

WASTE DISCHARGE IDENTIFICATION (WDID) NUMBER: XXXXX

# STORMWATER POLLUTION PREVENTION PLAN

for

State Route 32 Widening (Phase 1)

CALTRANS ENCROACHMENT PERMIT NUMBER FOR LOCAL AGENCY / PRIVATE  
ENTITY: XXXXX

CALTRANS ENCROACHMENT PERMIT NUMBER FOR CONTRACTOR: XXXXX

RISK LEVEL: 2

*Prepared for:*

City of Chico

P.O. Box 3420

Chico, Ca 95927

Resident Engineer: TBD

(XXX)XXX-XXXX

*Submitted by:*

TBD

XXX Rd

XXX, Ca XXXXX

(XXX)XXX-XXXX

TBD

*Project Site Address*

State Route 32 from Fir Street to El Monte Avenue

(XXX)XXX-XXXX

Contractor's Water Pollution Control (WPC) Manager/Qualified S WPPP Developer(OSD)

TBD

(XXX)XXX-XXXX

Contractor's Qualified SWPPP Developer (OSD) (if SWPPP not developed by WPC Manager)

TBD

(XXX)XXX-XXXX

Contractor's Qualified S WPPP Practitioner (OSP) (if different from WPC Manager)

**TBD**

**(XXX)XXX-XXXX**

**SWPPP Developed by:**

**Mark Thomas and Company, Inc.**

**7300 Folsom Blvd, Suite 203**

**Sacramento, Ca 95826**

**(916)381-9100**

**Zachary Siviglia, Senior Project Engineer**

**SWPPP Date**

**11-17-2011**

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**SWPPP Files**

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File Category 20.03 ..... Water Pollution Control Schedule Updates

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File Category 20.55 ..... Field Testing Equipment Maintenance and Calibration Records  
File Category 20.61 ..... Notice of Discharge Reports  
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File Category 20.70 ..... Annual Certification of Compliance  
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# SECTION 100

## SWPPP Certifications and Approval

### 100.1 Legally Responsible Person Certification and Caltrans Approval

#### Legally Responsible Person

Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name:

\_\_\_\_\_

Project Number/ID [if  
applicable]

\_\_\_\_\_

"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."

\_\_\_\_\_  
Legally Responsible Person [if organization]

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

\_\_\_\_\_  
Date

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

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

## Qualified SWPPP Developer

Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name: State Route 32 Widening (Phase 1)

Project Number/ID [if applicable] EA: 03-1E4904

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



QSD Signature

11/23/11

Date

Zachary Siviglia

QSD Name

01309

QSD Certificate Number

Senior Project Engineer, Mark Thomas and Company, Inc.

Title and Affiliation

(916)381-9100

Telephone Number

(916)381-9100

Email

### For Use by Caltrans Only

### CALTRANS OVERSIGHT ENGINEER'S CONCURRENCE OF SWPPP

I, and/or personnel acting under my direction and supervision, have reviewed this SWPPP and concur with the RE's findings that it meets the requirements set forth in the contract special provisions, Caltrans Standard Specifications Section 7-1.01G - Water Pollution, and the Caltrans SWPPP/WPCP Preparation Manual.

Caltrans Oversight Engineer's Signature

Date of WPCP Concurrence

Caltrans Oversight Engineer's Name

Telephone Number

## 100.2 Contractor and QSD SWPPP Certification

### Contractor's Certification of SWPPP

Project Name:

**State Route 32 Widening (Phase 1)**

---

Caltrans Encroachment Permit  
Number issued to Local Agency /  
Private Entity:

XXXXX

Caltrans Encroachment Permit  
Number issued to Contractor:

XXXXX

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to 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, to the best of my knowledge and belief, is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

---

Contractor's Signature

TBD

---

Date

(XXX)XXX-XXXX

---

Contractor's Name

---

Telephone Number

---

Contractor's Title

**QSD's Certification of SWPPP**

Project Name: **State Route 32 Widening (Phase 1)**

---

Caltrans Encroachment Permit  
Number issued to Local Agency /  
Private Entity: **XXXXX**

Caltrans Encroachment Permit  
Number issued to Contractor: **XXXXX**

"I certify under penalty of law that I relied upon available project and site information, current watershed and basin plan maps and available soil data to develop this SWPPP so that Best Management Practices (BMPs) were designed and placed in accordance with industry standards and best professional judgment to reduce pollutants from leaving the job site. All other sources relied upon to gain information for this project's SWPPP were appropriate and dependable, based on my best professional judgment. To the best of my knowledge and belief, the information submitted in this SWPPP is in compliance with all requirements of the Construction General Permit (CAS000002, Order No. 2009-009-DWQ)."

---

QSD's Signature

---

Date

---

QSD's Name

---

QSD's Telephone Number

---

QSD's Title

### **100.3 Amendments**

#### **100.3.1 SWPPP Amendments Certification and Approval**

This SWPPP is meant to be a "living document," therefore, updated and additional information is expected to be added to the SWPPP as the project progresses, including information regarding changes in the field that do not require an amendment, such as the following:

- adding BMPs as required by a *Rain Event Action Plan*.
- increasing or decreasing the quantity of BMPs in the field that are already part of the erosion control plan in the SWPPP,
- moving BMPs shown on the WPCDs to protect water quality during different phases of construction,
- updating WPCDs to reflect actual site conditions, and

- maintenance and repairs to BMPs.

This SWPPP shall be amended when:

- a change in construction or operations affects the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
- a contract change order includes additional water pollution control practices, not already specified in the approved SWPPP;
- deemed necessary by the RE;
- SWPPP objectives to reduce or eliminate pollutants in stormwater discharges have not been achieved; or
- a CGP violation has occurred; when the RWQCB determines that a CGP violation has occurred, the SWPPP shall be amended and corrective actions implemented within 14 calendar days after notification by the RWQCB.

The following information shall be included in each amendment:

- who requested the amendment;
- the location of proposed change;
- the reason for the change;
- the original BMP proposed, if any;
- the new BMP proposed; and
- any existing implemented BMP(s).

Approved and certified amendments shall be inserted into the appropriate section or attachment of the SWPPP. All SWPPP amendments prepared by the WPC Manager and approved by the Contractor shall be accepted and certified by the LRP or Approved Signatory. A blank copy of the CEM-2008 SWPPP/WPCP Amendment Certification and Approval form is in Appendix A. For approved amendments, the signed SWPPP Amendment Certification and Approval form shall be attached to the SWPPP amendment.

A copy of each approved and certified amendment shall be inserted into Attachment AA. All SWPPP amendments shall be listed in the SWPPP Amendment Log, available in Appendix B. The Amendment Log shall be kept in SWPPP File Category 20.02 and a copy shall be inserted into Attachment AA.

The SWPPP will be completely revised if either the number of amendments or the amount of information contained in the amendments makes implementation of the SWPPP confusing, as determined by the RE, or the Contractor requests to revise the SWPPP based on planned changes in activities that would require a major SWPPP amendment.

### ***100.3.2 Amendment Log***

All approved and certified SWPPP amendments shall be shown on the SWPPP Amendment Log. A blank Amendment Log is available in Appendix B. The SWPPP Amendment Log shall include the following information:

- amendment number;
- amendment date;
- brief description of the amendment;
- name of individual requesting amendment; and
- approval date.

All SWPPP amendment(s) prepared and approved as discussed in Section 100.3.1 shall be documented in the Amendment Log and kept in SWPPP File Category 20.02: Stormwater Pollution Prevention Plan Amendments. A copy of the Amendment Log shall also be inserted into Attachment AA.

#### ***100.4 Annual Compliance and Approval***

By July 15 of each year, the Local Agency / Private Entity shall submit an Annual Certification of Compliance to the Caltrans Oversight RE stating that the project is in compliance with the terms and conditions of the Permits and the SWPPP. By August 1 of each year, the Caltrans Oversight Engineer will review and accept the Annual Certification of Compliance. The Caltrans Oversight Engineer will document acceptance of the Annual Certificate of Compliance by completing and signing the Acceptance of Annual Certification of Compliance. A blank copy of the CEM-2070 SWPPP/WPCP Annual Certification of Compliance form is included in Appendix C. Completed Annual Certification of Compliance forms will be filed in SWPPP File Category 20.70: Annual Certification of Compliance.

# SECTION 200

## OBJECTIVES

This SWPPP has five (5) main objectives, which are listed below.

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 California Regional Water Quality Control Board (RWQCB) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated.
3. Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non- stormwater discharges from the construction activity to the best available technology (BAT) / best conventional technology (BCT) standard.
4. Calculations and design details for site run-on, as well as BMP controls, are complete and correct.
5. Stabilization BMPs designed to eliminate or reduce pollutants after construction is complete have been installed.

This SWPPP was developed to conform to the required elements of the CGP (CAS000002, Order No. 2009-0009-DWQ) issued by the SWRCB.

This SWPPP is designed to be a useful document for those who must implement the SWPPP on a daily basis in the field. Most of the information necessary for the daily implementation of the SWPPP is contained in Attachment BB: Water Pollution Control Drawings, Attachment CC: Water Pollution Control Best Management Practices List, and Attachment DD: Water Pollution Control Schedule.

This SWPPP is also a “living document” because updated and additional information is added to the SWPPP file categories as the project progresses, including:

- SWPPP Amendments;
- Subcontractor and Material Supplier Information;
- Contractor Personnel Training Documentation;
- Site Inspection Reports;
- Weekly Status Reports;
- Rain Event Action Plans;
- Sampling and Analysis Results;
- Equipment Maintenance and Calibration Records; and
- Notice of Discharge Reports.

The SWPPP shall be readily available on site for the duration of the project.

# SECTION 300

## PROJECT AND CONTRACTOR INFORMATION

### 300.1 Project Description

The construction project is located in Butte County, in the City of Chico, on State Route 32 (SR 32) from Post Mile 10.3 to Post Mile 11.3. The project will widen and improve approximately 1 mile of SR 32, beginning east of Fir Street at the west end of the project corridor and extending east to El Monte Avenue. SR 32 will be widened from two to three lanes in each direction from the east side of the SR99 interchange to just east of Fir Street. The roadway will then be widened from two to four lanes (two in each direction) from Fir Street to El Monte Avenue, where the roadway will conform to the existing intersection. The bridge over Dead Horse Slough will also be widened to accommodate 2 additional through lanes. The intersection of SR32 with Forest Avenue will be widened to include separated left and right turn pockets. The existing signal at Forest Avenue will be modified. The majority of the project discharges directly into Dead Horse Slough, which runs through the middle of the project. The City of Chico also maintains the storm drain systems located toward the west end of the project and along Forest Avenue.

### 300.2 Project Risk Level

The risk level assessment of the project site was calculated to be Risk Level 2. This risk level will determine the minimum level of BMPs that will be acceptable based on the project site and the project construction activities. The risk level is the basis for the minimum level of site-specific monitoring and reporting that will be required. The risk level is based on project duration, proximity to impaired receiving waters, and soil conditions. The Risk Level Determination is discussed in Section 500.1.3 and the calculations are included in Attachment C.

### 300.3 Construction Sites Estimates

The following are estimates of the construction site.

- Construction site area      20.7 Acres
- Percentage impervious area before construction      42%
- Runoff coefficient before construction      0.64
- Percentage impervious area after construction      54%
- Runoff coefficient after construction      0.69

Run-on from off-site areas anticipated:       Yes     No

Anticipated stormwater run-on flow rate to the construction site: stormwater run-on is not anticipated. Parcels adjacent to the property drain off-site.

Anticipated drainage patterns following the completion of grading activities are shown on the WPCDs from Attachment BB.

### 300.4 Vicinity and Site Map

The construction project vicinity map showing the project location, surface water boundaries, geographic features, construction site perimeter, and general topography, is located in Attachment D. The project contract plan Title Sheet provides additional detail regarding the project location and is also included in Attachment D.

The project location is in the vicinity of Dead Horse Slough. The project site is relatively flat, extending along State Route 32 east of the intersection of State Route 32 and Fir Street for approximately 1 mile. The roadway will cross dead horse slough toward the eastern conform of the project. The existing drainage along State Route 32 consists of roadside ditches that generally parallel the road and convey flow to Dead Horse Slough on the east end of the Project and drain to a formal storm drain system on the west end of the project that ties to Little Chico Creek. Little Chico Creek generally flows southwest, merging and joining with several other creeks and sloughs before ultimately ending at the Sacramento River approximately 20 miles southwest of the Project.

### 300.5 Unique Site Features

Project has Fill Material:  Yes  No

Project has Native Material:  Yes  No

Hydrologic Soil Group:  A (high infiltration rate)  B (moderate infiltration rate)

C (slow infiltration rate)  D (very slow infiltration rate)

Soil Erodibility:  Slight  Moderate  Severe

The Project is underlain by sediments of the Pleistocene-age Modesto formation, which is comprised primarily of alluvial sand, silt and clay. Within the project limits, the soil is mapped as being Almendra Loam. Almendra Loam is described as Sandy Loam. Interlayered stiff to very stiff (locally soft and hard) clay, sandy clay, silt, and silt with sand and dense to very dense clayey gravel, sand with gravel, and gravel with clay were encountered within the project limits. These soils can be interpreted as alluvium of the Modesto formation. Groundwater was encountered in borings at depths ranging from about 7 to 12 feet. Groundwater levels may fluctuate during the year, and may be seasonally perched over dense soil layers and/or bedrock.

Unique Features Onsite:  Water Bodies  Wetlands  Endangered or Protected Species  
 Environmentally Sensitive Areas  Other  None

Dead Horse Slough is located within the project limits. A portion of the construction will occur within the Slough, during the dry season, to drive piles and widen the existing bridge over the slough. Precautions will be taken to ensure the protection of the waterway during construction activities, in accordance with the Clean Water Act Section 404 Permit requirements, the Central Valley Flood Protection Board Encroachment Permit, the California Department of Fish and Game Streambed Alteration Agreement, and the Central Valley RWQCB Clean Water Act Section 401 Water Quality

Certification.

### **300.6** *Contact Information for Responsible Parties*

The following parties are responsible for this SWPPP:

#### **WPC Manager**

Name: **TBD**

Title: Water Pollution Control Manager

Company: **Insert Contractor's Company Name-then TAB.**

Address: **Insert Address 1 and press ENTER to insert Address 2 or TAB to next field**

**Insert City, State, ZIP-then TAB**

Phone Number: **Insert Telephone Number(s)-then TAB.**

Emergency Phone Number (24/7): **Insert Telephone Number(s)-then TAB.**

Email address: **Insert email address-then TAB.**

#### **Qualified SWPPP Developer (QSD)**

Name: **TBD**

Title: Qualified SWPPP Developer

Company: **TBD**

Address: **TBD**  
**XX, Ca XXXXX**

Phone Number: **XXX-XXX-XXXX**

Email Address: **XX@XXX.com**

#### **Resident Engineer**

Name: **Resident Engineer: TBD**

Title: Resident Engineer

Agency: **City of Chico**

Address: **P.O. Box 3420**  
**Chico, Ca 95927**

Phone Number: **(XXX)XXX-XXXX**

Emergency Phone Number (24/7): **Insert R.E.'s Telephone Number-then TAB.**

Email Address: **Insert email address-then TAB.**

**Contractor**

Name: **TBD**

Title: **Contractor**

Company: **TBD**

Address: **XXX Rd**  
**XXX, Ca XXXXX**

Phone Number: **(XXX)XXX-XXXX**

Emergency Phone Number (24/7): **XXX-XXX-XXXX**

Email Address: **Insert email address-then TAB.**

**Contractor Site Manager**

Name: **TBD**

Title: **TBD**

Company: **TBD**

Address: **TBD**  
**XXX, Ca XXXX**

Phone Number: **XXX-XXX-XXXX**

Emergency Phone Number (24/7): **XXX-XXX-XXXX**

Email Address: **XXX@XX.com**

**Qualified SWPPP Practitioner (QSP)**

Name: **TBD**

Title: **Insert Title-then TAB**

Company: **TBD**

Address: **TBD**  
**XX, Ca, XXXXX**

Phone Number: **XXX-XXX-XXXX**

Emergency Phone Number (24/7): **XXX-XXX-XXXX**

Email Address: **Insert email address-then TAB.**

**Erosion and Sediment Control Provider**

Name: **TBD**

Title: **TBD**

Company: **TBD**

Address: **TBD**  
**XX, Ca, XXXXX**

Phone Number: **XXX-XXX-XXXX**

Emergency Phone Number (24/7): **XXX-XXX-XXXX**

Email Address: **Insert email address-then TAB.**

**Stormwater Sampling and Testing Agent**

Name: **TBD**

Title: **TBD**

Company: **TBD**

Address: **TBD**  
**XXX, Ca, XXXXX**

Phone Number: **XXX-XXX-XXXX**

Emergency Phone Number (24/7): **XXX-XXX-XXXX**

Email Address: **Insert email address-then TAB.**

REPLACE THIS WITH ADDITIONAL NAMES AND ASSOCIATED RESPONSIBILITIES OR DELETE THIS LINE  
(Use the "FORMAT OPTIONS" button to insert subtitles and/or paragraphs).

### ***300.7 List of Subcontractor and Materials Suppliers***

The following subcontractors will be working on this project:

1. **XXXXXX XXXXXX**

SWPPP Responsibility:

2. **Insert Subcontractor Name/Company-then TAB.**

SWPPP Responsibility:

3. **Insert Subcontractor Name/Company-then TAB.**

SWPPP Responsibility:

4. [LIST]

XXXXXXXXXX

XXXXXXXXXX

XXXXXXXXXX

XXXXXX

Contact information for each subcontractor will be provided in the SWPPP Notification log in SWPPP File Category 20.21: Subcontractor Contact Information and Notification Letters. Contact information shall include subcontractor name, type of work performed, contact name, phone number and emergency telephone number (24/7).

The following materials suppliers will be delivering materials to the project site and must comply with pertinent SWPPP requirements:

1. **XXXXXXXXXXXXXXXXXX**

2. **XXXXXXXXXXXXXXXXXXXX**

3. **XXXXXXXXXXXXXXXXXX**

4. **XXXXXXXXXX**

XXXXXXXXXXXXXXXXXXXX

XX

Contact information for each material supplier will be provided in the SWPPP Notification log in SWPPP File Category 20.22: Material Supplier Contact Information and Notification Letters. Contact information shall include company name, type of material supplied, contact name and phone number.

All subcontractors and material suppliers shall be notified that the project is covered by the following permits issued by the SWRCB.

- SWRCB Order No. 2009-0009-DWQ, NPDES General Permit No. CAS000002, National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, September 02, 2009 (Construction General Permit).

Each subcontractor and material supplier shall also be notified that the project has a SWPPP and the pertinent water pollution control BMPs with which the subcontractor or material supplier must comply. If subcontractors or material suppliers are added during the project, appropriate notification that the project has a SWPPP and the pertinent water pollution control BMPs shall be given to the subcontractor or materials supplier prior to working or supplying materials on the project site.

A SWPPP Notification Letter shall be sent to all subcontractors and material suppliers. A sample notification letter and notification letter log is provided in Appendix D. A copy of SWPPP Notification Letters sent to subcontractors and material suppliers are in SWPPP File Category 20.21: Subcontractor Contact Information and Notification Letters or 20.22 Material Supplier Contact Information and Notification Letters. Notification letter logs and contact information are filed in SWPPP File Category 20.21: Subcontractor Contact Information and Notification Letters and File Category 20.22: Material Supplier Contact Information and Notification Letters.

### **300.8 Training**

The Contractor's WPC Manager is a QSD.TBD, the WPC Manager for this project, meets the qualifications and certification requirements of Section VII, Training Qualifications and Certification Requirements, of the CGP based on:

- xxxx
- 

The WPC Manager has received the following training.

- [LIST]

The WPC Manager has the following SWPPP development and implementation experience.

- [LIST]

The SWPPP for this project was developed by a QSD. Zachary Siviglia developed the SWPPP and meets the qualifications and certification requirements of Section VII, Training Qualifications and Certification Requirements, of the CGP based on:

- QSD/P, Registration #01309

The QSD has received the following training.

- 3-Day QSP/D Training, and 1-day BMP Training

The QSD has the following SWPPP development experience.

- WDID# 5S31C351303, 5S31C353710, 5S31C358306, 5S31C348964, 5S34W000570

A QSP will be assisting the WPC Manager to ensure that: required BMPs are implemented; non-stormwater and stormwater visual observations and sampling and analysis are performed; BMP maintenance is completed; and weekly training is provided. By September 2, 2011, TBD, the QSP for this project, must meet the qualifications and certification requirements of Section VII, Training Qualifications and Certification Requirements, of the CGP based on:

INSERT COMPANY, NAME AND PROFESSIONAL REGISTRATION OR OTHER QUALIFICATIONS (INCLUDING INFORMATION REGARDING OTHER TRAINING COURSES, SUCH AS CALTRANS SWPPP PREPARATION TRAINING) OF PERSON THAT PREPARED THE SWPPP

The QSP has received the following training.

- [LIST]

The QSP has the following SWPPP implementation experience.

- [LIST]

Ongoing, formal training sessions for individuals responsible for SWPPP development and implementation shall be selected from one of the following organizations.

- City of Los Angeles Storm Water Program
- County of Los Angeles Storm Water Program
- State of California RWQCB
- IECA-, ABAG- and/or AGC-sponsored training
- USEPA-sponsored training
- Recognized municipal stakeholder organizations throughout California
- Professional organizations and societies in the building and construction field

Contractor or subcontractor employees responsible for water pollution control BMP installation, maintenance and repair have received the following training.

- TBD

Contractor and subcontractor employees shall be trained prior to working on the site in the following subjects:

- water pollution control rules and regulations
- implementation and maintenance for:
  - temporary soil stabilization,

- temporary sediment control,
- tracking control,
- wind erosion control,
- material pollution prevention control,
- waste management, and
- non-stormwater management
- identification and handling of hazardous substances
- potential dangers to humans and the environment from spills and leaks or exposure to toxic or hazardous substances

Informal employee training shall include tailgate site meetings to be conducted weekly; tailgate meetings should address the following topics:

- water pollution control BMP deficiencies and corrective actions;
- BMPs that are required for work activities during the week;
- spill prevention and control;
- material delivery, storage, use, and disposal;
- waste management; and
- non-stormwater management procedures.

A summary of formal and informal training of various personnel is shown in Attachment E. A copy of all training certificate(s) (e.g., Caltrans 24-Hour Training Class and CGP Training) for the WPC Manager and the Qualified SWPPP Developer are included in Attachment E.

Training records for project personnel shall be updated by completing the CEM-2023 Stormwater Training Record form, available in Appendix E, and the CEM-2024 Stormwater Training Log form, available in Appendix F. Records of training, with training certificates attached, when applicable, and the training log will be kept in SWPPP File Category 20.23: Contractor Personnel Training Documentation. Personnel training records, with required documentation attached and an updated training log, shall be submitted to the RE within five (5) days of completion of training.

Training information, consisting of the following items, shall be provided in the Stormwater Annual Report:

- documentation of all training for individuals responsible for all activities associated with compliance with CGP,
- documentation of all training for individuals responsible for BMP installation, inspection, maintenance, and repair, and
- documentation of all training for individuals responsible for overseeing, revising, and amending the SWPPP.
- [LIST ANY ADDITIONAL TEXT REGARDING TRAINING OF PERSONNEL]



# SECTION 400

## REFERENCES, OTHER PLANS, PERMITS AND AGREEMENTS

The documents listed below are made a part of this SWPPP by reference.

- Standard Plans and Specifications, dated May 2006.
- Contract Plans and Special Provisions for Contract No.03-1E4904, dated 11/23/11, prepared by Mark Thomas & Co., Inc..
- SWRCB-Order No. 2009-0009-DWQ, NPDES General Permit No. CAS000002, National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities (Construction General Permit), September 2009
- *Caltrans Statewide Storm Water Management Plan (SWMP)*, dated May, 2003
- *Caltrans SWPPP/WPCP Preparation Manual*, dated June, 2011
- *Caltrans Construction Site Monitoring Program Guidance Manual*, Draft August 2010

Attachment F includes copies of the Caltrans Statewide Permit, the CGP, and other local, state, and federal plans and permits. A list of the other local, state, and federal plans and permits included in Attachment F is provided below.

- Central Valley RWQCB, Clean Water Act Section 401 Water Quality Certification, Dated 10/07/10, WDID #5A04CR00193
- U.S. Army Corps of Engineers, Clean Water Act Section 404, Nationwide Permit 14 authorization Letter, dated 07/13/2009
- California Department of Fish and Game Streambed Alteration Agreement Notification Number 1600-2010-0122, dated 09/23/2010
- Central Valley Flood Protection Board Encroachment Permit, Permit No. 18632, dated 11/04/2010

# SECTION 500

## DETERMINATION OF CONSTRUCTION SITE BEST MANAGEMENT PRACTICES

### 500.1 Pollutant Sources

#### 500.1.1 Inventory of Materials and Activities that May Pollute Stormwater

The following table contains a list of construction activities that have the potential to contribute pollutants, including sediment, to stormwater discharges. All potential pollutants, except sediment, and their locations shall be listed in this section, and, where possible, the locations shall be shown on the WPCDs from Attachment BB. Details for controlling these pollutants using soil stabilization and sediment control BMPs are discussed in Sections 500.3.1 through 500.3.5. Potential non-storm water and waste management-related discharges are further described in Sections 500.4.1 and 500.4.2, respectively.

