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Storm Water Pollution Prevention Plan

For:

Lot 9, R.S. 57-4-8

**#17 CREST ROAD EAST, ROLLING HILLS
CA 90274**

Prepared for:

City of Rolling Hills

2 portuguese Bend Road

Rolling hills, CA 90274

Insert [City] Engineer's Name: TBD

Insert Engineer's Telephone Number: TBD

Owner/Developer/Contractor:

Ann Johnson

#17 Crest Road East

Rolling Hills, CA 90274

310-519-5900

Project Site Location/Address:

#17 Crest Road East

Rolling Hills, CA 90274

Contractor's Storm Water Pollution Prevention Manager

Name: TBD

Telephone: TBD

SWPPP Prepared by:

Bolton Engineering Corp.

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SWPPP Preparation Date:

Apr. 13, 2012

Estimated Project Dates:

Start of Construction: June 2012

Completion of Construction: May 2013

WDID No.: _____

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Attachment A.....	Vicinity Map
Attachment B.....	Water Pollution Control Drawings
Attachment C.....	BMP Consideration Checklist
Attachment D.....	Computation Sheet for Determining Runoff Coefficients
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Attachment F.....	Notice of Intent (NOI)
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Attachment I Trained Contractor Personnel Log
Attachment J Subcontractor Notification Letter and Log
Attachment K Notice of Non-Compliance
Attachment L SWPPP and Monitoring Program Checklist
Attachment M Annual Certification of Compliance Form
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Attachment R Sampling Activity Log
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Section 100

SWPPP Certifications and Approval

100.1 Initial SWPPP Certification by Contractor

Project Name: Lot 9, R.S. 57-4-8

Project Number: #17 CREST ROAD EAST, ROLLING HILLS
CA 90274

"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, 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

TBD
Telephone Number

100.2 Owner/Developer Approval and Certification of SWPPP

**Owner/Developer
Approval and Certification of the
Storm Water Pollution Prevention Plan**

Project Name: Lot 9, R.S. 57-4-8

Project Number: #17 CREST ROAD EAST, ROLLING HILLS
CA 90274

"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, 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."

Owner/Developer Signature

Date

Ann Johnson

Owner/Developer Name

Telephone Number

100.3 Annual Compliance Certification

By July 1 of each year, the Contractor shall submit an Annual Certification of Compliance to the appropriate Regional Water Quality Control Board (RWQCB), stating compliance with the terms and conditions of the Permit and the SWPPP. The Annual Certification of Compliance Form is included in Attachment M. Completed Annual Certifications of Compliance and Approvals can be found in the following pages.

Section 200

SWPPP Amendments

200.1 SWPPP Amendment Certification and Approval

This SWPPP shall be amended:

- 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 storm water 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; and
- When deemed necessary by the Owner/Developer/Contractor.

The following items will be included in each amendment:

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

The amendments for this SWPPP, along with the Owner/Developer/Contractor's Certification and the Owner/Developer/Contractor approval, can be found in the following pages. Amendments are listed in the Amendment Log in section 200.2

INSERT ADDITIONAL RESPONSIBILITIES AND/OR NAMES HERE OR DELETE THIS LINE (Use the "FORMAT OPTIONS" button to insert subtitles and/or paragraphs)

SWPPP Amendment No.

Project Name: Lot 9, R.S. 57-4-8

Project Number: #17 CREST ROAD EAST, ROLLING HILLS
CA 90274

**Contractor Certification of the
Storm Water Pollution Prevention Plan Amendment**

"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, 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

TBD

TBD

Contractor's Name and Title

Telephone Number

**Owner/Developer Approval of the
Storm Water Pollution Prevention Plan Amendment**

"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, 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."

Owner/Developer Signature

Date

TBD

TBD

Owner/Developer Name and Title

Telephone Number

Section 300

Introduction and Project Description

300.1 Introduction and Project Description

The construction project is located in Los Angeles County ,in City of Rolling Hills, between Portuguese Bend Road and Crest Road. The project consists of mass grading, darainage systems. The receiving water is Klondike Canyon

300.2 Unique Site Features

The project is sandwiched to the north by Klondike Canyon, and to the south by one of the Klondike Canyon's tribary.

The project lot is aprox. 10.24 acres; however only 1.98 acres of the lot is disturbed, and combining with a 0.46 undisturbed driange area, constitute the total proposed drainage area. of $1.98+0.46 = 2.44$ acres.

Runoff Coefficient is calculated based on the 2.44 acres of the lot. Thes rest of the lot drainage remains its historical drainage course.

300.3 Construction Site Estimates

The following are estimates of the construction site:

Construction site area	<u>2.44</u>	acres
Percentage impervious area before construction	<u>27</u>	%
Runoff coefficient before construction ⁽¹⁾	<u>0.88</u>	
Percentage impervious area after construction	<u>50</u>	%
Runoff coefficient after construction ⁽¹⁾	<u>0.90</u>	
Anticipated storm water flow on to the construction site ⁽²⁾	<u>6.04</u>	cfs

⁽¹⁾ Calculations are shown in Attachment D

⁽²⁾ Calculations are shown in Attachment E

300.4 Project Schedule/Water Pollution Control Schedule

300.5 Contact Information/List of Responsible Parties

The Storm Water Pollution Prevention Manager (SWPPM) assigned to this project is:

Name: **TBD**

Telephone: **TBD**

Ann Johnson

#17 Crest **Road East**

Rolling Hills, **CA 90274**

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

- Ensuring full compliance with the SWPPP and the Permit
- Implementing all elements of the SWPPP, including but not limited to:
 - Implementation of prompt and effective erosion and sediment control measures
 - Implementing all non-storm water management, and materials and waste management activities such as: monitoring discharges (dewatering, diversion devices); general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than storm water are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.
- Pre-storm inspections
- Storm event inspections
- Post-storm inspections
- Routine inspections as specified in the project's specifications or described in the SWPPP
- Updates/Amendments to the SWPPP, as needed

- Preparing annual compliance certification
- Ensuring elimination of all unauthorized discharges
- The SWPPM shall be assigned authority by the Owner/Developer/Contractor to mobilize crews in order to make immediate repairs to the control measures
- Coordinate with the Owner/Developer/Contractor 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
- Submitting Notices of Discharge and reports of Illicit Connections or Illegal Discharges

INSERT ADDITIONAL RESPONSIBILITIES AND/OR NAMES HERE OR DELETE THIS LINE (Use the "FORMAT OPTIONS" button to insert subtitles and/or paragraphs)

Section 400

References

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

- Project plans and specifications No. INSERT NUMBER, dated INSERT DATE, prepared by ENTITY PREPARING THE PLANS, SPECIFICATIONS AND ESTIMATE.
- State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity.
- California Stormwater BMP Handbook - Construction, January 2003
- CLICK AND TYPE OTHER REFERENCES HERE
-

Section 500

Body of SWPPP

500.1 Objectives

This Storm Water Pollution Prevention Plan (SWPPP) has six main objectives:

- Identify all pollutant sources, including sources of sediment that may affect the quality of storm water discharges associated with construction activity (storm water discharges) from the construction site, and
- Identify non-storm water discharges, and
- Identify, construct, implement in accordance with a time schedule, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction, and
- Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs).
- 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 Permit (Clean Water Act Section 303(d) [303(d)] Water Bodies listed for Sedimentation).
- 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.

