

PRELIMINARY DRAFT

**STORMWATER POLLUTION PREVENTION PLAN
FOR THE PROPOSED
COSUMNES POWER PLANT CONSTRUCTION PROJECT
SACRAMENTO COUNTY, CALIFORNIA**

Prepared for: State Water Resources Control Board
Division of Water Quality
Attention: Storm Water Permit Unit
P.O. Box 1977
Sacramento, CA 95812-1977

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6201 S Street MSK 201
Sacramento, CA 95817
Contact: Colin Taylor
Telephone: (916) 732-6724

Date:

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Signature Page

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, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant

Print Name and Title : _____

Affiliation: _____

Signature: _____

This SWPPP was prepared by:

CH2MHILL

Name: Title:

Sacramento Municipal Utility District, property owner, acknowledge receipt of this SWPPP on, **DATE**, and hereby assume all duties to maintain compliance with the State Water Resources Control Board regulations. These regulations include, but are not limited to the following: 1) maintaining records for three years, 2) implementation of both the SWPPP and Storm Water Sampling Monitoring programs and 3) completion of amendments as required.

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Amendments:

The SWPPP shall be amended:

- Whenever there is a change in construction or operations which may affect the discharge of pollutants
- If any condition of the permit is violated or the general objective of reducing or eliminating pollutants in stormwater discharge is not achieved. If the RWQCB determines that a permit violation has occurred, the SWPPP shall be amended and implemented within 14 calendar days after notification by the RWQCB
- Annually, prior to the defined rainy season

The following items shall be included in each amendment:

- Who requested the amendment
- Describe the proposed change
- Describe the reason for the change
- Describe the original BMP proposed, if any
- Describe the new BMP proposed
- Describe any existing implemented BMP's

This SWPPP conforms to the required elements of the permit issued by the SWRCB.

Number	Issue Date	Issued To	Signature

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Distribution List

California Energy Commission
Contact: (TBD)
1516 Ninth Street
Sacramento, CA

Sacramento Municipal Utility District
Contact: Colin Taylor
6201 S. Street
Sacramento, CA

County of Sacramento
Contact: Kevin Maas
Water Resources
8277th Street
Room 301
Sacramento, CA

Note: This page should list all parties that will require a copy of the SWPPP

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Introduction and Objectives

This document is being prepared in compliance with the terms of the STATE WATER RESOURCES CONTROL BOARD—GENERAL PERMIT TO DISCHARGE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY (Water Quality Order 99-08-DWQ) and RESOLUTION NO. 2001-046. Resolution No. 2001-046 addresses the modification of Water Quality Order 99-08-DWQ to include sampling and analysis requirements for direct discharges of sediment to waters impaired due to sediment and for pollutants that are not visually detectable in runoff that may cause or contribute to an exceedance of water quality objectives. This General Permit expires five years from the date of adoption. A copy of the General Permit is attached (Section**)

This plan shall be available on site during all phases of construction activity. The requirements of the General Permit must be implemented throughout the life of the project. The “Responsible Person” designated herein shall be responsible for implementing this plan in the field. This will include monitoring the site, performing regular inspections, making necessary field modifications and recording changes to the plan.

SWPPPs are reports that are available to the public under Section 308(b) of the Clean Water Act (CWA) and will be made available by the RWQCB upon request. The SWPPP shall be developed and amended or revised, when necessary, to meet the following objectives:

- a) Identify all pollutant sources, including sources of sediment that may affect the quality of storm water discharges associated with construction activity (storm water discharges) from the construction site.
- b) Identify non-storm water discharges
- c) Identify, construct, implement in accordance with a time schedule, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction.
- d) Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs)
- e) A sampling and analysis program shall be developed and conducted for pollutants which are not visually detectable in storm water discharges, which are or should be known to occur on the construction site, and which could cause or contribute to an exceedance of water quality objectives in the receiving water.

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Discharger Certification Page

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, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Pursuant to Section C.9.b of the Permit, I do hereby designate the person(s) having responsibility for implementing, monitoring and amending this SWPPP as necessary to ensure that it reflects the current status of construction activity.