TABLE 500.1.1 ANTICIPATED CONSTRUCTION SITE ACTIVITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS	
<input checked="" type="checkbox"/> Demolition	<input checked="" type="checkbox"/> Pavement Removal (asphalt concrete, concrete) <input checked="" type="checkbox"/> Structure Demolition/Removal over or Adjacent to Water <input type="checkbox"/> Building Demolition (Structure, HVAC, insulation) <input checked="" type="checkbox"/> Hardscape Demolition (Parking areas, curbs, gutters, sidewalks)
<input checked="" type="checkbox"/> Earthwork	<input checked="" type="checkbox"/> Clearing and Grubbing <input checked="" type="checkbox"/> Grading Activities <input checked="" type="checkbox"/> Soil Import and Export <input checked="" type="checkbox"/> Stockpiling <input checked="" type="checkbox"/> Excavation <input type="checkbox"/> Disturbance of Contaminated Soil <input type="checkbox"/> Dewatering <input checked="" type="checkbox"/> Temporary Stream Crossing <input checked="" type="checkbox"/> Drainage Construction <input type="checkbox"/> Dredging <input checked="" type="checkbox"/> Pile Driving <input type="checkbox"/> Utilities <input checked="" type="checkbox"/> Line Flushing (hydrostatic test water, pipe flushing) <input checked="" type="checkbox"/> Landscaping, Planting and Plant Maintenance, Amending of Soil and Mulching <input checked="" type="checkbox"/> Material and Equipment Use over Water
<input checked="" type="checkbox"/> Masonry, Concrete, Asphalt Work	<input checked="" type="checkbox"/> Saw Cutting (cement and brick dust, saw cut slurries) <input checked="" type="checkbox"/> Paving and Grinding <input checked="" type="checkbox"/> Concrete Placement (colored chinks) <input checked="" type="checkbox"/> Concrete Curing (curing and glazing compounds) <input checked="" type="checkbox"/> Concrete Finishing (surface cleaners)

<b>TABLE 500.1.1 ANTICIPATED CONSTRUCTION SITE ACTIVITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS</b>	
	<input checked="" type="checkbox"/> Concrete Waste Management
<input type="checkbox"/> Building Construction	<input type="checkbox"/> Paint Preparation, Painting, Stenciling, and Etching <input type="checkbox"/> Material Use <input type="checkbox"/> Material Delivery and Storage <input type="checkbox"/> Adhesives (glues, resins, epoxy synthetics, caulks, sealers, putty, sealing agents and coal tars) <input type="checkbox"/> Cleaning, Polishing (metal, ceramic, tile), and Sandblasting Operations <input type="checkbox"/> Plumbing [solder (lead, tin), flux (zinc chloride), pipe fitting] <input type="checkbox"/> Framing (sawdust, particle board dust and treated woods) <input type="checkbox"/> Interior Construction (tile cutting, flashing, saw-cutting drywall, galvanized metal in nails and fences, and electric wiring)
<input checked="" type="checkbox"/> Equipment Use	<input checked="" type="checkbox"/> Vehicle and Equipment Cleaning <input checked="" type="checkbox"/> Vehicle and Equipment Fueling <input checked="" type="checkbox"/> Vehicle and Equipment Maintenance
<input checked="" type="checkbox"/> Waste Management	<input checked="" type="checkbox"/> Hazardous Waste Management <input checked="" type="checkbox"/> Solid Waste Management (litter, trash, and debris) <input checked="" type="checkbox"/> Liquid Waste Management (wash water) <input checked="" type="checkbox"/> Sanitary Septic Waste Management (portable toilets, disturbance of existing sewer lines)

The WPC Manager shall update the list of potential pollutants in accordance with onsite conditions, documenting all materials or equipment that have been received or produced onsite that are not designed to be outdoors and are potential sources of stormwater contamination.

**Materials Management Plan**

The WPC Manager shall conduct an assessment of materials and equipment expected to be used on site that have the potential to contaminate stormwater runoff, and shall prepare a Materials Management Plan. The WPC Manager shall consider the following as part of the Materials Management Plan:

- The quality, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed at the site.
- The degree to which pollutants associated with those materials may be exposed to an mobilized by contract with stormwater
- The direct and indirect pathways that may result in exposure of pollutants to stormwater or authorized non-stormwater discharges
- The effectiveness of BMPs to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater discharges

From this assessment, the WPC Manager shall determine the best strategy for preventing the contact of potential pollutants-during delivery, staging, usage, storage, and waste management-from coming in contact with stormwater. The potential Pollutant Inventory must include all non-visible pollutants that are known or should be known to occur on the construction site, including, but not limited to, materials that:

- Are being used in construction activities
- Are being stored on the construction site
- Were spilled during construction operations and not cleaned up
- Were stored (or used) in a manner that created the potential for a release of the materials during past land use activities
- Were spilled during previous land use activities and not cleaned up
- Were applied to the soil as part of past land use activities

The following is a list of materials or substances commonly associated with construction activities as described in the Standard Plans and Standard Specifications, dated May 2006:

- Dust palliative products (e.g. magnesium chloride, calcium chloride, and natural brines)
- Waste materials associated with demolition activities [e.g., asbestos, wood debris, Freon; aluminum, zinc, masonry block rubble, and plain cement concrete (PCC) rubble]
- Materials and waste associated with hardscape improvements, such as drainage structures, median barriers, and bridge construction (e.g., Portland Cement, masonry blocks, sealants, steel slag, metals, foundry sand, fly ash, mortar, treated wood, and rinse water)
- Base, subbase, and stockpiled materials associated with hardscape and underground improvements (e.g., cement-bound granular mixtures, hydraulic road binder bound mixtures, soil cement, and soil treated by hydraulic road binder) contaminated soil [e.g., methyl tert-butyl ether (MTBE), benzene, and total petroleum hydrocarbons (TPH)]
- Cleaning products (e.g., acids, chlorine, detergents, solvents, thinners, ammonia, lye, caustic sodas, bleaching agents, chromate salts, and tri-sodium phosphate)
- Joint and curing compounds (e.g., patching compounds, levelers, drywall joint compounds, polymeric compounds, water reducing admixtures, sealants, and waterproofing coatings)
- Concrete curing compounds (e.g., flood hardeners, methacrylate, and epoxy resin products)
- Painting products (e.g., paint, dyes, stripping pigments, sanding residue, paint strippers, acetone, methyl ethyl ketone, resins, sealants, solvents, thinners, lacquers, varnish, enamels, gum spirit, and turpentine)
- Sandblasting materials and waste products (e.g. sandblasting abrasives, rust, rubble, and paint)
- Raw landscaping materials and wastes (e.g. plant materials, aluminum sulfate, elemental sulfur, herbicides, organic and inorganic fertilizers and nutrients such as nitrogen, phosphorous, and potassium, pesticides, gypsum, lime, mulch, sand gravel, and topsoil)
- Soil amendments/stabilization products (e.g. polymer/copolymer, straw/mulch, lignin sulfonate, psyllium, guar/plant gums, and gypsum)
- Treated wood products (e.g. Ammoniacal-cooper-arsenate, Ammoniacal-cooper-zinc-arsenate, borate, copper-chromium-arsenic, copper naphthenate, and creosote)

- Materials and waste associated with building construction [e.g. volatile organic compounds (VOCs), metals, phenolics and mineral spirits; copper, formaldehydes and creosote; phenolics, asbestos, benzene, phenols and naphthalene; metals, plated products, acidity/alkalinity, chromium, lead, zinc, tin, copper, aluminum, treated wood products, sediments, minerals, and asbestos]
- Line flushing products (e.g. chlorinated water)
- Vehicle and equipment fluids (e.g., TPH and fuels, oils and grease, coolants/antifreeze, solvents, sealers, acids, benzene and derivatives, lubricants, and discharges from batteries)
- Portable toilet waste products [e.g., bacteria, biochemical oxygen demand (BOD), pathogens, and sanitary wastes]
- General litter (e.g., plastic, paper, cigarettes, other dry garbage, wood products, steel, and packaging)

This list is not all-inclusive and the WPC Manager shall update the Materials Management Plan and the Potential Pollutant Inventory in accordance with on-site conditions, documenting all materials or equipment that have been received or produced on site that are not designated to be outdoors and exposed to environmental conditions and are potential sources of stormwater contamination. An inventory form has been included as part of the Construction Site Monitoring Program (CSMP) to document any additional pollutants.

Some construction activities have the potential to generate pollutants in stormwater discharges if no BMPs are implemented. Construction activities can be grouped into categories for the purposes of identifying likely pollutants. Activities and areas, such as concrete pours and curing, concrete waste management areas, soil amendments (e.g. fly ash and lime), and mortar and stucco mixing, application, and waste management areas, should be monitored for high pH in site discharges.

A list of construction materials that will be on site and have the potential to contribute pollutants, other than sediment, to stormwater runoff, which has been prepared to prevent or minimize the off-site discharge of those pollutants, are provided below.

The following stockpiles will be covered and bermed prior to likely precipitation events.

- Contaminated soil
- Soil amendments

The following materials will be kept off the ground or bermed and covered prior to likely precipitation events.

- Calcium chloride
- Portland Cement

The following materials will be properly stored according to Material Safety Data Sheet requirements.

- Acetone
- Methyl ethyl ketone

The following dumpsters shall be covered prior to likely precipitation events.

- Dumpsters containing hazardous particulate waste

The following areas will be inspected for leaks or spills prior to likely precipitation events.

- Portable toilets
- Vehicle and equipment storage and maintenance areas

Potential pollutants shall not be stored within 50 feet of stormwater conveyance features or concentrated flow paths. In addition, non-stormwater discharges shall not be made within 50 feet of potential pollutants.

### 500.1.2 Potential Pollutants from Site Features or Known Contaminates

Former site usage or known site contamination may contribute pollutants to stormwater discharges from the site. Based on information available for the project site, the following site usage and historical contamination has been determined:

Former Industrial Operations:  Yes  No

Description of Former Industrial Operations: N/A

Historic Contamination:  Yes  No

The following contaminants are known to exist at the project site locations identified:

- There are no known contaminants at the project site.

### 500.1.3 Risk Level Determination

Construction of the proposed project improvements is scheduled to occur from 03/01/2012 to 03/01/2013. The USEPA Rainfall Erosivity Factor Calculator, K Factor Map, and LS Factor Maps were used to calculate the sediment risk. The R factor is 40.08. The site location is shown on both K and LS Factor Maps and has factors of 0.32 and 0.16 respectively. The product of the above values is  $40.08 \times 0.32 \times 0.16 = 2.05$ . Because this value is below 15, the Project is classified as having a low sediment risk. Copies of the Erosivity Index Calculator Results and the Sediment Risk Factor Worksheet are included in Attachment C, as well as the K and LS maps.

The disturbed area portion of the project site discharges into Dead Horse Slough, which merges with Little Chico Creek. Little Chico Creek ultimately ends in the Sacramento River approximately 20 miles southwest of the Project. Dead Horse Slough and Little Chico Creek are not listed on the Clean Water Act Section 303(d) List of Water Quality Limited Segments (303[d] List). However, the Sacramento River is considered to be of high risk. Using the combined risk level matrix, the Project Combined Risk is Level 2. The Receiving Water Risk Worksheet and Combined Risk Level Matrix are included in Attachment C.

## 500.2 Pre-Construction Existing Stormwater Control Measures

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

- There are no existing water pollution control measures within the project site.

### **500.3 BMP Selection for Erosion and Sediment Control/**

The Contractor shall control construction site erosion through the implementation of effective erosion and sediment control measures in accordance with the CGP. The Contractor and the WPC Manager shall develop a schedule that includes the sequencing of construction activities and the implementation of effective erosion control BMPs while taking local climate (rainfall, wind, etc.) into consideration, thereby reducing the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking. The SWPPP schedule shall: describe when work activities will be performed that could cause the discharge of pollutants in stormwater; describe the water pollution control practices associated with each construction phase; and identify the soil stabilization and sediment control practices for all disturbed soil areas. Effective soil cover shall be provided for:

- Inactive areas and all finished slopes, open space, utility backfill, and completed pads.

Additional erosion and sediment control BMPs may be required in other locations on the project site as work progresses in order to prevent sediment from leaving the construction site. These measures shall be determined by the Contractor and the WPC Manager in the field. As long as the water pollution control measures consist of additions to the BMPs already selected in the approved SWPPP, then these additional measures do not require a SWPPP amendment and the WPC Manager shall simply show the additional measures on the WPCDs. If erosion control or sediment control BMPs must be changed because of field conditions or because they are determined to be ineffective, the SWPPP must be amended. Once deemed necessary, corrective actions/design changes to the SWPPP shall be reviewed and signed by the WPC Manager, implemented within 72 hours of identification, and completed as soon as possible. Immediate corrective action is required for numeric action level (NAL) exceedances. Routine BMP maintenance or the implementation of an additional quantity of a BMP included in the SWPPP as recommended by the WPC Manager does not require an amendment to the SWPPP.

An effective combination of erosion (soil stabilization) and sediment control BMPs shall be implemented and maintained during the project. The following principles shall be followed to the maximum extent practicable to control erosion and sedimentation in disturbed areas at the site.

- Fit grading to the surrounding terrain
- Time grading operations to minimize soil exposure
- Retain existing vegetation whenever feasible
- Vegetate and mulch or otherwise stabilize disturbed areas
- Minimize the length and steepness of slopes
- Keep runoff velocities low
- Prepare drainage ways and outlets to handle concentrated runoff until permanent drainage structures are constructed.
- Trap sediment on site
- Inspect and maintain control measures frequently.

Temporary erosion and sediment control BMP's shall be deployed according to the Water Pollution Control Schedule

(WPCS) in Section 500.7 and the Materials Management Plan in Section 500.1.1.

A more concise listing of the BMP control measures to be implemented and maintained at the project site are denoted in the BMP selection tables in the following sub-sections.

### 500.3.1 Temporary Run-on Control BMPs

The CGP states that sites with low risk of impacting water quality are not subject to run-on and runoff control requirements unless an evaluation indicates that they are necessary or visual inspections show that such controls are required. Therefore, temporary diversion BMPs shall be implemented when deemed necessary by the WPC Manager to protect the site from run-on.

Since additional stormwater on the construction site can adversely impact construction activities and the deployment of other BMPs, thereby increasing costs, the methods for managing run-on have been addressed fully in this SWPPP. The implementation strategy is described in this section and the locations of temporary diversion BMPs are shown on the WPCDs in Attachment BB.

Anticipated drainage patterns following the completion of grading activities are shown on the WPCDs. Run-on from off-site areas shall be prevented from flowing through areas that have been disturbed by construction unless appropriate conveyance systems are in place. Calculations for anticipated stormwater run-on are shown in Section 300.3.

Stormwater from off site should be diverted around the project site or directed to an interior drain so that it does not impact disturbed soil or material storage areas. Within the project limits, the following actions will be employed to enhance the effectiveness of other BMPs:

- Divert water away from areas of soil disturbance
- Divert water from the top of disturbed slopes, which aids greatly in reducing erosion of slopes
- Divert water around stockpiles, material storage areas or other sensitive areas
- Place BMPs so that diverted water is safely directed to an inlet, temporary conveyance, or infiltrated into a vegetated area

The CGP requires that the SWPPP for a construction project describe all BMPs implemented to divert off-site drainage around or through the construction project. The BMP Fact Sheets for the selected temporary run-on control BMPs will be adhered to and can be found in the Caltrans Construction Site Best Management Practices (BMP) Manual, dated 2003. Temporary run-on control BMPs are listed by location in the WPCBMPL in Attachment CC and are shown on the WPCDs in Attachment BB. The Contractor may need temporary run-on control BMPs in other project locations as work progresses to keep run-on from entering disturbed areas of the site. These measures will be determined by the Contractor in the field; if measures are changes in the field, SWPPP Attachment BB and SWPPP Attachment CC will be updated. Use of alternative BMPs will require a SWPPP amendment and written approval by the RE. The following table explains how the selected BMPs shall be incorporated into the project.

**TABLE 500.3.1  
TEMPORARY RUN-ON CONTROL BMPs**

CONSTRUCTION BMP ID NO. <sup>(1)</sup>	BMP NAME	CONTRACT MINIMUM REQUIREMENT <sup>(2)</sup>	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
SS-1	Scheduling	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS-2	Preservation of Property/ Preservation of Existing Vegetation	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS-9	Earth Dikes / Drainage Swales & Lined Swales	√	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS-10	Outlet Protection / Velocity Dissipation Devices		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS-11	Slope Drains		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SS-12	Streambank Stabilization		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SC-4	Temporary Check Dam		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SC-5	Fiber Rolls	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SC-6	Temporary Gravel Bag Berm		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SC-8	Temporary Sandbag Barrier		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
ALTERNATIVE SEDIMENT CONTROL BMPs USED <sup>(3)</sup>						IF USED, STATE REASON
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
CONSTRUCTION BMP ID NO. <sup>(1)</sup>	BMP NAME					

Notes:

- (1) The BMP designations (SS-1, SC-5, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
- (2) Minimum requirements are based on the required Contract Provisions, Standard Special Provisions, Plans and Specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
- (3) Use of alternative BMPs will require written approval by the RE.

**Implementation of Temporary Run-on Controls BMPs**

BMPs will be deployed in a sequence to follow the progress of grading and construction. As the locations of soil disturbance change, temporary diversion controls will be adjusted accordingly to prevent run-on from impacting disturbed soil.

This project will implement the following practices for effective temporary DSA protection during construction.

- **SS-1 Scheduling**-The contractor/WPC Manager will schedule as many soil disturbing activities as possible during the dry season, leaving as much soil undisturbed as possible
- **SS-2 Preservation of existing Vegetation**-The slopes will be projected in place, when possible. Only BMPs needed to divert run-on away from the site will disturb the slopes. No vehicle or foot traffic will be allowed on the slopes.
- **SS-9 Temporary Drainage Swales**-Drainage swales will be cut in during grading and used to capture run-on from areas .
- **SS-10 Outlet Protection/Velocity Dissipation Devices**- Permanent Outlet protection will be used to prevent scour and reduce discharge velocities at outlets of drainage swales, culverts, and overside drains.
- **SS-12 Streambank Stabilization**-Streambank Stabilization in the form of Permanent Rock Slope Protection will be applied to the banks of Dead Horse Slough after widening of the structure takes place.
- **SC-4 Temporary Check Dams**- Check dams may be used to reduce scour and channel erosion within drainage swales or in conjunction with gravel filter berms. One hundred gravel bags and 250 linear feet of fiber roll shall be stored on site for mobilization prior to forecasted storm events. Bags should be installed as shown on WPCDs.
- **SC-5 Fiber Rolls**-Fiber rolls will be used to protect staged materials and stockpiles from run-on. Materials, stockpiles, and waste will not be stored near concentrated flow paths. Five hundred linear feet of fiber roll shall be stored in the staging area for mobilization prior to forecasted storm events.

Once installed, run-on control BMPs may remain in place, except where they interfere with construction activities or access to and from the site.

### **500.3.2 Soil Stabilization (Erosion Control)**

Soil stabilization, also referred to as erosion control, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Soil stabilization BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate *SWPPP/WPCP Preparation Manual* minimum temporary soil stabilization requirements, temporary soil stabilization measures required by the contract documents, and other measures selected by the Contractor.

- Preserve existing vegetation where required and when feasible.
- Apply temporary soil stabilization (erosion control) to remaining active and non-active areas as required by the contract specifications, and the *SWPPP/WPCP Preparation Manual*, Appendix C. Reapply as necessary to maintain effectiveness.
- Stabilize non-active areas within 14 days of cessation of construction activities or one day prior to forecasted storm events, whichever comes first.
- Control erosion in concentrated flow paths by applying erosion control blankets, check dams, and erosion control seeding, and by lining swales with plastic as required in the contract specifications and/or as shown on the plans.
- Apply permanent erosion control seeding to areas deemed substantially complete by the RE.

- Prior to the completion of construction, apply permanent erosion control to all remaining disturbed soil areas as required in the contract specifications

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

The following soil stabilization BMP selection table indicates the BMPs that shall be implemented to control erosion on the construction site. Temporary soil stabilization BMPs are listed by location in the WPCBMPL in Attachment CC and are shown on the WPCDs from Attachment BB. Any details for temporary soil stabilization BMPs are shown in Attachment BB.

<b>TABLE 500.3.2 TEMPORARY EROSION CONTROL BMPs</b>						
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME	CONTRACT MINIMUM REQUIRE- MENT <sup>(2)</sup>	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
SS-1	Scheduling	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS-2	Preservation of Property/ Preservation of Existing Vegetation	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS-3	Temporary Hydraulic Mulch (Bonded Stabilized Fiber Matrix)	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Temporary Hydraulic Mulch (Polymer Stabilized Fiber Matrix)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SS-4	Temporary Erosion Control (With Temporary Seeding)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SS-5	Temporary Soil Stabilizer		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SS-6	Temporary Erosion Control (Straw Mulch with Stabilizing Emulsion)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

TABLE 500.3.2 TEMPORARY EROSION CONTROL BMPs						
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME	CONTRACT MINIMUM REQUIRE- MENT <sup>(2)</sup>	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
SS-7	Temporary Erosion Control Blanket (On Slope)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Temporary Erosion Control Blanket (In swale or ditch)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS-7	Temporary Cover (Geotextiles and Mats)	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS-8	Temporary Mulch (Wood)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SS-9	Earth Dikes / Drainage Swales & Lined Swales	√	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS-10	Outlet Protection/ Velocity Dissipation Devices	√	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS-11	Slope Drains		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SS-12	Streambank Stabilization	√	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS-13	Polyacrylamide		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
ALTERNATIVE SEDIMENT CONTROL BMPs USED <sup>(3)</sup>						IF USED, STATE REASON
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME					

<b>TABLE 500.3.2 TEMPORARY EROSION CONTROL BMPs</b>						
<b>CONSTRUCTION BMP ID NO<sup>(1)</sup></b>	<b>BMP NAME</b>	<b>CONTRACT MINIMUM REQUIRE- MENT<sup>(2)</sup></b>	<b>CONTRACT BID ITEM</b>	<b>BMP USED</b>		<b>IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON</b>
				<b>YES</b>	<b>NO</b>	

Notes:

- (1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the Construction Site BMP Reference Manual is a required contract document.
- (2) Minimum requirements are based on the required Contract Provisions, Standard Special Provisions, Plans and Specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
- (3) Use of alternative BMPs will require written approval by the RE.

The BMPs selected for the project are listed below along with an explanation of how they will be incorporated into the project.

- **SS-1, SS-2 Scheduling and Preservation of Existing Vegetation**-Construction activities shall be sequenced to include the installation of both soil stabilization and sediment control measures. BMPs will be deployed in a sequence that follows the progress of grading and construction. The construction scheduling will be arranged as much as practicable to leave existing vegetation undisturbed until immediately prior to grading.
- **SS-3 Temporary Hydraulic Mulch (Bonded Stabilized Fiber Matrix)**-Temporary Hydraulic Mulch will be applied to the disturbed areas adjacent to excavations and on shallow slopes surrounding the site. See the WPCDs in Attachment BB and WPCBMPL in Attachment CC of this SWPPP for locations where temporary hydraulic mulch will be used.
- **SS-6 Straw Mulch**- Straw mulch will be applied to the disturbed areas adjacent to excavations and on shallow slopes surrounding the site, when necessary.
- **SS-7 Geotextiles, Plastic Covers and Erosion Control Blankets/Mats**-Geotextile blankets will be used to provide temporary stabilization for the flow line of the vegetated swales, when necessary. Covers will be used throughout the project area to cover small exposed soil areas prior to forecasted storm events, and will be anchored to prevent damage by wind. Loose stockpiled construction materials that are not actively being used (e.g., soil, spoils, aggregate, fly-ash, stucco, hydrated lime) will be covered and placed in a bermed area.
- **SS-9 Earth Dikes/Drainage Swales & Lined Swales**-Permanent Drainage swales will be cut in during grading operations in locations as shown on the plans for permanent erosion control.
- **SS-10 Outlet Protection/Velocity Dissipation Devices**-Permanent Rock Slope Protection at certain culvert exits will be constructed in locations as shown on the plans for permanent erosion control.
- **SS-12 Streambank Stabilization**-Permanent Rock Slope Protection at the bridge will be placed in the creek at locations as shown on the plans for permanent erosion control.

**Implementation of Temporary Soil Stabilization BMPs**

BMPs shall be deployed in a sequence to follow the progress of grading and construction. As the locations of soil disturbance change, soil stabilization and erosion control BMPs shall be adjusted accordingly to control stormwater runoff throughout the disturbed areas. The following practices shall be implemented for effective temporary and final soil stabilization during and after construction.

- The project schedule shall sequence construction activities with the installation of both soil stabilization and sediment control measures. The construction schedule shall be arranged as much as practicable to leave soil

undisturbed until immediately prior to clearing/grubbing.