This SWPPP conforms with the required elements of the General Permit No. CAS000002 issued by the State of California, State Water Resources Control Board (SWRCB). This SWPPP will be modified and amended to reflect any amendments to the Permit, or any changes in construction or operations that may affect the discharge of pollutants from the construction site to surface waters, groundwaters, or the municipal separate storm sewer system (MS4). The SWPPP will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges. The SWPPP shall be readily available on-site for the duration of the project.

500.2 Vicinity Map

The construction project vicinity map showing the project location, surface water boundaries, geographic features, construction site perimeter, and general topography, is located in Attachment A. The project's Title Sheet provides more detail regarding the project location and is also included in Attachment A.

500.3 Pollutant Source Identification and BMP Selection

500.3.1 Inventory of Materials and Activities that May Pollute Storm Water

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 Water Pollution Control Drawings (WPCDs) and/or in Sections 500.3.4 through 500.3.9):

- Vehicular fluids, including oil, grease, petroleum, and coolants
- Asphaltic emulsions associated with asphalt-concrete paving operations
- Cement materials associated with PCC paving operations, drainage structures, and curb and gutter
- Base and subbase material
- Joint and curing compounds
- Concrete curing compounds
- Paints
- Solvents, thinner, acids
- Mortar Mix
- Raw landscaping materials and wastes
- BMP materials
- PCC rubble
- Masonry block rubble
- General litter

Construction activities that have the potential to contribute sediment to storm water discharges include:

- Cleaning operations
- Grubbing Operations
- Grading operations
- Soil moving operations
- Utility excavation operations
- Landscaping operations
-
-

INSERT ADDITIONAL NARRATIVE TEXT HERE OR DELETE THIS LINE (Use the "FORMAT OPTIONS" button to insert subtitles and/or paragraphs)

Attachment C lists all Best Management Practices (BMPs) that have been selected for implementation in this project. Implementation and location of BMPs are shown on the WPCDs in Attachment B. Narrative descriptions of BMPs to be used during the project are listed by category in each of the following SWPPP sections. Attachment Q includes a list, and/or copies of the fact sheets of all the BMPs selected for this project.

500.3.2 Existing (pre-construction) Control Measures

The following are existing (pre-construction) control measures encountered within the project site:

-
-
-
-
-
-

500.3.3 Nature of Fill Material and Existing Data Describing the Soil

Existing site features that, as a result of past usage, may contribute pollutants to storm water (e.g., toxic materials that are known to have been treated, stored, disposed, spilled, or leaked onto the construction site) include:

- Existing Horse Stable
- Existing Horse Riding Ring
-
-

INSERT ADDITIONAL NARRATIVE TEXT HERE OR DELETE THIS LINE (Use the "FORMAT OPTIONS" button to insert subtitles and/or paragraphs)

500.3.4 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate erosion control measures required by the contract documents, and other measures selected by the Contractor. This project will implement the following practices for effective temporary and final erosion control during construction:

- 1) Preserve existing vegetation where required and when feasible.
- 2) Apply temporary erosion control to remaining active and non-active areas as required by the California Stormwater BMPs Handbook - Construction, and the contract documents. Reapply as necessary to maintain effectiveness.
- 3) Implement temporary erosion control measures at regular intervals throughout the defined rainy season to achieve and maintain the contract's disturbed soil area requirements. Implement erosion control prior to the defined rainy season.
- 4) Stabilize non-active areas as soon as feasible after the cessation of construction activities.

- 5) Control erosion in concentrated flow paths by applying erosion control blankets, erosion control seeding, and lining swales as required in the contract documents.
- 6) Apply seed to areas deemed substantially complete by the Owner during the defined rainy season.
- 7) At completion of construction, apply permanent erosion control to all remaining disturbed soil areas.

Sufficient erosion control materials will be maintained on-site to allow implementation in conformance with Permit requirements and described in this SWPPP. This includes implementation requirements for active areas and non-active areas that require deployment before the onset of rain.

Implementation and locations of temporary erosion control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B and/or described in this section. The BMP Consideration Checklist in Attachment C indicates the BMPs that will be implemented to control erosion on the construction site; these are:

- EC-1, Scheduling
- EC-2, Preservation of Existing Vegetation
- EC-5, Soil Binder
- EC-9, Earth Dikes & Drainage Swale
- EC-10, Velocity Dissipation Devices
-

Scheduling and Preservation of Existing Vegetation The project schedule will sequence construction activities with the installation of both soil stabilization and sediment control measures. BMPs will be deployed in a sequence to follow the progress of grading and construction. The construction schedule will be arranged as much as practicable to leaving existing vegetation undisturbed until immediately prior to grading.

Year-Round:

1. The Storm Water Pollution Prevention Manager (SWPPM) will monitor weather using National Oceanic and Atmospheric Administration (NOAA) reports to track conditions and alert crews to the onset of rainfall events. A Rain Event Action Plan (REAP) will be implemented should there be a 50% rain possibility.

2. Disturbed soil areas will be stabilized with temporary erosion control or with permanent erosion control as soon as possible after grading or construction is complete
3. Disturbed areas will be stabilized with temporary or permanent erosion control before rain events
4. Disturbed areas that are substantially complete will be stabilized with permanent erosion control and vegetation
5. Prior to forecast storm events, temporary erosion control BMPs will be deployed and inspected, as stated in REAP

During Non-rainy season:

1. The project schedule will sequence construction activities with the installation of both erosion control and sediment control measures. The construction schedule will be arranged as much as practicable to leave existing vegetation undisturbed until immediately prior to grading.

Straw Mulch & Soil Binding:

Straw Mulch will be primarily used during rain event to prevent erosion. Soil Binding will be implemented daily during day to day construction.

Velocity Dissipation Devices

Velocity Dissipation Devices will be installed during the installation of drainage devices. It will act as both permanent and temporary erosion control.

