

**STORM WATER POLLUTION PREVENTION PLAN
(SWPPP)
RISK LEVEL 2**

Date: April 2016

Waste Discharge Identification Number: 201C375895

for

THE BUNGALOWS

***1233 Bockman Road
San Lorenzo
Alameda County, California***

Prepared For:

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SWPPP CERTIFICATION BY QUALIFIED SWPPP DEVELOPER (QSD)

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 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.

The SWPPP was prepared in accordance with the requirements of the National Pollution Discharge Elimination System (NPDES) General Permit for Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended by Order 2010-0014-DWG. Said permit, by reference, is considered, in whole, as a part of this SWPPP. It is the responsibility of the Legal Responsible Person, Owner/Developer and Qualified SWPPP Practitioner to understand and comply with all conditions of said permit.



Mark Falgout, R.C.E #63394
(925) 227-9100



Date

SECTION 1 SWPPP REQUIREMENTS

1.1 Introduction

The project is located in San Lorenzo, an unincorporated community of Alameda County, California (see Vicinity Map in Appendix B). The project is bordered by Bockman Road on the south, residential houses along Via Del Rey on the west, and residential houses along Via Chiquita on the east. The Owner/Developer is San Lorenzo Res, LLC. who will be the legally responsible person and Dettaglio Construction, Inc (DCI) will be the general contractor overseeing the proposed construction and implementing the required erosion and sediment control measures and meet the requirements of the construction general permit and the SWPPP.

This SWPPP has been prepared to comply with the California's General Permit for *Storm Water Discharges Associated with Construction and Land Disturbance Activities* (General Permit), State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ. A copy of the General Permit has been provided in Appendix A, along with Attachment D-Risk Level 2 Requirements.

The major objectives of the SWPPP as identified in the General Permit (Section XIV.A) are as follows:

"The discharger shall ensure that the SWPPP's for all traditional project sites are developed and amended or revised by a QSD. The SWPPP shall be designed to address the following objectives:

1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity is controlled;
2. Where not otherwise required to be under a Regional Water Quality Control Board (RWQCB) permit, all non-storm water discharges are identified and either eliminated, controlled, or treated;
3. Site BMP's are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard;
4. Calculations and design details as well as BMP controls for site run-on are complete and correct, and
5. Stabilization BMP's installed to reduce or eliminate pollutants after construction is completed."

1.2 Permit Registration Documents

The Permit Registration Documents (PRD's) were submitted on March 16, 2016. A copy of the PRD's is included in Appendix B. Appendix B includes the Notice of Intent (NOI), Risk Assessment, Vicinity Map, Site Map – Erosion Control Plan, WDID confirmation, Annual Fee, signed Certification Statement and Annual Report.

1.3 SWPPP Availability and Implementation

The SWPPP shall be 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 crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMP's and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

1.4 SWPPP Amendments

Amendments provide a chronology and summary of changes that have been made to the SWPPP. All amendments should be dated and directly attached to the SWPPP with an assigned amendment number. Notation should be made over the original inscription that will notify the reader to analyze the amendment page for the proper superseding information, narration, direction, and/or plan.

General Instructions

1. Specify the location of the proposed change, and show it on the Site Map. Use landmarks, street names and other reference points to help identify the location. Include any approximate station and offset.
2. Describe existing conditions, including the type and placement of all materials. What area and/or control measures are involved? What BMP was originally proposed or implemented?
3. Clearly answer the following questions: What led to this amendment? For example, was there a change in construction or operation? Was a BMP not functioning adequately? Was a situation not foreseen? Who requested the amendment?
4. Clearly answer the following questions: What is the new proposal? What BMP is now proposed? What work will be done? Briefly describe the type and placement of materials. How is the new proposal an improvement over the original proposal?
5. Make specific references to the Storm Water Pollution Prevention Plan, as appropriate.
6. Include plans for design changes.
7. The QSD is responsible for amending the SWPPP. Depending on who prepares the amendment, attach a signed copy of the appropriate certification page at the beginning of the amendment.
8. A Record of Amendments should be listed on Sheet C-1 in Appendix C. Add additional pages as necessary. The description may be brief and complete (for simple amendments) or may refer to a drawing attached to the SWPPP, if necessary.

9. A Memorandum of Amendment (Sheet C-2) should be completed and sent to all holders of this SWPPP, and filed with this SWPPP.

1.5 Retention of Record

The General Permit (Section IV.6) requires the Owner/Developer maintain a paper or electronic copy of all required records, including a copy of the General Permit, for three years from the date generated or date submitted, whichever comes last. The records shall be available at the construction site until construction is complete and then moved to the Owner/Developer's office.

The Owner/Developer shall furnish the RWQCB, SWRCB, or US Environmental Protection Agency (EPA) within a reasonable time, any requested information to determine compliance with the General Permit. The Owner/Developer shall also furnish, upon request, copies of records that are required to be key by the General Permit.

1.6 Required Non-Compliance Reporting

The General Permit (Section I.J) requires the Owner/Developer provide visual monitoring of storm water and non-storm water discharges. The Owner/Developer shall electronically self-report any discharge violations and comply with any RWQCB enforcement actions. The Owner/Developer shall give advance notice to the RWQCB and local storm water management agency of any planned changes in the construction activity which may result in non-compliance with the General Permit.

1.7 Annual Report

An Annual Report shall be electronically submitted no later than September 1st of each year. The Annual Report shall be certified and submitted by the Legally Responsible Person (LRP) or the LRP's approved signatory.

The Annual Report shall include all the following:

1. A summary of all corrective actions taken during the compliance year.
2. Identification of any compliance activities or corrective actions that were implemented.
3. A summary of all violations of the General Permit.
4. The names of individual(s) who performed the facility inspections, sampling, visual observations (inspections), and/or measurements.
5. The date, place, time of facility inspections, sampling, visual observations (inspections), and/or measurements, including precipitation (air gauge).
6. The visual observation, sample collection and exception records as specified in the General Permit, Attachment D (Risk Level 2).
7. A summary and evaluation of all sampling and analysis results, including copies of laboratory reports (Level 2 and 3).
8. The analytical method(s), method reporting unit(s), and method detecting limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit").

The Annual Report provides documentation of all training for individuals responsible for all activities associated with compliance with the General Permit. That includes individuals responsible for BMP installations, inspection, maintenance and repair and individuals responsible for overseeing, revising, and amending the SWPPP. Copies of the Annual Reports are included in Appendix B.

1.8 Changes to Permit Coverage

The General Permit (Section II.C) allows the Owner/Developer to reduce or increase the total acreage covered under the General Permit. There are three opportunities to make changes:

1. A portion of the project is complete and/or conditions for termination have been met.
2. Ownership of a portion of the project is sold to a different entity.
3. New area is added to the project.

Changes to permit coverage must be filed electronically including a revised NOI, site map, SWPPP revisions and certification that new land owners have been notified of applicable requirements to obtain permit coverage. Name, address, phone number, and e-mail must be provided of new land owner. The General Permit requires changes to permit coverage be submitted within 30 days of the area increase or reduction. The updates to the PRD's shall be placed in Appendix E.

1.9 Notice of Termination

Notice of Termination (NOT) shall be submitted electronically via SMARTS. A "Final Site Map" and photos are required to be submitted with the NOT. Filing a NOT certifies that all General Permit requirements have been met. The RWQCB will consider a construction site complete only when all portions of the site have been transferred to a new owner, or all of the following conditions have been met.

1. For purposes of "final stabilization," the site will not pose any additional sediment discharge risk other than it did prior to the commencement of construction activity.
2. There is no potential for construction-related storm water pollutants to be discharged into site runoff.
3. Final stabilization has been reached.
4. Construction materials and waste have been disposed of properly.
5. Compliance with the Post-Construction Standards in Section XIII of the General Permit has been demonstrated.
6. Post-Construction storm water management measures have been installed and a long-term maintenance plan has been established.
7. All construction-related equipment, materials and any temporary BMP's no longer needed are removed from the site.

The Owner/Developer shall certify that final stabilization conditions are satisfied in the NOT. Failure to certify shall result in continuation of permit coverage and annual billing. The NOT must demonstrate through photos, RUSLE or RUSLE2, or results of testing and analysis that the site meets all of the conditions above. Proof of final stabilization is attained by one of the following methods:

1. 70% final cover method – no calculations required.
2. RUSLE or RUSLE2 – calculations required.
3. “Custom Method” – The Owner/Developer shall demonstrate by another means that the site complies with the “final stabilization” as required in the General Permit (Section II.D.1.a).

SECTION 2 PROJECT INFORMATION

2.1 Project and Site Description

2.1.1 Project History

The project applicant, San Lorenzo Res, LLC proposes to redevelop the subject property to 53 condominium units, as shown on Site 2 of the Vesting Tentative Map for Tract 7623 that was approved in April 2006. The project site had a two-story commercial building that was built in 1951 and was demolished in 2007. The site is currently vacant with asphalt pavements and ground cover consisting of various amounts of debris and dense vegetation. This SWPPP is being prepared to cover grading of the site and construction of streets, utilities and homes.

2.1.2 Project Location

The project is located at 1233 Bockman Road, San Lorenzo, Alameda County, California (see Vicinity Map in Appendix B). Assessor's Parcel Number for the project site is 411-0063-017. The site is bound by Bockman Road to the south. Properties to the west and north of the site consist of residential properties along Via Del Rey. Residential properties are also located to the east of the site, along Via Chiquita.

2.1.3 Project Type and Size

The total project site area is approximately 4.3 acres. The project will be permitted through the County of Alameda and associated agencies. The project will establish 10 condominium buildings with 53 two-story residential units. Associated improvements will include streets, underground utilities and landscape areas. Reference the Rough Grading Plans, Improvement Plans and Storm Water Management Plan for additional project details.

2.1.4 Site Map (Erosion Control Plan)

The site map (Erosion Control Plan) shows the current site plan with proposed Best Management Practices (BMP's) to minimize sediment laden runoff from discharging offsite during construction is included in Appendix B for reference. The proposed erosion control and sediment control measures will include, but not limited to, temporary construction entrance, straw wattles, inlet protection and hydroseeding, if required. The site discharges into an existing storm drain system at Bockman Road.

2.1.5 Phasing/Start of Construction

Demolition and grading activities are anticipated to begin April 2016 and site infrastructure improvements will begin June 2016. The project will be constructed in one phase.

2.1.6 Estimated Completion Date

Grading activities are anticipated to be completed in May 2016. Site infrastructure

improvements are anticipated to be substantially completed by May 2017. This SWPPP will be updated annually to reflect the site conditions at that time and the anticipated work.

2.1.7 Unique Features or Related Projects

The site topography currently slopes across the site, generally from the northeast down to the southwest and toward Bockman Road, which traverses along the southerly property line. The subsurface soil consists of medium stiff to very stiff clay, clay with sand and sandy clay with interbedded layers of loose to dense sand and silty sand.

2.2 Storm water Run-on from Offsite Areas

The General Permit (Section XIV.A.4) requires that the SWPPP address calculations and BMP controls for site run-on. Straw wattles, earth swales and underground storm drain pipes will be used to divert run-on away from the disturbed areas.

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

Figure 2.1 RUSLE Equation

R	K	LS	Watershed Erosion Estimate (tons / acreage)	Sediment Risk
48.28	0.32	0.49	7.57	Low

This section of the SWPPP summarizes the assumptions and input parameters and finding of the sediment and receiving water risk assessment, including the resulting site risk level. The output from the Risk Determination Worksheet is found in Appendix B.

The site specific Rainfall Erosivity Factor Calculator for Small Construction Sites was used to determine the Risk factor, R. Tentative construction dates from March 2016 to March 2017 input to the calculator gave an R factor value of 48.28. The project site is made up of medium stiff to very stiff clay. The K factor of 0.32 and the LS factor of 0.49 were determined based on Google “GIS” map.

The project site discharges into San Francisco Bay, which is a 303(d) listed body of water and therefore has a high receiving water risk factor.

The project site is a Risk Level 2 site. This SWPPP has been prepared to comply with the Risk Level 2 requirements of the Construction General Permit and as follows:

Risk Level 2- dischargers shall comply with the narrative effluent standards listed below:

1. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

2. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

Risk level 2 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

2.4 Construction Schedule

The projects construction schedule is included in Appendix F. Refer to Sections 2.1.5 and 2.1.6 for estimated start and completion dates.

2.5 Potential Construction Site Pollutant Sources

Pollutants other than sediments are found on construction sites. Appendix G includes practices to minimize contact with storm water from potential pollutant sources. The following is a list of potential chemicals / toxic materials, which may be used at the project site.

- Adhesive
- Asbestos
- Cleaners
- Coolants
- Curing Compounds
- Fertilizers
- Gypsum
- Insulation
- Lumber Treatment Products
- Masonry and Concrete
- Metals
- Paint products
- PCB's (from older transformers)
- Plaster
- Pesticides/Herbicides
- Petroleum Products
- Plumbing Products
- Polishes
- Sandblasting Grit
- Sanitary (septic) Fluids
- Sealing Agents
- Soil Amendments

The project site will be an active construction zone. During construction, additional BMP's are necessary to reduce or prevent pollutants in discharges. The following is a list of areas/activities where pollutant discharges are possible and shall be treated with a BMP:

- Material delivery and storage
- Material use
- Solid waste management
- Dewatering operations
- Paving and grading operations
- Potable water/irrigation
- Vehicle and equipment cleaning
- Vehicle and equipment fueling
- Vehicle and equipment maintenance
- Pole driving operations
- Concrete curing
- Concrete finishing
- Demolition adjacent to water
- Temporary Batch Plats
- Stockpile management
- Hazardous waste management
- Contaminated soil management
- Concrete waste management
- Sanitary (septic) waste management

2.6 Identification of Non-Storm water Discharges

No toxic materials are known to have been treated, stored, disposed, spilled, or leaked onto the construction site. Toxic materials include toxic chemicals, listed in the Code of Federal Regulations (40 CFR 372), requiring reporting on EPA Form R; and oil or hazardous substances in excess of reportable quantities, as specified on 40 CFR 110, 117 and 302. The predominant land use at the site is vacant.

SECTION 3 BEST MANAGEMENT PRACTICES

3.1 Schedule for BMP Implementation

BMP's must be implemented, modified and maintained to reflect the phase of construction and the weather conditions. All BMP's shall be implemented prior to the start of construction. Once construction has started, the QSP is responsible for directing BMP installation and maintenance during the phases of construction. The QSP shall document amendments to the SWPPP and update the SWPPP site map as necessary. Inactive areas on the construction site that have been disturbed and are not scheduled to be re-disturbed for at least 14 days shall have effective soil cover implemented.

3.2 Erosion Control and Sediment Control

The project site shall have erosion and sediment control devices in place to meet the General Permit requirements. The site's BMP's must be effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from construction activity to the BAT/BCT standard. These BMP's address erosion, sediment, wind and tracking controls. Once construction is complete, the BMP's installed shall be stabilized to reduce or eliminate pollutants. See Table 3.1 for BMP's that shall be installed on the project site. The selected BMP's meet the requirements for Risk Level 2 as required in the General Permit and are shown on the Site Map. The BMP fact sheets from the CASQA Construction Handbook are included in Appendix H and referenced in Table 3.1.

Table 3.1 Erosion and Sediment BMP's

Project Site BMP's	PRIMARY BMP CATEGORY				CASQA Construction Handbook Fact Sheet
	Erosion	Sediment	Wind	Tracking	
Hydroseeding	x				EC-4
Fiber Rolls (Straw Waddle)		x			SE-5
Street Sweeping and Vacuuming		x			SE-7
Storm Drain Inlet Protection		x			SE-10
Wind Erosion Control			x		WE-1
Stabilized Construction Entrance / Exit				x	TC-1

3.3 Non-Storm Water and Material Management

The project site shall have non-storm water BMP's in place to meet General Permit requirements. The site's non-storm water BMP's shall effectively reduce pollutants associated with material storage, material use, waste management and reduce/properly manage "non-storm water" that is used or generated on site. This SWPPP satisfies the General Permit requirement that a SWPPP be designed to identify all non-storm water discharges (where not otherwise required to be under a Regional Water Quality permit) and that discharges be eliminated, controlled or treated. (See Table 3.2.) The selected non-storm water BMP's meet the minimum requirements for Risk Level 2 and prevent pollutants associated with construction activities as required in the General Permit. See Table 3.2 for non-storm water BMP's that shall be installed on the project site.

The non-storm water BMP's fact sheets from the CASQA Construction Handbook are included in Appendix H and referenced in Table 3.2.

Table 3.2 Non-Stormwater BMP's

Project Site BMP's	PRIMARY BMP CATEGORY		CASQA Construction Handbook Fact Sheet
	Non-Stormwater Management	Waste Management and Materials Pollution	
Paving and Grinding Operations: Avoid paving during the wet season if feasible. Train employees and subcontractors in pollution prevention and reduction. Store materials away from drainage courses and protect water courses.	X		NS-3
Never clean machinery, equipment, tools, brushed or rinse containers into a street gutter or storm drain.	X		NS-8
Concrete wash area: Locate wash out areas away from the storm drains and open ditches, construct a temporary pit large enough to store the liquid and solid waste, clean pit by allowing concrete to set, breaking up the concrete, then recycling or disposing of properly.	X		NS-8
Equipment fueling area: Use off-site fueling station as much as possible. There on-site fueling occurs, use designated areas away from the storm drainage facility, use secondary containment and spill rags when fueling, discourage "topping off" of fuel tanks, place a stockpile of absorbent material where it will be readily accessible, and check vehicles and equipment regularly for leaking oils and fuels. Dispose rages and absorbent materials promptly and properly.		X	NS-9
Equipment and vehicle maintenance area: Use off-site repair shop as much as possible. For on-site maintenance, use designated areas away from the storm drainage facility. Always use secondary containment and keep stockpile of cleanup materials nearby. Regularly inspect vehicles and	X		NS-10

equipment for leaks and repair quickly or remove from the project site. A regular program of inspecting vehicles for leaks and spills, and of sweeping/vacuuming, litter control, and spill cleanup shall be implemented. Train employees on spill cleanup procedures.			
Concrete Curing: Avoid overspray of curing compound and minimize the drift by applying curing compound close to concrete surface. Use proper storage and handling techniques for curing compounds.	X		NS-12
Concrete Finishing: collect at the top of slopes and properly dispose of water from water blasting operations. Direct water from blasting operations away from inlets and protect inlets. Keep blasting nozzle close to surface to minimize drift of dust and blast materials.	X		NS-13
Material Over Water: Place drip pans under all vehicles and equipment. Provide watertight curbs or toe boards to contain spills and prevent materials, tools and debris from leaving the storage site.	X		NS-14
Create a contained and covered area on the site for the storage of cement, paints, oils, fertilizers, pesticides, or other materials used on the site that have the potential of being discharged into the storm drain system through being windblown or in the event of a material spill.		X	WM-1
Material Use: Follow manufacturer instructions regarding uses of material and equipment. Train personnel for proper use of pesticides. Do not over-apply fertilizers, herbicides, and pesticides.		X	WM-2
Stockpile management: Protect stockpiles year-round. Protect stockpiles with perimeter sediment barriers and implement wind erosion control practices.		X	WM-3
Spill Prevention and Control: Educate employees and subcontractors on spill prevention and control and dangers of		X	WM-4

spills and leaks to humans and environment. Store hazardous materials in covered containers.			
Gather all construction debris on a regular basis and place it in the appropriate container for recycling to be emptied on a weekly basis. Use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater runoff pollution.		X	WM-5
Ensure that concrete/gunite supply trucks or concrete/plaster operations do not discharge wash water into street, gutters, or storm drains.		X	WM-8
Sanitary / Septic Waste Management: Temporary sanitary facilities should be kept away from watercourses and traffic and equipped with containment. Regular waste collection should be arranged.		X	WM-9
Portable toilets used during construction shall be emptied on a regular basis	X		
Remove all dirt, gravel, rubbish, refuse and green waste from street pavement and storm drains adjoining the site. Limit construction access routes onto the site and place gravel on them. Do not drive vehicles and equipment off paved or gravel areas during wet weather. Broom sweep the street pavement adjoining the project site on a daily basis. Scrape caked-on mud and dirt from these areas before sweeping.		X	

3.4 Post-Construction Storm water Management Measures

The effective date for post-construction BMP's is March 1, 2017. The following post-construction BMP's are included:

- On-site storm drain inlets clearly marked and maintained with the words "No Dumping – Drains to Bay."
- Proper maintenance of landscaping, with minimal pesticide and fertilizer use.
- Ensure wastewater from vehicle and equipment washing operations is not discharged to the storm drain system.