- Existing vegetation shall be preserved where indicated on the WPCDs.
- The WPC Manager shall monitor weather using NWS reports to track conditions and alert crews with regard to forecasted storm events (<http://www.weather.gov/>).
- Prior to forecasted storm events (50 percent or greater chance of at least 0.10 inches of precipitation within 24-hours), all disturbed soil areas and temporary soil stabilization BMPs shall be inspected, and maintenance performed or additional BMPs deployed if necessary.
- Sufficient soil stabilization materials shall be maintained on site to allow implementation in conformance with this SWPPP. This includes implementation requirements for active and non-active areas that require BMP deployment before the onset of rain.
- Soil stabilization shall consist of covering disturbed soils with mulch, soil binders, geotextiles, or vegetation.
  - Soil cover such as hydraulic or wood mulch or soil binders shall serve to reduce the erosion potential by absorbing the energy of raindrops, promoting infiltration in lieu of runoff, and reducing the velocity of runoff, but will generally require a minimum curing time of 24 hours prior to a forecasted storm event.
  - Temporary soil stabilization (erosion control) measures shall be deployed in active and non-active areas as required. Such measures shall be deployed as necessary to maintain effectiveness.
  - The application of any erodible landscape material shall be discontinued within 2 days prior to a forecasted storm event or during periods of precipitation.
- Disturbed soil areas in which construction activities have been substantially completed shall be stabilized using permanent soil stabilization (erosion control) methods until hardscaping or landscaping can be completed.
- The contractor must provide temporary stabilization, or initiate permanent stabilization, of disturbed areas within 14 calendar days of the most recent land disturbance in areas where construction support activities have been temporarily suspended or have permanently ceased, except as stated below.
  - When vegetative stabilization methods are being used at a site, but the site is located in an arid area during dry or drought conditions, vegetative stabilization measures shall be initiated as soon as practicable, when growing conditions are best for planting or seeding.
  - Where disturbed areas are awaiting vegetative stabilization for periods greater than 14 calendar days after the most recent disturbance, non-vegetative methods of stabilization shall be employed.
- During the grading process, permanent drainage swales shall be cut into place. These permanent features may be used during construction, but the inlets will need to be protected in place. In addition, any sedimentation will have to be cleaned out prior to the end of construction, with care being taken to maintain the final grade according to plan.
- Control erosion in concentrated flow paths (drainage swales) will be achieved by applying erosion control blankets, check dams, erosion control seeding, or lining swales.
- BMPs that employ plastic materials shall be replaced by more sustainable, environmentally friendly alternatives where feasible. Where plastic materials are deemed necessary, the Contractor shall use plastic materials resistant to solar degradation.

- Prior to completion of construction, permanent erosion control methods shall be applied to all remaining disturbed soil areas.
- Temporary erosion control BMPs shall be removed after the protected areas are stabilized.

#### Deployment of Temporary Erosion Control

Construction activities will be sequenced to incorporate the installation of both soil stabilization and sediment control measures. The construction schedule will be arranged as much as practicable to leave existing vegetation undisturbed until immediately prior to clearing/grading.

BMPs will be deployed in a sequence to follow the progress of grading and construction. As the locations of soil disturbance change, soil stabilization and sedimentation controls will be adjusted accordingly to control stormwater runoff at the downgrade perimeter and drain inlets. The WPC Manager will monitor weather using NWS reports to track conditions and alert crews to the onset of rainfall events.

For temporary erosion control deployment during construction:

- Disturbed soil areas will be stabilized with temporary or permanent soil stabilization (erosion control) within 14 days of when an area becomes inactive
- Disturbed soil areas will be stabilized with temporary or permanent soil stabilization (erosion control) before forecasted storm events
- Disturbed soil areas that are substantially complete will be stabilized with permanent soil stabilization (erosion control) until hardscaping or landscaping can be completed
- Temporary soil stabilization BMPs will be deployed and inspected prior to forecasted storm events

### **500.3.3 Sediment Control**

Sediment controls are structural measures that are intended to complement and enhance the selected soil stabilization (erosion control) measures and reduce sediment discharges from construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. This project will incorporate *SWPPP/WPCP Preparation Manual* minimum temporary sediment control requirements, temporary sediment control measures required by the contract documents, and other measures selected by the Contractor.

Sediment control BMPs will be installed at all appropriate locations along the site perimeter and at all operational internal inlets to storm drain systems at all times.

Throughout the duration of the project, temporary sediment control materials, equivalent to 10 percent of the materials installed on site, will be maintained on site for implementation in event of predicted rain, or the need for rapid response to failures or emergencies, in conformance with other Caltrans requirements, and as described in the SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

The following sediment control BMP selection table indicates the BMPs that shall be implemented to control sediment on the construction site. Temporary sediment control BMPs are listed by location in the WPCBMPL in Attachment CC and are shown on the WPCDs from Attachment BB. Any details for temporary sediment control BMPs are shown in Attachment BB.

<b>TABLE 500.3.3 TEMPORARY SEDIMENT CONTROL BMPs</b>						
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME	CONTRACT MINIMUM REQUIRE- MENT <sup>(2)</sup>	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
SC-1	Temporary Silt Fence	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SC-2	Temporary Sediment Basin		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SC-4	Temporary Check Dam	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SC-5	Temporary Fiber Rolls	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SC-6	Temporary Gravel Bag Berm		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SC-7	Street Sweeping	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SC-8	Temporary Sandbag Barrier		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SC-9	Temporary Straw Bale Barrier		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SC-10	Temporary Drain Inlet Protection	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SC-11	Temporary Chemical Treatment		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
ALTERNATIVE SEDIMENT CONTROL BMPs USED <sup>(3)</sup>						IF USED, STATE REASON
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						

Notes:

- (1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
- (2) Minimum requirements are based on the required contract provisions, standard special provisions, plans and specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
- (3) Use of alternative BMPs will require written approval by the RE.

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

- **SC-1 Temporary Silt Fence**-Silt fences will be deployed along the toes of exterior cut and fill slopes to settle

out soil particles from stormwater runoff.

- **SC-4 Temporary Check Dam**-Temporary check dams will be installed during construction of drainage swales and during establishment of biofiltration strips.
- **SC-5 Temporary Fiber Rolls**-Temporary fiber rolls will be installed along cut and fill slopes at locations shown on the drawings. Fiber rolls installed during Stage 1 will be left and protected in place during stage 2, where applicable.
- **SC-7 Street Sweeping**-Street sweeping is described in Section 500.3.4
- **SC-10 Temporary Drain Inlet Protection**-Storm drain inlet protection will be used at all operational internal inlets to the storm drain system, as shown on the WPCDs. Drain inlet protection type is shown on the WPCDs for each inlet associated with each stage of construction.

### 500.3.4 Tracking Control

Tracking control BMPs are implemented to reduce sediment tracking from the construction site onto private or public roads. This project will incorporate *SWPPP/WPCP Preparation Manual* minimum temporary tracking control requirements, temporary tracking control measures required by the contract documents, and other measures selected by the Contractor.

The following tracking control BMP selection table indicates the BMPs that shall be implemented to reduce sediment tracking from the construction site onto private or public roads. Temporary tracking control BMPs are listed by location in the WPCBMPL in Attachment CC and shown on the WPCDs from Attachment BB. Any details for temporary tracking control BMPs are shown in Attachment BB.

<b>TABLE 500.3.4 TEMPORARY TRACKING CONTROL BMPs</b>						
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME	CONTRACT MINIMUM REQUIRE- MENT <sup>(2)</sup>	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
SC-7	Street Sweeping	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
TC-1	Temporary Construction Entrance	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
TC-2	Stabilized Construction Roadway		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
TC-3	Temporary Entrance / Outlet Tire Wash		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
ALTERNATIVE SEDIMENT CONTROL BMPs USED <sup>(3)</sup>						IF USED, STATE REASON
<input type="checkbox"/> Yes <input type="checkbox"/> No						

<b>TABLE 500.3.4 TEMPORARY TRACKING CONTROL BMPs</b>						
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME	CONTRACT MINIMUM REQUIRE- MENT <sup>(2)</sup>	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	

Notes:

- (1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
- (2) Minimum requirements are based on the required Contract Provisions, Standard Special Provisions, Plans and Specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
- (3) Use of alternative BMPs will require written approval by the RE.

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

- **TC-1 Temporary Construction Entrance**-A stabilized construction entrance/exit will be constructed and maintained at construction site entrances and exits, equipment yards, PCC batch plants and crushing plants, water filling areas for water trucks, and the project office location, as shown on the site map.

The site entrance/exit will be stabilized to reduce tracking of sediment as a result of construction traffic. The entrance will be designated and graded to prevent runoff from leaving the site. Stabilization material will be 3-to 6-inch-diameter crushed aggregate. The entrance will be flared where it meets the existing road to provide an adequate turning radius. A site entrance/exit shall only be installed to reduce tracking of sediment during soil-hauling activities that extend over a one-week time period.

BMPs will be implemented to prevent the off-site tracking of loose construction and landscape materials.

- **SC-7 Street Sweeping**-Road sweeping and vacuuming will occur during soil hauling and as necessary to keep streets clear of tracked material and debris. Washing of sediment tracked onto streets into storm drains will not occur.

### 500.3.5 *Wind Erosion Control*

Wind erosion control BMPs will be implemented to prevent sediment from leaving the construction site. This project will incorporate *SWPPP/WPCP Preparation Manual* minimum temporary wind erosion control requirements, temporary wind erosion control measures required by the contract documents, and other measures selected by the Contractor.

The following temporary wind erosion control BMP selection table indicates the BMPs that shall be implemented to reduce wind erosion at the construction site. Temporary wind erosion control BMPs are listed by location in the WPCBMPL in Attachment CC and shown on the WPCDs from Attachment BB. Any details for temporary wind erosion control BMPs are shown in Attachment BB.

<b>TABLE 500.3.5 TEMPORARY WIND EROSION CONTROL BMPs</b>					
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME	CONTRACT MINIMUM	CONTRACT BID ITEM	BMP USED	IF A CONTRACT MINIMUM REQUIREMENT BUT NOT

		REQUIRE- MENT <sup>(2)</sup>		YES	NO	USED, STATE REASON
WE-1	Wind Erosion Control	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
TC-1	Temporary Construction Entrance	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
TC-2	Stabilized Construction Roadway		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
----	All Soil Stabilization Measures included in Section 500.3.2		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>ALTERNATIVE SEDIMENT CONTROL BMPs USED<sup>(3)</sup></b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						<b>IF USED, STATE REASON</b>

Notes:

- (1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
- (2) Minimum requirements are based on the required contract provisions, standard special provisions, plans and specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
- (3) Use of alternative BMPs will require written approval by the RE.

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

- **WE-1 Wind Erosion Control**-Potable water shall be applied to disturbed soil areas of the project site to control dust and maintain optimum moisture levels for compaction. The water will be applied using water trucks. As shown on the project schedule, project soils will be disturbed and exposed from approximately May 1 through December 15. Water applications will be concentrated during the late summer and early fall months and especially during the embankment construction operations scheduled for July.

Wind erosion control and water conservation practice BMPs will be implemented to provide dust control and prevent discharges from dust control activities and water supply equipment. Water application rates will be minimized as necessary to prevent runoff and ponding, and leaks from water equipment will be repaired immediately.

During windy conditions [forecast or actual wind conditions of approximately 25 miles per hour (mph) or greater], dust control measures will be applied to DSAs, including haul roads, to adequately control wind erosion.

Stockpiles will be managed using plastic covers to prevent wind dispersal of sediment from stockpiles.

- **TC-1 Temporary Construction Entrance**-Temporary Construction Entrance is described in Section 500.3.4

## 500.4 BMP Selection for Construction Site Management

Construction site management shall consist of controlling potential sources of water pollution before they come in contact with stormwater systems or watercourses. The Contractor shall control material pollution and manage waste and non-stormwater discharges at the construction site by implementing effective handling, storage, use, and disposal practices.

### 500.4.1 Non-Stormwater Site Management

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the Caltrans Permit or authorized under a separate NPDES permit, shall be prohibited. The selection of non-stormwater BMPs is based on whether construction activities with a potential for non-stormwater discharges will be conducted, as discussed in the Materials Management Plan and in Section 500.4. This project will incorporate *SWPPP/WPCP Preparation Manual* minimum non-stormwater pollution control requirements, non-stormwater pollution temporary wind erosion control measures required by the contract documents, and other measures selected by the Contractor.

The following non-stormwater control BMP selection table indicates the BMPs that shall be implemented to prevent non-stormwater discharges from construction activities conducted at the project site. Non-stormwater pollution control BMPs are listed by location in the WPCBMPL in Attachment CC and shown on the WPCDs from Attachment BB. Any details for non-stormwater pollution control BMPs are shown in Attachment BB.

<b>TABLE 500.4.1 TEMPORARY NON-STORMWATER POLLUTION CONTROL BMPs</b>						
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME	CONTRACT MINIMUM REQUIRE- MENT <sup>(2)</sup>	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
NS-1	Water Control and Conservation		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
NS-2	Dewatering <sup>(3)</sup>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
NS-3	Paving, Sealing, Sawcutting, and Grinding Operations		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
NS-4	Temporary Stream Crossing <sup>(3)</sup>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
NS-5	Clear Water Diversion <sup>(3)</sup>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
NS-6	Illegal Connection and Illegal Discharge Detection Reporting	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
NS-7	Potable Water / Irrigation		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
NS-8	Vehicle and Equipment	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

TABLE 500.4.1 TEMPORARY NON-STORMWATER POLLUTION CONTROL BMPs						
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME	CONTRACT MINIMUM REQUIRE- MENT <sup>(2)</sup>	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
	Cleaning					
NS-9	Vehicle and Equipment Fueling	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
NS-10	Vehicle and Equipment Maintenance	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
NS-11	Pile Driving Operations		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
NS-12	Concrete Curing		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
NS-13	Material and Equipment Used Over Water		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
NS-14	Concrete Finishing		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
NS-15	Structure Demolition / Removal Over or Adjacent to Water		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>ALTERNATIVE SEDIMENT CONTROL BMPs USED<sup>(4)</sup></b>						<b>IF USED, STATE REASON</b>
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME					

**Notes:**

- (1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
- (2) Minimum requirements are based on the required contract provisions, standard special provisions, plans and specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
- (3) The BMPs listed above are incidental and do not include operations listed as separated line items in the contract.
- (4) Use of alternative BMPs will require written approval by the RE.

The following list of BMPs and associated narratives explain how the selected BMPs will be incorporated into the

project.

- **NS-1 Water Control and Conservation/Potable Water and Irrigation**-Water application rates will be minimized, as necessary, to prevent runoff and ponding and water equipment leaks will be repaired immediately. The water truck filling area will be stabilized.

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

The exposure of construction materials to precipitation will be minimized. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (e.g., poles, equipment pads, cabinets, conductors, insulators, bricks).

- **NS-3 Paving, Sealing, Saw-cutting, and Grinding Operations**-The project will include placement of new asphalt paving, cold foam in-place recycling of existing asphalt and base in certain locations, grinding of existing asphalt in certain locations, and removal of portions of existing asphalt and base in certain locations. Paving locations and adjacent storm drain inlets are shown on the construction drawings. Paving operations will generally be conducted in dry weather. Paving and Grinding Operation BMPs will be implemented to prevent paving materials from being discharged offsite. Inlets within the AC paving areas will be temporarily covered as shown in the detail on the WPCDs. Inlets outside of the HMA paving area will be protected with the type of drop inlet (DI) protection called out on the WPCDs. Following Paving operations, the area will be swept, inlet covers will be removed, and the inlets will be inspected for paving materials.

The project includes saw-cutting. Saw-cutting locations and adjacent storm drain inlets are shown on the construction drawings. Saw-cutting operations shall not be conducted during or immediately prior to a rainfall events. Any saw-cutting debris or slurry shall be vacuumed and discharged to the concrete washout facility. Dried waste shall be collected and properly disposed of offsite.

- **NS-4 Temporary Stream Crossing**-The contractor will implement Temporary Stream Crossing in Dead Horse Slough if necessary for Falsework Erection and bridge widening. Design shall comply with the requirements for culvert and bridge crossings, as contained in the Caltrans Highway Design Manual. Provide stability in the crossing and adjacent areas to withstand the design flow. The design flow and safety factor shall be selected based on careful evaluations of the risks due to over topping, flow backups, or washout.

The crossing shall be constructed during dry periods to minimize stream disturbance and reduce costs. It shall be constructed at or near the natural evaluation of the stream bed to prevent potential flooding upstream of the crossing. Vehicles and equipment shall not be driven, operated, fueled, cleaned, maintained, or stored in the wet or dry portions of a water body where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as authorized by the RE, as necessary to complete the work.

- **NS-5 Clear Water Diversion**- The contractor shall implement clear water diversion system in Dead Horse Slough to enclose a construction area and reduce sediment pollution from construction work occurring in or adjacent to the Slough. Structures commonly used as part of this system include diversion ditches, berms, dikes, slope drains, rock, gravel bags, wood, sheet piles, aqua barriers, cofferdams, filter fabric or turbidity curtains, drainage and interceptor swales, pipes, or flumes. When the work area encroaches on a live stream, barriers adequate to prevent the flow of muddy water into streams shall be constructed and maintained between working areas and streams. During construction of the barriers, muddying of streams shall be held to a minimum. Structures must be adequately designed to accommodate fluctuations in water depth or flow volume due to storms, flash floods, etc.
- **NS-6 Illegal Connection and Illegal Discharge Detection Reporting**-The contractor will implement the Illegal Connection/Illegal Discharge Detection Reporting BMP throughout the duration of the project

- **NS-7 Potable Water/Irrigation**-The Contractor shall inspect irrigated areas within the construction limits for excess watering. Adjust watering times and schedules to ensure that the appropriate amount of water is being used and to minimize runoff. Consider factors such as soil structure, grade, time of year, and type of plant material in determining the proper amount of water for specific areas.

Where possible, direct water from off-site sources around or through the construction site that minimizes contact with the construction site.

When possible, discharges from water line flushing shall be reused for landscaping purposes.

Shut off the water source to broken lines, sprinklers, or valves as soon as possible to prevent excess water flow.

Protect downstream storm water drainage systems and water courses from water pumped or bailed from trenches excavated to repair water lines.

- **NS-8, NS-9, NS-10 Vehicle and Equipment Operations**-Several types of vehicles and equipment will be used on site throughout the project, including graders, scrapers, excavators, loaders, paving equipment, rollers, trucks and trailers, backhoes, forklifts, generators, compressors, and traffic control equipment.

Vehicle and equipment fueling, and vehicle and equipment maintenance BMPs will be utilized to prevent discharges of fuel and other vehicle fluids. Except for concrete washout activities, which are addressed in Section 500.4.2, vehicle cleaning will not be performed on site.

All wheeled vehicles shall be fueled off site or at a temporary fueling area, which shall be paved. Fuel trucks, each equipped with absorbent spill clean-up materials, shall be used for all onsite fueling. Drip pans shall be used during all mobile fueling. Drip pans or absorbent pads shall be used during all vehicle and equipment maintenance activities that involve grease, oil, solvents, or other vehicle fluids. All vehicle maintenance and mobile fueling operations shall be conducted at least 50 feet away from operational inlets and drainage facilities and on a level, graded area.

- **NS-11 Pile Driving Operations**- Pile driving equipment shall be located on a level surface. The contractor shall have spill kits and cleanup materials available at all locations of pile driving. Maintenance or fueling of any pile driving equipment shall be done at least 50 feet away from operational inlets and drainage facilities and on a level graded area.
- **NS-12 Concrete Curing**- Drain inlets shall be protected prior to the application of curing compounds. Excess cure water and water from high pressure blasting will be collected and disposed of, and will not be allowed to run off to inlets or swales. Wet blankets will be used wherever possible to eliminate excess cure water.
- **NS-13 Material and Equipment Used over Water**-Use drip pans and absorbent materials for equipment and vehicles and ensure that an adequate supply of spill cleanup material is available. Drip pans shall be placed under all vehicles and equipment placed on structures over water bodies when the vehicle or equipment is expected to be idle for more than one hour. Comply with all necessary permits required for construction within or near the waterway, such as RWQCB, U.S. Army Corps of Engineers, Department of Fish and Game, and other local permitting agencies.
- **NS-15 Structure Demolition/Removal Over or Adjacent to Water**-Do not allow demolished material to enter waterway. Use attachments on construction equipment such as backhoes to catch debris from small demolition operations. Use covers or platforms to collect debris.

### 500.4.2 Waste Management and Materials Pollution Control

An inventory of construction activities, materials, and wastes is provided in Section 500.1.1. The following BMP consideration checklist lists the BMPs that have been selected to control construction site wastes and materials. Locations and details of applicable materials handling and waste management BMPs are shown on the WPCDs from Attachment BB. In the narrative description, a list of waste disposal facilities and the type of waste to be disposed at each facility is also provided. The following list of BMPs and associated narratives explain how the selected BMPs will be incorporated into the project.

<b>TABLE 500.4.2 TEMPORARY WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs</b>						
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME	CONTRACT MINIMUM REQUIRE- MENT <sup>(2)</sup>	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
WM-1	Material Delivery and Storage	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-2	Material Use	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-3	Stockpile Management	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-4	Spill Prevention and Control	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-5	Solid Waste Management	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-6	Hazardous Waste Management <sup>(3)</sup>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-7	Contaminated Soil Management <sup>(3)</sup>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
WM-8	Concrete Waste Management		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Temporary Concrete Washout Facility		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Temporary Concrete Washout (Portable)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WM-9	Sanitary/Septic Waste Management	√	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>ALTERNATIVE SEDIMENT CONTROL BMPs USED<sup>(4)</sup></b>						<b>IF USED, STATE REASON</b>
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
<b>CONSTRUCTION</b>	<b>BMP NAME</b>					

<b>TABLE 500.4.2 TEMPORARY WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs</b>						
CONSTRUCTION BMP ID NO <sup>(1)</sup>	BMP NAME	CONTRACT MINIMUM REQUIRE- MENT <sup>(2)</sup>	CONTRACT BID ITEM	BMP USED		IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON
				YES	NO	
BMP ID NO <sup>(1)</sup>						

Notes:

- (1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the *Construction Site BMP Reference Manual* is a required contract document.
- (2) Minimum requirements are based on the required contract provisions, standard special provisions, plans and specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the QSD or WPC Manager.
- (3) The BMPs listed above are incidental and do not include operations listed as separated line items in the contract.
- (4) Use of alternative BMPs will require written approval by the RE.

- **WM-1, WM-2 Material Delivery, Storage, and Use-** In general, BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use. The general material storage area shall be located in the Contractor’s yard. A linear sediment barrier shall be provided around the storage area to prevent run-on from adjacent areas. At this time, it is anticipated that watertight containers or covered areas are not needed and thus not shown on WPCDs. If this becomes necessary, watertight containers shall be provided to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents and grease. If necessary, for items not able to fit inside a watertight container, provide separate covered storage/containment facilities to provide storage for larger items such as drums and items shipped or stored on pallets. The containment facility shall consist of a lined or paved area with either wood framed cover or a plastic sheet to protect the facility from sun and rain. The facility should be capable of containing the liquid being stored plus the runoff from a 24-hour, 25-year storm.

Very large items, such as light standards, framing materials, and stockpiled lumber, shall be stored in the open in the general storage area. Such materials shall be elevated with wood blocks to minimize contact with run-on.

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

- **WM-3 Stockpile Management-** BMP WM-3, Stockpile management shall be implemented to reduce or eliminate pollution of stormwater from stockpiles of soil and paving materials such as PCC rubble, AC, AC Rubble, aggregate base, aggregate subbase, premixed aggregate and asphalt binder (so called “cold mix” asphalt). Stockpiles shall be surrounded with sediment controls (BMP SC-5, Fiber Rolls). Plastic covers shall be used.
- **WM-4 Spill Prevention and Control-**BMP WM-4, Spill prevention and Control shall be implemented to contain and clean up spills and prevent material discharges to the storm drain system. Spill prevention is also discussed above in the Material Delivery, Storage and Use BMP section, and below in the following waste management section.
- **WM-5, WM-6 Waste Management-**BMP WM-5, Solid Waste Management and BMP-6, Hazardous Waste Management BMPs shall be implemented to minimize stormwater contact with waste materials and prevent waste discharges. Solid wastes shall be loaded directly onto trucks for off-site disposal. When on-site storage is necessary, solid wastes shall be stored in watertight dumpsters in general storage area of the Contractor’s yard. Solid waste, including rubble stockpiles, shall be removed and disposed off site at least weekly. Liquid

Hazardous wastes shall be stored in the covered containment area discussed above for materials storage. Solid hazardous waste shall be stored in the shipping container or in the covered containment area. Hazardous wastes shall be placed in appropriate and clearly marked containers and segregated from other non-waste materials. Wastes shall be stored in sealed containers constructed of a suitable material and shall be labeled as required by Title 22 CCR, Division 4.5, and 49 CFR Parts 172, 173, 178, and 179. All hazardous waste shall be stored, transported, and disposed as required in Title 22 CCR, Division 4.5 and 49 CFR 261-263.

- **WM-8 Concrete Residuals and Washout Wastes-** Concrete waste management activities shall be implemented in accordance with contract documents, and maintained at the Contractor's yard. Discharges of washout waste will consist of rinse water and residual concrete (PCC, aggregates, admixture, and water). Concrete pours shall not be conducted during or immediately prior to rainfall events.

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

- **WM-9 Sanitary and Septic Wastes-**The Contractor shall implement a Sanitary and Septic Waste Management BMP. Portable toilets shall be located and maintained at the Contractor's yard for the duration of the project. Weekly maintenance shall be conducted and waste shall be disposed of off site. The toilets shall be located away from concentrated flow paths and traffic flow.

## ***500.5 Water Pollution Control Drawings***

The WPCDs are the component of the project SWPPP that show the BMPs, by project phase/stage, that are necessary for the project to be in compliance with the CGP. The construction activity phases used in this SWPPP are the preliminary phase, grading phase, highway construction phase, and the highway planting / erosion control establishment phase. These phases are defined below.