500.3.5 Sediment Control

Sediment controls are structural measures that are intended to complement and enhance the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. This project will incorporate sediment control measures required by the contract documents, and other measures selected by the Owner/Developer/Contractor.

Sufficient quantities of temporary sediment control materials will be maintained on-site throughout the duration of the project, to allow implementation of temporary sediment controls in the event of predicted rain, and for rapid response to failures or emergencies, in conformance with other Permit requirements and as described in this SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

Implementation and locations of temporary sediment control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. The BMP Consideration Checklist in Attachment C indicates all the BMPs that will be implemented to control sediment on the construction site; these are:

- SE-1, Temporary Silt Fence
- SE-7, Street Sweeping
- SE-8, Temporary Sanbags
- SE-10 Temporary Drain Inlet Protection
-
-
-

During the rainy season, temporary sediments controls will be implemented at the drainage perimeter of disturbed soil areas, at the toe of slopes, at storm drain inlets and at outfall areas at all times

During the non-rainy season, temporary sediment controls will be implemented at the draining perimeter of disturbed soil areas and at storm drain downstream from disturbed areas before rain events

Silt fence will be deployed along the toe of exterior slopes to filter storm water runoff

Storm drain inlet protection will be used at all operational internal inlets to the storm drain system during the rainy seasons

During the non-rainy seasons, in the event of a predicted storm, siltfence, sandbags and fiber rolls will be maintained onsite.

500.3.6 Tracking Control

The following BMPs have been selected to reduce sediment tracking from the construction site onto private or public roads:

- SE-7, Street Sweeping and Vacuuming
- TC-1, Temporary Construction Entrance
- TC-2, Stabilized Construction Roadway
- TC-3, Entrance/Outlet Tire Wash

SC-7 Street Sweeping

Road sweeping and vacuuming will occur during soil hauling and as necessary to keep streets clear of tracked material and debris. Washing of sediment tracked onto streets into storm drains will not occur.

TC-1 Temporary Constuction Entrance

A stabilized construction entrance/exit will be constructed and maintained at construction site entrances and exists, equipment yard, PCC batch plants, and project office location as shown on site map

TC-2

The construction roadway through the site will also be designed and stabilized to prevent erosion and to control tracking of mud and soil material onto adjacent roads. The roadway will be clearly marked for limited speed to control dust. Refer to the WPCDs for entrance/exist and construction roadway locations. Stabilization material will be 3- to 6-inch crushed aggregate. A regular maintenance program will be conducted to replace sediment-clogged stabilization material with new stabilization material

Entrance/Outlet Tire Wash

An Entrance/outlet tire wash station will be used to ensure that sediment tracking to public streets is minimized

500.3.7 Wind Erosion Control

The following BMPs have been selected to control dust from the construction site:

- WE-1, Wind Erosion Control
-
-

WE-1 Wind Erosion Control

- WATER THE SITE TWICE DAILY INCLUDING THE STOCKPILED DIRT.
- APPLY NON-TOXIC SOIL STABILIZERS TO INACTIVE GRADED AREA.

- PERIODICALLY CLEAN ROADS AT THE END OF DAY IF VISIBLE SOIL IS CARRIED ONTO PAVED ROADS ADJACENT TO THE SITE. IF A WATER SWEEPER IS USED, IT SHALL USED RECLAIMED WATER.
- INSTALL WHEEL WASHERS OR TRUCK-WHEEL VIBRATORS WHERE VEHICLES EXIT THE CONSTRUCTION SITE ONTO PAVED ROADS OR WASH OFF TRUCKS AND ANY EQUIPMENT LEAVING THE SITE EACH TRIP
- APPOINT A CONSTRUCTION RELATIONS OFFICER TO ACT AS COMMUNITY LIAISON FOR ON-SITE CONSTRUCTION ACTIVITY INCLUDING RESOLUTION OF ISSUES RELATED TO PM 10 DUST GENERATION.
- ALL TRUCKS HAULING DIRT, SAND, SOIL, OR OTHER LOSE MATERIALS SHALL BE COVERED.
- TRAFFIC SPEED LIMITS SHALL BE OBSERVED AT ALL TIME.
- THE APPLICANTS SHALL EXPLORE THE FEASIBILITY OF USING RECLAIMED WATER FOR ALL OF THEIR WATERING REQUIREMENTS DURING CONSTRUCTION.
- A HIGH WIND RESPONSES PLAN WILL BE IMPLEMENTED AND ENFORCED DURING GRADING TO REDUCE TRAFFIC SPEEDS TO 5 MPG, REDUCE LOADING OF TRUCKS AND EXCAVATORS TO HALF-LOADS, AND TERMINATE GRADING WHEN WIND EXCEEDS 40 MPH UP TO 20 MPH.
- HEAVY CONSTRUCTION EQUIPMENT SHALL BE PROPERLY TUNED AND MAINTAINED TO REDUCE EMISSIONS. CONSTRUCTION EQUIPMENT SHALL BE FITTED WITH THE MOST MODERN EMISSION CONTROL DEVICES. THE CONSTRUCTION MANAGER SHALL MONITOR COMPLIANCE WITH THIS MEASURE AND IS SUBJECT TO PERIODIC INSPECTIONS BY CITY BUILDING INSPECTORS.
- THE PROJECT SHALL COMPLY WITH RULE 461, WHICH ESTABLISHES REQUIREMENTS FOR VAPOR CONTROL FROM THE TRANSFER OF FUEL FROM THE FUEL TRUCK TO VEHICLES, IF APPLICABLE, BOTH DURING CONSTRUCTION AND SUBSEQUENT OPERATIONS.
- PROVIDE TEMP. TRAFFIC CONTROLS SUCH AS A FLAG PERSON DURING DELIVERY OF HEAVY EQUIPMENT OR BUILDING MATERIALS TO MAINTAIN SMOOTH TRAFFIC FLOW.
- USE ELECTRICITY FROM POWER POLES RATHER THAN TEMPORARY DIESEL OR GAS GENERATORS
- REROUTE HAUL TRACKS AWAY FROM CONGESTED STREETS OR SENSITIVE RECEPTOR AREAS
- NO VEHICLES SHALL IDLE IN EXCESS OF FIVE MINUTES, BOTH ON-SITE AND OFF-SITE.

500.3.8 Non-Storm Water Control

An inventory of construction activities and potential non-storm water discharges is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to control non-storm water pollution on the construction site. Implementation and locations of some non-storm water control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. A narrative description of each BMP follows.