- Ensure that no person shall dispose of, nor permit the disposal, directly or indirectly, of vehicle fluids, hazardous materials or rinse water from cleaning tools, equipment or parts into storm drains.
- Clean all on-site storm drains at least twice a year with one cleaning immediately prior to the rainy season. The County may require additional cleanings.
- Regularly but not less than once a month, sweep driveways, sidewalks and paved areas to minimize the accumulation of litter and debris. Corners and hard to reach areas shall be swept manually. Debris from pressure washing shall be trapped and collected to prevent entry into storm drain system. Wastewater containing any soap, cleaning agent or degreaser shall not be discharged into the storm drain.
- Bioretention or vegetated swales with grasses shall be mowed and clippings removed on a regular basis.
- Design landscaping to minimize irrigation and runoff, promote surface infiltration and minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.
- Select plant materials to site specific characteristics such as soil type, topography, climate, amount and timing of sunlight, prevailing winds, rainfall, air movement, patterns of land use, ecological consistency and plant interactions to ensure successful establishment.
- Landscaping shall comply with County of Alameda ordinances and policies regarding water conservation.

SECTION 4 BMP INSPECTION, MAINTENANCE, AND RAIN EVENT ACTION PLANS (REAP)

4.1 BMP Inspection and Maintenance

The project site shall be inspected a minimum of once a week per General Permit requirements. During rain events, the site shall be inspected daily. Blank and completed "Routine Inspection Forms" are included in Appendix I. If a deficiency is detected during an inspection, corrective actions shall be implemented within 72 hours. SWPPP amendments shall be prepared by the QSD if warranted by the problem encountered and corrective action required.

The Owner/Developer shall ensure that all inspection, maintenance, repair and sampling activities at the project site be performed or supervised by a QSP representing the Owner/Developer. The QSP may delegate any or all these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment.

4.2 Rain Event Action Plans (REAP)

REAP's are not required for Risk Level 1 discharges.

REAP's shall be developed by a QSP for all Risk Level 2 and 3 discharges for each construction phase. Appendix J includes a REAP template and completed REAP's. A REAP is customized for each rain event depending on the phase of construction. The QSP must develop the REAP 48-hours in advance of any precipitation event forecast to have a 50% or greater chance of producing precipitation in the project area. The REAP must be on site and be implemented 24 hours in advance of any predicted precipitation event.

The QSP shall obtain a printed copy of precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at <http://www.srh.noaa.gov/forecast>).

SECTION 5 TRAINING

All elements of this SWPPP have been developed by the QSD and shall be implemented by a QSP. The QSP may delegate any or all tasks to an employee appropriately trained to do the task(s).

The Owner/Developer ensures that all persons responsible for implementing requirements of the General Permit are appropriately trained in accordance with Section VII of the General Permit. Training shall be both formal and informal, occurring on an ongoing basis and include training offered by a recognized governmental agency or professional organization. Training documentation shall be added to Appendix K and also be submitted with the Annual Report. SWPPP certification requirements for QSD's and QSP's are included in Appendix K.

SECTION 6 RESPONSIBLE PARTIES AND OPERATORS

6.1 Responsible Parties

A list of authorized representatives has been provided in Appendix L.

The LRP has designated an “Approved Signatory” and a copy of that written agreement or other mechanism that provides authority from the LRP has been provided in Appendix L.

Training documentation for the QSD and QSP has been provided in Appendix K.

6.2 Contractor List

The following list shows the types of Contractors and Sub-contractors that may be employed on the site. Names and contact information on each individual Contractor is not known at the time of completing this SWPPP. A blank contractor list is included in Appendix M and names can be added as contractors join the project team.

- Appliances
- Appliance
- Cabinets
- Cabinet Tops
- Carpentry (rough)
- Carpentry (finish)
- Ceramic Tile
- Clean up
- Concrete
- Concrete Walls
- Deck Coating
- Driveways
- Drywall
- Electrical
- Fencing
- Fireplace
- Fire Sprinklers
- Flooring
- Garage
- Geotechnical Engineering
- Doors
- Glass Block
- Grading
- Hardware
- HVAC
- Insulation
- Landscaping
- Lumber/Trusses
- Mantles
- Marble
- Masonry
- Millwork
- Mirrors
- Ornamental Iron
- Painting
- Paving
- Pipeline
- Plaster
- Plumbing
- Post Tensioning
- Public Utility
- Trenching
- Roofing
- Stairs/Railings
- Termite Control
- Shelving
- Windows

SECTION 7 CONSTRUCTION SITE MONITORING PROGRAM

The purpose of the Construction Site Monitoring Program (CSMP) is to address the following objectives:

- To demonstrate that the site is in compliance with the applicable discharge prohibitions, Numeric Action Levels (NAL's), or Numeric Effluent Limitations (NEL's);
- To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
- To determine whether immediate corrective actions, additional BMP implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges; and
- To determine whether BMP's included in the SWPPP and/or Rain Event Action Plan (REAP) are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges

The CSMP in Appendix N meets the requirements and objectives identified in the General Permit (Attachment D; Section I.1.a.) for Risk Level 2

APPENDIX A
CONSTRUCTION GENERAL PERMIT



Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board



Arnold Schwarzenegger
Governor

Division of Water Quality

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE
ACTIVITIES

ORDER NO. 2009-0009-DWQ
NPDES NO. **CAS000002**

This Order was adopted by the State Water Resources Control Board on:	September 2, 2009
This Order shall become effective on:	July 1, 2010
This Order shall expire on:	September 2, 2014

IT IS HEREBY ORDERED, that this Order supersedes [Order No. 99-08-DWQ](#) except for enforcement purposes. The Discharger shall comply with the requirements in this Order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on September 2, 2009.

AYE: Vice Chair Frances Spivy-Weber
Board Member Arthur G. Baggett, Jr.
Board Member Tam M. Doduc

NAY: Chairman Charles R. Hoppin

ABSENT: None

ABSTAIN: None

Jeanine Townsend
Clerk to the Board

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Appendix 2 – Post-Construction Water Balance Performance Standard
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**STATE WATER RESOURCES CONTROL BOARD
ORDER NO. 2009-0009-DWQ
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
GENERAL PERMIT NO. CAS000002**

**WASTE DISCHARGE REQUIREMENTS
FOR
DISCHARGES OF STORM WATER RUNOFF ASSOCIATED WITH
CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES**

I. FINDINGS

A. General Findings

The State Water Resources Control Board (State Water Board) finds that:

1. The federal Clean Water Act (CWA) prohibits certain discharges of storm water containing pollutants except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit (Title 33 United States Code (U.S.C.) §§ 1311 and 1342(p); also referred to as Clean Water Act (CWA) §§ 301 and 402(p)). The U.S. Environmental Protection Agency (U.S. EPA) promulgates federal regulations to implement the CWA's mandate to control pollutants in storm water runoff discharges. (Title 40 Code of Federal Regulations (C.F.R.) Parts 122, 123, and 124). The federal statutes and regulations require discharges to surface waters comprised of storm water associated with construction activity, including demolition, clearing, grading, and excavation, and other land disturbance activities (except operations that result in disturbance of less than one acre of total land area and which are not part of a larger common plan of development or sale), to obtain coverage under an NPDES permit. The NPDES permit must require implementation of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate pollutants in storm water runoff. The NPDES permit must also include additional requirements necessary to implement applicable water quality standards.
2. This General Permit authorizes discharges of storm water associated with construction activity so long as the dischargers comply with all requirements, provisions, limitations and prohibitions in the permit. In addition, this General Permit regulates the discharges of storm water associated with construction activities from all Linear Underground/Overhead Projects resulting in the disturbance of greater than or equal to one acre (Attachment A).

3. This General Permit regulates discharges of pollutants in storm water associated with construction activity (storm water discharges) to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface.
4. This General Permit does not preempt or supersede the authority of local storm water management agencies to prohibit, restrict, or control storm water discharges to municipal separate storm sewer systems or other watercourses within their jurisdictions.
5. This action to adopt a general NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21100, et seq.), pursuant to Section 13389 of the California Water Code.
6. Pursuant to 40 C.F.R. § 131.12 and State Water Board [Resolution No. 68-16](#),¹ which incorporates the requirements of § 131.12 where applicable, the State Water Board finds that discharges in compliance with this General Permit will not result in the lowering of water quality standards, and are therefore consistent with those provisions. Compliance with this General Permit will result in improvements in water quality.
7. This General Permit serves as an NPDES permit in compliance with CWA § 402 and will take effect on July 1, 2010 by the State Water Board provided the Regional Administrator of the U.S. EPA has no objection. If the U.S. EPA Regional Administrator objects to its issuance, the General Permit will not become effective until such objection is withdrawn.
8. Following adoption and upon the effective date of this General Permit, the Regional Water Quality Control Boards (Regional Water Boards) shall enforce the provisions herein.
9. Regional Water Boards establish water quality standards in Basin Plans. The State Water Board establishes water quality standards in various statewide plans, including the California Ocean Plan. U.S. EPA establishes water quality standards in the National Toxic Rule (NTR) and the California Toxic Rule (CTR).

¹ Resolution No. 68-16 generally requires that existing water quality be maintained unless degradation is justified based on specific findings.

10. This General Permit does not authorize discharges of fill or dredged material regulated by the U.S. Army Corps of Engineers under CWA § 404 and does not constitute a waiver of water quality certification under CWA § 401.
11. The primary storm water pollutant at construction sites is excess sediment. Excess sediment can cloud the water, which reduces the amount of sunlight reaching aquatic plants, clog fish gills, smother aquatic habitat and spawning areas, and impede navigation in our waterways. Sediment also transports other pollutants such as nutrients, metals, and oils and greases.
12. Construction activities can impact a construction site's runoff sediment supply and transport characteristics. These modifications, which can occur both during and after the construction phase, are a significant cause of degradation of the beneficial uses established for water bodies in California. Dischargers can avoid these effects through better construction site design and activity practices.
13. This General Permit recognizes four distinct phases of construction activities. The phases are Grading and Land Development Phase, Streets and Utilities Phase, Vertical Construction Phase, and Final Landscaping and Site Stabilization Phase. Each phase has activities that can result in different water quality effects from different water quality pollutants. This General Permit also recognizes inactive construction as a category of construction site type.
14. Compliance with any specific limits or requirements contained in this General Permit does not constitute compliance with any other applicable requirements.
15. Following public notice in accordance with State and Federal laws and regulations, the State Water Board heard and considered all comments and testimony in a public hearing on 06/03/2009. The State Water Board has prepared written responses to all significant comments.
16. Construction activities obtaining coverage under the General Permit may have multiple discharges subject to requirements that are specific to general, linear, and/or active treatment system discharge types.
17. The State Water Board may reopen the permit if the U.S. EPA adopts a final effluent limitation guideline for construction activities.

B. Activities Covered Under the General Permit

18. Any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre.
19. Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or the sale of one or more acres of disturbed land surface.
20. Construction activity related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to U.S. EPA regulations, such as dairy barns or food processing facilities.
21. Construction activity associated with Linear Underground/Overhead Utility Projects (LUPs) including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.
22. Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.²
23. Storm water discharges from dredge spoil placement that occur outside of U.S. Army Corps of Engineers jurisdiction (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. Construction sites that intend to disturb one or more acres of land within the jurisdictional boundaries of a CWA § 404 permit should contact the appropriate Regional Water Board to determine whether this permit applies to the site.

² Pursuant to the Ninth Circuit Court of Appeals' decision in *NRDC v. EPA* (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the U.S. EPA's petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

C. Activities Not Covered Under the General Permit

24. Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.
25. Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.
26. Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a federal permit.
27. Construction activity and land disturbance involving discharges of storm water within the Lake Tahoe Hydrologic Unit. The Lahontan Regional Water Board has adopted its own permit to regulate storm water discharges from construction activity in the Lake Tahoe Hydrologic Unit (Regional Water Board 6SLT). Owners of construction sites in this watershed must apply for the Lahontan Regional Water Board permit rather than the statewide Construction General Permit.
28. Construction activity that disturbs less than one acre of land surface, and that is not part of a larger common plan of development or the sale of one or more acres of disturbed land surface.
29. Construction activity covered by an individual NPDES Permit for storm water discharges.
30. Discharges from small (1 to 5 acre) construction activities with an approved Rainfall Erosivity Waiver authorized by U.S. EPA Phase II regulations certifying to the State Board that small construction activity will occur only when the Rainfall Erosivity Factor is less than 5 ("R" in the Revised Universal Soil Loss Equation).
31. Landfill construction activity that is subject to the Industrial General Permit.
32. Construction activity that discharges to Combined Sewer Systems.
33. Conveyances that discharge storm water runoff combined with municipal sewage.
34. Discharges of storm water identified in CWA § 402(l)(2), 33 U.S.C. § 1342(l)(2).

35. Discharges occurring in basins that are not tributary or hydrologically connected to waters of the United States (for more information contact your Regional Water Board).

D. Obtaining and Modifying General Permit Coverage

36. This General Permit requires all dischargers to electronically file all Permit Registration Documents (PRDs), Notices of Termination (NOT), changes of information, annual reporting, and other compliance documents required by this General Permit through the State Water Board's Storm water Multi-Application and Report Tracking System (SMARTS) website.
37. Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.
38. This General Permit grants an exception from the Risk Determination requirements for existing sites covered under Water Quality Orders No. 99-08-DWQ, and [No. 2003-0007-DWQ](#). For certain sites, adding additional requirements may not be cost effective. Construction sites covered under Water Quality Order No. 99-08-DWQ shall obtain permit coverage at the Risk Level 1. LUPs covered under Water Quality Order No. 2003-0007-DWQ shall obtain permit coverage as a Type 1 LUP. The Regional Water Boards have the authority to require Risk Determination to be performed on sites currently covered under Water Quality Orders No. 99-08-DWQ and No. 2003-0007-DWQ where they deem it necessary. The State Water Board finds that there are two circumstances when it may be appropriate for the Regional Water Boards to require a discharger that had filed an NOI under State Water Board Order No. 99-08-DWQ to recalculate the site's risk level. These circumstances are: (1) when the discharger has a demonstrated history of noncompliance with State Water Board Order No. 99-08-DWQ or; (2) when the discharger's site poses a significant risk of causing or contributing to an exceedance of a water quality standard without the implementation of the additional Risk Level 2 or 3 requirements.

E. Prohibitions

39. All discharges are prohibited except for the storm water and non-storm water discharges specifically authorized by this General Permit or another NPDES permit. Non-storm water discharges include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Non-storm water discharges may

contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections during construction must be addressed through structural as well as non-structural Best Management Practices (BMPs)³. The State Water Board recognizes, however, that certain non-storm water discharges may be necessary for the completion of construction.

40. This General Permit prohibits all discharges which contain a hazardous substance in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
41. This General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the State Water Board and the nine Regional Water Boards.
42. Pursuant to the Ocean Plan, discharges to Areas of Special Biological Significance (ASBS) are prohibited unless covered by an exception that the State Water Board has approved.
43. This General Permit prohibits the discharge of any debris⁴ from construction sites. Plastic and other trash materials can cause negative impacts to receiving water beneficial uses. The State Water Board encourages the use of more environmentally safe, biodegradable materials on construction sites to minimize the potential risk to water quality.

F. Training

44. In order to improve compliance with and to maintain consistent enforcement of this General Permit, all dischargers are required to appoint two positions - the Qualified SWPPP Developer (QSD) and the Qualified SWPPP Practitioner (QSP) - who must obtain appropriate training. Together with the key stakeholders, the State and Regional Water Boards are leading the development of this curriculum through a collaborative organization called The Construction General Permit (CGP) Training Team.
45. The Professional Engineers Act (Bus. & Prof. Code section 6700, et seq.) requires that all engineering work must be performed by a California licensed engineer.

³ BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

⁴ Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

G. Determining and Reducing Risk

46. The risk of accelerated erosion and sedimentation from wind and water depends on a number of factors, including proximity to receiving water bodies, climate, topography, and soil type.
47. This General Permit requires dischargers to assess the risk level of a site based on both sediment transport and receiving water risk. This General Permit contains requirements for Risk Levels 1, 2 and 3, and LUP Risk Type 1, 2, and 3 (Attachment A). Risk levels are established by determining two factors: first, calculating the site's sediment risk; and second, receiving water risk during periods of soil exposure (i.e. grading and site stabilization). Both factors are used to determine the site-specific Risk Level(s). LUPs can be determined to be Type 1 based on the flowchart in Attachment A.1.
48. Although this General Permit does not mandate specific setback distances, dischargers are encouraged to set back their construction activities from streams and wetlands whenever feasible to reduce the risk of impacting water quality (e.g., natural stream stability and habitat function). Because there is a reduced risk to receiving waters when setbacks are used, this General Permit gives credit to setbacks in the risk determination and post-construction storm water performance standards. The risk calculation and runoff reduction mechanisms in this General Permit are expected to facilitate compliance with any Regional Water Board and local agency setback requirements, and to encourage voluntary setbacks wherever practicable.
49. Rain events can occur at any time of the year in California. Therefore, a Rain Event Action Plan (REAP) is necessary for Risk Level 2 and 3 traditional construction projects (LUPs exempt) to ensure that active construction sites have adequate erosion and sediment controls implemented prior to the onset of a storm event, even if construction is planned only during the dry season.
50. Soil particles smaller than 0.02 millimeters (mm) (i.e., finer than medium silt) do not settle easily using conventional measures for sediment control (i.e., sediment basins). Given their long settling time, dislodging these soils results in a significant risk that fine particles will be released into surface waters and cause unacceptable downstream impacts. If operated correctly, an Active Treatment System (ATS⁵) can prevent or reduce the release of fine particles from construction sites.

⁵ An ATS is a treatment system that employs chemical coagulation, chemical flocculation, or electro coagulation in order to reduce turbidity caused by fine suspended sediment.

Use of an ATS can effectively reduce a site's risk of impacting receiving waters.

51. Dischargers located in a watershed area where a Total Maximum Daily Load (TMDL) has been adopted or approved by the Regional Water Board or U.S. EPA may be required by a separate Regional Water Board action to implement additional BMPs, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule. Such dischargers may also be required to obtain an individual Regional Water Board permit specific to the area.

H. Effluent Standards

52. The State Water Board convened a blue ribbon panel of storm water experts that submitted a report entitled, "The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities," dated June 19, 2006. The panel concluded that numeric limits or action levels are technically feasible to control construction storm water discharges, provided that certain conditions are considered. The panel also concluded that numeric effluent limitations (NELs) are feasible for discharges from construction sites that utilize an ATS. The State Water Board has incorporated the expert panel's suggestions into this General Permit, which includes both numeric action levels (NALs) and NELs for pH and turbidity, and special numeric limits for ATS discharges.

Numeric Effluent Limitations

53. Discharges of storm water from construction activities may become contaminated from alkaline construction materials resulting in high pH (greater than pH 7). Alkaline construction materials include, but are not limited to, hydrated lime, concrete, mortar, cement kiln dust (CKD), Portland cement treated base (CTB), fly ash, recycled concrete, and masonry work. This General Permit includes an NEL for pH (6.0-9.0) that applies only at sites that exhibit a "high risk of high pH discharge." A "high risk of high pH discharge" can occur during the complete utilities phase, the complete vertical build phase, and any portion of any phase where significant amounts of materials are placed directly on the land at the site in a manner that could result in significant alterations to the background pH of any discharges.
54. For Risk Level 3 discharges, this General Permit establishes technology-based, numeric effluent limitations (NELs) for turbidity of 500 NTU. Exceedances of the turbidity NEL constitutes a violation of this General Permit.

55. This General Permit establishes a 5 year, 24 hour (expressed in inches of rainfall) Compliance Storm Event exemption from the technology-based NELs for Risk Level 3 dischargers.

Determining Compliance with Numeric Limitations

56. This General Permit sets a pH NAL of 6.5 to 8.5, and a turbidity NAL of 250 NTU. The purpose of the NAL and its associated monitoring requirement is to provide operational information regarding the performance of the measures used at the site to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges. The NALs in this General Permit for pH and turbidity are not directly enforceable and do not constitute NELs.
57. This General Permit requires dischargers with NAL exceedances to immediately implement additional BMPs and revise their Storm Water Pollution Prevention Plans (SWPPPs) accordingly to either prevent pollutants and authorized non-storm water discharges from contaminating storm water, or to substantially reduce the pollutants to levels consistently below the NALs. NAL exceedances are reported in the State Water Boards SMARTS system, and the discharger is required to provide an NAL Exceedance Report when requested by a Regional Water Board.
58. If run-on is caused by a forest fire or any other natural disaster, then NELs do not apply.
59. Exceedances of the NELs are a violation of this Permit. This General Permit requires dischargers with NEL exceedances to implement additional monitoring, BMPs, and revise their SWPPPs accordingly. Dischargers are required to notify the State and Regional Water Boards of the violation through the State Water Boards SMARTs system, and provide an NEL Violation Report sharing additional information concerning the NEL exceedance.