### **Preliminary Phase (Pre-Construction Phase – Part of the Grading Phase)**

Includes rough grading/or disking, clearing and grubbing operations, or any soil disturbance prior to mass grading.

### **Grading Phase**

Includes reconfiguring the topography for the highway, including excavation for roadway (e.g., necessary blasting of hard rock), highway embankment construction (fills); mass grading, and stockpiling of select material for capping operations.

### **Highway Construction Phase**

Encompasses both highway and structure construction. Highway construction includes final roadway excavation, placement of base materials and highway paving, finish grading, curbs, gutters and sidewalks, public utilities, public water facilities including fire hydrants, public sanitary sewer systems, storm drain systems and/or other drainage improvements, highway lighting, traffic signals and/or other highway electrical work, guardrail, concrete barriers, sign installation, pavement markers, traffic striping and pavement markings. Structure construction includes structure footings, bridges, retaining walls, major culverts, overhead sign structures and buildings.

### **Highway Planting / Erosion Control Establishment Phase**

Includes clearing and grubbing operations, soil preparation (grading, incorporation of soil amendments, and placement of topsoil), irrigation (trenching, installation and trench backfilling), minor grading (top dressing and fine grading of lawn and ground cover areas), planting (seeding and planting of vegetation), mulching (application of wood chips or other

mulches) and plant establishment (weeding, plant replacement, and, if needed, fertilizer application, irrigation maintenance, and reapplication of mulch). Erosion control includes placement of permanent erosion control materials and maintenance of temporary sediment controls during the erosion control establishment period.

The WPCDs provide field staff with the information on where to install BMPs so that they are effective. The WPCDs, WPCBML and Water Pollution Control Schedule provide the necessary tools for a Contractor to plan and implement BMPs to meet the requirements of the project SWPPP.

The WPCD cover sheet(s) shall include a listing of the BMPs that will be used along with the associated BMP symbols used on the WPCDs.

WPCDs are provided for all areas that are directly related to the construction activity, including but not limited to staging areas, storage yards, material borrow areas and storage areas, access roads, etc., whether or not they reside within the Caltrans rights-of-way.

The WPCDs shall show the construction project site in detail, including:

- the construction site perimeter;
- geographic features within or immediately adjacent to the site; include surface waters such as lakes, streams, springs, wetlands, estuaries, ponds, and the ocean;
- site topography before and after construction; include roads, paved areas, buildings, slopes, drainage facilities, and areas of known or suspected contamination; and
- permanent (post-construction) BMPs.

The WPCDs shall show the following site information:

- discharge points from the project to off-site storm drain systems or receiving waters;
- tributary areas and drainage patterns across the project area (show using flow arrows) into each on-site stormwater inlet or receiving water;
- tributary areas and drainage patterns to each on-site stormwater inlet, receiving water or discharge point;
- off-site tributary drainage areas that generate run-on to the project;
- temporary on-site drainage(s) to carry concentrated flows;
- drainage patterns and slopes anticipated after major grading activities are completed;
- outlines of all areas of existing vegetation, soil cover, or native vegetation that will remain undisturbed during the project;
- outlines of all areas of planned soil disturbance (disturbed soil areas, DSAs);
- known location(s) of contaminated or hazardous soils;and
- any potential non-stormwater discharges and activities, such as dewatering operations, concrete saw-cutting or coring, pressure washing, waterline flushing, diversions, cofferdams, and vehicle and equipment cleaning; if operations can't be located on the WPCDs, a narrative description should be provided.

The WPCDs show proposed locations of all construction site BMPs. Additional detail drawings are provided if necessary to convey site-specific BMP configurations. The WPCDs shall show construction site BMPs including the following:

- temporary soil stabilization and temporary sediment control BMPs that will be used during construction; any temporary on-site drainage(s) to carry concentrated flows, BMPs implemented to divert off-site drainage around or through the construction site, and BMPs that protect stormwater inlets;
- construction entrances used for site ingress and egress points and any proposed temporary construction roads;
- BMPs to mitigate or eliminate non-stormwater discharges;
- BMPs for waste management and materials pollution control, including, but not limited to storage of soil or waste; construction material loading, unloading, storage and access areas; and areas designated for waste handling and disposal; and
- BMPs for vehicle and equipment storage, fueling, maintenance, and cleaning.

The WPCDs can be found in Attachment BB of the SWPPP.

## **500.6 Water Pollution Control BMP List**

The Water Pollution Control Best Management Practices List (WPCBMPL) provides, by location and project phase/stage, the BMPs necessary for the project to be in compliance with the CGP. The WPCBMPL provides field staff both with a list of necessary BMPs and with an estimated quantity for each BMP by location and phase/stage of the project. The construction activity phases are typically the Preliminary Phase, Grading Phase, Highway Construction Phase, and the Highway Planting / Erosion Control Establishment Phase. The construction activity phases are defined in Section 500.5.

The WPCBMPL, water pollution control drawings and water pollution control schedule provide the tools necessary for the Contractor to plan and implement BMPs to meet the requirements of the project SWPPP. The BMPs listed on the WPCBMPL are the base line for site inspections and visual monitoring.

The WPCBMPL cover sheet includes a list of all BMPs to be used on the project based on Section 500 Determination of Construction Site Best Management Practices.

The names and number of locations listed on the WPCBMPL were established so that field staff and inspectors can easily identify where BMPs need to be located. The WPCBMPL includes all locations that are directly related to the construction activity, including but not limited to staging areas, storage yards, material borrow areas and storage areas, access roads, etc., whether or not they reside within Caltrans rights-of-way.

Necessary additional information to convey site-specific BMP configurations or BMP modifications are noted on the WPCBMPL.

All construction site BMPs are listed on the WPCBMPL including the following:

- temporary soil stabilization and temporary sediment control BMPs that will be used during construction; include temporary on-site drainage(s) to carry concentrated flows
- BMPs implemented to divert off-site drainage around or through the construction site, and BMPs that protect stormwater inlets

- BMPs to mitigate or eliminate non-stormwater dischargesBMPs for waste management and materials pollution control, including, but not limited to storage of soil or waste; construction material loading, unloading, storage and access areas; and areas designated for waste handling and disposal
- BMPs for vehicle and equipment storage, fueling, maintenance, and cleaning
- permanent BMPs that are a component of the project SWPPP

The WPCBMPL can be found in Attachment CC of the SWPPP.

## ***500.7 Water Pollution Control Schedule***

The Water Pollution Control Schedule (WPCS) is the component of the project SWPPP that shows the timeline for when BMPs will be installed so that the project is in compliance with the CGP. The WPCS provides field staff with the information necessary to plan for adequate materials and crews to install BMPs at the right time so that they are effective. The WPCS, WPCBMPL, and WPCDs provide the necessary tools for the Contractor to plan and implement BMPs to meet the requirements of the project SWPPP.

The WPCS shall contain an adequate level of detail to show major activities sequenced with the implementation of construction site BMPs, including:

- project start and finish dates, including each stage of the project
- SWPPP review and approval
- annual certifications
- mobilization dates
- mass clearing and grubbing/roadside clearing dates
- major grading/excavation dates
- dates named in other permits such as Fish and Game and Army Corps of Engineers Permits
- dates for submittal of SWPPP amendments as required in the contract specifications

The WPCS shall show by location the dates for the deployment of:

- temporary soil stabilization BMPs
- temporary sediment control BMPs
- wind erosion control BMPs
- tracking control BMPs
- non-stormwater BMPs
- waste management and materials pollution control BMPs

The WPCS shall include:

- paving, saw-cutting, and any other pavement-related operations;
- major planned stockpiling operations;
- dates for other significant long-term operations or activities that may cause non-stormwater discharges, such as dewatering, grinding, etc; and
- final stabilization activities for each disturbed soil area of the project.

The WPCS shall be updated quarterly and the quarterly updates shall be filed in SWPPP File Category 20.03: Water Pollution Control Schedule Updates.

The Water Pollution Control Schedule can be found in Attachment DD of the SWPPP.

# SECTION 600

## PROJECT SITE IMPLEMENTATION PROGRAM

### *600.1 Water Pollution Control Manager Responsibilities*

The WPC Manager shall have primary responsibility and authority to implement the SWPPP and ensure the project is in compliance with the CGP. The WPC Manager is responsible for implementing the SWPPP and amending the SWPPP when any of the conditions specified in Section 100.3 are met. The Contractor has assigned authority to the WPC Manager to mobilize crews and subcontractors, as necessary, for SWPPP and CGP compliance. The WPC Manager will be available at all times throughout duration of the project.

Duties of the Contractor's WPC Manager include but are not limited to the following

- ensuring full compliance with the SWPPP and the CGP
- implementing all elements of the SWPPP, including but not limited to implementing:
  - prompt and effective erosion and sediment control measures
  - all non-stormwater management, and materials and waste management activities such as: monitoring discharges (dewatering, diversion devices); performing general site cleanup; cleaning vehicles and equipment, performing fueling and maintenance activities; providing spill control; ensuring that no materials other than stormwater are discharged in quantities that will have an adverse effect on receiving waters or storm drain systems, etc.
- overseeing and ensuring that the following site inspections and visual site monitoring are conducted:
  - daily required BMP inspections
  - weekly routine stormwater site BMP inspections
  - quarterly non-stormwater site inspections
  - pre-storm inspections prior to forecasted storm events
  - daily inspections during extended forecasted storm events
  - post-storm inspections for qualifying rain events
- mobilizing crews to repair, replace, and/or implement additional BMPs due to deficiencies, failures or other shortcomings identified during inspections, to be completed within 72 hours of identification (the contractor's WPC Manager shall be assigned authority by the Contractor to mobilize crews)
- coordinating with the RE to assure that if design changes to BMPs are required due to deficiencies, failures or other shortcomings identified during inspections, the changes are completed as soon as possible and the SWPPP is revised accordingly
- monitoring NWS Forecast Office forecasts for both forecasted storm events and qualifying rain events; these events are defined as follows:
  - a forecasted storm event is defined as a 50% or greater likelihood that 0.10 inch or more of precipitation will fall within a 24-hour period

- a qualifying rain event is defined as a rain event that may produce or has produced ½ inch or greater of precipitation at the time of discharge, with a 72-hour dry period between events
- monitoring weather at the project site
- preparing and implementing qualifying rain event sampling and analysis plans
- preparing and implementing Rain Event Action Plans for forecasted stormevents
- preparing and implementing qualifying rain event sampling and analysis plans
- mobilizing crews immediately, in the event of NAL exceedances, to repair existing BMPs and/or implement additional BMPs (the Contractor's WPC Manager shall be assigned authority by the Contractor to mobilize crews),
- coordinating with the RE in the event of NAL exceedances to assure that any SWPPP revisions (corrective actions) are made immediately, either to prevent pollutants and authorized non-stormwater discharges from contaminating stormwater, or to substantially reduce the pollutants to levels consistently below the NALs, so that the project complies with the SWPPP, the CGP and approved plans at all times,
- submitting NAL exceedances reports to the RE
- submitting test results for stormwater samples to the RE
- preparing amendments to the SWPPP when required
- preparing contractor's SWPPP Annual Compliance Certification
- preparing the Stormwater Annual Reports
- ensuring elimination of all unauthorized discharges
- preparing and submitting Notice of Discharge reports to the RE
- preparing and submitting reports of illicit connections or illegal discharges to the RE

## 600.2 *Site Inspections*

Stormwater site inspections and visual monitoring are necessary to ensure that the project is in compliance with the requirements of the CGP. Project site visual monitoring requirements are covered in Section 700 Construction Site Monitoring Program. Project site inspections of stormwater BMPs are conducted to identify and record:

- that BMPs are properly installed
- what BMPs need maintenance to operate effectively
- what BMPs have failed
- what BMPs could fail to operate as intended.

Routine stormwater site inspections shall be conducted by the contractor's WPC Manager or other 24-hour trained staff at

the following minimum frequencies:

- daily inspections of;
  - storage areas for hazardous materials and waste
  - hazardous waste disposal and transporting activities
  - hazardous material delivery and storage activities
  - vehicle and equipment cleaning facilities if vehicle and equipment cleaning occurs daily
  - vehicle and equipment maintenance and fueling areas if vehicle and equipment maintenance and fueling occurs daily
  - vehicles and equipment at the job site to verify that operators are inspecting vehicles and equipment each day of use.
  - demolition sites within 50 feet of storm drain systems and receiving waters
  - pile driving areas for leaks and spills if pile driving occurs daily
  - temporary concrete washouts if concrete work occurs daily
  - paved roads at job site access points for street sweeping if earthwork and other sediment or debris generating activities occur daily
  - dewatering work if dewatering work occurs daily
  - temporary active treatment system if temporary active treatment system activities occur daily
  - work over water if work over water occurs daily
- daily inspections for projects within the Lake Tahoe Hydrologic Unit
- weekly inspection of site BMPs

Stormwater site inspections shall be documented on CEM-2030 Stormwater Site Inspection Report, in Appendix G. Completed stormwater inspection reports shall be submitted to the RE within 24 hours after completion of the inspection. Copies of completed inspection reports will be kept in SWPPP File Category 20.31: Contractor Stormwater Site Inspection Reports,

Deficiencies identified during site inspections and correction of deficiencies will be tracked on the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary, in Appendix I. Corrective Action Summary forms shall be submitted to the RE when corrections are completed but must be submitted within five (5) days after completion of the site inspection. Completed Stormwater Site Inspection Report Corrective Actions Summary forms shall be filed in SWPPP File Category 20.35: Corrective Actions Summary. A copy of the completed Corrective Actions Summary form will also be attached to the corresponding Stormwater Site Inspection Report that generated the need for the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary

### **600.3**    *Weather Forecast Monitoring*

The WPC Manager shall have primary responsibility to monitor the National Weather Service Forecast Office for forecasted precipitation based on project site location. Precipitation forecast information shall be obtained from the National Weather Service Forecast Office accessible at: <http://www.srh.noaa.gov/>.

The project site location to be used for obtaining forecast from National Weather Forecast Office website is State **Route 32 from Fir Street to El Monte Avenue.**

The WPC Manager shall monitor the weather forecast on a daily basis for predicted precipitation within the following 96 hours. The WPC Manager shall monitor the forecast for the next 24, 48, 72 and 96 hours to determine if the forecast for precipitation is 50 percent or greater for any 6-hour period. If the forecast for precipitation is 50 percent or greater, the WPC Manager shall calculate the amount of precipitation forecasted for each 24-hour period and the total precipitation for the forecasted storm event and record the information. Weather forecast monitoring shall be recorded on CEM-2040 Weather Forecast Monitoring Form, in Appendix J. The completed CEM-2040 Weather Forecast Monitoring forms shall be filed in File Category 20.40: Weather Monitoring Logs. Within 2 working days of the last date shown on a completed Weather Forecast Monitoring Log form, a copy of the completed log will be submitted to the RE.

When the forecast for precipitation is 50 percent or greater and the forecasted amount of precipitation is 0.10 inch or more for any 24-hour period within the next 72 hours, the WPC Manager shall perform a pre-storm site inspection and ensure that the site is prepared for the likely forecasted storm event.

For Risk Level 2 and 3 the WPC Manager will prepare a Rain Event Action Plan for forecasted storm events.

Forecasted storm event site preparation shall include, but is not limited to, the installation of soil stabilization and sediment BMPs on active disturbed soil areas and stockpiles.

## **600.4 Weather Monitoring**

The WPC Manager shall have primary responsibility to monitor weather at the project site. The WPC Manager, on a daily basis, shall monitor the weather and record the weather conditions on the CEM-2041 Weather Monitoring Log form.

When there is precipitation, the WPC Manager shall ensure that storm precipitation data is obtained from the project site rain gauge. Precipitation monitoring will be performed at least every two hours during normal working hours and will include recording the time, amount of precipitation measured in the project site rain gauge, amount of precipitation within a 24-hour period, and total cumulative amount of precipitation for the forecasted storm event.

If no pre-storm visual site monitoring was performed, and the amount of precipitation for any 24-hour period is 0.10 inch or greater, the WPC Manager will implement during storm visual site monitoring, as discussed in Section 700.1.

When a forecasted storm event was not forecasted to be a qualifying rain event, but the measured cumulative amount of precipitation for the storm event and the expected severity of the continuing storm event results in ½ inch or more of precipitation, the WPC Manager will implement a Qualifying Rain Event Sampling and Analysis Plan as soon as possible.

Weather monitoring will be documented daily on the CEM-2041 Weather Monitoring Log form, available in Appendix K. Completed weather monitoring log forms shall be kept in File Category 20.40: Weather Monitoring Logs. Within 2 working days of the last date shown on a completed weather monitoring log, a copy of the completed log will be submitted to the RE.

## **600.5 Best Management Practices Status Report**

The WPC Manager shall prepare a weekly status report of the water pollution control BMPs (site BMPs) installed on the project site and BMPs that will be deployed during the following week. The weekly BMP status report will be based on the progress of the work and the WPCBMPL for the project, with any additional BMPs the WPC Manager has determined are necessary based on the stage of construction and construction activities.

Because the SWPPP, including the WPCBMPL and WPCDs, are based on the entire project site and all construction activities, the weekly BMP status report should be a “snapshot” of which BMPs are deployed on the project site and which BMPs will be deployed the following week, so a project inspector or reviewer can easily determine what could be expected to be seen on the project site that week. The weekly status report will be used by stormwater inspectors and contractor personnel to ensure SWPPP compliance.

The weekly status report will be used to ensure that weekly training meetings cover BMPs that are required for work activities during the week. The weekly status report will be provided to regulatory agency staff who visit the project site to indicate which BMPs should be in place and which are scheduled to be implemented during the coming week.

The weekly status of stormwater BMPs will be documented on CEM-2034 Stormwater Best Management Practices Status Report form, in Appendix H. Completed weekly status reports shall be submitted to the RE 48 hours prior to the beginning of the work week. Copies of the completed reports will be kept in SWPPP File Category 20.34: Best Management Practices Weekly Status Reports.

## **600.6 Rain Event Action Plans**

REAPs will be prepared by the WPC Manager when there is a forecasted storm event. A forecasted storm event is any weather pattern that is forecasted to have a 50 percent or greater probability of producing precipitation of 0.10 inch or more within any 24-hour period at the project site location. The WPC Manager will prepare the REAP for the forecasted storm event based on the current construction activity phase of the project. For REAPs, the construction activity phases are the Highway Construction Phase, Highway Planting / Erosion Control Establishment Phase or Inactive Project Phase. The construction activity phases are defined in Section 500.5.

When the NWS forecast for 72 hours and greater predicts a forecasted storm event, the WPC Manager will prepare a REAP using the REAP form appropriate to the current project stage. REAP forms are available in Appendix L. Prepared REAPs shall be submitted to the RE at least 48 hours prior to a forecasted storm event. If the NWS forecast changes and a storm event is forecasted to occur within 24-72 hours then a REAP must be prepared. If the NWS forecast changes and a storm event is forecasted to occur within the next 24 a REAP will not be prepared and the WPC Manager will take immediate actions to ready the project site for the forecasted storm event.

The WPC Manager shall implement a REAP within the 48 hours prior to the forecasted storm event. A copy of the REAP shall be available on the job site at least 48 hours prior to the forecasted storm event. Copies of REAPs will be maintained in SWPPP File Category 20.45: Rain Event Action Plans in reverse chronologic order.

# SECTION 700

## CONSTRUCTION SITE MONITORING PROGRAM

### *700.1 Site Visual Monitoring Inspection*

This Construction Site Monitoring Program includes conducting site visual monitoring inspections of the project site to address the following objectives:

- determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives
- determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges
- determine whether BMPs included in the REAP are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges
- demonstrate that the site is in compliance with the discharge prohibitions and applicable NALs and NELs of the CGP
- determine whether immediate corrective actions, additional BMP implementation, or SWPPP amendments are necessary to reduce pollutants in stormwater and authorized non-stormwater discharges
- demonstrate that the site is in compliance with the discharge prohibitions
- document the presence or evidence of any non-stormwater discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source, if applicable, and the response taken to eliminate unauthorized non-stormwater discharges and to reduce or prevent pollutants from contacting non-stormwater discharges

#### *700.1.1 Visual Monitoring Locations*

##### **Locations of Visual Monitoring Prior To A Storm Event**

Visual monitoring (a pre-storm inspection) of the project site is required when the forecast for precipitation is greater than 50 percent within the next 24, 48, 72, 96 hours, and the amount of precipitation forecasted for any 24-hour period is 0.10 inch or greater. Within 48 hours of a forecasted storm event, a stormwater visual monitoring site inspection shall be performed and shall include observations of:

- stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources
- BMPs to identify whether they have been properly implemented
- any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard

5 drainage area(s) on the project site and the Contractor's yard, staging areas, and storage areas have been identified as required forecasted storm event visual observation location(s), according to Section I.3.e of Attachments C, D, and E of the CGP. Drainage area(s) are shown on the WPCDs in Attachment BB and are listed by drainage area location number and location description in Table 700.1.1.1: Drainage Areas.

<b>TABLE 700.1.1.1 DRAINAGE AREAS</b>	
<b>Drainage Area No.</b>	<b>Location</b>
1	Contractors staging yard-Location to be determined
2	Dead Horse Slough
3	North Drainage Swale to "WB"110+50
4	South Drainage Swale to "EB" 113+00
5	Forest Avenue North

0 stormwater storage or containment area(s) are located on the project site. These stormwater storage and containment area(s) have been identified as required forecasted storm event visual observation location(s). Stormwater storage or containment area(s) are shown on the WPCDs from Attachment BB and are listed by storage or containment area location number and location description in Table 700.1.1.2: Stormwater Storage and Containment Areas.

TABLE 700.1.1.2 STORMWATER STORAGE AND CONTAINMENT AREAS	
Location No.	Location

**Locations of Visual Monitoring during Extended Forecasted Storm Events and within 48 Hours After a Qualifying Rain Event**

During any extended forecasted storm events and within 48 hours after a qualifying rain event (a rain event that has produced ½ inch or more of precipitation), a stormwater visual monitoring site inspection is required to observe:

- stormwater discharges at all discharge locations
- BMPs to identify and record those that need maintenance to operate effectively, those that have failed, and those that could fail to operate as intended
- the discharge of stored or contained stormwater

7 discharge location(s) are located on the project site. These stormwater discharge location(s) have been identified as required visual observation location(s). Stormwater discharge location(s) are shown on the WPCDs in Attachment BB and are listed in Table 700.1.1.3: Stormwater Discharge Locations.

TABLE 700.1.1.3 STORMWATER DISCHARGE LOCATIONS	
Unique Sampling Location Identifier	Location
1	North Drainage Swale "WB" 110+50
2	Park and Ride Drainage Swale "EB" 112+00
3	South Drainage Ditch "EB" 113+00
4	Drainage Inlet at "B"129+65 Lt
5	Drainage Inlet at "F2" 12+10.67 Lt
6	Dead Horse Slough
7	Contractor's Staging Yard-Location to be Determined

BMP locations shown on the WPCDs in Attachment BB and are listed on the WPCBMPL in Attachment CC.

0 stormwater storage or containment area(s) are located on the project site. Stormwater storage or containment area(s) are shown on the WPCDs in Attachment BB and are listed on Table 700.1.1.2: Stormwater Storage and Containment Areas.



Caltrans will notify the owner/operator of the MS4 and the RWQCB as soon as practicable, but no later than 24 hours after onset of or threat of discharge which can cause adverse conditions to the storm sewer system or the receiving water. This applies to any such discharge that is not covered by Office of Emergency Services (OES) procedures for discharges from a highway to a storm sewer system subject to a MS4 permit.

Discharges requiring reporting include:

- stormwater from a DSA discharged to a waterway without treatment by an effective combination of temporary erosion and sediment control BMPs
- non-stormwater, except conditionally exempted discharges, discharged to a waterway or a storm drain system, without treatment by an approved control measure (BMP)
- stormwater discharged to a waterway or a storm drain system where the control measures (BMPs) have been overwhelmed or not properly maintained or installed
- discharge of hazardous substances above the reportable quantities, as provided in 40 CFR 110.3, 117.3 or 302.4
- stormwater runoff containing hazardous substances from spills discharged to a waterway or storm drain system

The initial notification to the RWQCB of a discharge or threat of discharge will be made immediately for any discharge that can cause adverse conditions to the storm sewer system or the receiving water, with a followup in writing within 24 hours. Adverse conditions include, but are not limited to, serious violations or serious threatened violations of Waste Discharge Requirements (WDRs), significant spills of petroleum products or toxic chemicals, or serious damage to control facilities that could affect compliance. Caltrans shall perform follow-up monitoring of major spills and/or perform confirmation sampling to ensure that threats to waters of the U.S. have been eliminated as determined by the local RWQCB.

### **Visual Monitoring Prior To A Forecasted Storm Event**

Visual monitoring of the project site is required when the forecast for precipitation is greater than 50 percent within the next 24, 48, 72, or 96 hours and the amount of precipitation forecasted for any 24-hour period during the storm event is 0.10 inch or greater within a 24-hour period. Site visual monitoring shall be conducted within 48 hours prior to a forecasted storm event. The pre-storm site visual monitoring shall include observations of:

- all drainage areas identified in Table 700.1.1.1 to identify any spills, leaks, or uncontrolled pollutant sources;
- all stormwater storage and containment areas identified in Table 700.1.1.2 to detect leaks and ensure maintenance of adequate freeboard
- all BMPs for proper installation and adequate maintenance.