- NS-6, Illicit Connection/Illegal Discharge Detection and Reporting
- NS-8, Vehicle and Equipment Cleaning
- NS-9, Vehicle and Equipment Fueling
- NS-10, Vehicle and Equipment Maintenance
- NS-1, Water Control and Conservation
- NS-2, Dewatering Operation
- NS-3, Paving, Sealing, Sawcutting, and Grinding Operations
- NS-12, Concrete Curing
- NS-13, Concrete Finishing
- NS-14, Concrete Finishing

NS-1 Water Control and Conservation / Potable Water and Irrigation

Water Application rates will be minimized and necessary to prevent runoff and ponding and water equipment leaks will be repaired immediately. The water truck filling area will be stabilized.

Irrigated area within the construction limits will be inspected for excess watering. Watering times and schedules will be adjusted to ensure that the appropriate amount of water is being used and to minimize runoff

NS-1 Dewatering Operation

Dewatering Operation will be implemented for non-stormwater and accumulated precipitation that must be removed from work location

NS-3 Paving, Sealing, Sawcutting, and Grinding Operations

The project will include AC pavement. Paving locations and adjacent storm drain inlets are shown on Attachment B. Paving and Grinding Operations BMPs will be implemented to prevent paving materials from being discharged offsite. Grate inlets protected with sandbags. Following paving operations, the area will be swept, inlet sandbags will be removed, and the inlets will be inspected for paving materials

NS-6 , NS-8, NS-9, NS-10

Several Types of vehicles and equipment will be used onsite throughout the project, including graders, scrapers, excavators, loaders, paving equipment, rollers, trucks and trailers, backhoes, forklifts, generators, compressors, and traffic control equipments.

Vehicle and Equipment Fueling, and Vehicle and Equipment Maintenance BMPs will be utilized to prevent discharges of fuel and other Vehicle fluids. Except for concrete washout, which is addressed in Section 500.3.8.2, vehicle cleaning will not be performed onsite.

A paved temporary fueling area shall be constructed in the contractor's yard. All wheeled vehicles shall be fueled offsite or at the temporary fueling area. Fuel trucks, each equipped with absorbent spill clean-up materials, shall be used for all onsite fueling, whether at the temporary fueling area or for mobile fueling elsewhere on the site. Drip pans shall be used during all mobile fueling. The fueling truck shall be parked on the paved fueling area during overnight storage.

Drip pans or absorbent pads shall be used during all vehicle and equipment maintenance activities that involve grease, oil, solvent, or other vehicle fluids

All vehicle maintenance and mobile fueling operations shall be conducted at least 50 feet away from operational inlets and drainage facilities and on a level graded area.

NS-12, NS-14 Concrete Curing and Finishing

Protect drain inlets prior to the application of curing compounds. Excess cure water and water from high pressure blasting will be collected and disposed of, and will not be allowed to runoff to inlets or swales. Wet blankets will be used wherever possible to eliminate excess cure water.

500.3.9 Waste Management and Materials Pollution Control

An inventory of construction activities, materials, and wastes is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to handle materials and control construction site wastes. A narrative description of each BMP follows.

- WM-1, Material Delivery and Storage
- WM- 2, Material Use
- WM-3, Stockpile Management
- WM-4, Spill Prevention and Control
- WM-5, Solid Waste Management
- WM-9, Sanitary/Septic Waste Management
- WM-8, Concrete Management
- WM-10, Liquid Waste Management
- WM-6 Hazardous Waste Management
- WM-7, Contaminated Soil Management

WM-1, WM-2 Material Delivery, Storage, and Use

In general, BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use. The general material storage area shall be located in the contractor's yard. A sandbag barrier shall be provided around the storage area to prevent run-on from adjacent areas. Two types of storage/containment facilities shall be provided within the storage area to minimize stormwater contact with construction material:

- Two watertight shipping containers shall be used to store and tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents and grease.

- A separate covered storage/containment facility shall be constructed adjacent to the shipping containers to provide storage for larger items such as drums and items shipped or stored on pallets. The containment facility shall consist of a 10 ft by 20 ft raised concrete pad with 5 inch curbed sides. A wood frame and corrugated tin roof and sides shall be constructed to protect the facility from sun and rain. The facility shall provide approximately 530 gallons of containment volume. The containment volume is adequate to store 9, 55 gallon drums and rainfall from a 24-hr, 25-year storm, pursuant to Material Delivery and Storage BMP.

Very large items shall be stored in the open in the general storage area. Such materials shall be elevated with wood blocks to minimize contact with run-on.

Spill clean-up material, material safety data sheets, a material inventory and emergency contact numbers shall be maintained and stored in the southern shipping container.

WM3-3 Stockpile Management

Stockpile Management shall be implemented to reduce or eliminate pollution of stormwater from stockpiles of soil and paving materials such as portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate subbase, pre-mixed aggregate and asphalt binder. Stockpile shall be surrounded with sediment controls (SC-8, sandbags barrier)

WM-4 Soil Prevention and Control.

Spill Prevention and Control shall be implemented to contain and clean-up spills and prevent material discharges to the storm drain system. Spill prevention is also discussed above in the Material Delivery, Storage and Use BMP, and below in the following waste management section.

WM-5, WM-6, Solid and Hazardous Waste Management

Solid Waste Management shall be implemented to minimize storm water contact with waste material and prevent waste discharges. Solid wastes shall be loaded directly onto trucks for offsite disposal. When onsite storage is necessary, solid wastes shall be stored in watertight dumpsters in the general storage area of the contractor's yard. Solid waste including rubble, stockpiles, shall be removed and disposed offsite at least weekly. Liquid hazardous waste shall be stored in the covered containment area discussed above for material storage. Solid hazardous waste shall be stored in the shipping container or in the covered containment area. Hazardous wastes shall be appropriately and clearly marked containers and segregated from other non-waste materials. Wastes shall be stored in sealed containers constructed of a suitable material and shall be labeled.

WM-7, Contaminated Soil Management

Should the soil be contaminated by construction activities, WM-7 will be implemented

WM-8 Concrete Residual and Washout Wastes

Concrete Waste Management shall be implemented in accordance with contract documents, and maintained at the contractor's yard.

Concrete washout facilities shall be designed in accordance with Standard Detail T59. All excess concrete and concrete washout slurries shall be discharged to the washout facility for drying. BMP maintenance, waste disposal, and BMP removal shall be conducted as described in Concrete Waste Management Special Provision

WM-9, Sanitary and Septic Waste

The contractor shall implement Sanitary and Septic Waster Management BMP. Portable toilets shall be located and maintained at the contractor's yard for the duration of the project. Weekly Maintenance shall be provide each Wednesday and waste shall be disposed offsite. The toilets shall be located away from the concentrated flow paths and traffic flow.

WM-10, Liquid Waste Managetment

The contractor shall implement Liquid Waste Management BMP.

