: _____

Caltrans Contract Number: _____

Storm Water Management Topic: (circle as appropriate)

- ☐ Temporary Soil Stabilization ☐ Temporary Sediment Control
- ☐ Wind Erosion Control ☐ Tracking Control
- ☐ Non-storm water management ☐ Waste Management and Materials Pollution Control
- ☐ Storm Water Sampling

Specific Training Objective: _____

Location: _____ Date: _____

Instructor: _____ Telephone: _____

Course Length (hours): _____

Attendee Roster (attach additional forms if necessary)

| Name | Company | Phone |
|------|---------|-------|
| | | |
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Attachment H
Trained Contractor Personnel Log Sheet

| Name | Company | Phone |
|------|---------|-------|
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| | | |

COMMENTS:





Attachment I

Subcontractor Notification Letter and Notification Log

SWPPP Notification



Dear _____,

Please be advised that the California State Water Resources Control Board has adopted the NPDES Statewide Storm Water Permit (Permit) to the State of California, Department of Transportation (Caltrans) in 1999 (CAS000003, Order No. 99-06-DWQ); and the General Permit (General Permit) for Storm Water Discharges Associated with Construction Activity (CAS000002, Order No. 99-08-DWQ), and modifications thereto. The goal of these permits is prevent the discharge of pollutants associated with construction activity from entering the storm drain system, ground and surface waters.

[REALM] has developed a Storm Water Pollution Prevention Plan (SWPPP) in order to implement the requirements of the Permits.

As a subcontractor, you are required to comply with the SWPPP and the Permits for any work that you perform on site. Any person or group who violates any condition of the Permits may be subject to substantial penalties in accordance with state and federal law. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP and the Permits. A copy of the Permits and the SWPPP are available for your review at the construction office. Please contact me if you have further questions.

Sincerely,

Jason Vine, P.E.
Realm Inc.
SWPPP Preparer

Subcontractor Notification Letter (Sample)
Subcontractor Notification Log
1 of 2

**SUBCONTRACTOR NOTIFICATION
LOG**

Project Name _____

| SUBCONTRACTOR COMPANY NAME | CONTACT NAME | ADDRESS | PHONE NUMBER | PAGER/ FIELD PHONE | DATE NOTIFICATION LETTER SENT | TYPE OF WORK |
|-------------------------------|-----------------|---------|-----------------|--------------------------|-------------------------------------|-----------------|
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Attachment J

Notice of Discharge

To: _____

Date: _____

Subject: Notice of Discharge

Project Name: _____

In accordance with the NPDES Statewide Permit for Storm Water Discharges Associated with Construction Activity, the following instance of discharge is noted:

Date, time, and location of discharge

Insert description and date of event

Nature of the operation that caused the discharge

Insert description of operation

Initial assessment of any impact caused by the discharge

Insert assessment

Existing BMP(s) in place prior to discharge event

List BMPs in place

Date of deployment and type of BMPs deployed after the discharge.

BMPs deployed after the discharge (with dates)

Steps taken or planned to reduce, eliminate and/or prevent recurrence of the discharge

Insert steps taken to prevent recurrence

Implementation and maintenance schedule for any affected BMPs

Insert implementation and maintenance schedule

If further information or a modification to the above schedule is required, notify the contact person below.

Notice of Discharge
1 of 2

Attachment J
Notice of Discharge

Name of Contact Person

Title

Company

Telephone Number

Signature

Date

Attachment K

Notice of Completion of Construction / Notice of Termination



Notice of Completion of Construction / Notice of Termination
1 of 1

Attachment L

Sampling Activity Log and Chain-of-Custody Forms

| RAIN EVENT GENERAL INFORMATION | | | | |
|--------------------------------|--|---------------|-------------------------------------|--|
| Project Name | | | | |
| Contract Number * | | | | |
| Contractor | | | | |
| Sampler's Name | | | | |
| Signature | | | | |
| Date of Sampling | | | | |
| Season (Check Applicable) | <input type="checkbox"/> Rainy | | <input type="checkbox"/> Non-Rainy | |
| Storm Data | Storm Start Date & Time: | | Storm Duration (hrs): | |
| | Time elapsed since last storm (Circle Applicable Units) | Min. Hr. Days | Approximate Rainfall Amount (mm) | |