I. Receiving Water Limitations

60. This General Permit requires all enrolled dischargers to determine the receiving waters potentially affected by their discharges and to comply with all applicable water quality standards, including any more stringent standards applicable to a water body.

J. Sampling, Monitoring, Reporting and Record Keeping

61. Visual monitoring of storm water and non-storm water discharges is required for all sites subject to this General Permit.

62. Records of all visual monitoring inspections are required to remain on-site during the construction period and for a minimum of three years.
63. For all Risk Level 3 and Risk Level 2 sites, this General Permit requires effluent monitoring for pH and turbidity. Sampling, analysis and monitoring requirements for effluent monitoring for pH and turbidity are contained in this General Permit.
64. Risk Level 3 sites in violation of the Numeric Effluent Limitations contained in this General Permit and with direct discharges to receiving water are required to conduct receiving water monitoring.
65. For Risk Level 3 sites larger than 30 acres and with direct discharges to receiving waters, this General Permit requires bioassessment sampling before and after site completion to determine if significant degradation to the receiving water's biota has occurred. Bioassessment sampling guidelines are contained in this General Permit.
66. A summary and evaluation of the sampling and analysis results will be submitted in the Annual Reports.
67. This General Permit contains sampling, analysis and monitoring requirements for non-visible pollutants at all sites subject to this General Permit.
68. Compliance with the General Permit relies upon dischargers to electronically self-report any discharge violations and to comply with any Regional Water Board enforcement actions.
69. This General Permit requires that all dischargers maintain a paper or electronic copy of all required records for three years from the date generated or date submitted, whichever is last. These records must be available at the construction site until construction is completed. For LUPs, these documents may be retained in a crew member's vehicle and made available upon request.

K. Active Treatment System (ATS) Requirements

70. Active treatment systems add chemicals to facilitate flocculation, coagulation and filtration of suspended sediment particles. The uncontrolled release of these chemicals to the environment can negatively affect the beneficial uses of receiving waters and/or degrade water quality (e.g., acute and chronic toxicity). Additionally, the batch storage and treatment of storm water through an ATS' can potentially

cause physical impacts on receiving waters if storage volume is inadequate or due to sudden releases of the ATS batches and improperly designed outfalls.

71. If designed, operated and maintained properly an ATS can achieve very high removal rates of suspended sediment (measured as turbidity), albeit at sometimes significantly higher costs than traditional erosion/sediment control practices. As a result, this General Permit establishes NELs consistent with the expected level of typical ATS performance.
72. This General Permit requires discharges of storm water associated with construction activity that undergo active treatment to comply with special operational and effluent limitations to ensure that these discharges do not adversely affect the beneficial uses of the receiving waters or cause degradation of their water quality.
73. For ATS discharges, this General Permit establishes technology-based NELs for turbidity.
74. This General Permit establishes a 10 year, 24 hour (expressed in inches of rainfall) Compliance Storm Event exemption from the technology-based numeric effluent limitations for ATS discharges. Exceedances of the ATS turbidity NEL constitutes a violation of this General Permit.

L. Post-Construction Requirements

75. This General Permit includes performance standards for post-construction that are consistent with State Water Board [Resolution No. 2005-0006](#), "Resolution Adopting the Concept of Sustainability as a Core Value for State Water Board Programs and Directing Its Incorporation," and [2008-0030](#), "Requiring Sustainable Water Resources Management." The requirement for all construction sites to match pre-project hydrology will help ensure that the physical and biological integrity of aquatic ecosystems are sustained. This "runoff reduction" approach is analogous in principle to Low Impact Development (LID) and will serve to protect related watersheds and waterbodies from both hydrologic-based and pollution impacts associated with the post-construction landscape.
76. LUP projects are not subject to post-construction requirements due to the nature of their construction to return project sites to pre-construction conditions.

M. Storm Water Pollution Prevention Plan Requirements

77. This General Permit requires the development of a site-specific SWPPP. The SWPPP must include the information needed to demonstrate compliance with all requirements of this General Permit, and must be kept on the construction site and be available for review. The discharger shall ensure that a QSD develops the SWPPP.
78. To ensure proper site oversight, this General Permit requires a Qualified SWPPP Practitioner to oversee implementation of the BMPs required to comply with this General Permit.

N. Regional Water Board Authorities

79. Regional Water Boards are responsible for implementation and enforcement of this General Permit. A general approach to permitting is not always suitable for every construction site and environmental circumstances. Therefore, this General Permit recognizes that Regional Water Boards must have some flexibility and authority to alter, approve, exempt, or rescind permit authority granted under this General Permit in order to protect the beneficial uses of our receiving waters and prevent degradation of water quality.

IT IS HEREBY ORDERED that all dischargers subject to this General Permit shall comply with the following conditions and requirements (including all conditions and requirements as set forth in Attachments A, B, C, D, E and F)⁶:

II. CONDITIONS FOR PERMIT COVERAGE

A. Linear Underground/Overhead Projects (LUPs)

1. Linear Underground/Overhead Projects (LUPs) include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water and wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g. telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, (a) those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment, and associated ancillary facilities); and include, but are not limited to, (b) underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/ or pavement repair or replacement, and stockpile/borrow locations.
2. The utility company, municipality, or other public or private company or agency that owns or operates the linear underground/overhead project is responsible for obtaining coverage under the General Permit where the construction of pipelines, utility lines, fiber-optic cables, or other linear underground/overhead projects will occur across several properties unless the LUP construction activities are covered under another construction storm water permit.
3. Only LUPs shall comply with the conditions and requirements in Attachment A, A.1 & A.2 of this Order. The balance of this Order is not applicable to LUPs except as indicated in Attachment A.

B. Obtaining Permit Coverage Traditional Construction Sites

⁶ These attachments are part of the General Permit itself and are not separate documents that are capable of being updated independently by the State Water Board.

1. The Legally Responsible Person (LRP) (see Special Provisions, Electronic Signature and Certification Requirements, Section IV.I.1) must obtain coverage under this General Permit.
2. To obtain coverage, the LRP must electronically file Permit Registration Documents (PRDs) prior to the commencement of construction activity. Failure to obtain coverage under this General Permit for storm water discharges to waters of the United States is a violation of the CWA and the California Water Code.
3. PRDs shall consist of:
 - a. Notice of Intent (NOI)
 - b. Risk Assessment (Section VIII)
 - c. Site Map
 - d. Storm Water Pollution Prevention Plan (Section XIV)
 - e. Annual Fee
 - f. Signed Certification Statement

Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

Attachment B contains additional PRD information. Dischargers must electronically file the PRDs, and mail the appropriate annual fee to the State Water Board.

4. This permit is effective on July 1, 2010.
 - a. **Dischargers Obtaining Coverage On or After July 1, 2010:** All dischargers requiring coverage on or after July 1, 2010, shall electronically file their PRDs prior to the commencement of construction activities, and mail the appropriate annual fee no later than seven days prior to the commencement of construction activities. Permit coverage shall not commence until the PRDs and the annual fee are received by the State Water Board, and a WDID number is assigned and sent by SMARTS.
 - b. **Dischargers Covered Under 99-08-DWQ and 2003-0007-DWQ:** Existing dischargers subject to State Water Board Order No. 99-08-DWQ (existing dischargers) will continue coverage under 99-08-DWQ until July 1, 2010. After July 1, 2010, all NOIs subject to State Water Board Order No. 99-08-DWQ will be terminated. Existing dischargers shall electronically file their PRDs no later than

July 1, 2010. If an existing discharger's site acreage subject to the annual fee has changed, it shall mail a revised annual fee no less than seven days after receiving the revised annual fee notification, **or else lose permit coverage**. All existing dischargers shall be exempt from the risk determination requirements in Section VIII of this General Permit until two years after permit adoption. All existing dischargers are therefore subject to Risk Level 1 requirements regardless of their site's sediment and receiving water risks. However, a Regional Board retains the authority to require an existing discharger to comply with the Section VIII risk determination requirements.

5. The discharger is only considered covered by this General Permit upon receipt of a Waste Discharger Identification (WDID) number assigned and sent by the State Water Board Storm water Multi-Application and Report Tracking System (SMARTS). In order to demonstrate compliance with this General Permit, the discharger must obtain a WDID number and must present documentation of a valid WDID upon demand.
6. During the period this permit is subject to review by the U.S. EPA, the prior permit (State Water Board Order No. 99-08-DWQ) remains in effect. Existing dischargers under the prior permit will continue to have coverage under State Water Board Order No. 99-08-DWQ until this General Permit takes effect on July 1, 2010. Dischargers who complete their projects and electronically file an NOT prior to July 1, 2010, are not required to obtain coverage under this General Permit.
7. Small Construction Rainfall Erosivity Waiver

EPA's Small Construction Erosivity Waiver applies to sites between one and five acres demonstrating that there are no adverse water quality impacts.

Dischargers eligible for a Rainfall Erosivity Waiver based on low erosivity potential shall complete the electronic Notice of Intent (NOI) and Sediment Risk form through the State Water Board's SMARTS system, certifying that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five. Where the LRP changes or another LRP is added during construction, the new LRP must also submit a waiver certification through the SMARTS system.

If a small construction site continues beyond the projected completion date given on the waiver certification, the LRP shall recalculate the rainfall erosivity factor for the new project duration and submit this

information through the SMARTS system. If the new R factor is below five (5), the discharger shall update through SMARTS all applicable information on the waiver certification and retain a copy of the revised waiver onsite. The LRP shall submit the new waiver certification 30 days prior to the projected completion date listed on the original waiver form to assure exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, the LRP shall be required to apply for coverage under this Order.

8. In the case of a public emergency that requires immediate construction activities, a discharger shall submit a brief description of the emergency construction activity within five days of the onset of construction, and then shall submit all PRDs within thirty days.

C. Revising Permit Coverage for Change of Acreage or New Ownership

1. The discharger may reduce or increase the total acreage covered under this General Permit when a portion of the site is complete and/or conditions for termination of coverage have been met (See Section II.D Conditions for Termination of Coverage); when ownership of a portion of the site is sold to a different entity; or when new acreage, subject to this General Permit, is added to the site.
2. Within 30 days of a reduction or increase in total disturbed acreage, the discharger shall electronically file revisions to the PRDs that include:
 - a. A revised NOI indicating the new project size;
 - b. A revised site map showing the acreage of the site completed, acreage currently under construction, acreage sold/transferred or added, and acreage currently stabilized in accordance with the Conditions for Termination of Coverage in Section II.D below.
 - c. SWPPP revisions, as appropriate; and
 - d. Certification that any new landowners have been notified of applicable requirements to obtain General Permit coverage. The certification shall include the name, address, telephone number, and e-mail address of the new landowner.
 - e. If the project acreage has increased, dischargers shall mail payment of revised annual fees within 14 days of receiving the revised annual fee notification.

3. The discharger shall continue coverage under the General Permit for any parcel that has not achieved “Final Stabilization” as defined in Section II.D.
4. When an LRP owns property with active General Permit coverage, and the LRP sells the property, or a parcel thereof, to another person, that person shall become an LRP with respect to whatever parcel was sold. The existing LRP shall inform the new LRP of the General Permit’s requirements. In order for the new LRP to continue the construction activity on its parcel of property, the new LRP, or the new LRP’s approved signatory, must submit PRDs in accordance with this General Permit’s requirements.

D. Conditions for Termination of Coverage

1. Within 90 days of when construction is complete or ownership has been transferred, the discharger shall electronically file a Notice of Termination (NOT), a final site map, and photos through the State Water Boards SMARTS system. Filing a NOT certifies that all General Permit requirements have been met. The Regional Water Board will consider a construction site complete only when all portions of the site have been transferred to a new owner, or all of the following conditions have been met:
 - a. For purposes of “final stabilization,” the site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity;
 - b. There is no potential for construction-related storm water pollutants to be discharged into site runoff;
 - c. Final stabilization has been reached;
 - d. Construction materials and wastes have been disposed of properly;
 - e. Compliance with the Post-Construction Standards in Section XIII of this General Permit has been demonstrated;
 - f. Post-construction storm water management measures have been installed and a long-term maintenance plan⁷ has been established; and

⁷ For the purposes of this requirement a long-term maintenance plan will be designed for a minimum of five years, and will describe the procedures to ensure that the post-construction storm water management measures are adequately maintained.

- g. All construction-related equipment, materials and any temporary BMPs no longer needed are removed from the site.
- 2. The discharger shall certify that final stabilization conditions are satisfied in their NOT. Failure to certify shall result in continuation of permit coverage and annual billing.
- 3. The NOT must demonstrate through photos, RUSLE or RUSLE2, or results of testing and analysis that the site meets all of the conditions above (Section II.D.1) and the final stabilization condition (Section II.D.1.a) is attained by one of the following methods:
 - a. "70% final cover method," no computational proof required
 - OR:**
 - b. "RUSLE or RUSLE2 method," computational proof required
 - OR:**
 - c. "Custom method", the discharger shall demonstrate in some other manner than a or b, above, that the site complies with the "final stabilization" requirement in Section II.D.1.a.

III. DISCHARGE PROHIBITIONS

- A.** Dischargers shall not violate any discharge prohibitions contained in applicable Basin Plans or statewide water quality control plans. Waste discharges to Areas of Special Biological Significance (ASBS) are prohibited by the California Ocean Plan, unless granted an exception issued by the State Water Board.
- B.** All discharges are prohibited except for the storm water and non-storm water discharges specifically authorized by this General Permit or another NPDES permit.
- C.** Authorized non-storm water discharges may include those from de-chlorinated potable water sources such as: fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, uncontaminated ground water from dewatering, and other discharges not subject to a separate general NPDES permit adopted by a Regional Water Board. The discharge of non-storm water is authorized under the following conditions:
1. The discharge does not cause or contribute to a violation of any water quality standard;
 2. The discharge does not violate any other provision of this General Permit;
 3. The discharge is not prohibited by the applicable Basin Plan;
 4. The discharger has included and implemented specific BMPs required by this General Permit to prevent or reduce the contact of the non-storm water discharge with construction materials or equipment.
 5. The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;
 6. The discharge is monitored and meets the applicable NALs and NELs; and
 7. The discharger reports the sampling information in the Annual Report.

If any of the above conditions are not satisfied, the discharge is not authorized by this General Permit. The discharger shall notify the Regional Water Board of any anticipated non-storm water discharges not already authorized by this General Permit or another NPDES permit, to determine whether a separate NPDES permit is necessary.

- D.** Debris resulting from construction activities are prohibited from being discharged from construction sites.
- E.** When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the discharger shall have those soils sampled and tested to ensure proper handling and public safety measures are implemented. The discharger shall notify the appropriate local, State, and federal agency(ies) when contaminated soil is found at a construction site, and will notify the appropriate Regional Water Board.

IV. SPECIAL PROVISIONS

A. Duty to Comply

1. The discharger shall comply with all of the conditions of this General Permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action and/or removal from General Permit coverage.
2. The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

B. General Permit Actions

1. This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.
2. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the dischargers so notified.

C. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

D. Duty to Mitigate

The discharger shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit, which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance

The discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this General Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a discharger when necessary to achieve compliance with the conditions of this General Permit.

F. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of Federal, State, or local laws or regulations.

G. Duty to Maintain Records and Provide Information

1. The discharger shall maintain a paper or electronic copy of all required records, including a copy of this General Permit, for three years from the date generated or date submitted, whichever is last. These records shall be available at the construction site until construction is completed.
2. The discharger shall furnish the Regional Water Board, State Water Board, or U.S. EPA, within a reasonable time, any requested information to determine compliance with this General Permit. The discharger shall also furnish, upon request, copies of records that are required to be kept by this General Permit.

H. Inspection and Entry

The discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or, in the case of construction sites which discharge through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the discharger's premises at reasonable times where a regulated construction activity is being conducted or where records must be kept under the conditions of this General Permit;

2. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;
3. Inspect at reasonable times the complete construction site, including any off-site staging areas or material storage areas, and the erosion/sediment controls; and
4. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

I. Electronic Signature and Certification Requirements

1. All Permit Registration Documents (PRDs) and Notice of Terminations (NOTs) shall be electronically signed, certified, and submitted via SMARTS to the State Water Board. Either the Legally Responsible Person (LRP) or a person legally authorized to sign and certify PRDs and NOTs on behalf of the LRP (the LRP's Approved Signatory) must submit all information electronically via SMARTS.
 - a. The LRP's Approved Signatory must be one of the following:
 - i. For a corporation: a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (b) the manager of the facility if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - ii. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
 - iii. For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. The principal executive officer of a Federal agency includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA);
 - iv. For the military: Any military officer who has been designated.
 - v. For a public university: An authorized university official

- b. Changes to Authorization. If an approved signatory's authorization is no longer accurate, a new authorization satisfying the requirements of paragraph (a) of this section must be submitted via SMARTS prior to or together with any reports, information or applications to be signed by an approved signatory.
2. All Annual Reports, or other information required by the General Permit (other than PRDs and NOTs) or requested by the Regional Water Board, State Water Board, U.S. EPA, or local storm water management agency shall be certified and submitted by the LRP or the LRP's approved signatory as described above.

J. Certification

Any person signing documents under Section IV.I above, shall make the following certification:

"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 assure 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."

K. Anticipated Noncompliance

The discharger shall give advance notice to the Regional Water Board and local storm water management agency of any planned changes in the construction activity, which may result in noncompliance with General Permit requirements.

L. Bypass

Bypass⁸ is prohibited. The Regional Water Board may take enforcement action against the discharger for bypass unless:

1. Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;⁹

⁸ The intentional diversion of waste streams from any portion of a treatment facility

⁹ Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventative maintenance;
3. The discharger submitted a notice at least ten days in advance of the need for a bypass to the Regional Water Board; or
4. The discharger may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such a case, the above bypass conditions are not applicable. The discharger shall submit notice of an unanticipated bypass as required.

M. Upset

1. A discharger that wishes to establish the affirmative defense of an upset¹⁰ in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the discharger can identify the cause(s) of the upset
 - b. The treatment facility was being properly operated by the time of the upset
 - c. The discharger submitted notice of the upset as required; and
 - d. The discharger complied with any remedial measures required
2. No determination made before an action of noncompliance occurs, such as during administrative review of claims that noncompliance was caused by an upset, is final administrative action subject to judicial review.
3. In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof

¹⁰ An exceptional incident in which there is unintentional and temporary noncompliance the technology based numeric effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

N. Penalties for Falsification of Reports

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years or by both.

O. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

P. Severability

The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

Q. Reopener Clause

This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations (CFR) 122.62, 122.63, 122.64, and 124.5.

R. Penalties for Violations of Permit Conditions

1. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under Section 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed \$37,500¹¹ per calendar day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

¹¹ May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act.

2. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which in some cases are greater than those under the CWA.

S. Transfers

This General Permit is not transferable.

T. Continuation of Expired Permit

This General Permit continues in force and effect until a new General Permit is issued or the SWRCB rescinds this General Permit. Only those dischargers authorized to discharge under the expiring General Permit are covered by the continued General Permit.

V. EFFLUENT STANDARDS

A. Narrative Effluent Limitations

1. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
2. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

B. Numeric Effluent Limitations (NELs)

Table 1- Numeric Effluent Limitations, Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

Parameter	Test Method	Discharge Type	Min. Detection Limit	Units	Numeric Action Level	Numeric Effluent Limitation
pH	Field test with calibrated portable instrument	Risk Level 2	0.2	pH units	lower NAL = 6.5 upper NAL = 8.5	N/A
		Risk Level 3			lower NAL = 6.5 upper NAL = 8.5	lower NEL = 6.0 upper NEL = 9.0
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	Risk Level 2	1	NTU	250 NTU	N/A
		Risk Level 3			250 NTU	500 NTU

1. Numeric Effluent Limitations (NELs):

- a. **Storm Event, Daily Average pH Limits** – For Risk Level 3 dischargers, the pH of storm water and non-storm water discharges

shall be within the ranges specified in Table 1 during any site phase where there is a "high risk of pH discharge."¹²

- b. **Storm Event Daily Average Turbidity Limit** – For Risk Level 3 dischargers, the turbidity of storm water and non-storm water discharges shall not exceed 500 NTU.
2. If daily average sampling results are outside the range of pH NELs (i.e., is below the lower NEL for pH or exceeds the upper NEL for pH) or exceeds the turbidity NEL (as listed in Table 1), the discharger is in violation of this General Permit and shall electronically file monitoring results in violation within 5 business days of obtaining the results.
3. **Compliance Storm Event:**

Discharges of storm water from Risk Level 3 sites shall comply with applicable NELs (above) unless the storm event causing the discharges is determined after the fact to be equal to or larger than the Compliance Storm Event (expressed in inches of rainfall). The Compliance Storm Event for Risk Level 3 discharges is the 5 year, 24 hour storm (expressed in tenths of an inch of rainfall), as determined by using these maps:

<http://www.wrcc.dri.edu/pcpnfreq/nca5y24.gif>
<http://www.wrcc.dri.edu/pcpnfreq/sca5y24.gif>

Compliance storm event verification shall be done by reporting on-site rain gauge readings as well as nearby governmental rain gauge readings.