500.3.10 Cost Breakdown for Water Pollution Control

A cost breakdown itemizing the contract lump sum for water pollution control has been developed for this project and included in Attachment O. The cost breakdown reflects the items of work, quantities and costs for BMPs shown in the SWPPP, except for those construction site BMPs and permanent BMPs that are shown on the project plans and for which there is a contract item of work.

500.4 Water Pollution Control Drawings (WPCDs)

The Water Pollution Control Drawings can be found in Attachment B of the SWPPP.

500.5 Construction BMP Maintenance, Inspection, and Repair

Inspections will be conducted as follows:

- Prior to a forecast storm
- after a rain event that causes runoff from the construction site
- at 24-hour intervals during extended rain events
- at any other time(s) or intervals of time specified in the contract documents

Completed inspection checklists will be submitted to the RE 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 that identifies deficiencies in BMPs. A program for Maintenance, Inspection and Repair of BMPs is shown in Attachment G.

500.6 Post-Construction Storm Water Management

500.6.1 Post-Construction Control Practices

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

- Energy Dissipater
-
-
-
-
-

Energy Dissipater located at the south eastern part of the site shall be clean prior and after the rainy season

500.6.2 Operation/Maintenance after Project Completion

The post-construction BMPs that are described above will be funded and maintained by The Johnson Family

500.7 Training

Section 300.5 shows the name of the Owner/Developer/Contractor's Storm Water Pollution Prevention Manager (SWPPM). This person has received the following training:

- LIST
-
-
-

The training log showing formal and informal training of various Contractor personnel is shown in Attachment I.

INSERT HERE ANY ADDITIONAL TEXT REGARDING TRAINING OF PERSONNEL.

This SWPPP was prepared by Michael Wu QSD 20254.

500.8 List of Subcontractors

All contractors and subcontractors will be notified of the requirement for storm water management measures during the project. A list of contractors will be maintained and included in the SWPPP. If subcontractors change during the project, the list will be updated accordingly. The subcontractor notification letter and log is included in the SWPPP as Attachment J.

500.9 Other Plans/Permits

Attachment N includes copies of other local, state, and federal plans and permits. Following is a list of the plans and permits included in Attachment N:

- State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity.
- CGP Risk Level 2 Requirements
-

Section 600

Monitoring Program and Reports

600.1 Site Inspections

The Owner/Developer/Contractor will inspect the site prior to a forecast storm, after a rain event that causes runoff from the construction site, at 24-hour intervals during extended rain events, and as specified in the contract documents. The results of all inspections and assessments will be documented, a copy shall be provided to the Owner/Developer/Contractor within 24 hours of the inspection, and copies of the completed inspection checklists will be maintained with the SWPPP. Site inspections conducted for monitoring purposes will be performed using the inspection checklist shown in Attachment H.

The name(s) and contact number(s) of the assigned inspection personnel are listed below:

Assigned inspector: TBD Contact phone: TBD

600.2 Non-Compliance Reporting

If a discharge occurs or if the project receives a written notice of non-compliance, the Contractor will immediately notify the Owner/Developer; will file a written report to the Owner/Developer within 7 days of the discharge or notice; and will file a written report to the Regional Water Quality Control Board (RWQCB) within 30 days of identification of non-compliance. Corrective measures will be implemented immediately following the discharge, notice or order. A sample Notice of Non-Compliance (NONC) form is provided in Attachment K. All discharges shall be documented on a Discharge Reporting Log using the example form in Appendix A, Attachment U.

The report to the Owner/Developer and to the RWQCB will contain the following items:

- The date, time, location, nature of operation, and type of unauthorized discharge, including the cause or nature of the notice or order,
- The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order,
- The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence, and
- An implementation and maintenance schedule for any affected BMPs

600.3 Record Keeping and Reports

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

- Site inspections
- Compliance certifications
- Discharge reports
- Approved SWPPP document and amendments

600.4 Sampling and Analysis Plan for Sediment

This project does not have the potential to discharge directly to a water body listed as impaired due to Sedimentation/Siltation and/or Turbidity pursuant to Clean Water Act, Section 303(d).

600.4.1 Scope of Monitoring Activities

This project discharges directly into [specify 303(d) water body], a water body listed as impaired due to [specify reason(s) for impairment: Sedimentation/Siltation and/or Turbidity] pursuant to Clean Water Act, Section 303(d). This Sampling and Analysis Plan (SAP) has been prepared pursuant to the requirements of the General Permit (including Resolution 2001-046). The SAP describes the sampling and analysis strategy and schedule for monitoring [specify impairment: Sedimentation/Siltation and/or Turbidity] in the 303(d) listed water body and potential increases in the [specify impairment: Sedimentation/Siltation and/or Turbidity] levels caused by storm water discharges from the project site.

The project has the potential for direct (concentrated) storm water discharges to [specify 303(d) water body] at the following locations, as shown on the WPCDs in Attachment B.

-
-
-

The project does not receive run-on with the potential to combine with storm water that discharges directly to the 303(d) listed water body.

The project receives run-on with the potential to combine with storm water that discharges directly to the 303(d) listed water body at the following locations, as shown on the WPCDs in Attachment B:

-
-
-

600.4.2 Monitoring Strategy

Sampling Schedule

Upstream, downstream, discharge, and run-on samples, if applicable, shall be collected for [specify impairment: Sedimentation/Siltation and/or Turbidity] during the first two hours of discharge from rain events that result in a direct discharge from the project site to [enter 303(d) water body]. Samples shall be collected during daylight hours (sunrise to sunset) and shall be collected regardless of the time of the year, status of the construction site, or day of the week.

All storm events that occur during daylight hours will be sampled up to a maximum of four rain events within a 30-day period. In conformance with the U.S. Environmental Protection Agency definition, a minimum of 72 hours of dry weather will be used to distinguish between separate rain events.

Sampling Locations

Sampling locations are based on proximity to identified discharge or run-on location(s), accessibility for sampling, personnel safety, and other factors in accordance with the applicable requirements in the General Permit. Sampling locations are shown on the WPCDs and include:

- A sample location (designated number) is upstream of all direct discharge from the construction site for the collection of a control sample to be analyzed for the prevailing condition of the receiving water without any influence from the construction site. The control sample will be used to determine the background levels of [specify impairment: Sedimentation/Siltation and/or Turbidity] in the 303(d) listed water body upstream of the project, if any.
 - Sample location number is located .
- A sample location (designated number) is immediately downstream from the last point of direct discharge from the construction site for the collection of a sample

to be analyzed for potential increases in [specify impairment: Sedimentation/Siltation and/or Turbidity] in the 303(d) listed water body caused by the storm water discharged from the project, if any.

- Sample location number is located .