Observations of the site and any recommended corrective actions will be documented in the CEM-2030 Stormwater Site Inspection Report. Any photographs used to document observations will be referenced in the stormwater site inspection report. Corrective actions documented in site inspection reports shall be immediately reviewed by the WCP Manager and, if deemed necessary, implemented prior to the forecasted storm event.

Any corrective actions identified by a pre-storm visual monitoring site inspection shall be included in the REAP for the forecasted storm event.

### **Visual Monitoring during Extended Forecasted Storm Events**

Stormwater visual monitoring site inspections shall be conducted at least once each 24-hour period during any extended

forecasted storm events. During any extended forecasted storm event, the site visual monitoring inspector shall visually observe:

- stormwater discharges at all discharge locations (Table 700.1.1.3)
- all stored or contained stormwater that is derived from and discharged subsequent to the qualifying rain event producing precipitation of ½ inch or more at the time of discharge; stored or contained stormwater that will likely discharge after working hours, due to anticipated precipitation, shall be observed prior to the discharge during working hours

Stormwater discharges and stored or contained stormwater will be observed for the presence or absence of floating and suspended materials, sheens on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

During any forecasted storm event, stormwater visual monitoring site inspections will include the observation of all site BMPs for:

- proper installation
- achievement of maintenance requirements
- possible failure
- BMPs that could fail to operate as intended
- effectiveness, so that design changes can be implemented as soon as feasible if needed

Observations of the site and any recommended corrective actions will be documented in the CEM-2030 Stormwater Site Inspection Report. Any photographs used to document observations will be referenced on the stormwater site inspection report. Corrective actions documented in site inspection reports shall be immediately reviewed by the WCP Manager and, if deemed necessary, implemented within 72 hours of identification and completed as soon as possible. If BMPs require design changes, the changes shall be implemented and the SWPPP shall be amended to include the changes.

### **Visual Monitoring Within 48 Hours after a Qualifying Rain Event**

Site visual monitoring post-qualifying rain events shall be conducted within 48 hours after the qualifying rain event. The post-storm site visual monitoring inspection shall include observations of:

- discharges of stormwater that have not been processed by a BMP or evidence of stormwater that has not been processed by a BMP at all discharge locations
- evidence of a breach at stored or contained stormwater that is derived from and discharged subsequent to the qualifying rain event producing precipitation of ½ inch or more at the time of discharge; stored or contained stormwater that will likely discharge after working hours, due to anticipated precipitation, shall be observed prior to the discharge during working hours

Stormwater discharges and stored or contained stormwater will be observed for the presence or absence of floating and suspended materials, sheens on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

Post-qualifying rain event stormwater visual monitoring site inspections will include observation of all site BMPs to determine if BMPs have failed to operate as intended because of:

- improper installation

- lack of maintenance
- lack of effectiveness

Observations of the site and any recommended corrective actions will be documented in the CEM-2030 Stormwater Site Inspection Report. Any photographs used to document observations will be referenced on the stormwater site inspection report. Corrective actions documented in site inspection reports shall be immediately reviewed by the WCP Manager and, if deemed necessary, implemented within 72 hours of identification and completed as soon as possible. If BMPs require design changes, the changes shall be implemented and the SWPPP shall be amended to include the changes.

### **Visual Monitoring of Non-Stormwater Discharges**

For non-stormwater site visual monitoring, each drainage area will be monitored quarterly for the presence or prior indications of unauthorized and authorized non-stormwater discharges, and their sources. The presence or absence of non-stormwater discharges based on site observations will be documented in the CEM-2030 Stormwater Site Inspection Report. Documentation of observed non-stormwater discharges will include presence or absence of floating and suspended materials, sheens on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

Site observations of the site and any recommended corrective actions will be documented. Corrective actions documented in site inspection reports shall be immediately reviewed by the WCP Manager and, if deemed necessary, implemented within 72 hours of identification and completed as soon as possible. If BMPs require design changes, the changes shall be implemented and the SWPPP shall be amended to include the changes. Corrective actions shall be documented in the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary. Any photographs used to document observations will be referenced in the CEM-2030 Stormwater Site Inspection Report.

#### ***700.1.4 Visual Monitoring Follow-up and Tracking Procedures***

For deficiencies identified during visual monitoring (site inspections), the required repairs or maintenance of BMPs shall begin and be completed as soon as possible, while taking into consideration worker safety. For deficiencies identified during visual site inspections that require design changes, including additional BMPs, the implementation of changes will begin within 72 hours of identification of the deficiency and be completed as soon as possible. When design changes to BMPs are required, the SWPPP shall be amended, including the WCBMPL and WPCDs. If NALs are exceeded, corrective actions shall be approved by the WPC Manager and implemented immediately.

Deficiencies identified on site inspection reports, as well as corrections of deficiencies, will be tracked on the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary, in Appendix I. Corrective action summaries shall be submitted to the RE when corrections are completed, but must be submitted within five (5) days of a site inspection.

#### ***700.1.5 Data Management and Reporting***

The results of site visual monitoring (pre-storm, during storm, post-storm, and quarterly inspections) shall be recorded on the CEM-2030 Stormwater Site Inspection Report, in Appendix G. A copy of each report shall be kept in SWPPP File Category 20.33: .

All reports shall be provided to the RE within 24 hours of the site inspection.

Deficiencies identified during visual monitoring (site inspections) and correction of deficiencies will be tracked on the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary, in Appendix I. Corrective Action Summary forms shall be submitted to the RE when corrections are completed, but must be submitted within five (5) days of the site inspection. Completed Stormwater Site Inspection Report Corrective Actions Summary forms shall be filed in SWPPP File Category 20.35: Corrective Actions Summary. A copy of the completed Corrective Actions Summary form will also be attached to the corresponding inspection report and shall be kept in the SWPPP Category 20.33.

If a discharge or evidence of a prior discharge is discovered by the Contractor, the WPC Manager or Contractor shall immediately notify the RE, and will file a written report to the RE within 24 hours of the discovery of evidence of a prior discharge. The written report to the RE will contain:

- the date, time, location, and type of unauthorized discharge;
- The nature of the operation that caused the discharge;
- An initial assessment of any impacts caused by the discharge;
- the BMPs deployed before the discharge;
- the date of deployment and type of BMPs deployed after the discharge, including additional measures installed or planned to reduce or prevent re-occurrence
- steps taken or planned to reduce, eliminate and/or prevent recurrence of the discharge

Reporting of discharges shall be documented on the CEM-2061 Notice of Discharge form, in Appendix M. Completed Notice of Discharge reports shall be submitted to the RE within 24 hours of discovery of evidence of a discharge. Copies of the Notice of Discharge reports will be kept in SWPPP File Category 20.61: Notice of Discharge Reports.

## ***700.2 Sampling and Analysis Plans***

### ***700.2.1 General SAP***

A sampling and analysis plan (SAP) describes how samples will be collected, under what conditions, where and when the samples will be collected, what the sample will be tested for, what test methods and detection limits will be used, and what methods/procedures will be performed to ensure the integrity of the sample during collection, storage, shipping and testing (i.e., quality assurance/quality control protocols). Therefore, a SAP shall include the components listed below.

1. Scope of Monitoring Activities
2. Monitoring Preparation
3. Monitoring Strategy
4. Sample Collection and Handling
5. Sampling Analysis
6. Quality Control and Assurance
7. Data Management and Reporting
8. Data Evaluation
9. Change of Conditions

This SWPPP contains a non-visible pollutants SAP. The SWPPP may also contain four additional specific SAPS based on the project risk level, project dewatering requirements, RWQCB sampling and analysis requirements, and a SAP for monitoring an active treatment system.

Sampling and analysis for Risk Level 1 projects will be documented on the CEM-2048 Storm Event Sampling and Analysis Plan, available in Appendix N. For Risk Level 2 and Risk Level 3 projects, sampling and analysis will be documented on the CEM-2049 Qualifying Rain Event Sampling and Analysis Plan, available in Appendix O.

### 700.2.1.1 Scope of Monitoring Activities

For specific details with regard to monitoring activities, refer to the specific SAP identified below.

- Non-visible Pollutants (Section 700.2.2.1)
- Non-Stormwater Discharges (Section 700.2.3.1)
- Stormwater pH and Turbidity (Section 700.2.4.1)
- Monitoring required by the Regional Board (Section 700.2.5.1)

### 700.2.1.2 Monitoring Preparation

To ensure an effective construction site monitoring program, the following monitoring preparation activities are required:

- identifying qualified sampling personnel
- ensuring the availability of an adequate quantity of monitoring supplies
- ensuring the availability of field instruments; field instruments must be properly maintained and calibrated prior to sampling events
- identifying a qualified testing laboratory that is capable of performing stormwater and non-stormwater analysis for those constituents that must be tested in a laboratory

#### 700.2.1.2.1 Qualified Sampling Personnel

Sampling personnel shall be trained to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program (SWAMP) *2008 Quality Assurance Program Plan (QAPrP)*.

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

- Stormwater sampling and field analysis will be performed by the following primary and alternative stormwater samplers:[ Insert name of the primary stormwater sampler and telephone number]
- [ Insert name of the alternative stormwater sampler and telephone number]

The primary stormwater sampler has received the following stormwater sampling training:

- [LIST]

The primary stormwater sampler has the following stormwater sampling experience:

- [LIST]

The alternate stormwater sampler has received the following stormwater sampling training:

- [LIST]

The alternate stormwater sampler has the following stormwater sampling experience:

- [LIST]

Training records of designated contractor sampling personnel are provided in Attachment E, Contractor Personnel Stormwater Training.

Safety practices for sample collection will be in accordance with the TBD.

### 700.2.1.2.2 Monitoring Supplies

An adequate stock of monitoring supplies and equipment for sampling will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will prevent the supplies/equipment from coming into contact with rain or direct sunlight. Supplies maintained at the project site will include, but are not limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, and the CEM-2050 Sample Information, Identification, and Chain-of-Custody Record forms.

The contractor will obtain and maintain the field testing instruments, identified in Section 700.2.1.2.3, for analyzing samples in the field by contractor sampling and testing personnel.

### 700.2.1.2.3 Field Instruments

The field instrument(s) shown in Table 700.2.1.2.3: Field Instruments will be used to analyze the constituents shown:

TABLE 700.2.1.2.3 FIELD INSTRUMENTS	
Field Instrument	Constituent
Field Meter	pH
Field Meter	Turbidity

The instrument(s) shall be maintained in accordance with manufacturer’s instructions.

The instrument(s) shall be calibrated before each sampling and analysis event.

A Standard Operating Procedure (SOP) for calibration and maintenance of field instruments shall be implemented based on the meter manufacturer’s instructions. A copy of the manufacture’s instructions shall be attached to the SOP so that they are readily available.

Instrument maintenance shall be documented on the CEM-2055 Stormwater Equipment Maintenance Log, in Appendix P. Instrument calibration shall be documented using the following forms:

- CEM-2056 - Stormwater Turbidity Meter Calibration Record (Appendix Q)

- CEM-2057 - Stormwater pH Meter Calibration Record (Appendix R)
- CEM-2058 - Stormwater Meter Calibration Record (Appendix S)

Maintenance and calibration records shall be maintained in SWPPP File Category 20.55: Field Testing Equipment Maintenance and Calibration Records.

#### 700.2.1.2.4 Testing Laboratory

Samples collected on the project site that require laboratory testing will be tested by a laboratory certified by the State Department of Health Services. Samples collected on the project site will be analyzed by:

Laboratory Name:	N/A
Address:	N/A N/A
Contact Name:	N/A
Title:	N/A
Phone Number:	N/A
Emergency Phone Number (24/7):	N/A
Email Address:	N/A

#### 700.2.1.3 Monitoring Strategy

The monitoring strategy includes identifying analytical constituents, potential sampling locations, identification of actual sampling locations, and sampling schedule,

##### 700.2.1.3.1 Analytical Constituents

Stormwater and non-stormwater discharges shall be monitored for the analytical constituents specified in the specific SAP(s) in this SWPPP.

##### 700.2.1.3.2 Potential Sampling Locations

Potential sampling locations must be representative of the stormwater and non-stormwater discharges from the construction site. Existing conditions and associated construction activities within each drainage area form the basis for determining representative stormwater sampling locations.

Project drainage areas and potential sampling locations have been determined by:

- reviewing project plans
- visiting project site
- reviewing topography maps

The WPCDs show the demarcation of all drainage areas that are either:

- within the project site
- cover part of the project site

The QSD must identify potential sampling locations where concentrated run-off:

- leaves the Caltrans right-of-way
- drains into an MS4
- discharges into a receiving water

Potential run-on sampling locations were determined where concentrated run-on:

- enters the right-of-way
- combines with the stormwater on site and then discharges into an MS4, including the location(s) of discharge into the MS4

The following locations were determined when runoff discharges directly into receiving water bodies:

- the discharge location(s) into the receiving water
- a potential sampling location upstream of all discharge locations
- a potential sampling location downstream from all discharge location(s) into the receiving water.

Necessary potential sampling locations were determined when:

- there are potential sources of non-visible pollutants, as discussed in Section 500.1, and discharge locations are downgradient
- run-on locations are present that may contribute non-visible pollutants
- there are potential non-stormwater discharges and corresponding discharge locations are downgradient
- there are proposed dewatering construction activities

If an ATS is used on site, then sample locations must be included in Section 700.2.6.

Potential stormwater and non-stormwater sampling locations must be shown on the WPCDs in Attachment BB and listed in Attachment EE: Stormwater Sample Locations. The QSD has identified each of the potential sampling locations with a unique sample location identification code, as shown below. The identification code must start with a number and must be different for each location. If the construction site lies in a west-to-east orientation, starting with one (01) from the east, the potential sampling locations shall be numbered toward the west. If the construction site lies in a south-to-north orientation, the potential sampling locations shall be numbered toward the north.

To further distinguish among the locations, each potential sampling location has been identified with one of the following abbreviations based on the sampling location type:

- discharge locations leaving Caltrans right-of-way: DL
- discharge locations from areas with known non-visible pollutants: NVP
- discharge locations upgradient of areas with known non-visible pollutants: UNVP
- discharge locations to an MS4: MS
- run-on locations: RO
- discharge locations into a receiving water: RW
- downstream of all discharge locations: RWD
- upstream of all discharge locations: RWU
- dewatering discharge locations: DDL
- contained stormwater discharge locations: CSDL
- discharge locations for ATS: ATS

The unique sample location identification code shall follow this format, **SSSTTTTXX**, where:

SSS	=	sampling location identifier number (e.g., 010)
TTTT	=	sampling location type (e.g. DL)
XX	=	identifier number for the type of sampling location

For example, the sampling location identification for the 15<sup>th</sup> sampling location based on starting from the south end of the project for a stormwater discharge location that has been identified to be the ninth discharge location would be **015DL09**.

Potential sampling locations shown on the WPCDs shall be identified with unique sampling location identifiers. Each potential sample location must be listed on Stormwater Sample Locations in Attachment EE. The unique identification of each potential sampling location based on its number and abbreviation of type shall be used on all sampling documentation.

The WPC Manager may have to revise and/or add additional sampling locations during the course of construction as conditions dictate.

### 700.2.1.3.3 Identification of Actual Sampling Locations

For each forecasted storm event, actual sampling locations will be determined by the WPC Manager based on the strategy described in each specific SAP. Sampling and analysis locations for Risk Level 1 projects will be documented on the CEM-2048 Storm Event Sampling and Analysis Plan, in Appendix N. For Risk Level 2 and Risk Level 3 projects, sampling and analysis locations will be documented on CEM-2048 Storm Event Sampling and Analysis Plan, in Appendix N, or CEM-2049 Qualifying Rain Event Sampling and Analysis Plan, in Appendix O, based on the forecasted storm event.

### 700.2.1.3.4 Sampling Schedule

For the sampling schedule, see the specific SAPs in this CSMP. If a scheduled sampling activity is unsafe because of dangerous weather conditions, such as flooding and electrical storms, then the stormwater sampler shall document why an exception to performing the sampling was necessary.

### 700.2.1.4 Sample Collection and Handling

Sample collection procedures shall be used to ensure that representative samples are collected and that the potential for contamination of samples is minimized. Sample handling procedures are followed to ensure that samples are identified accurately and that the required analysis is clearly documented. Chain-of-custody requirements for samples are necessary to trace the possession of the sample from collection through analysis.

#### 700.2.1.4.1 Sample Collection Procedures

Samples shall be collected, maintained and shipped in accordance with the SWAMP's 2008 QAPrP.

Grab samples shall be collected and preserved in accordance with the methods identified in each specific SAP. Only personnel trained in proper water quality sampling shall collect samples.

Samples from areas of sheet flow shall be collected using the collection procedures described below to concentrate the flow in order to collect a sample or follow other procedures approved by the RE.

- Place several rows of sandbags in a half circle directly in the path of the sheet flow to pond water, and wait for enough water to spill over. Then place a cleaned or decontaminated flexible hose along the top, and cover with another sandbag so that ponded water will only pour through the flexible hose and into sample bottles. Do not reuse the same sandbags during future sampling events as they may cross-contaminate future samples.
- Place a cleaned or decontaminated dustpan with open handle in the path of the sheet flow so that water will pour through the handle and into sample bottles.

For receiving water sampling, upstream samples shall be collected to represent the water body upgradient of the construction site. Downstream samples shall be collected to represent the water body mixed with direct discharge from the construction site. Samples shall not be collected directly from ponded, sluggish, or stagnant water.

Receiving water upstream and downstream samples shall be collected using one of the following methods:

- placing a sample bottle directly into the stream flow in or near the main current upstream of sampling personnel and allowing the sample bottle to fill completely;

OR

- placing a decontaminated or sterile bailer or other sterile collection device in or near the main current to collect the sample and then transferring the collected water to appropriate sample bottles allowing the sample bottle to fill completely.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel shall follow the procedures listed below.

- Wear a clean pair of surgical gloves donned prior to the collection and handling of each sample at each location.
- Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water. Dispose of decontamination water/soaps appropriately (i.e., do not discharge to the storm drain system or receiving water).

- Do not allow the inside of the sample bottle to come into contact with any material other than the run-off sample.
- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.
- Do not leave the cooler lid open for an extended period of time once samples are placed inside.
- Do not sample near a running vehicle where exhaust fumes may impact the sample.
- Do not touch the exposed end of a sampling tube, if applicable.
- Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.
- Do not eat, smoke, or drink during sample collection/field measurement.
- Do not sneeze or cough in the direction of an open sample bottle.
- Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample.

#### 700.2.1.4.2 Sample Handling Procedures

Immediately following collection, sample bottles to be forwarded for laboratory analytical testing shall be capped, labeled, documented on the Stormwater Sampling Information, Identification, and Chain-of-Custody Record form, sealed in a re-sealable storage bag, placed in an ice-chilled cooler, at  $0 \pm 4$  degrees Celsius, and delivered within 24 hours to the laboratory shown in sub-section 700.2.1.2.4.

Immediately following collection, samples used for field analysis shall be tested in accordance with the field instrument manufacturer's instructions and results recorded on the CEM-2052 Stormwater Sample Field Test Report form.

#### 700.2.1.4.3 Sample Documentation Procedures

All original data documented on sample bottle identification labels, the CEM-2050 Stormwater Sample Information, Identification and Chain-of-Custody Record form, and the CEM-2051 Stormwater Sampling and Testing Activity Log, shall be recorded using waterproof ink. These shall be considered accountable documents. If an error is made on an accountable document, the individual shall make corrections by lining through the error and entering the correct information. The erroneous information shall not be obliterated. All corrections shall be initialed and dated.

The following forms, used for sample documentation, are provided in the SWPPP appendices:

- CEM-2050 Stormwater Sampling Information, Identification, and Chain-of-Custody Record, in Appendix T
- CEM-2051 Stormwater Sampling and Testing Activity Log, in Appendix U

Duplicate samples shall be identified in a manner consistent with the numbering system for other samples to prevent the laboratory from identifying duplicate samples. Duplicate samples shall be identified in the CEM-2051 Stormwater Sampling and Testing Activity Log.

Sample Bottle Identification Labels: Sampling personnel shall attach an identification label to each sample bottle, which shall include, at a minimum, the following information:

- project name

- contract number and/or project identifier number
- unique sample identification code, which shall follow this format, **SSSSYYMMDDHHmmTT**, where:

SSSS	=	sampling location identifier number (e.g., 01MS1)
YY	=	last two digits of the year (e.g. 11)
MM	=	month (01-12)
DD	=	day (01-31)
HH	=	hour sample collected (00-23)
mm	=	minute sample collected (00-59)
TT	=	Type or QA/QC Identifier (if applicable)
G	=	grab
FS	=	field duplicate

For example, the sample number for a grab sample collected at Station 01MS1, collected at 4:15PM on December 8, 2011 would be **01MS11112081615G**.

- constituent to be analyzed
- initials of person who collected the sample

Stormwater Sampling and Testing Activity Log: A log of sampling events and test results shall include:

- sampling date
- separate times for collected samples and QA/QC samples, recorded to the nearest minute
- unique sample identification number and location
- constituent analyzed
- names of sampling personnel
- weather conditions (including precipitation amount)
- test results
- other pertinent data

Sample Information, Identification and Chain-of-Custody Record Forms: All samples to be analyzed by a laboratory will be accompanied by a CEM-2059 Sample Information, Identification and Chain-of-Custody Record form. The samplers will sign the Sample Information, Identification and Chain-of-Custody Record form when samples are turned over to the testing laboratory. Chain-of-custody procedures will be strictly adhered to for QA/QC purposes.

### 700.2.1.5 Sample Analysis

For the analytical methods to be used to determine the presence of pollutant(s), see the specific SAPs in this CSMP.

### 700.2.1.6 Quality Assurance/Quality Control

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

### 700.2.1.7 Data Management and Reporting

All test results shall be documented on either the CEM-2052 Stormwater Sample Field Test Report form, or the CEM-2054 Stormwater Sample Laboratory Test Report form, and entered on the CEM-2051 Stormwater Sampling and Testing Activity Log. These shall be considered accountable documents. If an error is made on an accountable document, the individual shall make corrections by lining through the error and entering the correct information. The erroneous information shall not be obliterated. All corrections shall be initialed and dated.

For field tests, the submitted information shall include a signed copy of the CEM-2050 Sample Information, Identification and Chain-of-Custody Record form and CEM-2052 Stormwater Sample Field Test Report form. Appendix V contains the CEM-2052 Stormwater Sample Field Test Report form, which must accompany the Sample Information, CEM-2050 Identification and Chain-of-Custody Record form from Appendix T. The test results shall be recorded on the CEM-2051 Stormwater Sampling and Testing Activity Log, in Appendix U.

For laboratory testing, all laboratory analysis results shall be reported on CEM-2054 Stormwater Sample Laboratory Test Result form, in Appendix W. If the CEM-2054 Stormwater Sample Laboratory Test Report form is not completed by the testing laboratory, then the laboratory report used to complete the CEM-2054 Stormwater Sample Laboratory Test Report form shall be attached to the completed CEM-2054 Stormwater Sample Laboratory Test Report form. For each test report, the CEM-2054 Stormwater Sample Laboratory Test Report and CEM-2050 Sample Information, Identification and Chain-of-Custody Record form shall be reviewed for consistency among laboratory methods, sample identifications, dates, and times for both primary samples and QA/QC samples. The test results shall be recorded on the CEM-2051 Stormwater Sampling and Testing Activity Log form.

All sampling and testing documentation, including CEM-2050 Sample Information, Identification, and Chain-of-Custody Record forms, CEM-2051 Stormwater Sampling and Testing Activity Logs, CEM-2052 Stormwater Sample Field Test Reports, and CEM-2054 Stormwater Sample Laboratory Test Reports shall be kept in the appropriate SWPPP file category. Sampling and testing documentation shall be filed in the appropriate following SWPPP file category based on the specific SAP that required the sampling and analysis:

- non-visible pollutant sampling and testing – SWPPP File Category 20.51;
- non-stormwater discharge sampling and testing – SWPPP File Category 20.50
- turbidity, pH, and SSC sampling and testing – SWPPP File Category 20.52
- required RWQCB sampling and testing – SWPPP File Category 20.53
- ATS sampling and testing – SWPPP File Category 20.54

If corrective actions are taken as a result of the data evaluation, a copy of the completed CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary shall be filed in File Category 20.35: Corrective Actions Summary.

A copy of completed sampling records and reports and an updated CEM Stormwater Sampling and Testing Log shall be

submitted to the RE. All water quality analytical results, including QA/QC data, shall be submitted to the RE within 48 hours of sampling for field analyzed samples, and within 30 days for laboratory analyses.

In addition to a paper copy of the water quality test results, the test results shall be submitted electronically in Microsoft Excel (.xls) format, and shall include, at a minimum, the following information from the lab: Sample ID Number, Contract Number, Constituent, Reported Value, Laboratory Name, Method Reference, Method Number, Method Detection Limit, and Reported Detection Limit. Electronic copies of stormwater data shall be forwarded by email to Resident Engineer: **TBD** at xxxx@xxx.com for inclusion into a statewide database.

### 700.2.1.8 Data Evaluation

For data evaluation of stormwater sample test results, see specific SAPs.

### 700.2.1.9 Change of Conditions

Whenever stormwater visual monitoring site inspections indicate a change in site conditions that might affect the appropriateness of sampling locations, sampling and testing protocols shall be revised accordingly. All such revisions shall be implemented as soon as feasible, and the SWPPP updated or amended.