For rainfall information: <http://cdec.water.ca.gov/weather.html> or <http://www.wrh.noaa.gov/wholmws/page.html>

| SAMPLE LOG | | |
|-----------------------|-----------------|------------------------------------|
| Sample Identification | Sample Location | Sample Collection Date and Time |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Specific sample locations descriptions may include: 30m upstream from discharge at eastern boundary, runoff from northern waste storage area, downgradient of Inlet 57 at kilometer post 36, etc.

| FIELD ANALYSIS | | |
|-----------------------|------|--------|
| | Yes | No |
| Sample Identification | Test | Result |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Attachment M

Pollutant Testing Guidance Table



Attachment M
Pollutant Testing Guidance Table ¹

| Category | Construction Site Material | Visually Observable? | Pollutant Indicators ² | Suggested Analyses Field ³ | Laboratory |
|--|-----------------------------|---|---|---------------------------------------|---|
| Asphalt Products (Sections 37, 39, 92, 93, 94, and Special Provisions) | Hot Asphalt | Yes - Rainbow Surface or Brown Suspension | Visually Observable - No Testing Required | | |
| | Asphalt Emulsion | | | | |
| | Liquid Asphalt (tack coat) | | | | |
| | Cold Mix | | | | |
| | Crumb Rubber | Yes - Black, solid material | Visually Observable - No Testing Required | | |
| | Asphalt Concrete (Any Type) | Yes - Rainbow Surface or Brown Suspension | Visually Observable - No Testing Required | | |
| Cleaning Products | Acids | No | pH Acidity Anions (acetic acid, phosphoric acid, sulfuric acid, nitric acid, hydrogen chloride) | pH Meter Acidity Test Kit | EPA 150.1 (pH) SM 2310B (Acidity) EPA 300.0 (Anion) |
| | Bleaches | No | Residual Chlorine | Chlorine | SM 4500-CL G (Res. Chlorine) |
| | Detergents | Yes - Foam | Visually Observable - No Testing Required | | |
| | TSP | No | Phosphate | Phosphate | EPA 365.3 (Phosphate) |
| | Solvents | No | VOC | None | EPA 801/802 or EPA 824 (VOC) |
| | | | SVOC | None | EPA 825 (SVOC) |
| | | | | | |

Pollutant Testing Guidance Table
2 of 9

Attachment M
Pollutant Testing Guidance Table ¹

| Category | Construction Site Material | Visually Observable? | Pollutant Indicators ² | Suggested Analyses Field ³ | Laboratory |
|--|--|----------------------|---|--|--|
| Portland Concrete Cement & Masonry Products (Section 27, 28, 29, 40, 41, 42, 49, 50, 51, 53, 63, 65, 72, 73, 80, 81, 83, 90, and Special Provisions) | Portland Cement (PCC) | Yes - Milky Liquid | Visually Observable - No Testing Required | | |
| | Masonry products | No | pH | pH Meter Alkalinity or Acidity Test Kit | EPA 150.1 (pH) |
| | | | Alkalinity | | SM 2320 (Alkalinity) |
| | Sealant (Methyl Methacrylate - MMA) | No | Methyl Methacrylate | None | EPA 825 (SVOC) |
| | | | Cobalt | | EPA 200.8 (Metal) |
| | | | Zinc | | |
| | Incinerator Bottom Ash Bottom Ash Steel Slag Foundry Sand Fly Ash Municipal Solid Waste | No | Aluminum Calcium Vanadium Zinc | Calcium Test | EPA 200.8 (Metal) EPA 200.7 (Calcium) |
| | Mortar | Yes - Milky Liquid | Visually Observable - No Testing Required | | |
| | Concrete Rinse Water | Yes - Milky Liquid | Visually Observable - No Testing Required | | |
| | Non-Pigmented Curing Compounds | No | Acidity | pH Meter Alkalinity or Acidity Test Kit | SM 2310B (Acidity) |
| | | | Alkalinity | | SM 2320 (Alkalinity) |
| | | | pH | | EPA 150.1 (pH) |
| | | | VOC | | EPA 801/802 or EPA 824 (VOC) |
| | | | SVOC | | EPA 825 (SVOC) |