4. Dischargers shall not be required to comply with NELs if the site receives run-on from a forest fire or any other natural disaster.

C. Numeric Action Levels (NALs)

1. For Risk Level 2 and 3 dischargers, the lower storm event average NAL for pH is 6.5 pH units and the upper storm event average NAL for pH is 8.5 pH units. The discharger shall take actions as described below if the discharge is outside of this range of pH values.

¹² A period of high risk of pH discharge is defined as a project's complete utilities phase, complete vertical build phase, and any portion of any phase where significant amounts of materials are placed directly on the land at the site in a manner that could result in significant alterations of the background pH of the discharges.

2. For Risk Level 2 and 3 dischargers, the NAL storm event daily average for turbidity is 250 NTU. The discharger shall take actions as described below if the discharge is outside of this range of turbidity values.
3. Whenever the results from a storm event daily average indicate that the discharge is below the lower NAL for pH, exceeds the upper NAL for pH, or exceeds the turbidity NAL (as listed in Table 1), the discharger shall conduct a construction site and run-on evaluation to determine whether pollutant source(s) associated with the site's construction activity may have caused or contributed to the NAL exceedance and shall immediately implement corrective actions if they are needed.
4. The site evaluation shall be documented in the SWPPP and specifically address whether the source(s) of the pollutants causing the exceedance of the NAL:
 - a. Are related to the construction activities and whether additional BMPs are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) determine what corrective action(s) were taken or will be taken and with a description of the schedule for completion.

AND/OR:

- b. Are related to the run-on associated with the construction site location and whether additional BMPs measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) what corrective action(s) were taken or will be taken with a description of the schedule for completion.

VI. RECEIVING WATER LIMITATIONS

- A.** The discharger shall ensure that storm water discharges and authorized non-storm water discharges to any surface or ground water will not adversely affect human health or the environment.
- B.** The discharger shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants in quantities that threaten to cause pollution or a public nuisance.
- C.** The discharger shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards (collectively, WQS) contained in a Statewide Water Quality Control Plan, the California Toxics Rule, the National Toxics Rule, or the applicable Regional Water Board's Water Quality Control Plan (Basin Plan).
- D.** Dischargers located within the watershed of a CWA § 303(d) impaired water body, for which a TMDL has been approved by the U.S. EPA, shall comply with the approved TMDL if it identifies "construction activity" or land disturbance as a source of the pollution.

VII. TRAINING QUALIFICATIONS AND CERTIFICATION REQUIREMENTS

A. General

The discharger shall ensure that all persons responsible for implementing requirements of this General Permit shall be appropriately trained in accordance with this Section. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. Those responsible for preparing and amending SWPPPs shall comply with the requirements in this Section VII.

The discharger shall provide documentation of all training for persons responsible for implementing the requirements of this General Permit in the Annual Reports.

B. SWPPP Certification Requirements

1. **Qualified SWPPP Developer:** The discharger shall ensure that SWPPPs are written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:
 - a. A California registered professional civil engineer;
 - b. A California registered professional geologist or engineering geologist;
 - c. A California registered landscape architect;
 - d. A professional hydrologist registered through the American Institute of Hydrology;
 - e. A Certified Professional in Erosion and Sediment Control (CPESC)[™] registered through Enviro Cert International, Inc.;
 - f. A Certified Professional in Storm Water Quality (CPSWQ)[™] registered through Enviro Cert International, Inc.; or
 - g. A professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET).

Effective two years after the adoption date of this General Permit, a QSD shall have attended a State Water Board-sponsored or approved QSD training course.

2. The discharger shall list the name and telephone number of the currently designated Qualified SWPPP Developer(s) in the SWPPP.
3. **Qualified SWPPP Practitioner:** The discharger shall ensure that all BMPs required by this General Permit are implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:
 - a. A certified erosion, sediment and storm water inspector registered through Enviro Cert International, Inc.; or
 - b. A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

Effective two years after the adoption date of this General Permit, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

4. The LRP shall list in the SWPPP, the name of any Approved Signatory, and provide a copy of the written agreement or other mechanism that provides this authority from the LRP in the SWPPP.
5. The discharger shall include, in the SWPPP, a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.
6. The discharger shall ensure that the SWPPP and each amendment will be signed by the Qualified SWPPP Developer. The discharger shall include a listing of the date of initial preparation and the date of each amendment in the SWPPP.

VIII. RISK DETERMINATION

The discharger shall calculate the site's sediment risk and receiving water risk during periods of soil exposure (i.e. grading and site stabilization) and use the calculated risks to determine a Risk Level(s) using the methodology in

Appendix 1. For any site that spans two or more planning watersheds,¹³ the discharger shall calculate a separate Risk Level for each planning watershed. The discharger shall notify the State Water Board of the site's Risk Level determination(s) and shall include this determination as a part of submitting the PRDs. If a discharger ends up with more than one Risk Level determination, the Regional Water Board may choose to break the project into separate levels of implementation.

IX. RISK LEVEL 1 REQUIREMENTS

Risk Level 1 Dischargers shall comply with the requirements included in Attachment C of this General Permit.

X. RISK LEVEL 2 REQUIREMENTS

Risk Level 2 Dischargers shall comply with the requirements included in Attachment D of this General Permit.

XI. RISK LEVEL 3 REQUIREMENTS

Risk Level 3 Dischargers shall comply with the requirements included in Attachment E of this General Permit.

XII. ACTIVE TREATMENT SYSTEMS (ATS)

Dischargers choosing to implement an ATS on their site shall comply with all of the requirements in Attachment F of this General Permit.

¹³ Planning watershed: defined by the Calwater Watershed documents as a watershed that ranges in size from approximately 3,000 to 10,000 acres <http://cain.ice.ucdavis.edu/calwater/calwfaq.html>, <http://gis.ca.gov/catalog/BrowseRecord.epl?id=22175> .

XIII. POST-CONSTRUCTION STANDARDS

- A.** All dischargers shall comply with the following runoff reduction requirements unless they are located within an area subject to post-construction standards of an active Phase I or II municipal separate storm sewer system (MS4) permit that has an approved Storm Water Management Plan.
1. This provision shall take effect three years from the adoption date of this permit, or later at the discretion of the Executive Officer of the Regional Board.
 2. The discharger shall demonstrate compliance with the requirements of this section by submitting with their NOI a map and worksheets in accordance with the instructions in Appendix 2. The discharger shall use non-structural controls unless the discharger demonstrates that non-structural controls are infeasible or that structural controls will produce greater reduction in water quality impacts.
 3. The discharger shall, through the use of non-structural and structural measures as described in Appendix 2, replicate the pre-project water balance (for this permit, defined as the volume of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event (or the smallest storm event that generates runoff, whichever is larger). Dischargers shall inform Regional Water Board staff at least 30 days prior to the use of any structural control measure used to comply with this requirement. Volume that cannot be addressed using non-structural practices shall be captured in structural practices and approved by the Regional Water Board. When seeking Regional Board approval for the use of structural practices, dischargers shall document the infeasibility of using non-structural practices on the project site, or document that there will be fewer water quality impacts through the use of structural practices.
 4. For sites whose disturbed area exceeds two acres, the discharger shall preserve the pre-construction drainage density (miles of stream length per square mile of drainage area) for all drainage areas within the area serving a first order stream¹⁴ or larger stream and ensure that post-project time of runoff concentration is equal or greater than pre-project time of concentration.

¹⁴ A first order stream is defined as a stream with no tributaries.

- B.** All dischargers shall implement BMPs to reduce pollutants in storm water discharges that are reasonably foreseeable after all construction phases have been completed at the site (Post-construction BMPs).

XIV. SWPPP REQUIREMENTS

- A.** The discharger shall ensure that the Storm Water Pollution Prevention Plans (SWPPPs) for all traditional project sites are developed and amended or revised by a QSD. The SWPPP shall be designed to address the following objectives:
1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled;
 2. Where not otherwise required to be under a Regional Water Board permit, all non-storm water discharges are identified and either eliminated, controlled, or treated;
 3. Site BMPs are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from construction activity to the BAT/BCT standard;
 4. Calculations and design details as well as BMP controls for site run-on are complete and correct, and
 5. Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.
- B.** To demonstrate compliance with requirements of this General Permit, the QSD shall include information in the SWPPP that supports the conclusions, selections, use, and maintenance of BMPs.
- C.** 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 crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

XV. REGIONAL WATER BOARD AUTHORITIES

- A.** In the case where the Regional Water Board does not agree with the discharger's self-reported risk level (e.g., they determine themselves to be a Level 1 Risk when they are actually a Level 2 Risk site), Regional Water Boards may either direct the discharger to reevaluate the Risk Level(s) for their site or terminate coverage under this General Permit.
- B.** Regional Water Boards may terminate coverage under this General Permit for dischargers who fail to comply with its requirements or where they determine that an individual NPDES permit is appropriate.
- C.** Regional Water Boards may require dischargers to submit a Report of Waste Discharge / NPDES permit application for Regional Water Board consideration of individual requirements.
- D.** Regional Water Boards may require additional Monitoring and Reporting Program Requirements, including sampling and analysis of discharges to sediment-impaired water bodies.
- E.** Regional Water Boards may require dischargers to retain records for more than the three years required by this General Permit.

XVI. ANNUAL REPORTING REQUIREMENTS

- A.** All dischargers shall prepare and electronically submit an Annual Report no later than September 1 of each year.
- B.** The discharger shall certify each Annual Report in accordance with the Special Provisions.
- C.** The discharger shall retain an electronic or paper copy of each Annual Report for a minimum of three years after the date the annual report is filed.
- D.** The discharger shall include storm water monitoring information in the Annual Report consisting of:
 - 1. a summary and evaluation of all sampling and analysis results, including copies of laboratory reports;
 - 2. the analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit");
 - 3. a summary of all corrective actions taken during the compliance year;
 - 4. identification of any compliance activities or corrective actions that were not implemented;
 - 5. a summary of all violations of the General Permit;
 - 6. the names of individual(s) who performed the facility inspections, sampling, visual observation (inspections), and/or measurements;
 - 7. the date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge); and
 - 8. the visual observation and sample collection exception records and reports specified in Attachments C, D, and E.
- E.** The discharger shall provide training information in the Annual Report consisting of:
 - 1. documentation of all training for individuals responsible for all activities associated with compliance with this General Permit;

2. documentation of all training for individuals responsible for BMP installation, inspection, maintenance, and repair; and
3. documentation of all training for individuals responsible for overseeing, revising, and amending the SWPPP.

APPENDIX B
SUBMITTED PERMIT REGISTRATION DOCUMENTS

Notice of Intent (NOI), Risk Assessment, Vicinity Map, Site Map – Erosion Control Plan,
WDID Confirmation, Annual Fee, Signed Certification Statement and Annual Report



State Water Resources Control Board
NOTICE OF INTENT
 TO COMPLY WITH THE TERMS OF THE
 GENERAL PERMIT TO DISCHARGE STORM WATER
 ASSOCIATED WITH CONSTRUCTION ACTIVITY (WQ ORDER No. 99-08-DWQ)

**I. NOI STATUS (SEE INSTRUCTIONS)**

MARK ONLY ONE ITEM 1. New Construction 2. Change of Information for WDID#

II. PROPERTY OWNER

Name San Lorenzo Res, LLC		Contact Person Andrew Lavaux		
Mailing Address 100 St. Paul Street, Suite 300		Title Authorized Signatory		
City Denver	State CO	Zip 80206	Phone (303) 307-5051	
Owner Type (check one) 1. <input type="checkbox"/> Private Individual 2. <input checked="" type="checkbox"/> Business 3. <input type="checkbox"/> Municipal 4. <input type="checkbox"/> State 5. <input type="checkbox"/> Federal 6. <input type="checkbox"/> Other				

III. DEVELOPER/CONTRACTOR INFORMATION

Developer/Contractor Dettaglio Construction, Inc. (DCI)		Contact Person Michael Gonzales		
Mailing Address 100 Montgomery Street, Suite 2000		Title Project Manager		
City San Francisco	State CA	Zip 94104	Phone (415) 640-4110	

IV. CONSTRUCTION PROJECT INFORMATION

Site/Project Name The Bungalows		Site Contact Person Michael Gonzales		
Physical Address/Location 1233 Bockman Road		Latitude N37°67'06"	Longitude W122°13'48"	County Alameda
City (or nearest City) San Lorenzo		Zip 94580	Site Phone Number (415) 640-4110	Emergency Phone Number (510) 896-9449
A. Total size of construction site area: _____ 4.3+/- Acres	C. Percent of site imperviousness (including rooftops): Before Construction: _____ 53.0 % After Construction: _____ 73.5 %		D. Tract Number(s) 8284	
B. Total area to be disturbed: _____ 4.3+/- Acres (% of total 100%)	F. Is the construction site part of a larger common plan of development or sale? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		E. Mile Post Marker: _____	
H. Construction commencement date: 4/18/16		G. Name of plan or development: The Bungalows		
I. % of site to be mass graded: 100%		J. Projected construction dates: Complete grading: 5/23/16 Complete project: 5/11/17		
K. Type of Construction (Check all that apply): 1. <input checked="" type="checkbox"/> Residential 2. <input type="checkbox"/> Commercial 3. <input type="checkbox"/> Industrial 4. <input type="checkbox"/> Reconstruction 5. <input type="checkbox"/> Transportation 6. <input type="checkbox"/> Utility Description: _____ 7. <input type="checkbox"/> Other (Please List): _____				

V. BILLING INFORMATION

SEND BILL TO: <input checked="" type="checkbox"/> OWNER (as in II. above)	Name	Contact Person	
<input type="checkbox"/> DEVELOPER (as in III. above)	Mailing Address	Phone/Fax	
<input type="checkbox"/> OTHER (enter information at right)	City	State	Zip

VI. REGULATORY STATUS

A. Has a local agency approved a required erosion/sediment control plan?..... YES NO
 Does the erosion/sediment control plan address construction activities such as infrastructure and structures?..... YES NO
 Name of local agency County of Alameda Phone: (510) 670-5500

B. Is this project or any part thereof, subject to conditions imposed under a CWA Section 404 permit or 401 Water Quality Certification?..... YES NO
 If yes, provide details: _____

VII. RECEIVING WATER INFORMATION

A. Does the storm water runoff from the construction site discharge to (Check all that apply):

1. Indirectly to waters of the U.S.
 2. Storm drain system - Enter owner's name: County of Alameda
 3. Directly to waters of U.S. (e.g. , river, lake, creek, stream, bay, ocean, etc.)

B. Name of receiving water: (river, lake, creek, stream, bay, ocean): San Francisco Bay

VIII. IMPLEMENTATION OF NPDES PERMIT REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (check one)

A SWPPP has been prepared for this facility and is available for review: Date Prepared: _____ Date Amended: ____/____/____
 A SWPPP will be prepared and ready for review by (enter date): 3/28/16
 A tentative schedule has been included in the SWPPP for activities such as grading, street construction, home construction, etc.

B. MONITORING PROGRAM

A monitoring and maintenance schedule has been developed that includes inspection of the construction BMPs before anticipated storm events and after actual storm events and is available for review.
 If checked above: A qualified person has been assigned responsibility for pre-storm and post-storm BMP inspections to identify effectiveness and necessary repairs or design changes..... YES NO
 Name: Bernard Eddy Phone: (925) 914-1049

C. PERMIT COMPLIANCE RESPONSIBILITY

A qualified person has been assigned responsibility to ensure full compliance with the Permit, and to implement all elements of the Storm Water Pollution Prevention Plan including:

1. Preparing an annual compliance evaluation..... YES NO
 Name: Bernard Eddy Phone: (925) 914-1049

2. Eliminating all unauthorized discharges..... YES NO

IX. VICINITY MAP AND FEE (must show site location in relation to nearest named streets, intersections, etc.)

Have you included a vicinity map with this submittal? YES NO
 Have you included payment of the annual fee with this submittal?..... YES NO

X. CERTIFICATIONS

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure 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 or imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan will be complied with."

Printed Name: Mark Falgout
 Signature: _____ Date: _____
 Title: Principal

Combined Risk Level Matrix

		<u>Sediment Risk</u>		
		Low	Medium	High
<u>Receiving Water Risk</u>	Low	Level 1	Level 2	
	High	Level 2		Level 3

Project Sediment Risk: **Low**
Project RW Risk: **High**
Project Combined Risk: **Level 2**

Receiving Water (RW) Risk Factor Worksheet	Entry	Score
A. Watershed Characteristics	yes/no	
<p>A.1. Does the disturbed area discharge (either directly or indirectly) to a 303(d)-listed waterbody impaired by sediment (For help with impaired waterbodies please visit the link below) or has a USEPA approved TMDL implementation plan for sediment?:</p> <p>http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml</p> <p style="text-align: center;">OR</p>	yes	High
<p>A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan)</p> <p>http://www.waterboards.ca.gov/waterboards_map.shtml</p>		
<p>Region 1 Basin Plan</p> <p>Region 2 Basin Plan</p> <p>Region 3 Basin Plan</p> <p>Region 4 Basin Plan</p> <p>Region 5 Basin Plan</p> <p>Region 6 Basin Plan</p> <p>Region 7 Basin Plan</p> <p>Region 8 Basin Plan</p> <p>Region 9 Basin Plan</p>		

	A	B	C
1	Sediment Risk Factor Worksheet		Entry
2	A) R Factor		
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.		
4	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
5	R Factor Value		48.28
6	B) K Factor (weighted average, by area, for all site soils)		
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.		
8	Site-specific K factor guidance		
9	K Factor Value		0.32
10	C) LS Factor (weighted average, by area, for all slopes)		
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.		
12	LS Table		
13	LS Factor Value		0.49
14			
15	Watershed Erosion Estimate (=RxKxLS) in tons/acre		7.570304
16	Site Sediment Risk Factor		Low
17	Low Sediment Risk: < 15 tons/acre		
18	Medium Sediment Risk: >=15 and <75 tons/acre		
19	High Sediment Risk: >= 75 tons/acre		
20			



<http://water.epa.gov/polwaste/npdes/stormwater/LEW-Results.cfm>

Water: Stormwater

You are here: [Water](#) » [Pollution Prevention & Control](#) » [Permitting \(NPDES\)](#) » [Stormwater](#) » LEW Results

LEW Results

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Start Date: 03/01/2016
End Date: 03/01/2017
Address: 1233 Bockman Road, San Lorenzo, CA
Latitude: 37.670649
Longitude: -122.13476400000002

Erosivity Index Calculator Results

AN EROSIIVITY INDEX VALUE OF **48.28** HAS BEEN DETERMINED FOR THE CONSTRUCTION PERIOD OF **03/01/2016 - 03/01/2017**.