## *700.2.2 Sampling and Analysis Plan for Non-Visible Pollutants*

This SAP has been prepared for monitoring non-visible pollutants in stormwater and non-stormwater discharges from the project site and off-site activities directly related to the project, in accordance with the requirements of the CGP and applicable requirements of the Caltrans *Construction Site Monitoring Program Guidance Manual*, Draft August 2010. This SAP for monitoring non-visible pollutants includes all of the components listed in Section 700.2.1.

### 700.2.2.1 Scope of Monitoring Activities

The scope of monitoring for discharges of non-visible pollutants from the construction site is based on the construction materials and construction activities to be performed on the project site, potential for the presence of non-visible pollutants, based on the historical use of the site, and potential non-visible pollutants in run-off from areas where soil amendments have been used on the project site.

The construction materials, wastes or activities listed below, and identified in Section 500.1.1, are potential sources of non-visible pollutants to stormwater discharges from the project. Storage, use, and operational locations are shown on the WPCDs in Attachment BB.

- Solvents, thinners
- Concrete curing
- Treated wood
- Fertilizer, herbicides, and pesticides

The existing site features listed below, and identified in Section 500.1.2, are potential sources of non-visible pollutants to stormwater discharges from the project.

- There are no known contaminants

The soil amendments listed below have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil and will be used on the project site.

- None

### 700.2.2.2 Monitoring Preparation

Refer to the general requirements in General SAP Section 700.2.1.2 for monitoring preparation.

#### 700.2.2.2.1 Qualified Sampling Personnel

Refer to the general requirements in General SAP Section 700.2.1.2.1 for Qualified Sampling Personnel.

#### 700.2.2.2.2 Monitoring Supplies

Refer to the general information in General SAP Section 700.2.1.2.2 regarding monitoring supplies.

#### 700.2.2.2.3 Field Instruments

Refer to the general information in General SAP Section 700.2.1.2.3 regarding field instruments.

#### 700.2.2.2.4 Testing Laboratory

Refer to the contact information found in General SAP Section 700.2.1.2.4 for the Testing Laboratory.

### 700.2.2.3 Monitoring Strategy

The monitoring strategy for non-visible pollutants in stormwater discharges is to identify all potential non-visible pollutants that may be on the project site, non-visible pollutant sources, and water quality indicators that will indicate the presence of the non-visible pollutant in stormwater discharges. Locations will be identified where sources of non-visible pollutants will be used, stored or exist because of historical use of the project site so that these areas are monitored prior to and during forecasted storm events.

Non-visible pollutant monitoring is only required where a discharge can cause or contribute to an exceedance of a water quality standard based on one of the following triggers:

- construction materials or waste are exposed
- the site contains historical non-visible pollutants
- construction activity has occurred or material has been placed within the past 24 hours that may cause an exceedance of a water quality standard
- there is run-on to the site that may contain non-visible pollutants
- there is a breach, malfunction, leak or spill from a BMP

When one of the triggers that indicates a non-visible pollutant source may have come in contact with stormwater is discovered during a site inspection conducted prior to, during or after a forecasted storm event, the WPC Manager will require that sampling and analysis of the stormwater discharge be conducted for the applicable non-visible pollutant water quality indicator(s).

For the forecasted storm event in which a trigger for a non-visible pollutant sampling and analysis has occurred, the WPC

Manager will also require the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. The WPC Manager will perform an evaluation of the analysis results from the non-visible pollutant stormwater discharge sampling location and the analysis results from the uncontaminated run-off sampling location to determine if there is an increased level of the tested non-visible pollutant analyte in the stormwater discharge.

### 700.2.2.3.1 Analytical Constituents

#### Identification of Potential Non-Visible Pollutants

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

<b>TABLE 700.2.2.3.1 POTENTIAL NON-VISIBLE POLLUTANTS AND WATER QUALITY INDICATOR CONSTITUENTS</b>		
<b>Pollutant Source</b>	<b>Pollutant</b>	<b>Water Quality Indicator Constituent</b>
Asphalt		VOCs
Cleaning	Solvent	VOCs, SVOCs
Concrete	Solvent	SVOCs
Concrete	Curing Compounds	VOCs, SVOCs, pH
Concrete	Ash	pH, Al, Ca, Va, Zn
Framing	Untreated wood	BOD
Landscaping	Pesticides	
Landscaping	Fertilizer	TKN, NO3, BOD, DOC, Sulfate, NH3, Phosphate, Potassium
Sanitary Waste	Portable Toilets	BOD, Total/Fecal Coliform
Vehicle/Equipment Use	Batteries/Hydrocarbons	Surfuric acid, Pb, pH

### 700.2.2.3.2 Potential Sampling Locations

Using the criteria in Section 700.2.1.3.2, the potential sampling locations on the project site for monitoring non-visible pollutants were identified. Sampling locations are based on: proximity to planned non-visible pollutant storage; occurrence or use; accessibility for sampling and personnel safety; and other factors in accordance with the applicable requirements in the *Caltrans Construction Site Monitoring Program Guidance Manual*, latest edition. Sampling locations shall be shown on the WPCDs in Attachment BB and listed on Stormwater Sampling Locations in Attachment EE:

2 sampling location(s) on the project site and the contractor’s support facilities have been identified as potential locations for the collection of samples of runoff from planned material and waste storage areas and areas where non-visible pollutant producing construction activities are planned. Potential non-visible pollutant sampling locations are listed in the Table 700.2.2.3.2.1: Potential Non-Visible Pollutant Sampling Locations.

<b>TABLE 700.2.2.3.2.1 POTENTIAL NON-VISIBLE POLLUTANT SAMPLING LOCATIONS</b>	
<b>Sampling Location Identifier</b>	<b>Location Description</b>
1	Dead Horse Slough South of Bridge
2	Drainage Inlet-Park and Ride Lot

Potential non-visible pollutant sampling locations shall be shown on the WPCDs in Attachment BB and listed on Stormwater Sampling Locations in Attachment EE:

0 sampling location(s) has been identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location(s) was selected such that the sample will not have come in contact with (1) operational or storage areas associated with the materials, wastes, and activities identified in Section 500.1.1; (2) potential non-visible pollutants due to historical use of the site, as identified in Section 500.1.2; (3) areas in which soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied; or (4) disturbed soils areas. Potential non-visible pollutant uncontaminated sampling locations are listed in Table 700.2.2.3.2.2: Potential Uncontaminated Non-visible Pollutant Sampling Locations.

<b>TABLE 700.2.2.3.2.2 POTENTIAL UNCONTAMINATED NON-VISIBLE POLLUTANT SAMPLING LOCATIONS</b>	
<b>Sampling Location Identifier</b>	<b>Location Description</b>

Potential non-visible pollutant uncontaminated sampling locations shall be shown on the WPCDs from Attachment BB and listed on Stormwater Sampling Locations in Attachment EE.

### 700.2.2.3.3 Actual Sampling Locations

Sampling for non-visible pollutants at any potential non-visible pollutant sampling location will be based on any of the

conditions listed below having been identified during the visual monitoring site inspections.

- Locations where materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents stormwater contact and runoff from the storage area.
- Locations where materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the forecasted storm event, and (3) the potential exists for discharge of non-visible pollutants to surface waters or a storm drain system.
- Locations where a construction activity (including but not limited to those identified in Section 500.1.1) with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the forecasted storm event, (2) involved the use of applicable BMPs that were observed to be breached, malfunctioning, or improperly implemented, and (3) resulted in the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Locations where soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and the potential exists for discharge of non-visible pollutants to surface waters or a storm drain system.
- Locations where stormwater runoff from an area contaminated by historical usage of the site has been observed to combine with stormwater runoff from the site, and the potential exists for discharge of non-visible pollutants to surface waters or a storm drain system.

If the presence of a material storage, waste storage, or operations area where spills have been observed or the potential for the discharge of non-visible pollutants to surface waters or a storm drain system was noted during a site inspection conducted prior to or during a forecasted storm event and such an area has not been identified on the list of potential non-visible pollutant sampling locations, the WPC Manager must identify the corresponding discharge location and the corresponding upgradient sampling location as actual non-visible sampling locations. The additional sampling location for non-visible pollutant monitoring shall be shown on the WPCDs from Attachment BB and added to Attachment EE: Stormwater Sampling Locations.

For forecasted storm events, the selection of the actual sampling locations for non-visible pollutants by the WPC Manager will be documented on the CEM-2048 Storm Event Sampling and Analysis Plan form, in Appendix N. The completed SAP for each storm event will be filed in File Category 20.46: Storm/Rain Event Action, Sampling and Analysis Plans. Within 24 hours prior to a storm event, a copy of the storm event SAP shall be submitted to the RE.

For qualifying rain events, the selection of the actual sampling locations for non-visible pollutants by the WPC Manager will be documented on the CEM-2049 Qualifying Rain Event Sampling and Analysis Plan, in Appendix O. The completed SAP for each qualifying rain event will be filed in File Category 20.46: Storm/Rain Event Sampling and Analysis Plans. Within 24 hours prior to a storm event, a copy of the SAP shall be attached to the REAP and submitted to the RE.

#### 700.2.2.3.4 Sampling Schedule

In addition to the general scheduling requirements in General SAP Section 700.2.1.3.4, samples for non-visible pollutant monitoring, including both the non-visible pollutants samples and uncontaminated background samples, shall be collected during the first two hours of discharge from storm events that result in a sufficient discharge for sample collection. Samples shall be collected during working hours.

#### **700.2.2.4 Sample Collection and Handling**

Refer to the general requirements for sample collection and handling in General SAP Section 700.2.1.4.

##### **700.2.2.4.1 Sample Collection Procedures**

Refer to the general procedures for sample collection in General SAP Section 700.2.1.4.1.

##### **700.2.2.4.2 Sample Handling Procedures**

Refer to the general procedures for sample handling in General SAP Section 700.2.1.4.2.

##### **700.2.2.4.3 Sample Documentation Procedures**

In addition to the general sample documentation procedures provided in General SAP Section 700.2.1.4.3, when applicable, the contractor's stormwater inspector will document in the CEM-2030 Stormwater Site Inspection Report, that samples for non-visible pollutants were taken during a storm event, based on the criteria for non-visible pollutant sampling described in Section 700.2.2.3.3.

#### **700.2.2.5 Sample Analysis**

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

Refer to General SAP Section 700.2.1.2.3 for general information regarding field instrument identification and requirements.

#### **700.2.2.6 Quality Assurance/Quality Control**

Refer to the general requirements regarding Quality Assurance/Quality Control (QA/QC) in General SAP Section 700.2.1.6.

#### **700.2.2.7 Data Management and Reporting**

Refer to general requirements for data management and reporting in Section General SAP 700.2.1.7.

#### **700.2.2.8 Data Evaluation**

Water quality sample analytical results for non-visible pollutants shall be compared to the uncontaminated background sample results. Should the discharge (downgradient) sample show an increased level of the tested non-visible pollutant analyte relative to the background sample, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visual pollutant concentrations. Once deemed necessary, corrective actions shall be implemented within 72 hours of identification, completed as soon as possible, and documented on the CEM-2035 Stormwater Site Inspection Report

Corrective Actions Summary. Revisions/design changes to BMPs required as a result of data evaluation and site assesment shall be implemented based on an amendment to the SWPPP.

### 700.2.2.9 Change of Conditions

Refer to the general requirements for change of conditions in General SAP Section 700.2.1.9.

## *700.2.3 Sampling and Analysis Plan for Non-Stormwater Discharges*

This SAP has been prepared for monitoring non-stormwater discharges from the project site and off-site activities directly related to the project, in accordance with the requirements of the CGP and applicable requirements of the *Caltrans Construction Site Monitoring Program Guidance Manual*, Draft August 2010. This SAP for monitoring non-stormwater discharges includes all of the components listed in Section 700.2.1.

### 700.2.3.1 Scope of Monitoring Activities

Non-stormwater discharges can be authorized by a separate NPDES permit or conditional exemption. For non-stormwater discharges that are unauthorized or non-exempt where runoff is discharged off site, sampling and testing of the discharge must be conducted in compliance with the CGP and Caltrans Permit.

Conditionally exempt non-stormwater discharges include: water line and fire hydrant flushing, irrigation water, landscape irrigation, uncontaminated ground water dewatering, and other discharges not subject to a separate general NPDES permit adopted by a region. Conditionally exempt discharges are not prohibited (i.e., they are authorized) if they are identified as not being sources of pollutants to receiving waters, or if appropriate control measures (BMPs) to minimize the adverse impacts of such sources are developed and implemented.

Examples of unauthorized non-stormwater discharges common to construction activities include:

- vehicle and equipment wash water, including concrete washout water
- slurries from concrete cutting and coring operations, or grinding operations
- slurries from concrete or mortar mixing operations
- residue from high-pressure washing of structures or surfaces
- wash water from cleaning painting equipment
- runoff from dust control applications of water or dust palliatives
- sanitary and septic wastes
- chemical leaks and/or spills of any kind, including but not limited to, petroleum, paints, cure compounds, etc

When an unauthorized non-stormwater discharge is discovered, the WPC Manager will require sampling and analysis of the effluent to detect whether non-visible pollutants are present in the discharge. Sampling and analysis of non-stormwater discharges shall be performed in accordance with Section 700.2.2, the SAP for non-visible pollutants.

Sampling and analysis for pH and turbidity of stored or impounded stormwater discharges subsequent to a qualifying rain event (a rain event that has produced ½ inch or more of precipitation at the time of discharge) shall be performed in accordance with Section 700.2.4, the SAP for stormwater pH and turbidity.

### 700.2.3.2 Monitoring Preparation

Refer to the general requirements for monitoring preparation in General SAP Section 700.2.1.2.

#### 700.2.3.2.1 Qualified Sampling Personnel

Refer to the general requirements for Qualified Sampling Personnel in General SAP Section 700.2.1.2.1.

#### 700.2.3.2.2 Monitoring Supplies

Refer to the general information regarding monitoring supplies in General SAP Section 700.2.1.2.2.

#### 700.2.3.2.3 Field Instruments

Refer to the general information regarding field instruments in General SAP Section 700.2.1.2.3.

#### 700.2.3.2.4 Testing Laboratory

Refer to the contact information for the testing laboratory found in General SAP Section 700.2.1.2.4.

### 700.2.3.3 Monitoring Strategy

Non-stormwater discharges from the construction site will be monitored for exceedances of water quality standards.

#### 700.2.3.3.1 Analytical Constituents

For non-stormwater dewatering discharges and discharges of stored stormwater, samples shall be analyzed for the following constituents:

- turbidity
- pH

#### 700.2.3.3.2 Potential Sampling Locations

Using the criteria in Section 700.2.1.3.2, potential sampling locations on the project site for monitoring dewatering discharges, discharges of impounded stormwater, and other non-stormwater discharges were identified. Sampling locations were based on: proximity to planned non-stormwater dewatering; non-stormwater occurrence or use; accessibility for sampling and personnel safety; and other factors in accordance with the applicable requirements in the *Caltrans Construction Site Monitoring Program Guidance Manual*, Draft August 2010. Sampling locations shall be shown on the WPCDs in Attachment BB and listed on Stormwater Sampling Locations in Attachment EE:

0 sampling location(s) on the project site have been identified as potential locations for the collection of non-stormwater dewatering samples and the sampling location(s) are listed in Table 700.2.3.3.2.1: Potential Non-stormwater Dewatering Sampling Locations.

TABLE 700.2.3.3.2.1 POTENTIAL NON-STORMWATER DEWATERING SAMPLING LOCATIONS	
Sampling Location Identifier	Location Description

0 sampling location(s) on the project site been identified as potential locations for the collection of discharge samples of impounded stormwater and the sampling location(s) are listed in Table 700.2.3.3.2.2: Potential Impounded Stormwater Discharge Sampling Locations.

TABLE 700.2.3.3.2.2 POTENTIAL IMPOUNDED STORMWATER DISCHARGE SAMPLING LOCATIONS	
Sampling Location Identifier	Location Description

### 700.2.3.3.3 Actual Sampling Locations

Actual sampling locations will be determined by the WPC Manager when dewatering activities are in progress based on the potential dewatering discharge sample locations initially selected.

When stormwater is impounded in excavations on the project site and the impounded stormwater has the potential to create runoff from the project site, the WPC Manager will determine the actual sampling location for collecting impounded stormwater discharge samples.

If new locations for dewatering discharges or impounded stormwater discharges that have not been identified on the list of potential stormwater and non-stormwater sampling locations are identified during the course of construction, the WPC Manager must create sampling location identifiers for the dewatering discharge sampling location. The additional sampling location for dewatering discharge monitoring shall be shown on the WPCDs in Attachment BB and added to Attachment EE: Stormwater Sampling Locations.

### 700.2.3.3.4 Sampling Schedule

Whenever there are dewatering discharges or impounded stormwater discharges, sampling will be performed daily during discharging. Sampling will be performed upon commencement of the dewatering discharge or impounded stormwater discharge, and then a minimum of three (3) samples per day will be collected for analysis.

### 700.2.3.4 Sample Collection and Handling

Refer to the general requirements for sample collection and handling in General SAP Section 700.2.1.4.

#### 700.2.3.4.1 Sample Collection Procedures

Refer to the general procedures for sample collection in General SAP Section 700.2.1.4.1.

#### 700.2.3.4.2 Sample Handling Procedures

Refer to the general procedures for sample handling in General SAP Section 700.2.1.4.2.

#### 700.2.3.4.3 Sample Documentation Procedures

In addition to the general procedures for sample documentation in General SAP Section 700.2.1.4.3, when applicable, the contractor’s stormwater inspector will document on the CEM-2030 Stormwater Site Inspection Report that samples for non-stormwater discharge pollutants were taken based on a visual monitoring site inspection.

### 700.2.3.5 Sample Analysis

Samples from non-stormwater discharges shall be analyzed for pH and turbidity.

The WPC Manager may determine that samples of non-stormwater discharges, need to be analyzed for non-visible pollutants. If the WPC Manager determines that non-visible pollutants may have contaminated the discharge, the samples shall be analyzed for the suspected pollutants. Sampling and analysis for non-visible pollutants in non-stormwater discharges shall be performed following the guidance in Section 700.2.2, the SAP for non-visible pollutants.

Samples shall be analyzed for the constituents indicated in the following table, titled “Sample Collection, Preservation and Analysis for Monitoring Water Extracted by Dewatering or Impounded Stormwater Discharges.”

<b>TABLE 700.2.3.5 SAMPLE COLLECTION, PRESERVATION AND ANALYSIS FOR MONITORING WATER EXTRACTED BY DEWATERING OR IMPOUNDED STORMWATER DISCHARGES</b>						
<b>Parameter</b>	<b>Test Method</b>	<b>Sample Preservation</b>	<b>Minimum Sample Volume<sup>(1)</sup></b>	<b>Sample Bottle</b>	<b>Maximum Holding Time</b>	<b>Detection Limit (min)</b>
Turbidity	Field test with calibrated portable instrument	Store at 4° C (39.2° F)	100 mL	Polypropylene or Glass	48 hours	1 NTU
pH	Field test with calibrated portable instrument	Store at 4° C (39.2° F)	100 mL	Polypropylene	48 hours	0.2

**TABLE 700.2.3.5  
SAMPLE COLLECTION, PRESERVATION AND ANALYSIS FOR MONITORING WATER EXTRACTED BY  
DEWATERING OR IMPOUNDED STORMWATER DISCHARGES**

Parameter	Test Method	Sample Preservation	Minimum Sample Volume <sup>(1)</sup>	Sample Bottle	Maximum Holding Time	Detection Limit (min)

Notes: <sup>(1)</sup> Minimum sample volume recommended. Specific volume requirements will vary by instrument; check instrument manufacturer instructions.

- °C – degrees Celsius
- °F – degrees Fahrenheit
- L – liter
- ml – milliliters
- NTU – Nephelometric Turbidity Unit

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

Refer to general information for field instrument identification and requirements in General SAP Section 700.2.1.2.3.

### 700.2.3.6 Quality Assurance/Quality Control

Refer to the general requirements regarding Quality Assurance/Quality Control (QA/QC) in Section General SAP 700.2.1.6. For samples analyzed for turbidity and pH the following replaces the requirements for QA/QC in Section 700.2.1.6:

The contractor shall coordinate with the Caltrans RE on sampling locations and timing for quality assurance verification of field sampling and analysis. The contractor shall notify the RE at least 24 hours prior to dewatering discharge or impounded stormwater discharge sampling events.

### 700.2.3.7 Data Management and Reporting

Refer to the general requirements for data management and reporting in General SAP Section 700.2.1.7.

### 700.2.3.8 Data Evaluation

An evaluation of the water quality sample analytical results, including sampling locations and the QA/QC data, shall be submitted to the RE for every day that the water from dewatering is discharged. Should the dewatering discharge concentrations exceed applicable water quality standards, discharging will be stopped and the WPC Manager or other personnel shall evaluate the dewatering BMPs to determine the probable cause for the exceedance.

Samples of non-stormwater collected during discharge shall be evaluated by determining if suspected contaminants are present. Unauthorized discharges will be stopped as soon as possible and a report of discharge shall be completed and submitted to the RE. Authorized discharges shall be sampled for pH and Turbidity and all suspected pollutants. For pH and turbidity, sample results shall be compared to the NAL and NELs.

As determined by the data evaluation and project site assesment, appropriate BMPs shall be repaired or modified to mitigate the exceedances. Corrective actions taken shall be documents on the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary. Any revisions/design changes to BMPs shall be implemented based on an amendment to the SWPPP.

### 700.2.3.9 Changes of Conditions

Refer to the general requirements for changes of conditions in General SAP Section 700.2.1.9.

## 700.2.4 *Sampling and Analysis Plan for Stormwater pH and Turbidity*

This SAP has been prepared for monitoring pH and turbidity in stormwater discharges from the project site and off-site activities directly related to the project in accordance with the requirements of the CGP and applicable requirements of the Caltrans *Construction Site Monitoring Program Guidance Manual, Draft August 2010*. This SAP for monitoring pH and turbidity includes all of the components listed in Section 700.2.1.

### 700.2.4.1 Scope of Monitoring Activities

The scope of monitoring for this SAP includes monitoring for pH and turbidity in stormwater discharges from the project site and, run-on to the project site.

This project discharges into a water body that is sediment-sensitive. Monitoring of the receiving water will be required when direct discharges to the receiving water.

### 700.2.4.2 Monitoring Preparation

Refer to the general requirements for monitoring preparation in General SAP Section 700.2.1.2.

#### 700.2.4.2.1 Qualified Sampling Personnel

Refer to the general requirements for Qualified Sampling Personnel in General SAP Section 700.2.1.2.1.

#### 700.2.4.2.2 Monitoring Supplies

Refer to the general information regarding monitoring supplies in General SAP Section 700.2.1.2.2.

#### 700.2.4.2.3 Field Instruments

Refer to the general information regarding field instruments in General SAP Section 700.2.1.2.3.

#### 700.2.4.2.4 Testing Laboratory

Refer to the contact information for the testing laboratory found in General SAP Section 700.2.1.2.4.

### 700.2.4.3 Monitoring Strategy

Monitor representative stormwater discharges from the project site for pH and turbidity during qualifying rain events (a rain event that has produced ½ inch or more of precipitation at the time of discharge).

#### 700.2.4.3.1 Analytical Constituents

Stormwater discharge samples are to be analyzed for pH and turbidity.

**700.2.4.3.2 Potential Sampling Locations**

Using the criteria in Section 700.2.1.3.2, the potential sampling locations on the project site for monitoring pH and turbidity were identified. Potential sampling locations for monitoring stormwater discharges for pH and turbidity are based on drainage areas; run-on and runoff locations; accessibility for sampling and personnel safety; and other factors in accordance with the applicable requirements in the *Caltrans Construction Site Monitoring Program Guidance Manual*, Draft August 2010. Stormwater discharge locations shall be shown on the WPCDs in Attachment BB and listed on Stormwater Sample Locations in Attachment EE. The stormwater discharge locations on the project site are listed in Table 700.2.4.3.2.1 “Stormwater Discharge Locations.”

<b>TABLE 700.2.4.3.2.1 STORMWATER DISCHARGE LOCATIONS</b>	
<b>Sampling Location Identifier</b>	<b>Location</b>
1	Dead Horse Slough South of Bridge
2	Drainage Inlet-Park and Ride Lot

Runoff from the project has the potential to result in direct (concentrated) stormwater discharges to N/A at the locations listed in Table 700.2.4.3.2.2 “Direct Stormwater Discharge Locations to Sediment Sensitive Waterbody.”

<b>TABLE 700.2.4.3.2.2 DIRECT STORMWATER DISCHARGE LOCATIONS TO SEDIMENT SENSITIVE WATERBODY</b>	
<b>Discharge Location Identifier</b>	<b>Location</b>

Direct stormwater discharge locations to receiving waters shall be shown on the WPCDs in Attachment BB and listed on Stormwater Sampling Locations in Attachment EE:

The monitoring of receiving waters is based on the locations of stormwater discharges. To monitor receiving waters for this project, both an upstream sampling location from the stormwater discharge location(s) and a sampling location immediately downstream from the last construction site stormwater discharge location should be selected. These locations are listed in Table 700.2.4.3.2.3 “Receiving Water Sampling Locations.”

**TABLE 700.2.4.3.2.3  
RECEIVING WATER SAMPLING LOCATIONS**

Sample Location Identifier	Location
1	Dead Horse Slough-North of Bridge

Receiving water sampling locations shall be shown on the WPCDs in Attachment BB and listed on Stormwater Sampling Locations in Attachment EE:

The project does not receive run-on with the potential to combine with stormwater discharges.