- [Enter number of locations] sampling location(s) (designated number(s)) has been identified for the collection of samples of run-on to the project site with the potential to combine with discharges from the construction site in other than MS4 to the 303(d) water body. These samples will identify potential [specify impairment: Sedimentation/Siltation and/or Turbidity] that originates off the project site and contributes to direct storm water discharges from the construction site to the 303(d) listed water body.
 - Sample location number is located .
 - If needed Sample location number is located .
 - If needed Sample location number is located .

600.4.3 Monitoring Preparation

Samples on the project site will Select one of the following Contractor sampling personnel:

Name/Telephone Number:	Name	Phone Number
Name/Telephone Number:	Name	Phone Number
Alternate(s)/Telephone Number:	Name	Phone Number
Alternate(s)/Telephone Number:	Name	Phone Number

Prior to the rainy season, all sampling personnel and alternates will review the SAP. Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

An adequate stock of supplies and equipment for monitoring [specify impairment: Sedimentation/Siltation and/or Turbidity] will be available on the project site or provided by [specify laboratory] prior to a sampling event. Monitoring supplies and equipment will be stored in a cool-temperature environment that will not come into contact with rain or

direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule.

Supplies maintained at the project site will include, but will not be limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, Sampling Activity Log forms, and Chain of Custody (COC) forms. The Contractor will obtain and maintain the field-testing instruments, as identified in Section 600.4.5, for analyzing samples in the field by Contractor sampling personnel. Safety practices for sample collection will be in accordance with the [enter title and publication date of contactor health and safety plan for the project].

Samples on the project site will be collected by the following [specify laboratory or environmental consultant]:

Company Name:

Address:

Telephone Number:

Point of Contact:

Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

SWPPM will contact [specify name of laboratory or environmental consultant] [enter number of hours] hours prior to a predicted rain event to ensure that adequate sample collection personnel, supplies and field test equipment for monitoring [specify impairment: Sedimentation/Siltation and/or Turbidity] are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

[Specify name of laboratory or environmental consultant] will obtain and maintain the field-testing instruments, as identified in Section 600.4.5, for analyzing samples in the field by their sampling personnel.

600.4.4 Sample Collection and Handling

Sample Collection Procedures

Grab samples will be collected and preserved in accordance with the methods identified in Table 600-1, "Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity" provided in Section 600.4.5. Only personnel trained in proper water quality sampling will collect samples.

Upstream samples will be collected to represent the condition of the water body upgradient of the construction site. Downstream samples will be collected to represent the water body mixed with direct flow from the construction site. Samples will not be collected directly from ponded, sluggish, or stagnant water.

Upstream and downstream samples will be collected using one of the following methods:

- Placing a sample bottle directly into the stream flow in or near the main current upstream of sampling personnel, and allowing the sample bottle to fill completely;
- OR,
- Placing a decontaminated or 'sterile' bailer or other 'sterile' collection device in or near the main current to collect the sample, and then transferring the collected water to appropriate sample bottles, allowing the sample bottles to fill completely.

Run-on samples, if applicable, will be collected to identify potential sedimentation/siltation and/or turbidity that originates off the project site and contributes to direct discharges from the construction site to the 303(d) listed water body. Run-on samples will be collected downgradient and within close proximity of the point of run-on to the project by pooling or ponding water and allowing the ponded water to spill over into sample bottles directly in the stream of water.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel will:

- Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location.
- Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample.
- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.
- Not leave the cooler lid open for an extended period of time once samples are placed inside.

- Not touch the exposed end of a sampling tube, if applicable.
- Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.
- Not eat, smoke, or drink during sample collection.
- Not sneeze or cough in the direction of an open sample bottle.
- Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample to take place.
- Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water.
- Dispose of decontamination water/soaps appropriately; i.e., not discharge to the storm drain system or receiving water.

Sample Handling Procedures

Immediately following collection, sample bottles for laboratory analytical testing will be capped, labeled, documented on a Chain of Custody (COC) form provided by the analytical laboratory, sealed in a re-sealable plastic storage bag, placed in an ice-chilled cooler, at as near to 4 degrees Celsius as practicable, and delivered within 24 hours to the following California state-certified laboratory:

Laboratory Name:

Address:

Telephone Number:

Point of Contact:

Immediately following collection, samples for field analysis will be tested in accordance with the field instrument manufacturer's instructions and results recorded on the Sampling Activity Log.

Sample Documentation Procedures

All original data documented on sample bottle identification labels, Chain of Custody forms, Sampling Activity Logs, and Inspection Checklists will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on

an accountable document, the individual will make corrections by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated. Copies of the Sampling Activity Log and Chain of Custody form are provided in Attachment R. Sampling and field analysis activities will be documented using the following:

- Sample Bottle Identification Labels: Sampling personnel will attach an identification label to each sample bottle. At a minimum, the following information will be recorded on the label, as appropriate:
 - Project name
 - Project number
 - Unique sample identification number and location.
[Project Number]-[Six digit sample collection date]-[Location]
(*Example: 0G5304-081801-Upstream*).
 - Quality assurance/quality control (QA/QC) samples shall be identified similarly using a unique sample number or designation
(*Example: 0G5304-081801-DUP1*).
 - Collection date/time (No time applied to QA/QC samples)
 - Analysis constituent

- Sampling Activity Logs: A log of sampling events will identify:
 - Sampling date
 - Separate times for sample collection of upstream, downstream, run-on, and QA/QC samples recorded to the nearest minute
 - Unique sample identification number and location
 - Analysis constituent
 - Names of sampling personnel
 - Weather conditions (including precipitation amount)
 - Field analysis results
 - Other pertinent data

- Chain of Custody (COC) forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.

- Storm Water Quality Construction Inspection Checklists: When applicable, the Contractor's storm water inspector will document on the checklist that samples for sedimentation/siltation and/or turbidity were taken during a rain event.

600.4.5 Sample Analysis

Samples will be analyzed for the constituents indicated in Table 600-1, "Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity".