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do NOT qualify for a waiver from NPDES permitting requirements.**

[Start Over](#)

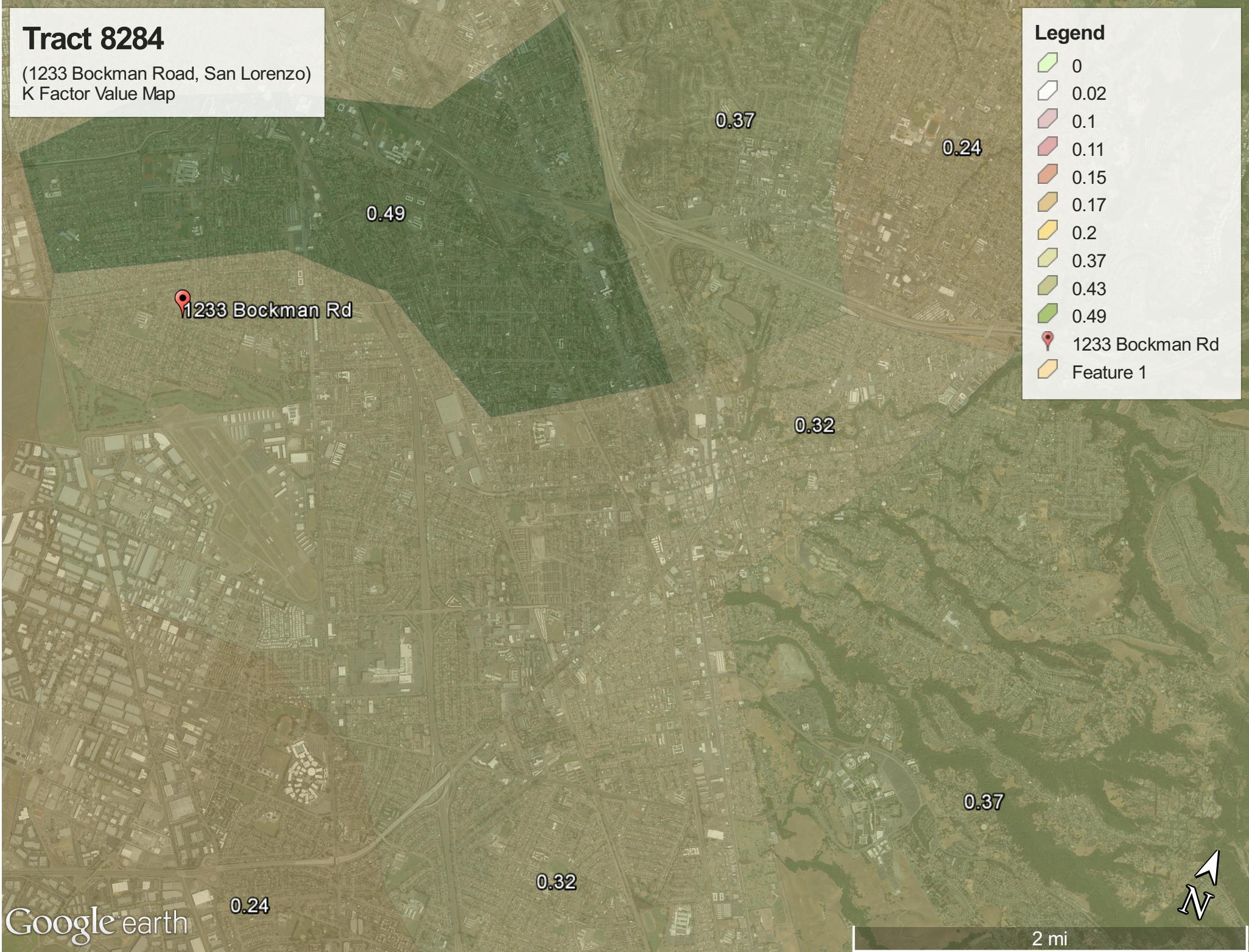
Last updated on Monday, July 28, 2014

Tract 8284

(1233 Bockman Road, San Lorenzo)
K Factor Value Map

Legend

- 0
- 0.02
- 0.1
- 0.11
- 0.15
- 0.17
- 0.2
- 0.37
- 0.43
- 0.49
- 1233 Bockman Rd
- Feature 1



Tract 8284
(1233 Bockman Road, San Lorenzo)
LS Factor Value Map

Legend

- 0
- 0.02
- 0.1
- 0.11
- 0.15
- 0.17
- 0.2
- 0.37
- 0.43
- 0.49
- 1233 Bockman Rd
- Feature 1

1233 Bockman Rd

0.63

2.13

5

0.49

0.12

0.12

0.16



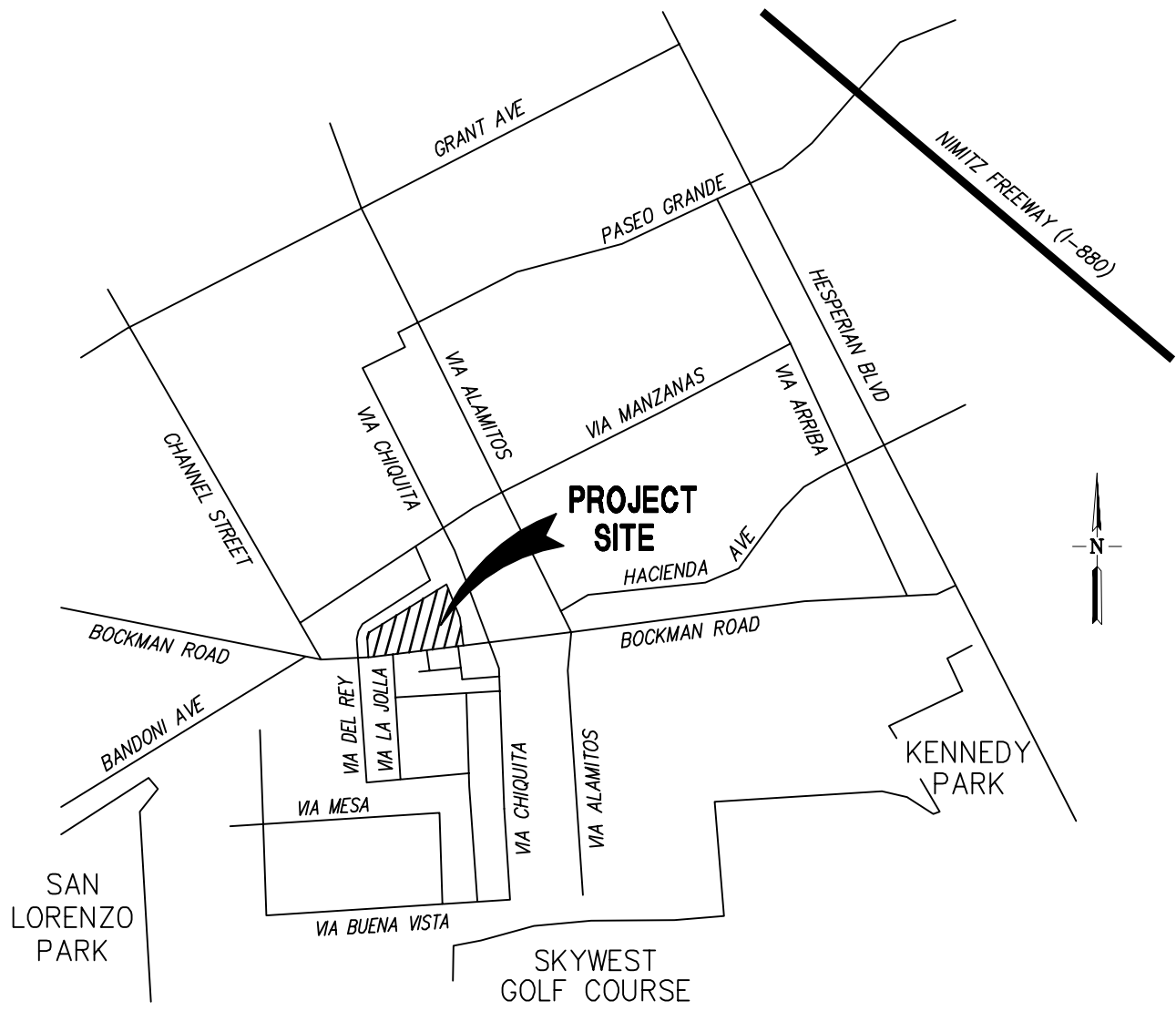


EXHIBIT B
 TRACT 8284
 THE BUNGALOWS
 VICINITY MAP

SAN LORENZO, ALAMEDA COUNTY, CALIFORNIA



RUGGERI-JENSEN-AZAR
 ENGINEERS ■ PLANNERS ■ SURVEYORS
 4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
 PHONE: (925) 227-9100 FAX: (925) 227-9300

SCALE:
 NOT TO SCALE

DATE:
 2-1-2016

JOB NO.:
 151072

STANDARD HYDROSEED MIX FOR ALL GRADED AREAS:

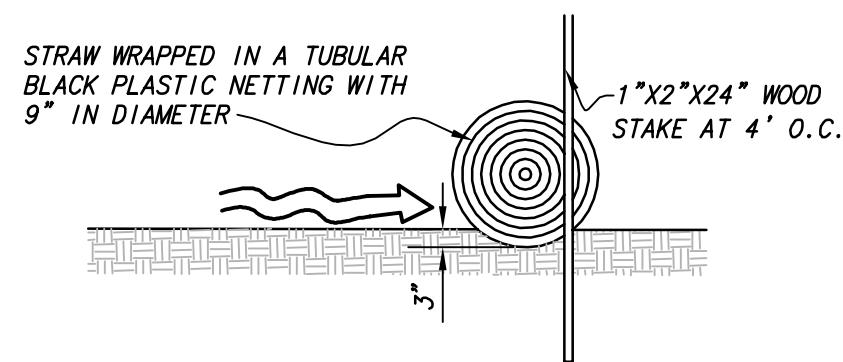
BOTANICAL NAME (COMMON NAME)	MIN % PURITY	MIN % GERMINATION	LBS/AC.
FESTUCA MYZUROS (ZORRO FESCUE)	95	85	20
TRIFOLIUM HIRTUM (HYKON ROSE CLOVER)	90	70	20
LUPINUS MICROCARPUS (CHICK LUPINE)	90	70	10
LINUM LEWISII (BLUE FLAX)	90	70	10

THE EROSION CONTROL MATERIALS SHALL BE MIXED AND APPLIED IN APPROXIMATELY THE FOLLOWING PROPORTIONS:

MATERIAL	LBS/AC. (SLOPE MEASURE)
SEED	60 LBS
WOOD FIBER MULCH	2,000 LBS
R BINDER	60 LBS
FERTILIZER (20-20-10)	400 LBS
WATER	AS NEEDED FOR APPLICATION

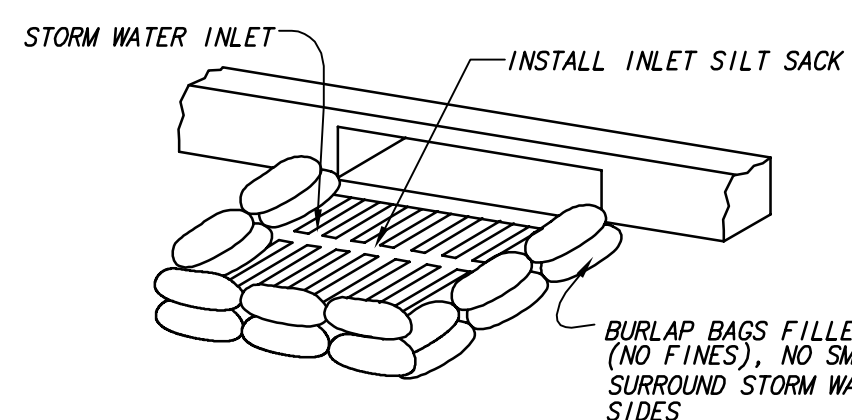
STRAW WATTLE SPACING	
SLOPE PERCENTAGE	SHEET FLOW LENGTH
0-25%	20'
25%-50%	15'
>50%	10'

PER STATE WATER RESOURCES CONTROL BOARD GENERAL PERMIT ATTACHMENT D FOR RISK LEVEL 2 REQUIREMENTS, WATTLE WILL BE SPACED AS SPECIFIED IN TABLE LISTED ABOVE AND UPSTREAM SIDE OF SWALES & DITCHES.



STRAW WATTLE DETAIL

NOT TO SCALE

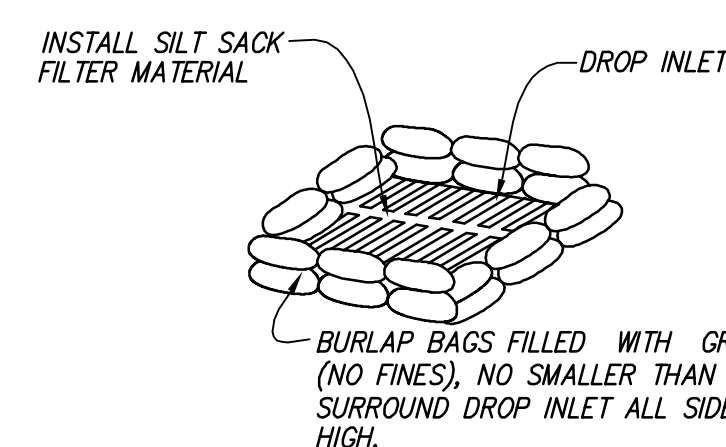


NOTES:

- THICKNESS OF FILLED BAGS WHEN LAID FLAT SHALL NOT EXCEED 4".
- ENSURE THERE ARE NO GAPS BETWEEN THE BAGS OR BETWEEN THE BAGS AND THE FACE OF CURB.
- REMOVE ACCUMULATED SLIT, DIRT, AND DEBRIS BEFORE IT EXCEEDS 2" THICK IN THE GUTTER.
- INSPECT INLET PROTECTION DAILY DURING EXTENDED RAINFALL PERIODS AND BEFORE AND AFTER EACH RAIN EVENT.

BURLAP SACK CURB INLET SEDIMENT CONTROL

NOT TO SCALE

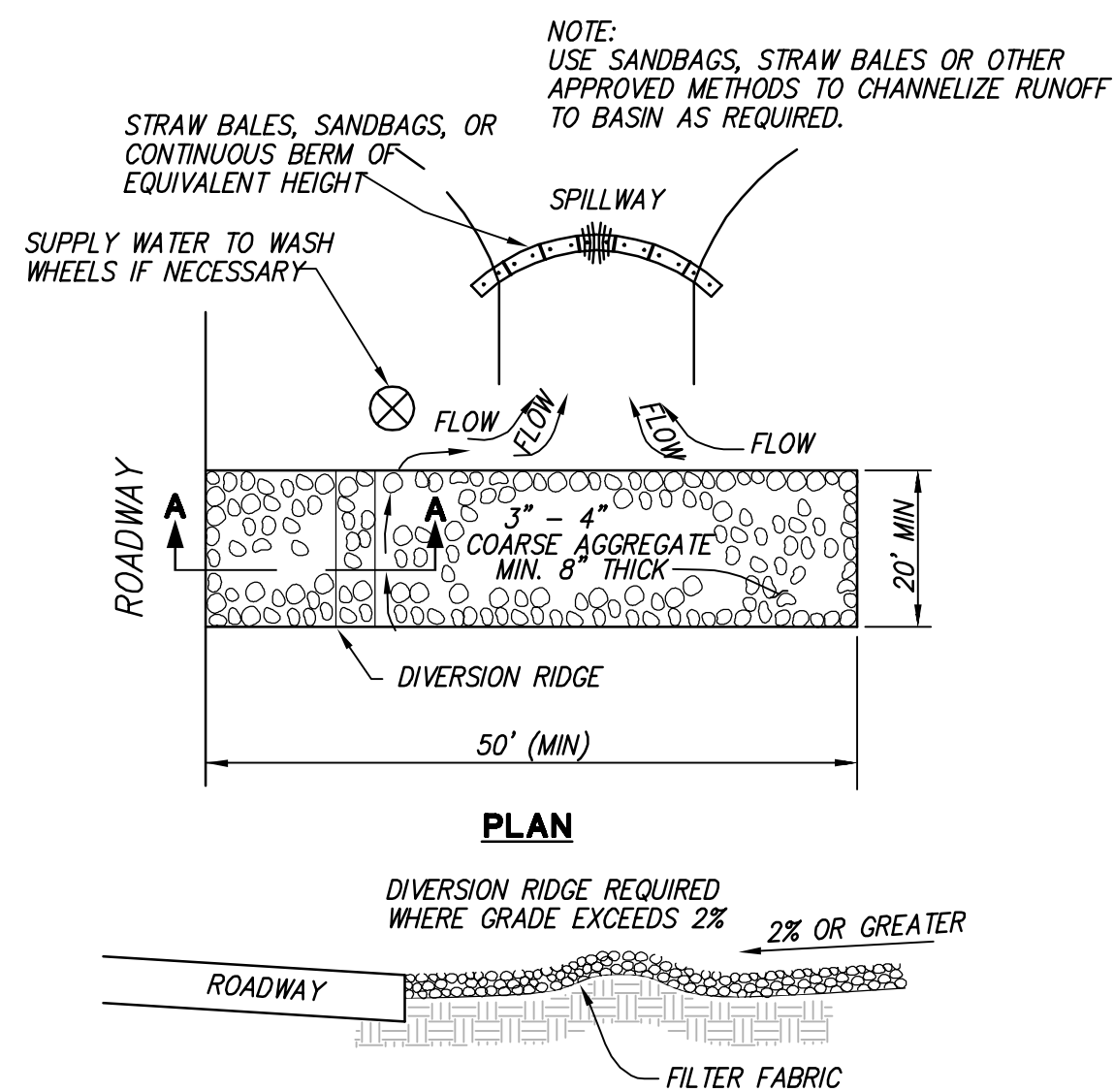
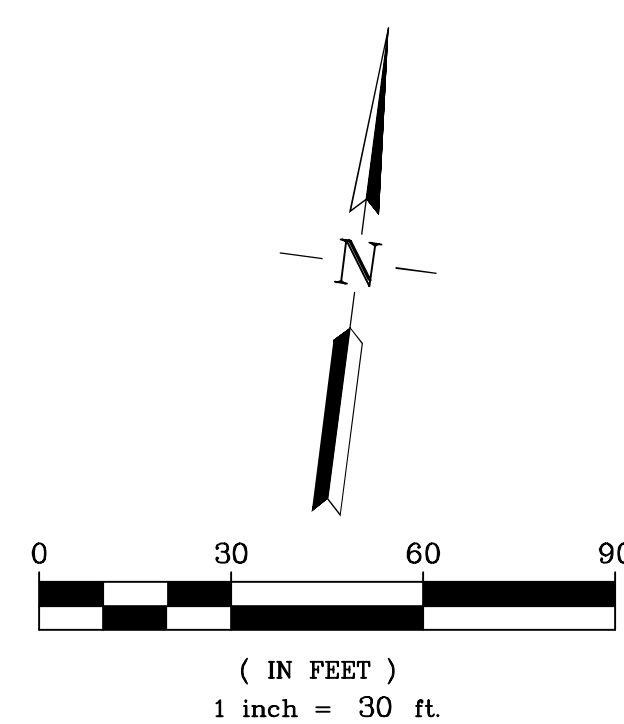


NOTES:

- THICKNESS OF FILLED BAGS WHEN LAID FLAT SHALL NOT EXCEED 4".
- ENSURE THERE ARE NO GAPS BETWEEN THE BAGS.
- REMOVE ACCUMULATED SILT, DIRT, AND DEBRIS BEFORE IT EXCEEDS 2" THICK AROUND THE INLET.
- INSPECT INLET PROTECTION DAILY DURING EXTENDED RAINFALL PERIODS AND BEFORE AND AFTER EACH RAIN EVENT.