### 700.2.4.3.3 Actual Sampling Locations

The WPC Manager shall select sampling locations from the list of potential sampling locations for stormwater discharge sampling shown on the WPCDs from Attachment BB and listed on Stormwater Sampling Locations in Attachment EE:.

If the construction activity has not started within the drainage area at a sampling location, and there is no disturbed soil within a drainage area, sampling from the stormwater discharge location from that drainage area is not required.

Within 72 to 48 hours prior to each qualifying rain event, the WPC Manager must identify the drainage areas that must be sampled. To identify these drainage areas, the WPC Manager must refer to the WPCDs and consider the conditions described below and activities within each drainage area that could have an effect on the stormwater discharge pH or turbidity.

1. **Turbidity:** The area of the disturbed soil at the time of precipitation could have an impact on the stormwater run-off turbidity. The area of the disturbed soil at the time of predicted precipitation must be expressed as a percentage of the total drainage area. It is reasonable to assume that a larger percentage of disturbed soil area could result in a more turbid run-off.
2. **pH:** The type of construction activities that could have an impact on stormwater run-off pH (for example, concrete work and saw cutting, lime stabilization work, use of crushed concrete, etc.).

For representative sampling of construction site discharges, 20 percent of the drainage areas with disturbed soil areas and 20 percent of the drainage areas where activities that could potentially have an impact on the discharge pH must be sampled. At least five (5) drainage area discharge locations for each qualifying rain event must be sampled. If there are five (5) or fewer drainage area sampling locations in a project, then all drainage area sampling locations must be sampled. The drainage areas with the largest percentage of disturbed soil area must be included in the selected drainage areas to be sampled. The drainage areas where the most extensive activities (activities that potentially can alter discharge pH) are in progress must be included in the selected drainage areas to be sampled.

This representative monitoring strategy for stormwater discharges requires collection of additional samples based upon the preceding sampling event stormwater discharge pH or turbidity analysis results when the:

- turbidity analysis results – even in one sampling location – in the previous sampling event have exceeded 200 NTU, the number of drainage areas with disturbed soil areas requiring sampling will be raised to 50 percent.
- turbidity analysis results – even in one sampling location – in the previous sampling event have exceeded 250 NTU, the number of drainage areas with disturbed soil areas requiring sampling will be raised to 100 percent.
- pH analysis results – even in one sampling location – in the previous sampling event have not fallen within 6.5 to 8.5 pH unit range, the number of drainage areas requiring sampling where construction activities could have an impact on the discharge pH readings will be raised to 50 percent.
- pH analysis results – even in one sampling location – in the previous sampling event have not fallen within 6.0 to 9.0 pH unit range, the number of drainage areas requiring sampling where construction activities could have an impact on the discharge pH readings will be raised to 100 percent.

The selection of additional sampling locations, based on turbidity results, will involve drainage areas with the highest percentage of disturbed soil area. The selection of additional sampling locations, based on pH results, will be involve drainage areas with construction activities that are most likely to affect stormwater discharge pH. Selection of stormwater discharge sampling locations shall be documented on the CEM-2049 Qualifying Rain Event Sampling and Analysis Plan, in Appendix O. Completed qualifying rain event SAPs shall be kept in SWPPP File Category 20.46: Storm/Rain Event Sampling and Analysis Plans.

This project has discharge locations that discharge directly into the sediment-sensitive receiving water. Receiving water sampling locations will be sampled and analyzed for every qualifying rain event (rain events producing ½ inch or more of precipitation at the time of discharge).

Sampling location (designated number 1) is upstream of all direct discharges from the construction site. Upstream samples shall be collected and analyzed for the prevailing condition of the receiving water without any influence from the construction site. The upstream samples will be used to determine the background levels of turbidity, suspended sediment concentration, and pH in the sediment-sensitive listed water body upstream of the project.

Sampling location number 1 is located North of Dead Horse Slough Bridge.

Sampling location (designated number 1) is immediately downstream from the last point of direct discharge from the construction site for the collection of a sample to be analyzed for potential increases in turbidity, suspended sediment concentration, or potential exceedance in pH level in the sediment-sensitive listed water body caused by stormwater discharges from the project.

Sampling location number 1 is located South of Dead Horse Slough Bridge.

Receiving water sampling locations shall be shown on the CEM-2049 Qualifying Rain Event Sampling and Analysis Plan by the WPC Manager prior to every qualifying rain event. Completed CEM-2049 plans shall be kept in SWPPP File Category 20.45: Storm/Rain Event Action and Sampling and Analysis Plans.

#### **700.2.4.3.4 Sampling Schedule**

Discharge samples shall be collected for turbidity and pH for qualifying rain events that result in a discharge from the project site. When applicable, upstream, downstream, and run-on samples shall be collected for analysis of turbidity and pH. Sampling and testing for turbidity and pH will be performed daily during all qualifying rain events. Samples shall be collected during working hours.

At least 48 hours prior to each qualifying rain event, the WPC Manager must prepare the CEM-2049 Qualifying Rain Event Sampling and Analysis Plan that includes a list of sampling locations that must be sampled for the qualifying rain

event.

The Qualifying Rain Event Sampling and Analysis Plan shall include all of the following sampling location types:

- discharge locations from the drainage areas with the largest percentage of disturbed soil areas,
- discharge locations from the drainage areas where construction activities that could have an impact on stormwater run-off pH are in progress, and
- if applicable, at least one sampling location from drainage areas where the disturbed soil areas have been stabilized.

For the purposes of the sampling schedule, the sampling locations must be arranged in the following order: starting with the sampling location on the northwest corner of the WPCDs as the first entry, move clockwise on the WPCDs and enter all the sampling location identifiers on the Qualifying Rain Event SAP schedule.

Within 48 to 24 hours prior to a qualifying rain event, the Qualifying Rain Event SAP shall be distributed to the individual collecting stormwater samples, and to the RE.

The Caltrans stormwater site inspector and contractor inspector must coordinate and select the sampling locations and the time to meet and collect simultaneous samples for the purposes of QA/QC.

Every reasonable attempt has to be made to collect at least three grab samples per day from each sampling location identified on the Qualifying Rain Event SAP during the qualifying rain event.

Sampling must start immediately after the flow begins or as soon as possible thereafter. The individual responsible for collecting samples must begin sampling with the first sampling location identified on the Qualifying Rain Event SAP and move on to the next sampling location until all locations are sampled. It is preferable that the three rounds of sampling are performed over the first three hours of the flow; however, depending on the time of the day or other dictating conditions in the field, the three rounds of sampling could be performed over a shorter period of time to ensure that three samples per location are collected.

If stormwater sampling is unsafe because of dangerous weather conditions, such as flooding and electrical storms, then the stormwater sampler shall document the conditions resulting in the sampling not being performed as planned. The documentation for the sampling exception shall be filed in SWPPP 20.52, Turbidity and pH Sampling and Test Results.

#### **700.2.4.4 Sample Collection and Handling**

Refer to the general requirements for sample collection and handling in General SAP Section 700.2.1.4.

##### **700.2.4.4.1 Sample Collection Procedures**

In addition to the general procedures for sample collection in General SAP Section 700.2.1.4.1, the procedures described below apply to sample collection for monitoring of pH and turbidity.

- Grab samples shall be collected and preserved in accordance with the methods identified in Table 700.2.4.5.1: Sample Collection, Preservation and Analysis for Monitoring Turbidity and pH, provided in Section 700.2.4.5.
- Only personnel trained in proper water quality sampling shall collect samples.

##### **700.2.4.4.2 Sample Handling Procedures**

Refer to the general procedures for sample handling in General SAP Section 700.2.1.4.2.

#### 700.2.4.4.3 Sample Documentation Procedures

Refer to the general procedures for sample documentation in General SAP Section 700.2.1.4.3.

#### 700.2.4.5 Sample Analysis

Samples shall be analyzed for the constituents indicated in Table 700.2.4.5.1: “Sample Collection, Preservation and Analysis for Monitoring Turbidity and pH.”

<b>TABLE 700.2.4.5.1 SAMPLE COLLECTION, PRESERVATION AND ANALYSIS FOR MONITORING TURBIDITY AND PH</b>						
<b>Parameter</b>	<b>Test Method</b>	<b>Sample Bottle</b>	<b>Minimum Sample Volume<sup>(1)</sup></b>	<b>Sample Preservation</b>	<b>Maximum Holding Time</b>	<b>Detection Limit (min)</b>
Turbidity	Field test with calibrated portable instrument	Polypropylene or Glass	100 mL	Store at 4° C (39.2° F)	48 hours	1 NTU
pH	Field test with calibrated portable instrument	Polypropylene	100 mL	Store at 4° C (39.2° F)	15 minutes	0.2

**Acronyms/Notes:**

C = Celsius

F = Fahrenheit

Min = minutes

mL = milliliter

NTU = Nephelometric Turbidity Units

<sup>(1)</sup> Minimum sample volume recommended. Specific volume requirements will vary by instrument; check instrument manufacturer instructions.

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Samples collected for field analysis shall meet the requirements of the field instrument manufacturer’s instructions.

Refer to the general information regarding field instruments in General SAP Section 700.2.1.2.3, which includes field instrument calibration and maintenance documentation requirements.

#### 700.2.4.6 Quality Assurance/Quality Control

Refer to the general requirements regarding Quality Assurance/Quality Control (QA/QC) in General SAP Section 700.2.1.6. The following replaces the requirements for QA/QC in Section 700.2.1.6 for turbidity and pH quality assurance testing. However, Section 700.2.1.6 requirements apply for SSC quality assurance testing: The contractor shall coordinate with Caltrans RE on sampling locations and timing for quality assurance verification of field sampling and analysis activities. The contractor shall notify the RE at least 24 hours prior to sampling events.

#### 700.2.4.7 Data Management and Reporting

Refer to general requirements for data management and reporting in General SAP Section 700.2.1.7.

In addition to the general requirements for data management and reporting in Section 700.2.1.7, the additional reporting described below is required.

**Numeric Action Limit Exceedance Reporting** - This project is subject to NALs for pH and turbidity as shown in Table 700.2.4.7.1 “NALs for Monitoring pH and Turbidity.”

<b>TABLE 700.2.4.7.1 NALs FOR MONITORING pH AND TURBIDITY</b>				
<b>Parameter</b>	<b>Test Method</b>	<b>Detection Limit (Min)</b>	<b>Unit</b>	<b>Numeric Action Level</b>
pH	Field test with calibrated portable instrument	0.2	pH units	Lower NAL = 6.5 Upper NAL = 8.5
Turbidity	Field test with calibrated portable instrument	1	NTU	250 NTU

**Acronyms:**

NAL = numeric action level

NTU = Nephelometric Turbidity Units

If an NAL is exceeded, then form CEM-2062 NAL Exceedance Report will be completed and submitted to the RE within 48 hours after the sampling and analysis event. The NAL Exceedance Report will include:

- test results, analytical methods, reporting units, and detection limits
- date, sampling location, time of sampling, and visual observations
- predicted quantity of precipitation of the forecasted storm event, and estimated quantity of precipitation at the time of sampling
- description of BMPs
- corrective actions taken to manage the NAL exceedance

Once deemed necessary, corrective actions shall be immediately implemented and documented. Appendix I contains the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary form and Appendix X contains the CEM-2062 NAL Exceedance Report form. NAL exceedance reports will be filed in SWPPP File Category 20.62: Numeric Action Level Exceedance Reports.

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### 700.2.4.8 Data Evaluation

An evaluation of the water quality sample analytical results, including sampling locations and the QA/QC data, shall be submitted to the RE for every day of stormwater sampling. If the stormwater discharge concentrations exceed applicable water quality standards, the WPC Manager or other personnel shall evaluate the project site BMPs to determine the probable cause for the exceedance.

As determined by the data evaluation and project site assesment, appropriate BMPs shall be repaired or modified to mitigate the exceedances. Corrective actions taken shall be documented on the CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary. Any revisions/design changes to BMPs shall be implemented based on an amendment to the SWPPP.

#### 700.2.4.9 Change of Condition

Refer to the general requirements for changes of conditions in General SAP Section 700.2.1.9.

#### *700.2.5 Sampling and Analysis Plan for Monitoring Required by Regional Board*

This project does not require a Sampling and Analysis Plan for Monitoring required by a RWQCB.

#### *700.2.6 Sampling and Analysis Plan for Monitoring of Active Treatment System*

This project does not require a SAP for an ATS because deployment of such a system is not planned.

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## SECTION 800 POST-CONSTRUCTION CONTROL PRACTICES

### *800.1 Post-Construction Control Practices*

The following are the post-construction BMPs for the project site

- Biofiltration Strips, Drainage Swales
- Outlet protection/velocity dissipation devices at all culvert outlets
- Rock slope protection on slopes under and adjacent to Dead Horse Slough Bridge
- Erosion Control (Hydroseed)
- Storm Drain Signage

### *800.2 Post-Construction Operation/Maintenance*

The post-construction BMPs that are listed above will be funded and maintained in the following manner.

- short-term funding: City of Chico
- long-term funding: Caltrans District 3 Maintenance

The responsible party for the long-term maintenance of post-construction BMPs is Caltrans District 3 Maintenance.

# SECTION 900

## SWPPP REPORTING REQUIREMENTS

### 900.1 Recordkeeping

To manage the various documents required by the SWPPP and to provide easy access to the documents, the following SWPPP file categories will be used to file SWPPP compliance documents:

File Category 20.01 .....	Stormwater Pollution Prevention Plan (SWPPP)
File Category 20.02 .....	Stormwater Pollution Prevention Plan Amendments
File Category 20.03 .....	Water Pollution Control Schedule Updates
File Category 20.05 .....	Notice of Construction or Notice of Intent
File Category 20.06 .....	Legally Responsible Person Authorization of Approved Signatory
File Category 20.10 .....	Correspondence
File Category 20.21 .....	Subcontractor Contact Information and Notification Letters
File Category 20.22 .....	Material Supplier Contact Information and Notification Letters
File Category 20.23 .....	Contractor Personnel Training Documentation
File Category 20.31 .....	Contractor Stormwater Site Inspection Reports
File Category 20.32 .....	Caltrans Stormwater Site Inspection Reports
File Category 20.33 .....	Site Visual Monitoring Inspection Reports
File Category 20.34 .....	Best Management Practices Weekly Status Reports
File Category 20.35 .....	Corrective Actions Summary
File Category 20.40 .....	Weather Monitoring Logs
File Category 20.45 .....	Rain Event Action Plans
File Category 20.46 .....	Storm/Rain Event Sampling and Analysis Plans
File Category 20.50 .....	Non-Stormwater Discharge Sampling and Test Results
File Category 20.51 .....	Non-Visible Pollutant Sampling and Test Results
File Category 20.52 .....	Turbidity, pH and SSC Sampling and Test Results
File Category 20.53 .....	Required Regional Water Board Monitoring Sampling and Test Results
File Category 20.54 .....	ATS Monitoring Sampling and Test Results
File Category 20.55 .....	Field Testing Equipment Maintenance and Calibration Records
File Category 20.61 .....	Notice of Discharge Reports
File Category 20.62 .....	Numeric Action Level Exceedance Reports
File Category 20.63 .....	Numeric Effluent Limitation Violation Reports
File Category 20.70 .....	Annual Certification of Compliance
File Category 20.80 .....	Stormwater Annual Reports
File Category 20.90 .....	Notice of Termination

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

- approved SWPPP document and amendments
- Stormwater Site Inspection Reports
- Site Inspection Report Corrections Summary
- Rain Event Action Plans (REAPs)
- Notice of Discharge Reports
- Numeric Action Limit (NAL) Exceedance Reports
- Numeric Effluent Limitaion (NEL) Violation Reports
- sampling records and analysis reports
- Annual Compliance Certifications
- copies of all applicable permits

## ***900.2 Stormwater Annual Report***

A Stormwater Annual Report will be prepared for this project to document the stormwater monitoring information and training information.

The stormwater monitoring information listed below shall be included in the Stormwater Annual Report.

- A summary and evaluation of all sampling and analysis results, including copies of laboratory reports.
- The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter.
- A summary of all corrective actions taken during the compliance year.
- Identification of any compliance activities or corrective actions that were not implemented.
- A summary of all violations of the CGP.
- The names of individual(s) who performed site inspections, sampling, site visual monitoring inspections and/or measurements.
- The date, place, and time of site inspections, sampling, site visual monitoring inspections, and/or measurements, including precipitation (rain gauge).
- Any site visual monitoring inspection and sample collection exception records.

The stormwater training information listed below shall be included in the Stormwater Annual Report.

- Documentation of all training for individuals responsible for all activities associated with compliance with the

CGP.

- Documentation of all training for individuals responsible for BMP installation, inspection, maintenance, and repair.
- Documentation of all training for individuals responsible for overseeing, revising and amending the SWPPP.

### ***900.3 Discharge Reporting***

If an unauthorized discharge is discovered or evidence of a previously unseen discharge is discovered, the Contractor shall notify the RE within 6 hours of the discovery, and will file a written report with the RE within 48 hours after the discovery. The written report to the RE will contain the following items:

- date, time, location, and type of unauthorized discharge
- nature of operation that caused the discharge
- initial assessment of any impacts caused by the discharge
- BMPs deployed before the discharge event and date(s) of deployment
- BMPs deployed after the discharge event, including re-installation, maintenance or repair of initial BMPs
- steps taken or planned to reduce, eliminate and/or prevent recurrence of the discharge

Reporting of discharges shall be documented on the CEM-2061 Notice of Discharge form in Appendix M. A log of all reportable discharges shall be documented on CEM-2065 Discharge Reporting Log form in Appendix Z. Completed CEM-2061 Notice of Discharge forms shall be submitted to the RE within 24 hours after the discharge event or discovery of evidence of a prior discharge. Copies of completed forms will be kept in File Category 20.61: Notice of Discharge Reports.

### ***900.4 Regulatory Agency Notice or Order Reporting***

If a written notice or order is issued to the project by any regulatory agency, the Contractor will notify the RE within 6 hours of receiving the notice or order and will file a written report to the RE within 48 hours of receiving the notice or order. Corrective measures will be implemented immediately following receipt of the notice or order.

The report to the RE will contain the following items:

- the date, time, location, and cause or nature of the notice or order
- the BMPs deployed prior to receiving the notice or order
- the date of deployment and type of BMPs deployed after receiving the notice or order, including additional BMPs installed or planned to reduce or prevent recurrence
- an implementation and maintenance schedule for any affected BMPs

### **900.5**    *Illicit Connection/Illegal Discharge Reporting*

If the Contractor discovers an illicit connection to a storm drain system or any pipe discharging onto the project site, not shown on the project plans, the Contractor shall notify the RE within 6 hours of the discovery and shall file a written report to the RE within 48 hours of the discovery.

If the Contractor discovers any illegal discharge, including illegal disposing of material on the project site, the Contractor shall immediately notify the RE and shall file a written report to the RE within 3 days of discovery.

The report to the RE will contain the following items:

- the date, time, and location of the discovery
- the details for the illicit connection or illegal discharge, including any photographs taken
- any actions taken to contain the illegal discharge
- any sampling and testing performed on material that was illegally disposed of or discharged



## Attachment A

Legally Responsible Person Authorization of Approved  
Signatory



**LEGALLY RESPONSIBLE PERSON  
AUTHORIZATION OF APPROVED SIGNATORY**

CEM-2006 (REV. 8/2010)

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
	PROJECT IDENTIFIER NUMBER
LEGALLY RESPONSIBLE PERSON NAME AND TITLE	LEGALLY RESPONSIBLE PERSON ADDRESS

The above person appoints the following person:

Authorized approved signatory name and title

Authorized approved signatory address

I hereby agree and further authorize the above-named designated authorized approved signatory to certify all permit registration documents, Numeric Action Limit Exceedance Reports, Numeric Effluent Limitation Violation Reports, Annual Reports, and Notices of Termination in accordance with Section IV.I, Section IV.XVI, Attachment D, and Attachment E of the 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.

I hereby further authorize the above-named designated approved signatory to submit documents electronically to the State Water Resources Control Board SMARTS database.

EXECUTED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_ AT \_\_\_\_\_ CALIFORNIA.

Legally responsible person signature	Approved signatory signature
Legally responsible person name	Approved signatory name
Phone number	Phone number

**ADA Notice**

For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

# LEGALLY RESPONSIBLE PERSON AUTHORIZATION OF APPROVED SIGNATORY

CEM-2006 (REV. 8/2010)

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## Instructions

### General Information

- This form is required for compliance with provisions in Section IV.I of the 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
- The legally responsible person (LRP) for Caltrans projects is the district director. The LRP may authorize the project resident engineer to be the approved signatory.
- For a local agency, the LRP is either a principal executive officer or ranking elected official. The local agency LRP may authorize the project resident engineer to be the approved signatory.
- For a private entity performing work in the state right-of-way under an encroachment permit, the LRP must be one of the following:
  1. For a corporation, a responsible corporate officer.
  2. For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
- The private entity LRP may not authorize an approved signatory.
- Include a copy of the completed form in the project Storm Water Pollution Prevention Plan.

### Form

#### Project Identifier Number

Caltrans projects starting July 1, 2010, will have a project identifier number. For projects without a number, write N/A in the field.

#### Contract Number/Co/Rte/PM

For local agency encroachment permit projects, write the encroachment permit number in the contract number field.

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Attachment B

Notice of Intent



TO BE INSERTED WITH AN AMDENDMENT



# Attachment C

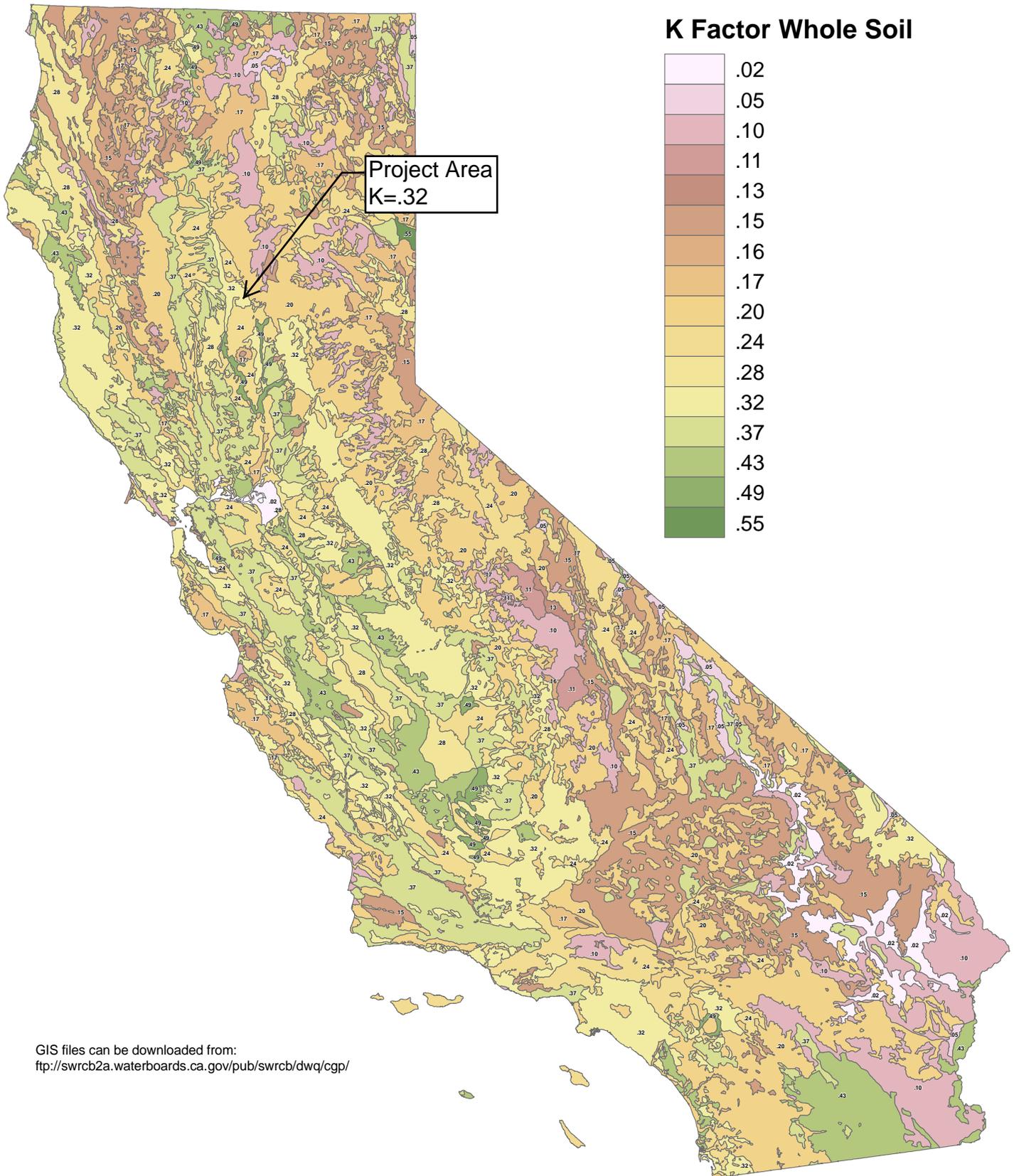
## Risk Level Determination



	A	B	C	D
1	Version 8/17/2011			
2	<b>Risk Determination Worksheet</b>			
3				
4			<b>Step 1</b>	Determine Sediment Risk via one of the options listed:
5				<a href="#">1. GIS Map Method - EPA Rainfall Erosivity Calculator &amp; GIS map</a>
6				<a href="#">2. Individual Method - EPA Rainfall Erosivity Calculator &amp; Individual Data</a>
7			<b>Step 2</b>	Determine Receiving Water Risk via one of the options listed:
8				<a href="#">1. GIS map of Sediment Sensitive Watersheds provided</a>
9				<a href="#">2. Site Specific Analysis (support documentation required)</a>
10			<b>Step 3</b>	<a href="#">Determine Combined Risk Level</a>
11				
12				
13			<b>EA:</b>	<b>03-1E4904</b>
14				<b>03-But-32</b>
15				<b>State Route 32 Widening-Phase 1</b>
16			<b>Lat</b>	<b>39.739</b>
17			<b>Long</b>	<b>-121.805</b>
18				
19			<b>Const Start</b>	<b>3/1/2012</b>
20			<b>CCA Date</b>	<b>3/1/2013</b>
21			<b>Project Combined Risk</b>	<b>Level 2</b>