Pollutant Testing Guidance Table
3 of 9

Attachment M
Pollutant Testing Guidance Table ¹

| Category | Construction Site Material | Visually Observable? | Pollutant Indicators ² | Suggested Analyses Field ³ | Laboratory |
|--|---|--------------------------------|---|---------------------------------------|---|
| Landscaping and Other Products (Section 20, 24, and Special Provisions) | Aluminum Sulfate | No | Aluminum | TDS Meter Sulfate | EPA 200.8 (Metal) |
| | | | TDS | | EPA 160.1 (TDS) |
| | | | Sulfate | | EPA 300.0 (Sulfate) |
| | Sulfur-Elemental | No | Sulfate | Sulfate | EPA 300.0 (Sulfate) |
| | Fertilizers-Inorganic ⁴ | No | Nitrate | Nitrate | EPA 300.0 (Nitrate) |
| | | | Phosphate | Phosphate | EPA 365.3 (Phosphate) |
| | | | Organic Nitrogen | None | EPA 351.3 (TKN) |
| | | | Potassium | None | EPA 200.8 (Metal) |
| | Fertilizers-Organic | No | TOC | Nitrate | EPA 415.1 (TOC) |
| | | | Nitrate | | EPA 300.0 (Nitrate) |
| | | | Organic Nitrogen | | EPA 351.3 (TKN) |
| | | | COD | | EPA 410.4 (COD) |
| | Natural Earth (Sand, Gravel, and Topsoil) | Yes - Cloudiness and turbidity | Visually Observable - No Testing Required | | |
| | Herbicide | No | Herbicide | None | Check lab for specific herbicide or pesticide |
| | Pesticide | | Pesticide | | |
| Lime | Alkalinity | | pH Meter Alkalinity or Acidity Test Kit | SM 2320 (Alkalinity) | |
| | pH | | | EPA 150.1 (pH) | |

Pollutant Testing Guidance Table
4 of 9

Attachment M
Pollutant Testing Guidance Table

Attachment M
Pollutant Testing Guidance Table ¹

| Category | Construction Site Material | Visually Observable? | Pollutant Indicators ² | Suggested Analyses Field ³ | Laboratory |
|--|--|----------------------|---|---------------------------------------|------------------------------|
| Painting Products (Section 12-3.08, 20-2.32, 50-1.05, 59, 91, and Special Provisions) | Paint | Yes | Visually Observable - No Testing Required | | |
| | Paint Strippers | No | VOC | None | EPA 801/802 or EPA 824 (VOC) |
| | | | SVOC | None | EPA 825 (SVOC) |
| | Resins | No | COD | None | EPA 410.4 (COD) |
| | | | SVOC | | EPA 825 (SVOC) |
| | Sealants | No | COD | None | EPA 410.4 (COD) |
| | Solvents | No | COD | None | EPA 410.4 (COD) |
| | | | VOC | | EPA 801/802 or EPA 824 (VOC) |
| | | | SVOC | | EPA 825 (SVOC) |
| | Lacquers, Varnish, Enamels, and Turpentine | No | COD | None | EPA 410.4 (COD) |
| | | | VOC | | EPA 801/802 or EPA 824 (VOC) |
| | | | SVOC | | EPA 825 (SVOC) |
| | Thinners | No | VOC | None | EPA 801/802 or EPA 824 (VOC) |
| | | | COD | | EPA 410.4 (COD) |
| Portable Toilet Waste Products | Portable Toilet Waste | Yes | Visually Observable - No Testing Required | | |

Pollutant Testing Guidance Table
5 of 9

Attachment M
Pollutant Testing Guidance Table ¹

| Category | Construction Site Material | Visually Observable? | Pollutant Indicators ² | Suggested Analyses Field ³ | Laboratory |
|---------------------------------------|--|--------------------------------------|---|--|--|
| Contaminated Soil ⁵ | Aerially Deposited Lead ³ | No | Lead | None | EPA 200.8 (Metal) |
| | Petroleum | Yes – Rainbow Surface Sheen and Odor | Visually Observable - No Testing Required | | |
| | Mining or Industrial Waste, etc. | No | Contaminant Specific | Contaminant Specific – Check with laboratory | Contaminant Specific – Check with laboratory |
| Line Flushing Products | Chlorinated Water | No | Total chlorine | Chlorine | SM 4500-CL G (Res. Chlorine) |
| Adhesives | Adhesives | No | COD | None | EPA 410.4 (COD) |
| | | | Phenols | Phenol | EPA 420.1 (Phenol) |
| | | | SVOC | None | EPA 825 (SVOC) |
| Dust Palliative Products (Section 18) | Salts (Magnesium Chloride, Calcium Chloride, and Natural Brines) | No | Chloride | Chloride | EPA 300.0 (Chloride) |
| | | | TDS | TDS Meter | EPA 160.1 (TDS) |
| | | | Cations (Sodium, Magnesium, Calcium) | None | EPA 200.7 (Cations) |
| Vehicle | Antifreeze and Other Vehicle Fluids | Yes - Colored Liquid | Visually Observable - No Testing Required | | |
| | Batteries | No | Sulfuric Acid | None | EPA 300.0 (Sulfate) |
| | | | Lead | None | EPA 200.8 (Metal) |
| | | | pH | pH Meter Alkalinity or Acidity Test Kit | EPA 150.1 (pH) |
| | Fuels, Oils, Lubricants | Yes - Rainbow Surface Sheen and Odor | Visually Observable - No Testing Required | | |