BURLAP SACK DROP INLET SEDIMENT CONTROL

NOT TO SCALE



LEGEND:

- BURLAP SACK CURB INLET SEDIMENT CONTROL
- FIELD INLET SEDIMENT CONTROL IN UNPAVED AREAS
- HYDROSEED AREA
- STABILIZED CONSTRUCTION ENTRANCE
- STRAW WATTLE

NOTES:

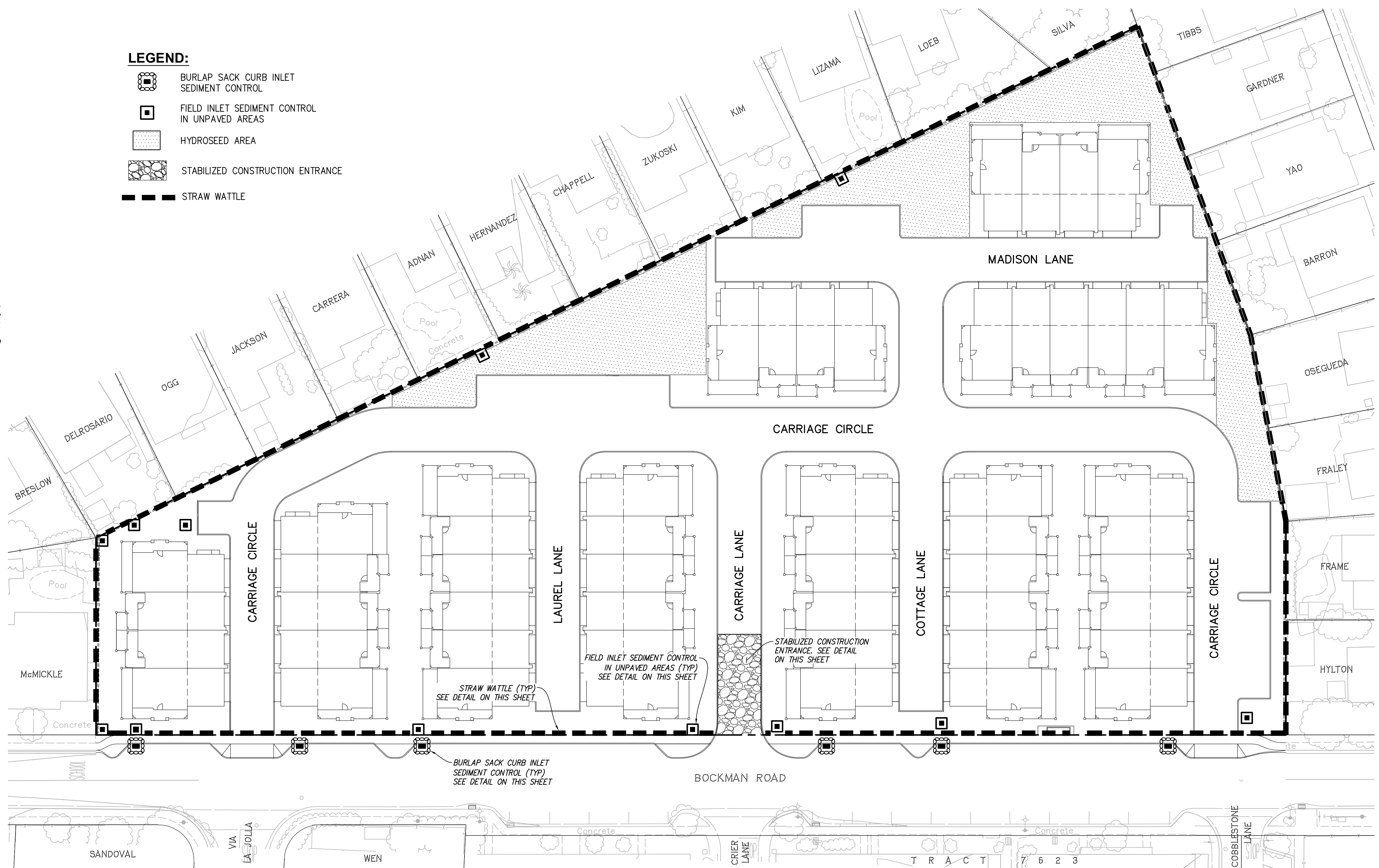
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PAVED ROADS.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

EROSION CONTROL NOTES:

- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE EFFECTIVE FOR CONSTRUCTION DURING THE RAINY SEASON (OCTOBER 1 TO APRIL 30).
- NO STORM WATER SHALL BE ALLOWED TO DRAIN DIRECTLY INTO THE EXISTING STORM DRAIN SYSTEM BEFORE THE ONSITE STORM DRAIN SYSTEM IS INSTALLED.
- AS SOON AS IS PRACTICAL AFTER THE NEW ONSITE STORM SYSTEM IS INSTALLED, THE CATCH BASINS SHALL BE INSTALLED. EROSION CONTROL DEVICES SHALL BE PLACED AROUND THOSE CATCH BASINS AS SHOWN ON THE APPROVED EROSION CONTROL PLAN.
- ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF FROM ENTERING ANY STORM DRAINAGE SYSTEM.
- BEFORE THE CATCH BASIN OR FIELD INLET IS COMPLETE, STRAW BALES, SAND BAGS, AND SILT SACKS SHALL BE INSTALLED AT ALL CATCH BASINS OR FIELD INLETS PER DETAILS HEREON.
- AFTER THE CATCH BASINS OR FIELD INLETS ARE COMPLETE, INLET SEDIMENT FILTERS SHALL BE INSTALLED PER DETAILS SHOWN ON THIS SHEET.
- ALL SEDIMENT BARRIERS SHALL BE REMOVED AFTER APRIL 30.
- EARTHGUARD FIBER MATRIX BY TERRA NOVO (888) 843-1029, OR APPROVED EQUAL, SHALL BE APPLIED WHERE SHOWN ON THE PLANS AND PER THE FOLLOWING SPECIFICATIONS:
 - A HYDROSEEDING VEHICLE SHALL BE FILLED WITH WATER TO AT LEAST 1/3 CAPACITY (HIGH ENOUGH TO COVER AGITATORS) PRIOR TO ADDING ANY EARTHGUARD. CONTINUE TO FILL VESSEL WITH WATER AND SLOWLY ADD THE EARTHGUARD WHILE AGITATORS ARE IN MOTION FOR A MINIMUM OF 10 MINUTES PRIOR TO APPLICATION.
 - THE FOLLOWING PROPORTIONS SHALL BE USED: 4 GALLONS EARTHGUARD + 1500 LBS. FIBER PER ACRE.
 - EARTHGUARD FIBER MATRIX SLURRY SHALL BE APPLIED BY A QUALIFIED APPLICATOR AT A MINIMUM RATE OF 3000 GALLONS/ACRE (HIGHER RATES MAY BE REQUIRED) EVENLY OVER THE ENTIRE AREA TO BE TREATED. CAUTION SHOULD BE TAKEN TO AVOID CREATING PUDDLES OR RUNOFF. THE BLEND MUST BE SPRAYED FROM MULTIPLE DIRECTIONS AND ANGLES TO ENSURE COMPLETE AND PROPER COVERAGE. TREATED AREAS SHALL NOT BE DISTURBED AFTER APPLICATION.
 - EARTHGUARD FIBER MATRIX SHALL BE APPLIED 24 HOURS PRIOR TO OR FOLLOWING A STORM EVENT.
 - AN APPLICATION CERTIFICATE SHALL BE FURNISHED TO THE ENGINEER STATING THAT THE APPROPRIATE QUANTITIES, BLENDING AND APPLICATION METHODS AS SPECIFIED HEREWITHIN HAVE BEEN PROPERLY FOLLOWED.
 - ANY DAMAGED AREA SHALL BE REPAIRED UTILIZING THE EXACT BLEND AND APPLICATION PROCEDURE AS SPECIFIED ABOVE.
 - LIMITS OF HYDROSEEDING & EROSION CONTROL SHALL BE EXTENDED AS NEEDED TO COINCIDE WITH THE ACTUAL REMEDIAL GRADING LIMITS.



REVIEWED BY:
FOR ALAMEDA COUNTY
PUBLIC WORKS AGENCY

RJA
RUGGERI-JENSEN-AZAR
REGISTERED PROFESSIONAL ENGINEER
EARTHQUAKE ENGINEER - SUDBURY, CA
4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
PHONE: (925) 227-9100 FAX: (925) 227-9300

REGISTERED PROFESSIONAL ENGINEER
MARK A. FALGOUT
No. C 63394
CIVIL
STATE OF CALIFORNIA

IMPROVEMENT PLANS
TRACT 8284 - THE BUNGALOWS
EROSION CONTROL PLAN
SAN LORENZO, ALAMEDA COUNTY, CALIFORNIA
FOR: SAN LORENZO RES, LLC

SCALE	DATE	DRAWN	CHECKED	PROJ. MGR.
1"=30'	2-23-2016	AL/AM/TH		

SHEET NO.
C7.1
30 OF 33 SHEETS
JOB NO.
151072

Construction Annual Fees by Acre

Note: Fee is based on the total acreage to be disturbed during the life of the project.

Partial Acreage rounded to nearest whole number.

Acres	FY 2014-15	Acres	FY 2014-15
0	\$466	51	\$2,836
1	\$513	52	\$2,882
2	\$559	53	\$2,929
3	\$606	54	\$2,975
4	\$652	55	\$3,022
5	\$699	56	\$3,068
6	\$745	57	\$3,115
7	\$792	58	\$3,161
8	\$838	59	\$3,208
9	\$885	60	\$3,254
10	\$931	61	\$3,301
11	\$978	62	\$3,347
12	\$1,024	63	\$3,393
13	\$1,070	64	\$3,440
14	\$1,117	65	\$3,486
15	\$1,163	66	\$3,533
16	\$1,210	67	\$3,579
17	\$1,256	68	\$3,626
18	\$1,303	69	\$3,672
19	\$1,349	70	\$3,719
20	\$1,396	71	\$3,765
21	\$1,442	72	\$3,812
22	\$1,489	73	\$3,858
23	\$1,535	74	\$3,905
24	\$1,581	75	\$3,951
25	\$1,628	76	\$3,997
26	\$1,674	77	\$4,044
27	\$1,721	78	\$4,090
28	\$1,767	79	\$4,137
29	\$1,814	80	\$4,183
30	\$1,860	81	\$4,230
31	\$1,907	82	\$4,276
32	\$1,953	83	\$4,323
33	\$2,000	84	\$4,369
34	\$2,046	85	\$4,416
35	\$2,093	86	\$4,462
36	\$2,139	87	\$4,509
37	\$2,185	88	\$4,555
38	\$2,232	89	\$4,601
39	\$2,278	90	\$4,648
40	\$2,325	91	\$4,694
41	\$2,371	92	\$4,741
42	\$2,418	93	\$4,787
43	\$2,464	94	\$4,834
44	\$2,511	95	\$4,880
45	\$2,557	96	\$4,927
46	\$2,604	97	\$4,973
47	\$2,650	98	\$5,020
48	\$2,697	99	\$5,066
49	\$2,743	100	\$5,113
50	\$2,789	100+	\$5,113

APPENDIX C
SWPPP AMENDMENT LOG

RECORD OF AMENDMENTS TO SWPPP
for
The Bungalows
San Lorenzo, Alameda County, California

Amend No.	Date	Description of Amendment	Where Amendment was Made (i.e., SWPPP, Site Plan, etc.)	Signature of Person Entering Amendment

MEMORANDUM OF AMENDMENT TO SWPPP
for
The Bungalows
San Lorenzo, Alameda County, California

Date:

TO: All holders of this SWPPP for the above referenced project:

Please remove the appropriate pages in your copy of the SWPPP and replace them with this amendment(s).

All amendments to the SWPPP must be submitted to the Qualified SWPPP Practitioner (QSP) responsible for the implementation of the SWPPP.

Amendments will be filed with this plan.

Amendment Number: _____

Date of Amendment: _____

Remove Pages:

Insert Pages:

APPENDIX D
NAL EXCEEDANCE REPORTS (RISK LEVEL 2)

**Numeric Action Level (NAL) Exceedance Report
Risk Level 2**

Analytical Method: Field Meter (pH)(Turbidity)
 pH Test Kit (pH)
 EPA 180.1 (Turbidity)
 ASTM Method D 3977-97(SSC)

Reporting Units: pH Units (pH test)
 NTU (Turbidity)
 Mg/L (SSC)

Minimum Detection Limit (MDL): 0.2 pH Units
 1 NTU
 5 mg/L

NAL Exceedance Samples

Date	Time	Location	Sample Measurement	Visual Observations	Rainfall (in)

Description of BMP and Proposed Corrective Actions:

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 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.

Certification (LRP or LRP's Approved Signatory)

D - 2

APPENDIX E
SUBMITTED CHANGES TO PERMIT REGISTRATION DOCUMENTS (PRD's)
(DUE TO CHANGE IN OWNERSHIP OR ACREAGE)

APPENDIX F
CONSTRUCTION SCHEDULE

Construction Schedule

Estimated Construction Start: April 2016
Estimated Construction Finish: May 2017

Mobilization of equipment and materials: April 2016

Site preparation, Clearing and grubbing: April 2016

Install stabilized construction entrance: April 2016

Submit annual rainy season implementation schedule: September 2016

Rainy season begins October 1, 2016

Start erosion and sediment control BMP's: October 1, 2016. Continue to implement and maintain temporary BMP's throughout rainy season.

Grading work: March 2016 – May 2016

Continue to apply erosion and sediment controls as needed during construction: from October 2016 to April 2017.

Rainy season ends April 15, 2017

APPENDIX G
CONSTRUCTION MATERIALS, EQUIPMENT AND ACCIDENT RESPONSE

SECTION 1 POTENTIAL USE OF CHEMICAL/TOXIC MATERIALS

1.1 Practices to Minimize Contact with Storm Water

1.1.1 Construction Materials

- The materials listed in Section 2.5 will be present on the site at various times during construction. The amount of these materials on site will be kept to a minimum by proper scheduling of the construction operation so that the materials will not be brought on site until they are needed, and any extra materials will be removed from the site as soon as they are determined excess.
- During periods of rain or the rainy season, materials will be stored in covered areas and be provided with secondary containment. Secondary containment shall consist of earthen dikes, containment pits, spill blankets, or other means of preventing spills from entering the drainage system.
- Chemicals will be kept in their original containers and well labeled at all times. If drums must be kept uncovered, they will be stored at a slight angle to reduce ponding of rainwater on the lids and to reduce corrosion.
- Materials which have the potential to react with other materials will be stored separately.
- Potentially toxic materials will be stored and transported as far away from drainage facilities as possible.
- Chemicals, drums, or bagged materials will not be stored directly on the ground. These items will be placed on pallets and, when possible, in secondary containment.
- Materials will be stored on paved areas when possible.
- Storage areas will include measures to prevent or contain spills.
 - Stockpiled materials, waste containers, and dumpsters will be stored under a temporary roof, or secured plastic sheeting.
 - A berm will be placed around covered and/or paved storage areas to prevent storm water from running onto the area.
 - Containers of paint, chemicals, solvents, and other hazardous materials will be stored as described in Section 3.
- Routine inspections of storage areas (at least weekly) will be conducted and checks for external corrosion of material containers will be made.
- Wastes will be separated and recycled or disposed of properly and in accordance with applicable laws.
- Dumpsters will be placed under roofs or covered with plastic sheeting at the end of each work day and during rainy weather. If plastic is used, dumpster contents will be protected from storm water by securing it around the outside of the dumpster.
 - Dumpsters will be inspected regularly for leaks, and any dumpster that is not water-tight will be repaired or replaced.
 - Dumpsters will not be cleaned out by hosing them down on the construction site. Dumpsters will be returned to the trash hauling contractor for cleaning.

1.1.2 Construction Equipment and Vehicles

- All construction equipment will be maintained so as to prevent oil or other fluid leaks. Drip pans will be used for any oil or fluid changes that are required for maintenance of equipment.
- Vehicles and equipment will be kept clean. Excessive build-up of oil and grease will be prevented.
- Off-site repair shops will be used as much as possible.
- Secondary containment (such as a drain pan or drop cloths) will be used to catch spills or leaks when removing or changing fluids.
- Stockpiled spill cleanup materials will be placed where they will be readily accessible.
- On-site vehicles and equipment will be inspected regularly for leaks, and repaired immediately.
- Incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) will be checked for leaking oil and fluids. Leaking vehicles or equipment will not be allowed on site.
- Wastes, such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, and hydraulic and transmission fluids will be segregated and recycled.
- Off-site fueling stations will be used as much as possible.
- If fueling must occur on-site, designated areas located away from drainage will be used.
- On-site fuel storage tanks will be located within a retention area designed to hold the total tank volume.
- The retention area will be covered with an impervious material and installed in a manner to ensure that any spills will be contained in the retention area.
- Topping-off of fuel tanks will be discouraged.
- Secondary containment, such as a drain pan or drop cloths, will be used when fueling to catch spills/leaks.
- Mobile fueling of mobile construction equipment around the site will be discouraged. The equipment should be fueled in designated fueling areas.
- Off-site commercial washing businesses will be used as much as possible.
- If washing must occur on-site, designated, bermed wash areas will be used to prevent wash water contact with storm water, creeks, rivers, and other water bodies.
- As little water as possible will be used to avoid having to install erosion and sediment controls for the wash area.
- Phosphate-free, biodegradable soaps will be used. Their use will be limited to as little as possible to prevent any discharge of soapy water from the wash area.
- Steam cleaning on-site will not be permitted.
- Vehicle and equipment storage, cleaning, and maintenance areas will be located in designated, confined areas, as delineated on the Site Map. These areas should be located away from significant drainage courses.
- Cleaning and maintenance activities will be allowed only in such designated areas.
- Concentrated storm water run-on/runoff will be directed around storage and service

areas.

- Contact of storm water and run-on/runoff with stored materials and equipment will be minimized by raising stored materials and equipment on pallets or other similar devices.

1.1.3 Toxic Materials

- All wastes will be disposed of in accordance with Federal, State, and local regulations.
- All of the product will be used before disposing of the container.
- The container's original product label will not be removed prior to disposal, since it contains important safety and disposal information.
- Herbicides and pesticides will not be overly applied. Only the amount needed will be prepared.
- Herbicides and pesticides will not be applied just before rains. Surface dressings should be applied in several smaller applications, as opposed to one large application, to allow time for infiltration and to avoid excess runoff.
- Brushes or paint containers will not be cleaned out on dirt or into streets, gutters, storm drains, or streams. Brushes will be "painted out" as much as possible. Water-based paints will be rinsed to the sanitary sewer. Thinners and solvents will be filtered and re-used. Excess oil-based paints and sludge will be disposed of as hazardous waste.
- Designated hazardous waste storage areas will be selected as described in Section 3.
- Hazardous materials and wastes will be stored in covered containers and protected from vandalism.
- Hazardous material and waste containers will be placed in secondary containment. Secondary containment shall consist of earthen dikes, containment pits, spill blankets, or other means of preventing spills from entering the drainage system.
- Wastes will not be mixed, since mixing can cause chemical reactions, make recycling impossible, and complicate disposal.
- Useful material such as oil or water-based paint will be recycled. Toxic liquid wastes and chemicals will not be disposed of in dumpsters designated for construction debris.
- Regular waste collection services will be scheduled before containers overflow.
- Hazardous waste will be collected, removed, and disposed of only at authorized disposal areas.
- Stockpiled spill cleanup materials will be placed where they will be readily accessible.

1.2 Construction Material Loading, Unloading and Access Areas

Unloading, loading and storage areas on the site will be relocated as construction progresses. They will be located away from creeks or channels, storm drains or other surface water conveyance features. Delivery and service vehicles travel to and from the site on a regular basis, however, the maintenance of these vehicles will be done off-site. Because grading equipment and construction materials are costly to move and are frequently used, they will be stored and maintained on-site in areas where all applicable procedural BMP's for equipment storage and maintenance may be applied. These areas may change regularly as grading operations move across the site, but the procedures remain the same. Soil disturbance in these areas will be minimized. Gravel or base rock will be placed at these sites if necessary to reduce soil disturbance.

SECTION 2 ACCIDENTAL DISCHARGES/MALFUNCTION OF BMP's

2.1 Accident Prevention/Proper Operation of BMP's

The most important means of reducing contamination is to prevent accidents and ensure that all BMP's are operating properly. A list of potential toxic materials at the construction site are described in Section 2.5 and practices to minimize their contact with storm water are described in Section 1.1 of Appendix G. Proper adherence to these suggested practices will minimize accidental contamination.

Continuous visual inspection and maintenance of BMP's is essential for their proper functioning. These practices are described in Section 7.

2.2 Discovery of Breach or Malfunction, or Leakage or Spill

Continuous inspection of the construction site is essential, since spills, leakage, or damage to BMP's can occur even during dry weather. In addition, visual monitoring could indicate if there has been a breach, malfunction, leakage, or spill from a BMP or other source which could result in the discharge of pollutants that would not be visually detectable. Visual monitoring could also indicate if storm water has come into contact with soil amendments, exposed materials or other contaminants.

2.3 Immediate Corrective Action

Immediate corrective action is essential and most important in order to prevent or reduce contamination from being discharged. Several representative problems are listed below:

2.3.1 Breach/Malfunction

When a breach or a malfunction is visually observed, the problem must be corrected immediately. Some examples of these corrective measures are listed in Section 7. Usually, these problems are physical or structural in nature, such as debris removal, reconstructing a berm, or covering stockpiled material to protect it from rainfall.

Any breach/malfunction observed which could have resulted in the discharge of pollutants that would not be visually detectable in storm water requires the collection of a sample of discharge, as described in Section 7.

2.3.2 Leakage or Spill

Leakage/spills and accidental discharges have the potential to be the greatest source of storm water pollution. Cleanup of leakage/spills should be immediate, automatic, and routine. Handling of all emergency leakage/spill controls and measures shall be performed as follows:

2.3.2a Minor Leakage/Spills

Minor leakage/spills typically involve small quantities of oil, gasoline, paint, etc., which can be controlled by the first responder at the discovery of the leakage/spill.