Responsible Person(s) _____ (Tel. _____)

_____ (Tel. _____)

_____ (Tel. _____)

Name _____ Title _____

Signature _____ Date _____

The duties of the responsible person(s) include, but are not limited to:

- Assure full compliance with the General Permit and implement all elements of the SWPPP including the elimination of all unauthorized discharges and the preparation of the annual compliance evaluation and other required reports.
- Inspections before and after storm events and once each 24 hour period during extended storm events to assess BMP effectiveness and implement repairs or design changes as soon as feasible depending on field conditions.
- Monitoring and evaluation of the effectiveness of onetime discharges to insure that no material other than storm water are discharged in quantities which will have an adverse effect on receiving waters of storm drains systems.
- Conducting training sessions to educate contractors and subcontractors regarding the requirements of the General Permit.
- Preparation in advance to enable rapid response to failures and emergencies by having available equipment, materials and workers necessary to perform corrective maintenance as soon as possible after the conclusion of each storm consistent with workers safety.
- Follow the procedures set forth in the section "Storm Water Sampling and Analysis for Non-Visible Pollutants".
- Amending this SWPPP as necessary to keep it current with existing field conditions and modifications to BMP's that have taken place in the field.

The subject of specific inspection requirements is discussed in greater detail in the "Inspection and Maintenance" section of this SWPPP. It is important that inspections are done with the frequency and

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thoroughness that is required by the General Permit. Forms for use during inspections are included in the aforementioned section .

General Information

National Pollutant Discharge Elimination System and Storm Water Pollution Prevention Plan Overview

This document establishes a plan to manage the quality of stormwater runoff from construction activities associated with the Cosumnes Power Plant (CPP) project proposed in Sacramento County, California (**Figure 1-1**) *location of project map*. For construction projects that involved disturbance of 5 or more acres, the U.S. Environmental Protection Agency (EPA) requires that the project owner or contractor apply for a stormwater permit under the National Pollutant Discharge Elimination System (NPDES) program. For the purposes of the NPDES program, construction activities are defined as clearing, excavating, grading, or other land-disturbing activities. The State of California has been delegated by EPA to administer this permit, which authorizes stormwater discharge to waters of the United States under its General Permit for stormwater discharges associated with construction activities.

This Storm Water Pollution Prevention Plan (SWPPP) was written with the assistance of, and information from, California Storm Water Best Management Practice Handbook – Industrial/Commercial, Urban Hydrology for Small Watersheds, Construction Site Erosion and Spill Control, Guidance Manual: Storm Water Monitoring Protocols, Erosion and Sediment Control Guidelines, County of Sacramento and Construction Storm Water Sampling and Analysis Guidance Document (10/2001). Copies of the Notice of Intent and the general permit to discharge stormwater are provided in Appendix**.

Goals and Objectives of the SWPPP

The primary goals of this SWPPP are to establish procedures to:

- Minimize accelerated soil erosion
- Minimize accelerated sedimentation in drainages and other receiving waters
- Minimize or eliminate non-stormwater runoff, and
- Ensure long-term reestablishment of preconstruction site conditions were practicable.

The following objectives have been identified to accomplish these goals:

- Identify sources of sediment and other pollutants that can affect the quality of stormwater discharges;
- Identify non-stormwater discharges;
- Focus on controlling erosion rather than sedimentation;
- Identify, construct, implement (in accordance with a time schedule), and maintain best management practices (BMP's) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site;

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- Prevent an net increase of sediment discharge by using and maintaining temporary sediment control measures; and
- Provide for long-term stabilization of the site by installing permanent erosion control and storm water management measures, where appropriate.

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Application and Implementation of the SWPPP

This SWPPP describes the BMPs that will be applied during the course of project construction and provides guidelines on how BMPs will be implemented in the field. It is intended to comply with NPDES requirements and to satisfy the erosion control documentation requirements of Sacramento County's grading permit. Following completion of construction, the contractor will continue to use this SWPPP as a guideline through the cleanup and site-stabilization process. The contractor will maintain temporary erosion and sediment control measures and complete the site cleanup in a timely fashion. All temporary sediment control measures, such as silt fences and straw baled dikes, will be maintained and removed by the contractor at the contractor's expense when vegetation has returned to 70% of its preconstruction coverage.