Pollutant Testing Guidance Table
6 of 9

Attachment M
Pollutant Testing Guidance Table

Attachment M
Pollutant Testing Guidance Table ¹

| Category | Construction Site Material | Visually Observable? | Pollutant Indicators ² | Suggested Analyses Field ³ | Laboratory |
|---------------------------------------|-----------------------------------|----------------------|---|---|----------------------|
| Soil Amendment/Stabilization Products | Polymer/Copolymer ^{6, 7} | No | Organic Nitrogen | None | EPA 351.3 (TKN) |
| | | | BOD | None | EPA 405.1 (BOD) |
| | | | COD | None | EPA 410.4 (COD) |
| | | | DOC | None | EPA 415.1 (DOC) |
| | | | Nitrate | Nitrate | EPA 300.0 (Nitrate) |
| | | | Sulfate | Sulfate | EPA 300.0 (Sulfate) |
| | | | Nickel | None | EPA 200.8 (Metal) |
| | Straw/Mulch | Yes - Solids | Visually Observable - No Testing Required | | |
| | Lignin Sulfonate | No | Alkalinity | Alkalinity | SM 2320 (Alkalinity) |
| | | | TDS | TDS Meter | EPA 160.1 (TDS) |
| | Psyllium | No | COD | None | EPA 410.4 (COD) |
| | | | TOC | None | EPA 415.1 (TOC) |
| | Guar/Plant Gums | No | COD | None | EPA 410.4 (COD) |
| | | | TOC | None | EPA 415.1 (TOC) |
| | | | Nickel | None | EPA 200.8 (Metal) |
| | Gypsum | No | pH | pH Meter Alkalinity or Acidity Test Kit | EPA 150.1 (pH) |
| | | | Calcium | Calcium | EPA 200.7 (Calcium) |
| | | | Sulfate | Sulfate | EPA 300.0 (Sulfate) |
| | | | Aluminum | None | EPA 200.8 (Metal) |
| | | | Barium | | |
| | | | Manganese | | |
| | | | Vanadium | | |

Pollutant Testing Guidance Table
7 of 9

Attachment M
Pollutant Testing Guidance Table ¹

| Category | Construction Site Material | Visually Observable? | Pollutant Indicators ² | Suggested Analyses Field ³ | Laboratory |
|---|--|---|---|---------------------------------------|-------------------|
| Treated Wood Products (Section 58, 80-3.01B(2), and Special Provisions) | Ammoniacal-Copper-Zinc-Arsenate (ACZA) | No | Arsenic | Total Chromium | EPA 200.8 (Metal) |
| | Copper-Chromium-Arsenic (CCA) | | Total Chromium | | |
| | Ammoniacal-Copper-Arsenate (ACA) | | Copper | | |
| | Copper Naphthenate | | Zinc | | |
| | Creosote | Yes - Rainbow Surface or Brown Suspension | Visually Observable - No Testing Required | | |

Notes:

- 1 If specific pollutant is known, analyze only for that specific pollutant. See MSDS to verify.
- 2 For each construction material, test for one of the pollutant indicators. Bolded pollutant indicates lowest analysis cost or best indicator. However, the composition of the specific construction material, if known, is the first criterion for selecting which analysis to use.
- 3 See www.hach.com, www.lamotte.com, www.vsi.com and www.chemetrics.com for some of the test kits
- 4 If the type of inorganic fertilizer is unknown, analyze for all pollutant indicators listed.
- 5 Only if special handling requirements are required in the Standard Special Provisions for aerially deposited lead (ADL)
- 6 If used with a dye or fiber matrix, it is considered visually observable and no testing is required.
- 7 Based upon research conducted by Caltrans, the following copolymers/polymers do not discharge pollutants and water quality sampling and analysis is not required: Super Tak™, M-Binder™, Fish Stik™, Pro40dc™, Fisch-Bond™, Soil Master WR™, and EarthGuard™.