**Table 600-1
Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity**

Constituent ⁽¹⁾	Analytical Method	Test to be Used?	Sample Preservation	Minimum Sample Volume	Sample Bottle	Maximum Holding Time	Reporting Limit
(a) Suspended Sediment Concentration (SSC)	ASTM D3977-97	<input type="checkbox"/> YES <input type="checkbox"/> <input type="checkbox"/> NO	Store at 4° C (39.2° F)				
(b) Settleable Solids (SS)	EPA 160.5 Std Method 2540(f)	<input type="checkbox"/> YES <input type="checkbox"/> <input type="checkbox"/> NO	Store at 4° C (39.2° F)				mL/L/hr
(c) Total Suspended Solids (TSS)	EPA 160.2 Std Method 2540(d)	<input type="checkbox"/> YES <input type="checkbox"/> <input type="checkbox"/> NO	Store at 4° C (39.2° F)				mg/L
(d) Turbidity	EPA 180.1 Std Method 2130(b)	<input type="checkbox"/> YES <input type="checkbox"/> <input type="checkbox"/> NO	Store at 4° C (39.2° F)				NTU

Notes: ⁽¹⁾ Samples shall be analyzed by using methods (b) and (c), or only method (a)

ASTM - American Society for Testing and Materials
 °C - Degrees Celsius
 °F - Degrees Fahrenheit
 EPA - U.S. Environmental Protection Agency
 L - Liter
 mL/L/hr - Milliliters per liter per hour

mg/L - Milligrams per liter
 mL - Milliliters
 NTU - Nephelometric Turbidity Unit
 Std Method - Per the *Standard Methods for the Examination of Water and Wastewater*, 20th Edition, American Water Works Association

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

The following field instrument(s) will be used to analyzed the following constituents:

Field Instrument	Constituent

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

600.4.6 Quality Assurance/Quality Control

For an initial verification of laboratory or field analysis, duplicate samples will be collected at a rate of 10 percent or 1 duplicate per sampling event. The duplicate sample will be collected, handled, and analyzed using the same protocols as primary samples, and will be collected where contaminants are likely, and not on the upstream sample. A duplicate sample will be collected immediately after the primary sample has been collected. Duplicate samples will not influence any evaluations or conclusions; however, they will be used as a check on laboratory quality assurance.

600.4.7 Data Management and Reporting

A copy of all water quality analytical results and QA/QC data will be submitted to the Owner/Developer within 5 days of sampling (for field analyses) and within 30 days of sampling (for laboratory analyses). Lab reports and COCs will be reviewed for consistency between lab methods, sample identifications, dates, and times for both primary samples and QA/QC samples. All data, including COC forms and Sampling Activity Logs, shall be kept with the SWPPP document.

600.4.8 Data Evaluation

An evaluation of the water quality sample analytical results, including figures with sample locations, will be submitted to the Owner/Developer/Contractor with the water quality analytical results and the QA/QC data for every event that samples are collected. Should the downstream sample concentrations exceed the upstream sample concentrations, the Storm Water Pollution Prevention Manager or other personnel will evaluate the BMPs, site conditions, surrounding influences (including the run-on sample analysis), and other site factors to determine the probable cause for the increase.

As determined by the data and project evaluation, appropriate BMPs will be repaired or modified to mitigate increases in sediment concentrations in the water body. Any revisions to the BMPs will be recorded as an amendment to the SWPPP.

600.4.9 Change of Conditions

Whenever SWPPP monitoring, pursuant to Section B of the General Permit, indicates a change in site conditions that might affect the appropriateness of sampling locations, testing protocols will be revised accordingly. All such revisions will be recorded as amendments to the SWPPP.

600.5 Sampling and Analysis Plan for Non-Visible Pollutants

This Sampling and Analysis Plan (SAP) for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in storm water discharges from the project site and off-site activities directly related to the project, in accordance with the requirements of Section B of the General Permit, including SWRCB Resolution 2001-046.

600.5.1 Scope of Monitoring Activities

The following construction materials, wastes or activities, as identified in Section 500.3.1, are potential sources of non-visible pollutants to storm water discharges from the project. Storage, use, and operational locations are shown on the WPCDs in Attachment B.

- Solvent, Thinners
- Concrete curing
- Soil Stabilizers
- Lime treated subgrade
- Fertilizers, herbicides, and pesticides

The following existing site features, as identified in Section 500.3.3, are potential sources of non-visible pollutants to storm water discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the WPCDs in Attachment B.

- (DESCRIBE)

-
-

The following soil amendments have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil and will be used on the project site. Locations of soil amendment application are shown on the WPCDs in Attachment B.

- (LIST)
-
-

The project has the potential to receive storm water run-on with the potential to contribute non-visible pollutants to storm water discharges from the project. Locations of such run-on to the project site are shown on the WPCDs in Attachment B.

- (LIST LOCATIONS)
-
-

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.

600.5.2 Monitoring Strategy

Sampling Schedule

Samples for the applicable non-visible pollutant(s) and a sufficiently large uncontaminated 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 daylight hours (sunrise to sunset) and shall be collected regardless of the time of year, status of the construction site, or day of the week.

In conformance with the U.S. Environmental Protection Agency definition, a minimum of 72 hours of dry weather will be used to distinguish between separate rain events.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during the required inspections conducted before or during rain events:

- 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 storm water contact and runoff from the storage area.
- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- An operational activity, including but not limited to those in Section 600.5.1, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) applicable 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 sewer system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- Storm water runoff from an area contaminated by historical usage of the site has been observed to combine with storm water runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, personnel safety; and other factors in accordance with the applicable requirements in the Permit. Planned sampling locations are shown on the WPCDs in Attachment B and include the following:

- [Enter number of locations] sampling locations have been identified for the collection of samples of runoff that drain areas where soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil will be applied.
- If applicable Sample location number(s) is located .

- [Enter number of locations] sampling locations have been identified for the collection of samples of runoff that drain areas contaminated by historical usage of the site.
- If applicable Sample location number(s) is located .
- [Enter number of locations] sampling locations have been identified for the collection of samples of run-on to the project site with the potential to combine with discharges being sampled for non-visible pollutants. These samples are intended to identify sources of potential non-visible pollutants that originate off the project site.
- If applicable Sample location number(s) is located .
- A location has been identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location was selected such that the sample will not have come in contact with (1) operational or storage areas associated with the materials, wastes, and activities identified in Section 500.3.1; (2) potential non-visible pollutants due to historical use of the site as identified in Section 500.3.3; (3) areas in which soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied; or (4) disturbed soils areas.
- If applicable Sample location number(s) is located .

If an operational activity or storm water inspection conducted 24 hours prior to or during a rain 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 sewer system that was an unplanned location and has not been identified on the WPCDs, sampling locations will be selected using the same rationale as that used to identify planned locations.

600.5.3 Monitoring Preparation

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

Name/Telephone Number:

Name/Telephone Number:

Alternate(s)/Telephone
Number:

Alternate(s)/Telephone
Number:

Prior to the rainy season, all sampling personnel and alternates will review the SAP. Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool-temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule.

Supplies maintained at the project site will include, but are not limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, Sampling Activity Log forms, and Chain of Custody (COC) forms. The Contractor will obtain and maintain the field-testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by Contractor sampling personnel.