The practices to be followed for minor leakage/spills are to:

- Contain the leakage/spill
 - Stop the source of the leakage/spill.
 - Berm around leakage/spill area, if necessary.
 - Use absorbent materials to prevent spreading of leakage/spill area, if available.
- Recover Leakage/Spilled Materials
 - Sweep up leakage/spilled dry materials immediately. Never attempt to wash them away with water, or bury them.
 - Recover liquid leakage/spills on dirt areas by digging up and properly disposing of contaminated soil.
 - Recover liquid leakage/spills on paved or impermeable surfaces using dry cleanup methods (absorbent materials, cat litter, and/or rags).
- Clean the Contaminated Area and/or Dispose of Contaminated Materials
 - Used cleanup rags may contain hazardous wastes that must either be sent to a certified industrial laundry or dry cleaner, or disposed of properly.
 - Dispose of contaminated materials in a proper waste container.
 - Do not dispose of toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, and curing compounds) in dumpsters designated for construction materials.
 - Place small non-hazardous leakage/spill residues and materials inside a sealed container and place into the garbage can or dumpster
 - Examine labels of leakage/spilled materials for proper waste disposal instructions
 - Inspect the leakage/spill area periodically until it can be satisfactorily determined that the leakage/spill material has been completely removed from the site

2.3.2b Semi-Significant Leakage/Spills

Semi-significant leakage/spills can be controlled by the first responder along with the aid of other personnel such as laborers, foremen, contractors, etc. This response may require the cessation of all other activities. The leakage/spill control measures taken should be consistent with those used for minor leakage/spills. In addition, the following actions should occur upon discovery of a semi-significant leakage/spill:

- Contain the spread of the leakage/spill.
- If the leakage/spill occurs on paved or impermeable surfaces, clean up using dry methods (absorbent materials, cat litter, and/or rags). Contain the leakage/spill by encircling with absorbent materials and do not let the leakage/spill spread widely.
- If the leakage/spill occurs in dirt areas, immediately contain the leakage/spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
- If the leakage/spill occurs during rain, cover the impacted area if possible to avoid runoff and minimize the amount of material needed to be cleaned up.

2.3.2c Significant/Hazardous Leakage/Spills

Significant or hazardous leakage/spills cannot be completely controlled by on-site personnel. The following steps shall be taken:

- Notify the local emergency response agency by dialing 911. Also notify other appropriate local officials. All necessary emergency telephone numbers should be available at the construction site.
- Notify the Governor's Office of Emergency Services Warning Center at (805) 852-7550.
- For leakage/spills of federal reportable quantities, notify the National Response Center at (800) 424-8802.
- Notification should first be made by telephone and followed up with a written report as soon as possible.
- If safe, stop the source of the leakage/spill and contain the leakage/spills spread.
- A leakage/spill cleanup contractor or Haz-Mat team should be contacted immediately.

- Other agencies which may need to be consulted include local fire, police, and public works departments, the Coast Guard, the Highway Patrol, the State Department of Toxic Substance Control, the California Division of Oil and Gas, Cal/OSHA, etc.

APPENDIX H
CASQA BMP HANDBOOK FACT SHEETS

APPENDIX I
CONSTRUCTION SITE INSPECTION REPORT

INSPECTION REPORT

The Bungalows
San Lorenzo, Alameda County, California

ROUTINE SITE INSPECTION FORM

(To be completed by QSP before and after a storm event)

Inspected By: _____ Project:

Date: _____ Address:

==> SWPPP on site? yes no

Dry Season? Wet Season => Time since last rain

Routine inspection? Follow-up inspection? Reason:

Action Item #	Erosion and Sediment Controls	Yes	No*	Comments	n/a
1	Are the control measures called for on grading and erosion control plans installed on the site in the proper locations?				
2	Are all operational storm drain inlets protected from sediment inflow?				
3	Are sediment control measures (traps, filters, barriers, etc.) being maintained effectively?				
4	Are temporary soil stockpiles covered to prevent erosion?				
5	Are stock piles of other granular materials covered, contained or bermed to prevent erosion?				
6	Is there any evidence of sediment-laden runoff flowing under, around or through a diversion structure?				
7	Is there any evidence of erosion (rills, gullies, etc.) on cut or fill slopes or at the outlets of drains or swales?				
8	Is there any evidence of sediment-laden runoff or dewatering effluent leaving the site?				
9	Is there any evidence of sediment, debris or mud deposits on public roads near the site access road?				
10	Are there any areas of bare, unprotected soil that required stabilization to prevent erosion?				
11	Do any seeded or landscaped areas require maintenance, irrigation or inspection to provide more effective cover?				

*No answers require an explanation of corrective action taken. See Sheet I-3.

ROUTINE SITE INSPECTION FORM

Action Item #	Chemical and Waste Controls	Yes	No*	Comments	n/a
12	Are chemicals (paints, concrete mix, fertilizers, etc.) being stored properly and prevented from reaching storm water?				
13	Are waste products (building materials, wood, sheet metal, broken concrete or paving, paints, etc.) being disposed or properly or recycled?				
14	Are contaminated waters generated during construction activities being properly contained, treated and/or disposed of?				
15	Are storm drain inlets in the vicinity of the site protected from inflow during saw-cutting, paving, sealing, and building washing operations?				
16	Is all heavy equipment parked in a designated area, well away from storm drain inlets?				
17	If equipment must be repaired or maintained on site, are drip pans, absorbent pads, berms, or other methods used to prevent contamination or soil or runoff?				
18	Are spills being cleaned up properly and promptly (using dry cleaning methods as appropriate)?				
19	Are there adequate trash receptacles for containing solid wastes generated on site, and are they covered during the rainy season?				
20	Is there any evidence of chemical spills or leaks (stains, sludges, etc.) on site?				
21	Is there any evidence of chemicals, contaminated runoff, litter, or blowing debris or dust leaving the site?				
22	Is there any evidence of chemical wastes, slurries, wash waters, vehicle fluids, or other discharges entering storm drain inlets?				

OTHER COMMENTS: _____

* No answers require an explanation of corrective action taken. See Sheet I-4.

INSPECTION REPORT (CONTINUED)

CORRECTIVE ACTIONS TAKEN
(Note: If none required, enter date and "None")

Item #	Corrective Action	To be Completed By (Date)	Date to Re-Inspect	Re-Inspection Date	Date Complete

E/C Super Signature: _____

Date: _____

Print Name: _____

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 storm water release	<input type="checkbox"/> Quarterly non-storm water
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: _____		Estimate storm duration: _____ (hours)		Estimate time since last storm: _____		Rain gauge reading: _____ (inches)
(date and time)				(days or hours)		
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 BMP's 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:
------------	-------

Visual Inspection Field Log Sheet			
Site Inspections			
Outfalls or BMP's 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)			

BMP INSPECTION CHECKLIST

Inspection Date: _____ Report Date: _____ Inspection Type:

Construction Site Name: _____

- Weekly
- Pre-Qualifying Rain Event
- Post-Qualifying Rain Event
- Contained Storm water Release
- Quarterly Non-Storm water

Project Site BMP	CASQA Construction Handbook Fact Sheet	BMP Status				Notes
		Good Stage	Needs Maintenance to Operate Effectively	Could Fail to Operate as Intended	Failed	

**Risk Level 2
Effluent Sampling Field Log Sheets**

Construction Site Name:	Date:	Time Start:
-------------------------	-------	-------------

Sampler:

Sampling Event Type:	<input type="checkbox"/> Storm water	<input type="checkbox"/> Non-storm water	<input type="checkbox"/> Non-visible pollutant
----------------------	--------------------------------------	--	--

Field Meter Calibration

pH Meter ID No./Desc.: Calibration Date/Time:	Turbidity Meter ID No./Desc.: Calibration Date/Time:
--	---

Field pH and Turbidity Measurements

Discharge Location Description	pH	Turbidity	Time

Grab Samples Collected

Discharge Location Description	Sample Type	Time

Additional Sampling Notes:

Time End:

Risk Level 3 Effluent Sampling Field Log Sheets				
Construction Site Name:		Date:	Time Start:	
Sampler:				
Sampling Event Type:	<input type="checkbox"/> Storm water	<input type="checkbox"/> Non-storm water	<input type="checkbox"/> Non-visible pollutant	<input type="checkbox"/> Post NEL Exceedance
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	
Grab Samples Collected				
Discharge Location Description	SSC	Other (specify)	Time	
Additional Sampling Notes:				

Time End:

**Risk Level 3
Receiving Water Sampling Field Log Sheets**

Construction Site Name: _____ Date: _____ Time Start: _____

Sampler: _____

Receiving Water Description and Observations

Receiving Water Name/ID: _____

Observations:

Odors Yes No

Floating material Yes No

Suspended Material Yes No

Sheen Yes No

Discolorations Yes No

Turbidity Yes No

Field Meter Calibration

pH Meter ID No./Desc.: _____ Turbidity Meter ID No./Desc.: _____

Calibration Date/Time: _____ Calibration Date/Time: _____

Field pH and Turbidity Measurements and SSC Grab Sample

Upstream Location

Type	Result	Time	Notes
pH			
Turbidity			
SSC	Collected Yes <input type="checkbox"/> No <input type="checkbox"/>		

Downstream Location

Type	Result	Time	Notes
pH			
Turbidity			
SSC	Collected Yes <input type="checkbox"/> No <input type="checkbox"/>		

Additional Sampling Notes:

Time End:

APPENDIX J
RAIN EVENT ACTION PLAN (TEMPLATE AND COMPLETED PLANS)

Rain Event Action Plan (template and completed plans)
Rain Event Action Plan (REAP)

Date:		WDID Number:	
--------------	--	---------------------	--

Date Rain Predicted to Occur:		Predicted % chance of rain:	
--------------------------------------	--	------------------------------------	--

Site Information:

Site Name, City and Zip Code _____ Project Risk Level: Risk Level 2 Risk Level 3

Site Storm water Manager Information:

 Name, Company, Emergency Phone Number (24/7)

Erosion and Sediment Control Contractor – Labor Force contracted for the site:

 Name, Company, Emergency Phone Number (24/7)

Storm water Sampling Agent:

 Name, Company, Emergency Phone Number (24/7)

Current Phase of Construction

Check ALL the boxes below that apply to your site.

- | | | |
|---|---|--|
| <input type="checkbox"/> Grading and Land Development | <input type="checkbox"/> Vertical Construction | <input type="checkbox"/> Inactive Site |
| <input type="checkbox"/> Streets and Utilities | <input type="checkbox"/> Final Landscaping and Site Stabilization | <input type="checkbox"/> Other: |

Activities Associated with Current Phase(s)

Check ALL the boxes below that apply to your site (some apply to all Phases).

Grading and Land Development:

- | | | |
|---|--|---|
| <input type="checkbox"/> Demolition | <input type="checkbox"/> Vegetation Removal | <input type="checkbox"/> Vegetation Salvage-Harvest |
| <input type="checkbox"/> Rough Grade | <input type="checkbox"/> Finish Grade | <input type="checkbox"/> Blasting |
| <input type="checkbox"/> Soil Amendment(s): | <input type="checkbox"/> Excavation (_____ ft) | <input type="checkbox"/> Soils Testing |
| <input type="checkbox"/> Rock Crushing | <input type="checkbox"/> Erosion and Sediment Control | <input type="checkbox"/> Surveying |
| <input type="checkbox"/> Equip. Maintenance/Fueling | <input type="checkbox"/> Material Delivery and Storage | <input type="checkbox"/> Other: |

Streets and Utilities:

- | | | |
|--|---|--|
| <input type="checkbox"/> Finish Grade | <input type="checkbox"/> Utility Install: water-sewer-gas | <input type="checkbox"/> Paving Operations |
| <input type="checkbox"/> Equip. Maintenance/Fueling | <input type="checkbox"/> Storm Drain Installation | <input type="checkbox"/> Material Delivery & Storage |
| <input type="checkbox"/> Curb and Gutter/Concrete Pour | <input type="checkbox"/> Masonry | <input type="checkbox"/> Other: |

Vertical Construction:

- | | | |
|---|-------------------------------------|--|
| <input type="checkbox"/> Framing | <input type="checkbox"/> Carpentry | <input type="checkbox"/> Concrete/Forms/Foundation |
| <input type="checkbox"/> Masonry | <input type="checkbox"/> Electrical | <input type="checkbox"/> Painting |
| <input type="checkbox"/> Drywall/Interior Walls | <input type="checkbox"/> Plumbing | <input type="checkbox"/> Stucco |
| <input type="checkbox"/> Equip. Maintenance/Fueling | <input type="checkbox"/> HVAC | <input type="checkbox"/> Tile |
| <input type="checkbox"/> Exterior Siding | <input type="checkbox"/> Insulation | <input type="checkbox"/> Landscaping & Irrigation |
| <input type="checkbox"/> Flooring | <input type="checkbox"/> Roofing | <input type="checkbox"/> Other: |

Final Landscaping & Site Stabilization:

- | | | |
|--|---|--|
| <input type="checkbox"/> Stabilization | <input type="checkbox"/> Vegetation Establishment | <input type="checkbox"/> E&S Control BMP Removal |
| <input type="checkbox"/> Finish Grade | <input type="checkbox"/> Storage Yard/ Material Removal | <input type="checkbox"/> Landscape Installation |
| <input type="checkbox"/> Painting and Touch-Up | <input type="checkbox"/> Irrigation System Testing | <input type="checkbox"/> Other: |
| <input type="checkbox"/> Drainage Inlet Stencils | <input type="checkbox"/> Inlet Filtration | <input type="checkbox"/> Perm. Water Quality Ponds |

- | | | |
|--|--|--|
| <input type="checkbox"/> Other: | <input type="checkbox"/> Other: | <input type="checkbox"/> Other: |
| <u>Inactive Construction Site:</u> | | |
| <input type="checkbox"/> E & S Control Device Installation | <input type="checkbox"/> Routine Site Inspection | <input type="checkbox"/> Trash Removal |
| <input type="checkbox"/> E & S Control Device Maintenance | <input type="checkbox"/> Street Sweeping | <input type="checkbox"/> Other: |

Rain Event Action Plan (REAP)

Date:

WDID Number:

Trades Active on Site during Current Phase(s)

Check ALL the boxes below that apply to your site

- | | | |
|--|---|---|
| <input type="checkbox"/> Storm Drain Improvement | <input type="checkbox"/> Grading Contractor | <input type="checkbox"/> Surveyor- Soil Technician |
| <input type="checkbox"/> Street Improvements | <input type="checkbox"/> Water Pipe Installation | <input type="checkbox"/> Sanitary Station Provider |
| <input type="checkbox"/> Material Delivery | <input type="checkbox"/> Sewer Pipe Installation | <input type="checkbox"/> Electrical |
| <input type="checkbox"/> Trenching | <input type="checkbox"/> Gas Pipe Installation | <input type="checkbox"/> Carpentry |
| <input type="checkbox"/> Concrete Pouring | <input type="checkbox"/> Electrical Installation | <input type="checkbox"/> Plumbing |
| <input type="checkbox"/> Foundation | <input type="checkbox"/> Communication Installation | <input type="checkbox"/> Masonry |
| <input type="checkbox"/> Demolition | <input type="checkbox"/> Erosion and Sediment Control | <input type="checkbox"/> Water, Sewer, Electric Utilities |
| <input type="checkbox"/> Material Delivery | <input type="checkbox"/> Equipment Fueling/Maintenance | <input type="checkbox"/> Rock Products |
| <input type="checkbox"/> Tile Work- Flooring | <input type="checkbox"/> Utilities, e.g., Sewer, Electric | <input type="checkbox"/> Painters |
| <input type="checkbox"/> Drywall | <input type="checkbox"/> Roofers | <input type="checkbox"/> Carpenters |
| <input type="checkbox"/> HVAC installers | <input type="checkbox"/> Stucco | <input type="checkbox"/> Pest Control: e.g., termite prevention |
| <input type="checkbox"/> Exterior Siding | <input type="checkbox"/> Masons | <input type="checkbox"/> Water Feature Installation |
| <input type="checkbox"/> Insulation | <input type="checkbox"/> Landscapers | <input type="checkbox"/> Utility Line Testers |
| <input type="checkbox"/> Fireproofing | <input type="checkbox"/> Riggers | <input type="checkbox"/> Irrigation System Installation |
| <input type="checkbox"/> Steel Systems | <input type="checkbox"/> Utility Line Testers | <input type="checkbox"/> Other: |

Trade Contractor Information Provided

Check ALL the boxes below that apply to your site.

- | | | |
|---|--|--|
| <input type="checkbox"/> Educational Material Handout | <input type="checkbox"/> Tailgate Meetings | <input type="checkbox"/> Training Workshop |
| <input type="checkbox"/> Contractual Language | <input type="checkbox"/> Fines and Penalties | <input type="checkbox"/> Signage |
| <input type="checkbox"/> Other: | <input type="checkbox"/> Other: | <input type="checkbox"/> Other: |

Rain Event Action Plan (REAP)

Date of REAP		WDID Number:	
Date Rain Predicted to Occur:		Predicted % chance of rain:	

Predicted Rain Event Triggered Actions

Below is a list of suggested actions and items to review for this project. Each active Trade should check all material storage areas, stockpiles, waste management areas, vehicle and equipment storage and maintenance, areas of active soil disturbance, and areas of active work to ensure the proper implementation of BMP's. Project-wide BMP's should be checked and cross-referenced to the BMP progress map.

Trade or Activity	Suggested action(s) to perform / item(s) to review prior to rain event
<input type="checkbox"/> Information & Scheduling	<input type="checkbox"/> Inform trade supervisors of predicted rain <input type="checkbox"/> Check scheduled activities and reschedule as needed <input type="checkbox"/> Alert erosion/sediment control provider <input type="checkbox"/> Alert sample collection contractor (if applicable) <input type="checkbox"/> Schedule staff for extended rain inspections (including weekends & holidays) <input type="checkbox"/> Check Erosion and Sediment Control (ESC) material stock <input type="checkbox"/> Review BMP progress map <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Material storage areas	<input type="checkbox"/> Material under cover or in sheds (ex: treated woods and metals) <input type="checkbox"/> Perimeter control around stockpiles <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Waste management areas	<input type="checkbox"/> Dumpsters closed <input type="checkbox"/> Drain holes plugged <input type="checkbox"/> Recycling bins covered <input type="checkbox"/> Sanitary stations bermed and protected from tipping <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Trade operations	<input type="checkbox"/> Exterior operations shut down for event (e.g., no concrete pours or paving) <input type="checkbox"/> Soil treatments (e.g., fertilizer) ceased within 24 hours of event <input type="checkbox"/> Materials and equipment (ex: tools) properly stored and covered <input type="checkbox"/> Waste and debris disposed in covered dumpsters or removed from site <input type="checkbox"/> Trenches and excavations protected <input type="checkbox"/> Perimeter controls around disturbed areas <input type="checkbox"/> Fueling and repair areas covered and bermed <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Site ESC BMP's	<input type="checkbox"/> Adequate capacity in sediment basins and traps <input type="checkbox"/> Site perimeter controls in place <input type="checkbox"/> Catch basin and drop inlet protection in place and cleaned <input type="checkbox"/> Temporary erosion controls deployed <input type="checkbox"/> Temporary perimeter controls deployed around disturbed areas and stockpiles <input type="checkbox"/> Roads swept; site ingress and egress points stabilized <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Concrete rinse out area	<input type="checkbox"/> Adequate capacity for rain <input type="checkbox"/> Wash-out bins covered <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____

Continued on next page.

<input type="checkbox"/> Spill and drips	<input type="checkbox"/> All incident spills and drips, including paint, stucco, fuel, and oil cleaned <input type="checkbox"/> Drip pans emptied <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
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<input type="checkbox"/> Other / Discussion / Diagrams	<input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
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Attach a printout of the weather forecast from the NOAA website to the REAP.

I certify under penalty of law that this Rain Event Action Plan (REAP) will be performed in accordance with the General Permit by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the 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.

_____ Date: _____
 Qualified SWPPP Practitioner (Use ink please)

APPENDIX K
TRAINING REPORTING FORMS AND SWPPP CERTIFICATION REQUIREMENTS

Training Reporting Form

Date	Training Class	Field Representative	Instructor	Instructor's Signature (provide documentation when signature is not available)

SWPPP Certification Requirements

1. Qualified SWPPP Developer: The discharger shall ensure that SWPPP's are written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:

- a. A California registered professional civil engineer;
- b. A California registered professional geologist or engineering geologist;
- c. A California registered landscape architect;
- d. A professional hydrologist registered through the American Institute of Hydrology;
- e. A Certified Professional in Erosion and Sediment Control (CPESC) TM registered through Enviro Cert International, Inc.;
- f. A Certified Professional in Storm Water Quality (CPSWQ) TM registered through Enviro Cert International, Inc.; or
- g. A professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET).

Effective two years after the adoption date of this General Permit, a QSD shall have attended a State Water Board-sponsored or approved QSD training course.