Pollutant Testing Guidance Table
8 of 9

Attachment M
Pollutant Testing Guidance Table

Acronyms:

BOD – Biochemical Oxygen Demand
 COD – Chemical Oxygen Demand
 DOC – Dissolved Organic Carbon
 EPA – Environmental Protection Agency
 HACH – Worldwide company that provides advanced analytical systems and technical support for water quality testing.
 SM – Standard Method
 SVOC – Semi-Volatile Organic Compounds
 TDS – Total Dissolved Solids
 TKN – Total Kjeldahl Nitrogen
 TOC – Total Organic Carbon
 TSP – Tri-Sodium Phosphate
 VOC – Volatile Organic Compounds

References:

Construction Storm Water Sampling and Analysis Guidance Document, California Stormwater Quality Task Force, October 2001.
Environmental Impact of Construction and Repair Materials on Surface and Ground Waters, Report 448, National Cooperative Highway Research Program, 2001
Soil Stabilization for Temporary Slopes, Environmental Programs, California Department of Transportation, October 1, 1999.
Statewide Storm Water Management Plan, Division of Environmental Analysis, California Department of Transportation, April 2002.
Statewide Storm Water Quality Practice Guidelines, Environmental Program, California Department of Transportation, August 2000.
Soil Stabilization for Temporary Slopes and District 7 Erosion Control Pilot Study, June 2000.
Stormwater Monitoring Protocols, Guidance Manual, California Department of Transportation, May 2000.

Pollutant Testing Guidance Table
9 of 9

Attachment N

Sampling Data Reporting Form

| RAIN EVENT GENERAL INFORMATION | | | | |
|--------------------------------|--|---------------|-------------------------------------|--|
| Project Name | | | | |
| Contract Number * | | | | |
| Contractor | | | | |
| Sampler's Name | | | | |
| Signature | | | | |
| Date of Sampling | | | | |
| Season (Check Applicable) | <input type="checkbox"/> Rainy | | <input type="checkbox"/> Non-Rainy | |
| Storm Data | Storm Start Date & Time: | | Storm Duration (hrs): | |
| | Time elapsed since last storm (Circle Applicable Units) | Min. Hr. Days | Approximate Rainfall Amount (mm) | |

| SAMPLE LOG | | |
|-----------------------|-----------------|------------------------------------|
| Sample Identification | Sample Location | Sample Collection Date and Time |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Specific sample location descriptions may include: 30m upstream from discharge at eastern boundary, runoff from northern waste storage area, downgradient of inlet 57 at kilometer post 36, etc.

| FIELD ANALYSIS | | |
|-----------------------|------|--------|
| | Yes | No |
| Sample Identification | Test | Result |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information,



Attachment O

Discharge Reporting Log

Project Name: _____
Contract Number: _____

| Date | Material(s) Discharged | Estimated Quantity | Observed By |
|------|------------------------|--------------------|-------------|
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to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Contractor's Signature

Date

Contractor's Name and Title

Contractor's Telephone Number

Attachment P

NEW OWNER INFORMATION AND CHANGE OF INFORMATION (COI) FORM FOR THE GENERAL CONSTRUCTION PERMIT NO. CAS000002

Owners Name: _____
WDID No.: _____
Prepared By: _____

Date: _____
Date of Last NOI Change: _____
Signature of Preparer: _____

| | Area Transferred (acres) ¹ column 1 | Area Remaining (acres) ² column 2 | Lot/Tract Numbers Transferred | Contact Person and Company Name of NewOwner(s) | Address(es) of the New Owner(s) | Phone # of New Owner | Is Const/Post Construction Complete? Yes/No | Date of Ownership Transfer |
|----|---|---|-------------------------------------|--|---------------------------------|-------------------------|--|----------------------------------|
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |

¹Use approximate area (in acres) if no exact figure is available.

²Calculate running total in this column as follows:

Enter in column 2, line 1, the area from NOI minus the area in column 1.

Enter in column 2, line 2, the area in column 2, line 1, minus the area in line 2, column 1.

Enter in column 2, line 3, the area in column 2, line 2, minus the area in line 3, column 1, and so forth.