	A	B	C
1	<b>Sediment Risk Factor Worksheet</b>		<b>Entry</b>
2	<b>A) R Factor</b>		
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	<a href="http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm">http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm</a>		
5	R Factor Value		40.08
6	<b>B) K Factor (weighted average, by area, for all site soils)</b>		
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	<a href="#">Site-specific K factor guidance</a>		
9	K Factor Value		0.32
10	<b>C) LS Factor (weighted average, by area, for all slopes)</b>		
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	<a href="#">LS Table</a>		
13	LS Factor Value		0.16
14			
15	<b>Watershed Erosion Estimate (=RxKxLS) in tons/acre</b>		2.052096
16	<b>Site Sediment Risk Factor</b>		<b>Low</b>
17	Low Sediment Risk: < 15 tons/acre		
18	Medium Sediment Risk: >=15 and <75 tons/acre		
19	High Sediment Risk: >= 75 tons/acre		
20			

# RUSLE K Values

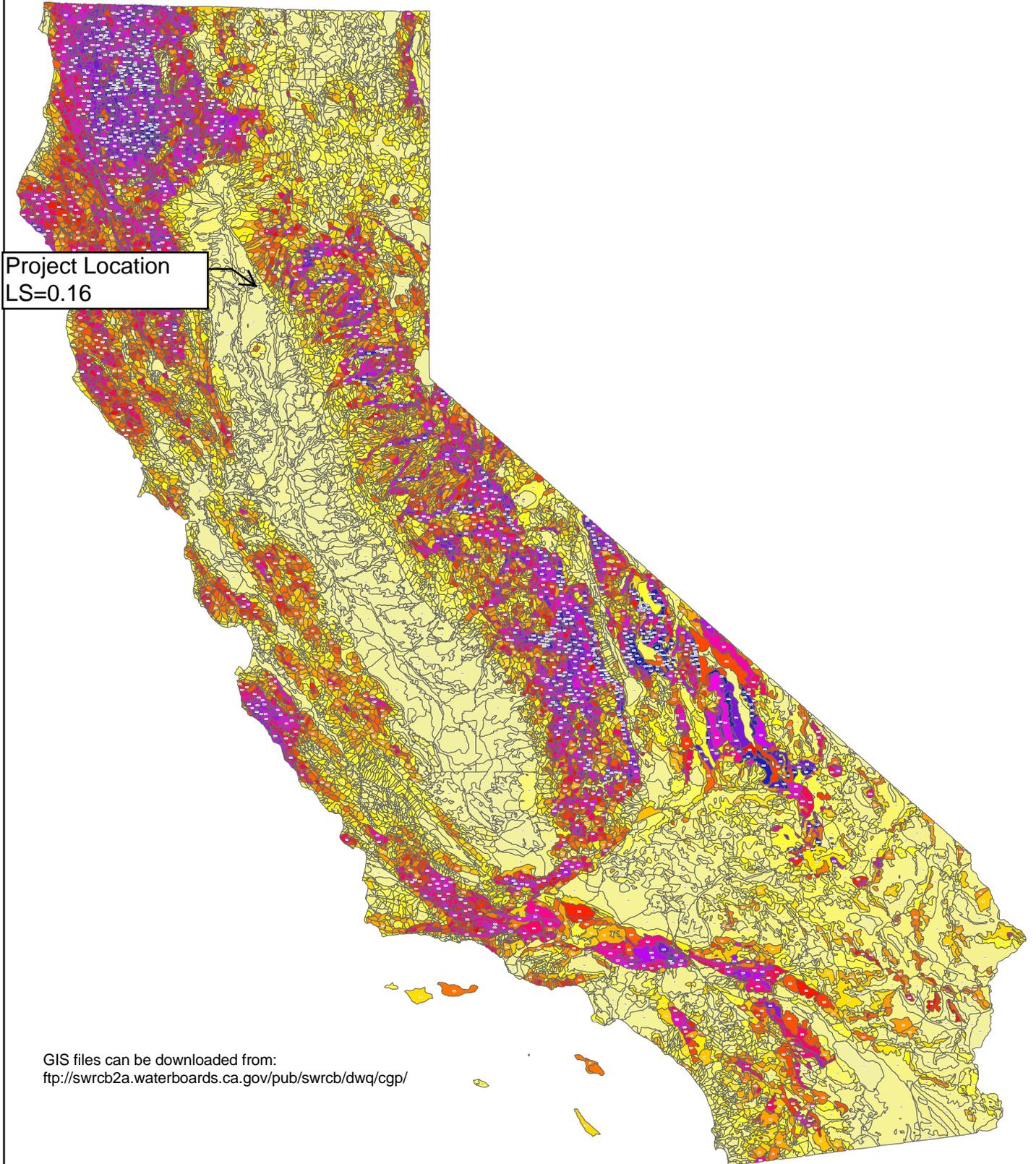


GIS files can be downloaded from:  
<ftp://swrcb2a.waterboards.ca.gov/pub/swrcb/dwq/cgp/>



Data Source: *Natural Resources Conservation Service,  
U.S. Dept. of Agriculture and State Water Resources Control Board*

# RUSLE LS Values



GIS files can be downloaded from:  
<ftp://swrcb2a.waterboards.ca.gov/pub/swrcb/dwq/cgp/>



Data Source: *State Water Resources Control Boards and*

## Rainfall Erosivity Factor Calculator for Small Construction Sites

Please enter the name of your construction project/site

Project/Site Name:

Select a construction period

Start Date:    
(Format: mm/dd/yyyy)

End Date:    
(Format: mm/dd/yyyy)

The start date is the date of initial earth disturbance. The end date is the date of final site stabilization.

**NOTE: If your construction project extends beyond the estimated end date, you will need to either recalculate the R factor based on a new end date, or apply for NPDES permit coverage.**

## Rainfall Erosivity Factor Calculator for Small Construction Sites

Please enter the Latitude/Longitude information of the project/site.

(Do not enter negative numbers)

- |  |   |
|--|---|
| <input checked="" type="radio"/> Latitude: <input type="text" value="39"/> ° <input type="text" value="44"/> ' <input type="text" value="22"/> '' N<br>(Degrees/Minutes/Seconds) | Longitude: <input type="text" value="121"/> ° <input type="text" value="48"/> ' <input type="text" value="17"/> '' W<br>(Degrees/Minutes/Seconds) |
| <input type="radio"/> Latitude: <input type="text"/> ° <input type="text"/> ' <input type="text"/> '' N<br>(Degrees/Minutes.Decimal Minutes)                                     | Longitude: <input type="text"/> ° <input type="text"/> ' <input type="text"/> '' W<br>(Degrees/Minutes.Decimal Minutes)                           |
| <input type="radio"/> Latitude: <input type="text"/> . <input type="text"/> ° N<br>(Decimals)  | Longitude: <input type="text"/> . <input type="text"/> ° W<br>(Decimals)  |

If you do NOT have the Latitude/Longitude information, please enter the project/site address.

Address Line 1:

Address Line 2:

City:

State:  

Zip Code:

# Rainfall Erosivity Factor Calculator for Small Construction Sites

## Facility Information

Facility Name: SR 32 Widening-Phase 1  
Start Date: 03/01/2012  
End Date: 03/01/2013  
Latitude: 39.7394  
Longitude: -121.8047

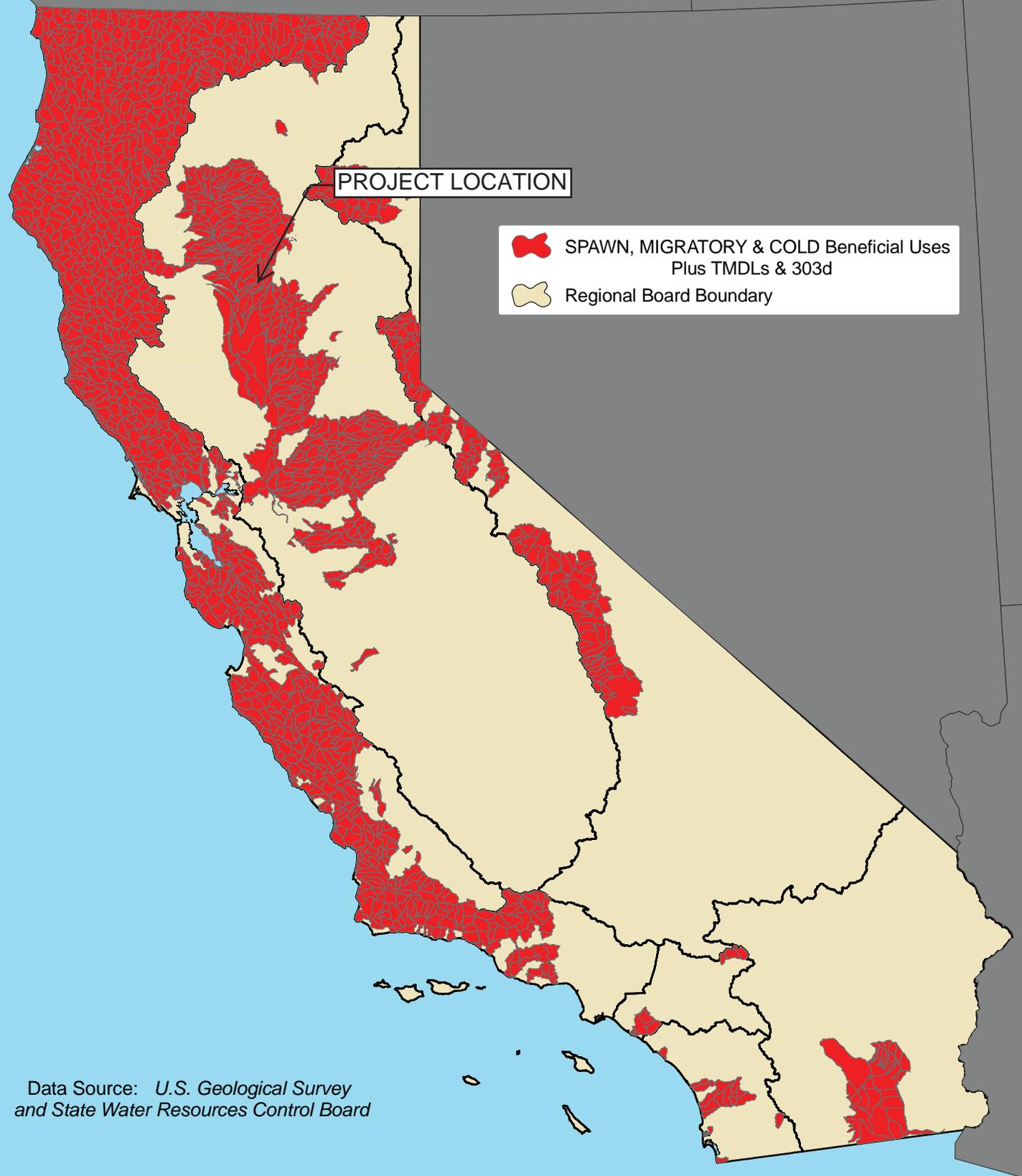
## Erosivity Index Calculator Results

AN EROSIIVITY INDEX VALUE OF **40.08** HAS BEEN DETERMINED FOR THE CONSTRUCTION PERIOD OF 03/01/2012 - 03/01/2013.

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.**

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

# High Risk Receiving Watersheds



PROJECT LOCATION

-  SPAWN, MIGRATORY & COLD Beneficial Uses Plus TMDLs & 303d
-  Regional Board Boundary

Data Source: U.S. Geological Survey  
and State Water Resources Control Board

To download GIS files please visit:  
<ftp://swrcb2a.waterboards.ca.gov/pub/swrcb/dwq/cgp/>



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

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

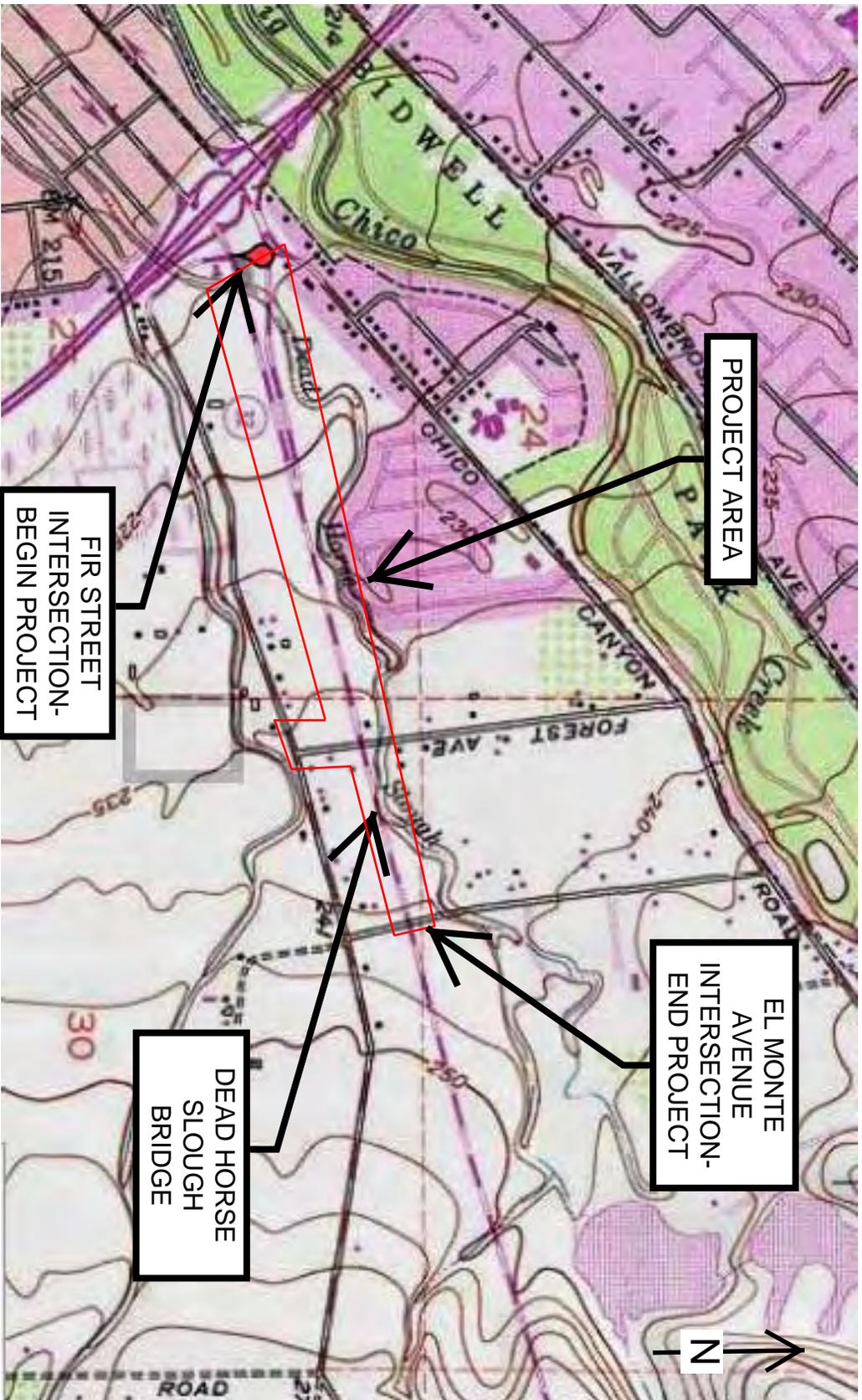


## Attachment D

### Vicinity Map and Site Map



# VICINITY MAP



INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-9	TYPICAL SECTIONS
10	KEY MAP/PROJECT CONTROL LAYOUTS
11-14	LAYOUTS
15-18	PROFILE AND SUPERELEVATION DIAGRAM
19-22	CONSTRUCTION DETAILS
23-31	DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES
32-40	TREE REMOVAL PLAN
41-45	UTILITY PLANS AND DETAILS
46-49	CONSTRUCTION AREA SIGNS
50	STAGE CONSTRUCTION PLANS
51-52	TRAFFIC HANDLING PLANS, DETAILS, AND QUANTITIES
53-65	PAVEMENT DELINEATION PLANS, DETAILS AND QUANTITIES
66-70	SOUND WALL PLANS
71-77	SOUND WALL PLANS AND DETAILS
78-86	SUMMARY OF QUANTITIES
87-89	SUMMARY OF QUANTITIES
90-106	ELECTRICAL PLANS
107-129	LANDSCAPE PLANS
130-146	DEAD HORSE SLOUGH BRIDGE (WIDEN) B. No. 12-0135

**STATE OF CALIFORNIA**  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN BUTTE COUNTY**  
**IN CHICO**  
**ON STATE ROUTE 32**  
**FROM 0.3 MILE EAST OF STATE ROUTE 99**  
**TO EL MONTE AVENUE**  
**CITY PROJECT NAME: STATE ROUTE 32 WIDENING PROJECT (PHASE I)**  
**PROJECT No. 15010**  
**FROM EAST OF PARK AND RIDE LOT TO EL MONTE AVENUE**  
**BUDGET No. MAJ/GC/15010-300-4150**  
 TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006  
 AND CITY OF CHICO STANDARD PLANS (LATEST EDITION)

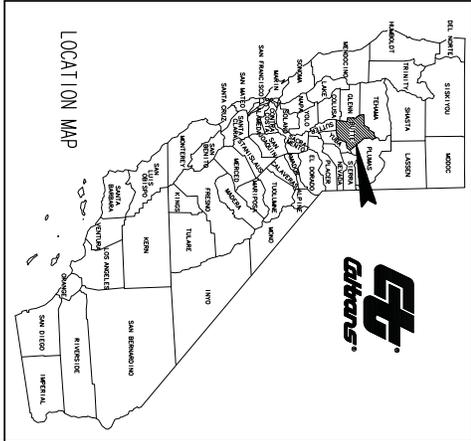
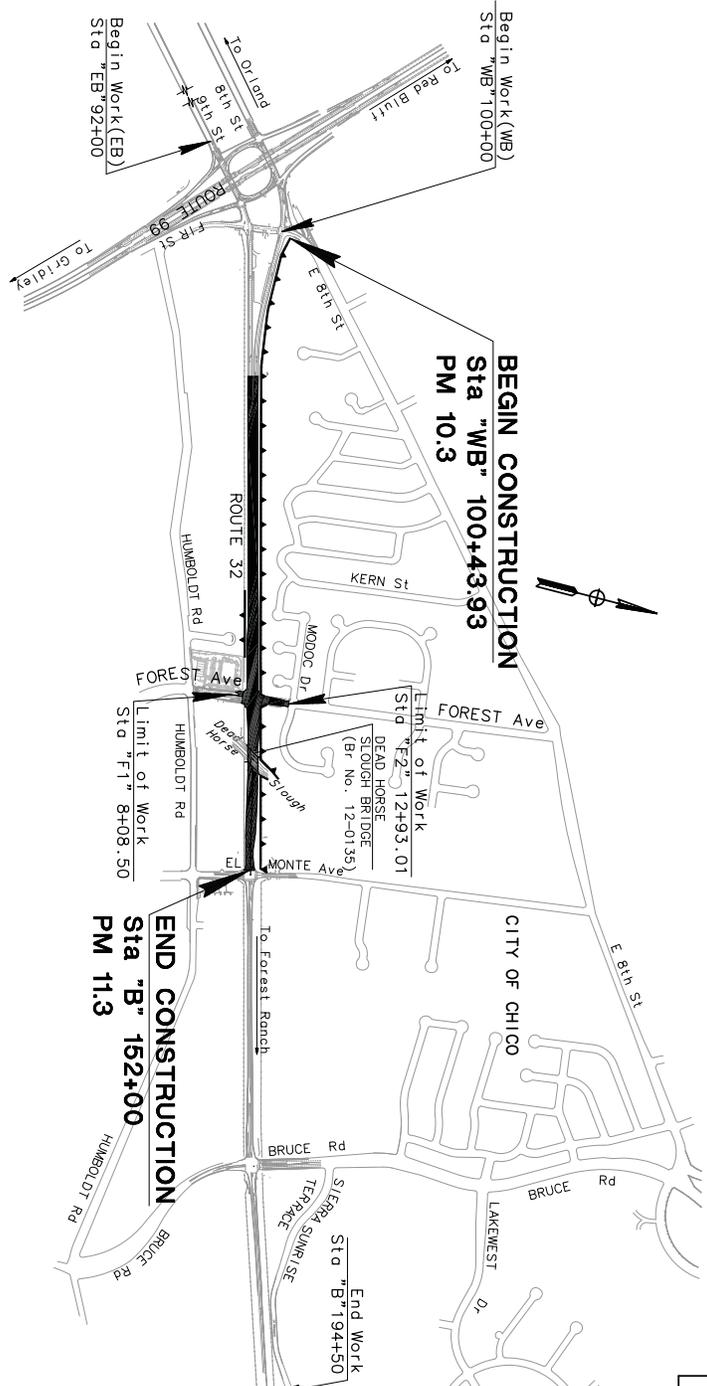
CONSULTANT DESIGN ENGINEER	CALTRANS DESIGN OVERSIGHT APPROVAL	REGISTRATION No.	LICENSE Exp DATE	DATE SIGNED	APPROVED AS TO IMPACT ON STATE FACILITIES AND CONFORMANCE WITH APPLICABLE STATE STANDARDS AND PRACTICES AND THAT TECHNICAL OVERSIGHT WAS PERFORMED.
ROBERT MATTHEW BROGAN	REBECCA MOWRY	C54415	12/31/11		

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

RELATIVE BORDER SCALE 0 1 2 3 USERNAME => \$USER DON FILE => \$REDRAW

UNIT 0000 PROJECT NUMBER & PHASE 03000002644



Approved By: *[Signature]* 09/15/11  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
 REGISTERED PROFESSIONAL ENGINEER  
 MARK THOMAS & COMPANY, INC.  
 411 MAIN STREET  
 SACRAMENTO, CA 95820  
 CITY OF CHICO  
 CAPITAL PROJECT SERVICES  
 CONTRACT No. **03-1E4904**  
 PROJECT ID **03000002644**



BORDER LAST REVISED 7/2/2010 CALTRANS WEB SITE IS: HTTP://WWW.DOT.CA.GOV/

## Attachment E

### Contractor Personnel Stormwater Training





PROJECT NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
	PROJECT IDENTIFIER NUMBER
<b>STORMWATER TRAINING RECORD CONTINUED</b>	

Include the following when the WPC Manager does not develop the SWPPP.

<b>Qualifier SWPPP Developer(QSD)</b>			
NAME	COMPANY		PHONE
TITLE			PHONE 24/7
Training Course Title	Training Objective	Date Training Completed	Course Length (Hours)

Include the following when a Qualified SWPPP Practitioner will be assisting the WPC manager with SWPPP/WPCP implementation.

<b>Qualifier SWPPP Practitioner(QSP)</b>			
NAME	COMPANY		PHONE
TITLE			PHONE 24/7
Training Course Title	Training Objective	Date Training Completed	Course Length (Hours)

PROJECT NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
	PROJECT IDENTIFIER NUMBER

**STORMWATER TRAINING RECORD CONTINUED**

Include the following training record information when a stormwater inspector will be assisting the WPC manager.

<b>Stormwater Inspector</b>			
NAME	COMPANY		PHONE
TITLE			PHONE 24/7
Training Course Title	Training Objective	Date Training Completed	Course Length (Hours)

Include the following when contractor employees will be responsible for stormwater discharge sampling testing.

<b>Primary Stormwater Discharge Sampler and Tester</b>			
NAME	COMPANY		PHONE
TITLE			PHONE 24/7
Training Course Title	Training Objective	Date Training Completed	Course Length (Hours)

<b>Alternate Stormwater Discharge Sampler and Tester</b>			
NAME	COMPANY		PHONE
TITLE			PHONE 24/7
Training Course Title	Training Objective	Date Training Completed	Course Length (Hours)

PROJECT NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
	PROJECT IDENTIFIER NUMBER

**STORMWATER TRAINING RECORD CONTINUED**

Include the following when contractor employees will be responsible for BMP installation, maintenance and repair.

<b>Employees Responsible for BMP Installation, Maintenance and Repair</b>			
EMPLOYEE NAME			
Training Course Title	Training Objective	Date Training Completed	Course Length (Hours)
EMPLOYEE NAME			
Training Course Title	Training Objective	Date Training Completed	Course Length (Hours)
EMPLOYEE NAME			
Training Course Title	Training Objective	Date Training Completed	Course Length (Hours)
EMPLOYEE NAME			
Training Course Title	Training Course Title	Training Course Title	Training Course Title