Safety practices for sample collection will be in accordance with the [ENTER TITLE AND PUBLICATION DATE OF CONTRACTOR'S HEALTH AND SAFETY PLAN FOR THE PROJECT OR PROVIDE SPECIFIC REQUIREMENTS HEREIN].

Samples on the project site will be collected by the following [specify laboratory or environmental consultant]:

Company Name:

Address:

Telephone Number:

Point of Contact:

Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

SWPPM will contact [specify name of laboratory or environmental consultant] [enter number of hours] hours prior to a predicted rain event and if one of the triggering conditions is identified during an inspection before, during, or after a storm event to ensure that adequate sample collection personnel, supplies and field test equipment for

monitoring non-visible pollutants are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

[Specify name of laboratory or environmental consultant] will obtain and maintain the field-testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by their sampling personnel.

600.5.4 Analytical Constituents

Identification of Non-Visible Pollutants

Table 600-2 lists the specific sources and types of potential non-visible pollutants on the project site and the applicable water quality indicator constituent(s) for that pollutant.

Table 600-2

Potential Non-Visible Pollutants and Water Quality Indicator Constituents

Pollutant Source	Pollutant	Water Quality Indicator Constituent
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600.5.5 Sample Collection and Handling

Sample Collection Procedures

Samples of discharge will be collected at the designated sampling locations shown on the WPCDs for observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples will be collected and preserved in accordance with the methods identified in the Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants," provided in Section 600.5.6. Only personnel trained in proper water quality sampling will collect samples.

Samples will be collected by placing a separate lab-provided sample container directly into a stream of water downgradient and within close proximity to the potential non-visible

pollutant discharge location. This separate lab-provided sample container will be used to collect water, which will be transferred to sample bottles for laboratory analysis. The upgradient and uncontaminated background samples shall be collected first prior to collecting the downgradient to minimize cross-contamination. The sampling personnel will collect the water upgradient of where they are standing. Once the separate lab-provided sample container is filled, the water sample will be poured directly into sample bottles provided by the laboratory for the analyte(s) being monitored.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel will:

- Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location.
- Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample.
- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.
- Not leave the cooler lid open for an extended period of time once samples are placed inside.
- Not sample near a running vehicle where exhaust fumes may impact the sample.
- Not touch the exposed end of a sampling tube, if applicable.
- Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.
- Not eat, smoke, or drink during sample collection.
- Not sneeze or cough in the direction of an open sample bottle.
- Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample to take place.
- Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water.
- Dispose of decontamination water/soaps appropriately; i.e., not discharge to the storm drain system or receiving water.

Sample Handling Procedures

Immediately following collection, sample bottles for laboratory analytical testing will be capped, labeled, documented on a Chain of Custody form provided by the analytical laboratory, sealed in a re-sealable storage bag, placed in an ice-chilled cooler, at as near to 4 degrees Celsius as practicable, and delivered within 24 hours to the following California state-certified laboratory:

Laboratory Name:

Address:

Telephone Number:

Point of Contact:

Immediately following collection, samples for field analysis will be tested in accordance with the field instrument manufacturer's instructions and results recorded on the Sampling Activity Log.

Sample Documentation Procedures

All original data documented on sample bottle identification labels, Chain of Custody forms, Sampling Activity Logs, and Inspection Checklists will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on an accountable document, the individual will make corrections by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated. Copies of the Sampling Activity Log and Chain of Custody form are provided in Attachment R.

Sampling and field analysis activities will be documented using the following:

- **Sample Bottle Identification Labels:** Sampling personnel will attach an identification label to each sample bottle. At a minimum, the following information will be recorded on the label, as appropriate:
 - Project name
 - Project number
 - Unique sample identification number and location.
[Project Number]-[Six digit sample collection date]-[Location]
(Example: 0G5304-081801-Inlet472).

Quality assurance/quality control (QA/QC) samples shall be identified similarly using a unique sample number or designation

(Example: 0G5304-081801-DUP1).

- Collection date/time (No time applied to QA/QC samples)
- Analysis constituent

■ Sampling Activity Logs: A log of sampling events will identify:

- Sampling date
- Separate times for collected samples and QA/QC samples recorded to the nearest minute
- Unique sample identification number and location
- Analysis constituent
- Names of sampling personnel
- Weather conditions (including precipitation amount)
- Field analysis results
- Other pertinent data

■ Chain of Custody (COC) forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.

■ Storm Water Quality Construction Inspection Checklists: When applicable, the Contractor's storm water inspector will document on the checklist that samples for non-visible pollutants were taken during a rain event.

600.5.6 Sample Analysis

Samples will be analyzed for the applicable constituents using the analytical methods identified in Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants" in this section.

Constituent	Analytical Method	Minimum Sample Volume	Sample Bottle	Sample Preservation	Reporting Limit	Maximum Holding Time
Notes:						

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

The following field instrument(s) will be used to analyzed the following constituents:

Field Instrument	Constituent

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

600.5.7 Quality Assurance/Quality Control

For an initial verification of laboratory or field analysis, duplicate samples will be collected at a rate of 10 percent or 1 duplicate per sampling event. The duplicate sample will be collected, handled, and analyzed using the same protocols as primary samples. A duplicate sample will be collected at each location immediately after the primary sample has been collected. Duplicates will be collected where contamination is likely, not on the background sample. Duplicate samples will not influence any evaluations or conclusions; however, they will be used as a check on laboratory quality assurance.

600.5.8 Data Management and Reporting

A copy of all water quality analytical results and QA/QC data will be submitted to the Owner/Developer within 5 days of sampling (for field analyses) and within 30 days (for laboratory analyses).

Lab reports and COCs will be reviewed for consistency between lab methods, sample identifications, dates, and times for both primary samples and QA/QC samples. All data, including COC forms and Sampling Activity Logs, shall be kept with the SWPPP.

600.5.9 Data Evaluation

An evaluation of the water quality sample analytical results, including figures with sample locations, will be submitted to the Owner/Developer with the water quality analytical results and the QA/QC data.

Should the runoff/downgradient sample show an increased level of the tested analyte relative to the background sample, the BMPs, site conditions, and surrounding influences will be assessed to determine the probable cause for the increase. As determined by the site and data evaluation, appropriate BMPs will be repaired or modified to mitigate discharges of non-visual pollutant concentrations. Any revisions to the BMPs will be recorded as an amendment to the SWPPP.

600.5.10 Change of Conditions

Whenever SWPPP monitoring, pursuant to Section B of the General Permit, indicates a change in site conditions that might affect the appropriateness of sampling locations or introduce additional non-visible pollutants of concern, testing protocols will be revised accordingly. All such revisions will be recorded as amendments to the SWPPP.