2. Qualified SWPPP Practitioner: The discharger shall ensure that all BMP's required by this General Permit are implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:

- a. A certified erosion, sediment and storm water inspector registered through Enviro Cert International, Inc.; or
- b. A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

Effective two years after the adoption date of this General Permit, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

APPENDIX L
RESPONSIBLE PARTIES

Legally Responsible Person (LRP)

Name: Andrew Lavaux
Company: San Lorenzo Res, LLC
Address: 100 St. Paul Street, Suite 300, Denver, CO, 80206
Phone Number: (303) 307-5051
E-mail: andrew.lavaux@paulscorp.com

Approved Signatory

Name: Andrew Lavaux
Company: San Lorenzo Res, LLC
Address: 100 St. Paul Street, Suite 300, Denver, CO, 80206
Phone Number: (303) 307-5051
E-mail: andrew.lavaux@paulscorp.com

Qualified SWPPP Developer (QSD)

Name: Mark Falgout, PE
Company: Ruggeri-Jensen-Azar
Address: 4690 Chabot Drive, Suite 200, Pleasanton, CA 94588
Phone Number: (925) 227-9100
E-mail: mfallgout@rja-gps.com

Qualified SWPPP Practitioner (QSP)

Name: Bernard Eddy, QSP #22026
Company: SWIMS (Storm Water Inspection and Maintenance Service)
Address: P.O. Box 1627, Discovery Bay, CA 94505
Phone Number: (925) 914-1049
E-mail: info@swimsclean.com
Date of Training: December 19, 2015

**APPENDIX M
CONTRACTORS AND SUBCONTRACTORS**

Contractor List

Company	Contact	Address	Phone Number	Emergency Phone Number	Type of Contractor

APPENDIX N
CONSTRUCTION SITE MONITORING PROGRAM
RISK LEVEL 2

1.1 Applicability of Permit Requirements

A Construction Site Monitoring Program (CSMP) is required with all SWPPP's. The General Permit requires that all construction projects develop and implement a site-specific CSMP. The CSMP includes the monitoring procedures and instructions, location maps, forms, and checklists necessary to implement the visual and water quality monitoring required for the site. The CSMP is developed prior to the start of construction activities and is part of the SWPPP. The CSMP may need to be revised to reflect and adapt to changes in the project. The applicable requirements for each CSMP vary depending on the project risk level. Since the project is Risk Level 2, it must meet the requirements summarized in Table N-1.

Table N-1 Summary of Risk Level 2 Monitoring Requirements

Type of Monitoring		When
Sampling & Analysis	Effluent Sampling	Collect a minimum of three samples per day. Collect runoff samples representative of site discharges.
	Effluent Sampling: pH	During construction phases with high risk of high pH discharge Collect a minimum of three samples per day. Collect runoff samples representative of site discharges.
	Non-visible pollutants: spill/BMP failure based on pollutant source assessment	Within first two hours of discharge from site. Collect samples of runoff affected by the spilled or released material(s) and runoff that is unaffected by the spilled or released material(s).
	Contained rain water	At time of discharge.
	Non-Storm water	At locations where discharged of the site.
	Particle size	When sediment basins are used. If needed to justify site specific sediment risk using the Revised Universal Soil Loss Equation (RUSLE).
	Other	RWQCB or Total Maximum Daily Loads (TMDL's) may require other monitoring.
	Visual Inspections	Non-storm water inspection
Qualifying rain event: Pre-rain inspection		All drainage areas, BMP's, and storm water containments within two business days of each qualifying rain event.
Qualifying rain event: Post-rain inspection		All discharge locations within two business days after each qualifying rain event. Visually observe discharge of contained storm water when

		discharged.
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A qualifying rain event is one that produces ½ inch or more of precipitation within a 48 hour or greater period between rain events.

1.2 Monitoring Locations

The project's observation locations are identified on a map attached to the Visual Inspection Field Log Sheet. The blank and completed Visual Inspection Field Log Sheets are part of Appendix I.

1.3 Safety

Hats are required on the project site at all times. Please also wear appropriate shoes while on the project site; i.e. no open toe shoes or high heels. Since this is an active project, be aware of moving equipment and notify field personnel you are in the field. During wet weather, certain areas on the project site can be slippery.

1.4 Visual Monitoring (Inspections)

All sites are required to conduct visual monitoring (inspections). Visual monitoring includes inspections of BMP's, inspections pre- and post-qualifying rain events and inspections for non-storm water discharges. Visual inspections are required for the duration of the project. Risk Level 1 dischargers are not required to conduct visual inspections during hazardous weather or outside scheduled business hours.

1.4.1 BMP Inspections

The General Permit requires that BMP's be inspected weekly and once a day during extended storm events. The purpose of the visual monitoring is to identify BMP's that need maintenance, could fail to operate as intended, or failed. If deficiencies are identified during BMP inspections, repairs or design changes to BMP's must be initiated within 72 hours of identification and must be completed as soon as possible. The Visual Inspection Field Log Sheet and BMP Inspection Checklist are included in Appendix I.

1.4.2 Qualifying Rain Events

The General Permit requires that the construction site be inspected within two days prior to a predicted qualifying rain event and within two days after a qualifying rain event. These inspections are only required during regular business hours of the construction site. The General Permit also requires that dischargers only use weather forecasts from the National Oceanographic and Atmospheric Administration (NOAA). Pre-rain event inspections should be initiated after consulting NOAA for a qualifying rain event with 50% or greater probability of precipitation.

These forecasts can be obtained at <http://www.srh.noaa.gov/>. The records of all qualifying rain event inspections need to be maintained on site and documented on the Visual Inspection Field Log Sheet and BMP Inspection Checklist. Both forms can be found in Appendix I.

The pre-rain event inspections needs to cover all storm water drainage areas to identify any spills or uncontrolled pollutant sources, all BMP's, storm water storage and containment areas to detect leaks and presence of any observed pollutants.

The post-rain event inspection needs to cover all storm water discharge locations, discharges of contained storm water that is caused by the qualifying rain event and all BMP's to determine if they were adequately implemented. The BMP's should be evaluated to determine if maintenance is necessary and should a different BMP be installed for the next qualifying rain event.

1.4.3 Non-Storm water Discharges Inspection

The General Permit requires all construction sites be inspected quarterly for presence of non-storm water discharges. Non-storm water discharge inspections are only required during normal business hours of the construction site. The purpose of these inspections is to detect unauthorized non-storm water discharges. Quarterly inspections are documented on the Visual Inspection Field Log Sheets in Appendix I. The inspections need to include each drainage area of the project and the inspector must look for presence or indicators of unauthorized and authorized non-storm water discharges and their sources and pollutant characteristics of the non-storm water discharge. (Floating and suspended material, sheen, discoloration, turbidity, odor, etc.) The inspector must also document responses to field observations.

1.5 Water Quality Sampling and Analysis

The General Permit requires all construction sites to monitor runoff for non-visible pollutants in the event of a BMP failure, breach, or spill. An area unaffected by the failure, breach, or spill must also be sampled to serve as the basis of comparison. Appendix G references potential pollutant sources for this construction site. Typically, non-visible pollutants in site discharges result from materials that:

1. Are being used in construction activity.
2. Are stored on the construction site.
3. Were spilled during construction and not cleaned up.
4. Were stored (or used) in a manner that presented the potential for a release for the material during post land use activities.
5. Were spilled during previous land use activities and not cleaned up.
6. Were applied to soil as part of past land use activities.

1.5.1 Sampling Locations

In situations where a breach, malfunction, leakage, or spill has occurred, dischargers must collect a sample of runoff that has come into contact with the materials and must also collect a runoff sample that has not come in contact with the materials (uncontaminated sample) for comparison.

1.5.2 Sample Collection and Handling

It is important to use the correct methods to collect and handle samples to ensure the samples are valid. The General Permit requires dischargers to designate and train personnel to collect, maintain, and ship water quality samples in accordance with the Surface Water Ambient Monitoring Program (SWAMP) 2008 Quality Assurance Program Plan (QAPrP). The SWAMP is available at http://www.swrcb.ca.gov/water_issues/programs/swamp/tools.shtml#ga.

Sampling methods, handling procedures and locations, should be identified in advance of the sampling event. A Sampling Plan with adherence to SWAMP sampling guidance will provide consistent, reproducible, and accurate results. The Sampling Plan should consider contamination potential from sample locations, sampling techniques, and sample handling. Field crews should be trained in the appropriate site specific methods specified in the Sampling Plan. The Sampling Plan shall be completed by the QSP.

1.5.3 Analytical Methods, Laboratories, and Field Meters

All laboratory analyses must be conducted according to analytical procedures specified in 40 Code of Federal Regulations (CFR) Part 136, unless other analytical procedures have been specified in the General Permit or by the RWQCB. With the exception of field analyses conducted by the discharger for turbidity and pH, all analyses must be sent to and conducted by a state-certified analytical laboratory. Currently, the SSC method is not state certified and a limited number of laboratories have the capability of doing this analysis.

Analytical laboratories should be contacted and a contract should be worked out before the wet season to minimize potential disruptions during the critical sampling period. A laboratory should be chosen foremost by their accreditation, ability to perform the required samples in the desired turn-around-time, and then by their proximity for ease of sample delivery. Although with overnight mail delivery, proximity is less important, it may still be an important factor to avoid bottle breakage during shipment.

State-certified analytical laboratories can be found by using the Environmental Laboratory Accreditation Program's (ELAP) website at: <http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx>.

The analytical method/protocol, minimum detection limits, and reporting units for the water quality constituents specifically identified in the General Permit are presented in Table N-2.

Table N-2 Water Quality Constituent Analytical Method / Protocol, Minimum Detection Limits, Sample Size and Container Requirements

Parameter	Test Method / Protocol	Minimum Detection Limit	Minimum Sample Volume	Container Type
pH	Field Meter or pH test kit	0.2 pH Units	NA	Plastic
Turbidity	Field meter or EPA 180.1	1NTU	500 mL	Plastic
SSC	ASTM Method D 3977-97	5 mg/L	200 mL	Contact Lab

Non-visible pollutants may require a wide range of analytical methods. A list of potential non-visible pollutants based on common construction activities is shown in Table N-3. This list is not meant to be inclusive but to provide general guidance for projects. Consult with the analytical laboratory or 40 CFR Part 136 to identify specific analytical methods, sample volumes, and containers needed for the expected non-visible pollutants.

Dischargers can perform pH analysis on site with a calibrated pH meter, or pH test kit. Dischargers can perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on site or at an accredited analytical laboratory.

Many manufacturers offer single parameter meters or multiple parameter meters with various optional probes. Dischargers will need to determine the best type of meter for their individual situation. Any meter selected for field monitoring should have the ability to be calibrated, be accompanied by detailed operation instructions, and should be ruggedly designed for field use and long term storage (you are unlikely to need it during the dry season).

Table N-3 Potential Non-Visible Pollutants Based on Common Construction Activities

Activity	Potential Pollutant Source	Laboratory Analysis
Water line flushing	Chlorinated water	Residual chlorine
Portable toilets	Bacteria, disinfectants	Total/fecal coliform
Concrete & Masonry	Acid wash	pH
	Curing compounds	pH, alkalinity
	Concrete rinse water	Volatile organic compounds (VOC's) pH
Painting	Resins	Semi-volatile organic compounds (SVOC's)
	Thinners	Phenols, VOC's
	Paint strippers	VOC's
	Solvents	Phenols, VOC's
	Adhesives	Phenols, SVOC's
	Sealants	SVOC's
Cleaning	Detergents	Methylene Blue Activated Substances (MBA's), phosphates
	Bleaches	Residual chlorine

	Solvents	VOC's
Landscaping	Pesticides/Herbicides Fertilizers Lime and gypsum Aluminum	Check with analytical library No ₃ / NH ₃ / P Acidity / alkalinity Total dissolved solids (TDS), alkalinity
Treated Wood	Copper, arsenic, senium	Metals
Soil amendments & dust control	Lime, gypsum Plant gums Magnesium chloride Calcium chloride Natural brines Lignosulfonates	pH Biochemical oxygen demand (BOD) Alkalinity, TDS Alkalinity, TDS Alkalinity, TDS Alkalinity, TDS

Hand held single parameters are usually the least costly and are designed with a user friendly interface. Multi-parameter meters are more costly, but provide increased versatility, have user friendly interfaces, and can provide instantaneous readings of multiple parameters. Probes for the multi-parameter meters can be attached to cables of varying lengths that make it possible to sample at a greater distance from the runoff flow.

Hach, Hydrolab, Global Water, Fisher Scientific, and LaMott are some known manufacturers and/or vendors of turbidity and pH meters. Whichever turbidimeter is selected, it is important to use the same meter; different meters may have different results even if properly calibrated. If you need to use several turbidimeters, then assign each meter to a specific location.

Dischargers utilizing a sediment basin are required to conduct a soil particle analysis. Dischargers may also want to conduct this analysis to establish site-specific particle size information, which can be used to justify the project risk level using RUSLE (the particle size analysis provides the K factor). The soil particle analysis is conducted using the American Society for Testing and Materials (ASTM) test method ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, to determine the percentages of sand, very fine sand, silt, and clay on the site. The percentages of particles less than 0.02 mm in diameter must also be determined. This analysis is conducted before construction starts and is reported with the PRD's.

1.6 Watershed Monitoring Option

Dischargers who are part of a qualified regional watershed-based monitoring program may be eligible for relief from the sampling and analysis requirements. The RWQCB may approve proposals to substitute an acceptable watershed-based monitoring program by determining if the watershed-based monitoring program will provide substantially similar monitoring information in evaluating discharger compliance with the requirements of the General Permit.

1.7 Quality Assurance (QA) and Quality Control (QC)

This QA/QC plan must be implemented as part of the CSMP. This ensures that analytical data can be

used with confidence. The following sections provide detail of the procedures to follow for an effective QA/QC plan.

1.7.1 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, BMP's, etc.) Field measurements for pH and turbidity should also be recorded in the field log.

1.7.2 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. "Clean Sampling" techniques are based on the US EPA Method 1669. The adoption of a clean sampling approach will minimize the chance of field contamination and questionable data results.

1.7.3 Sample Chain-of-Custody (COC)

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.

1.7.4 Data Verification

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

The COC and laboratory reports need to be checked to make sure all requested analysis were performed and all samples are accounted for in the reports.

Check laboratory reports to make sure hold times were met and that the reporting levels meet or are lower than the reporting levels agreed to in the contract.

Check data for outlier values and follow up with the laboratory. Occasionally typographical errors, unit reporting errors, or incomplete results are reported and should be easily detected. These errors need to be identified, clarified, and corrected quickly by the laboratory. Attention should be paid to data that is an order of magnitude or more different than similar locations, or is inconsistent with previous data from the same location.

For laboratory analyses, EPA establishes QA/QC checks and acceptable criteria. These data are typically reported along with the sample results. Data reviewers should evaluate the reported QA/QC data to check for contamination (look at method, field, and equipment blanks), precision (laboratory matrix spike duplicates), and accuracy (matrix spikes and laboratory control samples). When QA/QC checks are outside acceptable ranges, the laboratory must flag the data, and usually provides an explanation of the potential impact to the sample results.

Check the data set for outlier values and, accordingly, confirm results and re-analyze samples where appropriate. Sample re-analysis should only be undertaken when it appears that some part of the QA/QC resulted in a value out of the expected range. Initial data, even if outside the expected range may not be discounted unless the analytical laboratory identifies the required QA/QC criteria were not met. If this occurs, the project should obtain a written statement from the analytical laboratory regarding the validity of the sample result.

Similarly, field data needs to be checked as soon as possible to identify potential errors. Reported data and observations should be verified to ensure that it is complete and accurate and as soon as the field logs are received.

Field logs should be checked to make sure all required measurements were completed and appropriately documented. Crews may occasionally miss-record a value. Reported values that appear out of the typical range or inconsistent, should be followed up on immediately to identify potential reporting or equipment problems.

Equipment calibration notations should be verified for outlier data, and if appropriate equipment calibrations should be checked after sampling. Observations noted on the field logs can also help to identify potential interferences. Notations should be made of any errors and actions taken to correct the equipment or recording errors.

When using a field meter it is important to record the value and then make note of any possible meter failures or interferences that could have led to an exceedance. Some possible instrument problems may include the need to recalibrate; the need to replace the battery; problems with the sample container (such as scratches on glass or plastic optical sample cells or particles on the outside of the optical sample cells); or fouled probes.

1.8 Reporting Requirements and Records Retention

Most reporting will typically occur in the Annual Report. However, Risk Level 3 dischargers must electronically submit all storm event sampling results (pH and turbidity) to the SWRCB's SMARTS no

later than five days after the conclusion of the storm event. Field data related to ATS monitoring must be filed every 30 days. Additional reporting is required if NALs or NELs are exceeded. (See Table N-4 for Numeric Effluent Limitations and Numeric Action Levels.) The requirements for NAL Exceedance Reports and NEL Violation Reports as well as records retention are discussed in the following sections.

Table N-4 Numeric Effluent Limitations and Active Levels

Parameter	Discharge Type	Units	Numeric Action Level	Numeric Effluent Limitation
pH	Risk Level 2	pH Units	6.5-8.5	N/A
	Risk Level 3		6.5-8.5	6.0-9.0
Turbidity	Risk Level 2	NTU	250 NTU	N/A
	Risk Level 3		250 NTU	500 NTU

1.8.1 Numeric Action Level (NAL) Exceedance Report

In the event that the storm event average of the samples exceeds an applicable NAL, Risk Level 2 and 3 dischargers must electronically submit all storm event sampling results to the SWRCB’s SMARTS no later than 10 days after the conclusion of the storm event. (Note, however that Risk Level 3 dischargers must submit all field data regardless of exceedance status within five days of the storm event conclusion.) In addition, the RWQCB’s may request the submittal of an NAL Exceedance Report. The discharger must certify each NAL Exceedance Report in accordance with the General Permit’s Special Provisions for Construction Activity.

An NAL Exceedance Report must contain the following information:

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

1.8.2 Numeric Effluent Limitation (NEL) Violation Report

In the event that the daily average of the samples exceed an applicable NEL, Risk Level 3 dischargers must electronically submit a NEL Violation Report to the SWRCB's SMARTS within 24 hours of identifying the exceedance. ATS dischargers must submit an NEL Violation Report to the SWRCB's SMARTS within 24 hours after the NEL exceedance has been identified. The discharger must certify each NEL Violation Report in accordance with the General Permit's Special Provisions for Construction Activity.

Similar to the NAL Exceedance Report, an NEL Violation Report contains the following information:

1. Analytical method(s), method reporting unit(s), and MDL(s) of each analytical parameter;
2. Date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation; and
3. Description of the current BMP's associated with the effluent sample that exceeded the NEL and the proposed corrective actions taken.

In the event that an applicable NEL was exceeded during a storm event equal to or larger than the Compliance Storm Event (5-year, 24-hour event), Risk Level 3 and ATS dischargers must report the on-site rain gauge reading and nearby governmental rain gauge readings for verification. Projects affected by run-on from a natural disaster (such as a forest fire) are not subject to NEL's. Exemption justifications must be entered in to SMARTS.

Risk Level 3 projects and sites using ATS are required to subsequently sample receiving waters for pH, turbidity, and SSC for the duration of coverage under the General Permit if an NEL contained in the General Permit is violated.

1.8.3 Annual Report

All dischargers are required to prepare and electronically submit an Annual Report no later than September 1st each year. The Annual Reports must be certified in accordance with the Special Provisions in the General Permit. The Annual Report must include the following storm water monitoring information:

1. A summary and evaluation of all sampling and analysis results, including original laboratory reports;
2. The analytical method(s), method reporting unit(s), and MDL(s) of each analytical parameter (analytical results that are less than the MDL must be reported as "less than the MDL" or "<MDL");
3. A summary of all corrective actions taken during the compliance year;
4. Identification of any compliance activities or corrective actions that were not implemented;
5. A summary of all violations of the General Permit;

6. The individual(s) who performed facility inspections, sampling, visual observation (inspections), and/or measurements;
7. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge); and
8. The visual observations and sample collection exemption records and reports.

1.8.4 Records Retention

Dischargers must retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years from date of submittal or longer if required by the RWQCB. ATS dischargers must retain all records for three years after the completion of the construction project. Records are to be kept on site while construction is ongoing. These records include:

1. The date, place, and time of facility inspections, sampling, visual observations (inspections), and/or measurements, including precipitation;
2. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and/or measurements;
3. The date and approximate time of analyses;
4. The individual(s) who performed the analyses;
5. A summary of all analytical results from the last three years, 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. Non-storm water discharge inspections and visual observations (inspections) and storm water discharge visual observation records;
9. Visual observation and sample collection exemption records
10. NAL Exceedance Reports and NEL Violation Reports; and
11. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observations (inspections), or inspections.

Results of field measurements and laboratory analyses must be kept in the SWPPP. It is also recommended that training logs, COC's, and other documentation related to sampling and analysis be kept with the project's SWPPP.