Non-stormwater BMPs (e.g., equipment washing, concrete washouts) will be implemented during the entire duration of construction operations, irrespective of the season. Stormwater BMPs (e.g., erosion and sediment control) will be implemented during the rainy season (October 15–April 30) and before forecasted storms during the dry season (May 1–October 14). BMPs to control wind erosion will be implemented as appropriate.

This plan includes Storm Water Sampling and Analysis requirements, for compliance with California State Water Resources Control Board Resolution No. 2001-046 (NPDES General Permit for Storm Water Discharges associated with construction activity). (Appendix V)

This SWPPP consists of the present document and accompanying drawings, which show the location of the BMPs, and BMP details sheets.

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Project Location

The Project is located south of the Rancho Seco Plant in Sacramento County, 25 miles southeast of the city of Sacramento (see Figure **). The project will be located on a 30-acre parcel that is part of 2,480 acres owned by the Sacramento Municipal Utility District (SMUD), in Section 29, Township 6N, Range 8E Mount Diablo base and meridian, adjacent to the Rancho Seco Plant. CPP is located on the southeastern quarter of APN 140-0050-010, and on the southwestern quarter of APN 140-0050-008.

Clay East Road borders the project site to the south. Twin Cities Road is the closest road to the north and west of the project site. Two state highways serve the project area, including Twin Cities Road and SR 99.

The Project includes 26 miles of installed pipeline. The proposed route is shown in Figures *.* through *.* (*to be included when final drawings are available*).

Project Description

CPP will be a high-efficiency, combined-cycle natural gas-fired generating facility that will provide electricity to the District's customers.

Approximately 30 acres will be required to accommodate both phases of the generation facilities, including the storage tank areas, parking area, control/administration building, water treatment facility, stormwater retention pond, switchyard, emission control equipment, and generation equipment.

Access to the site will be provided via two 30-foot-wide roads leading from Clay East Road to the site and terminating at a control gate and a side gate. Most of the site will be paved to provide internal access to all project facilities and on-site buildings. The switchyard and areas around equipment, where not paved, will have gravel surfacing.

The proposed project site is crossed by 3 ephemeral drainages, all of which join Clay Creek within 0.25 mile of the site. These drainages have distinct hydrologic features, and some vegetation that indicate that they would be defined as jurisdictional wetlands, according to Army Corps of Engineers (ACOE) criteria. The project proposes to divert these drainages around the proposed site to support local drainage, minimize erosion in the project area, and to maintain the benefits of the drainages. The District proposes to construct a non-sited detention basin that would capture essentially all site stormwater runoff.

Construction Schedule

Construction of Phase 1 of the project is expected to commence in the fourth quarter of 2002 and continue for approximately 24 months.

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This site will be accessed for construction by proceeding east on Twin Cities Road (State Route 104) to Clay East Road to the project site. The land to the west and south of the site will be available for use as construction and laydown areas. (See Site Access Map, Appendix**).

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Project Personnel Contact Information

The project owner and operator is Sacramento Municipal Utility District (District). The address is:

6201 S Street, MSK201
Sacramento, CA 95817

Contact information is as follows:

General District Contact:	Scott Flake	(916) 732-6174	
Engineer/Technical Representative:	Name	Phone	
Project Manager/Construction Site Supervisor:	Name	Phone	
Contractor(s):	<i>Name</i>	<i>Company</i>	<i>Phone</i>

The District will be in charge of all aspects of the project. A contractor or contractors will perform the actual construction, but the work will be supervised by the District at all times and all decisions will be made by the District. The District will be responsible for ensuring that all measures, inspections and maintenance actions specified in the SWPPP are properly implemented.

Contractor/Subcontractor Signatory Requirements and Certification

All contractors and subcontractors must provide contact and responsibility information and sign a copy of the certification statement found at the end of this section before conducting any professional service at the project area identified in the SWPPP. The signed certification statements will be kept with the SWPPP and will serve as an official record of all contractors and subcontractors and their responsibilities in implementing the SWPPP.

Retention and Posting of Records

The District must maintain a copy of this SWPPP on site from the date of project initiation to the termination of coverage under the general permit. In accordance with EPA regulations, a copy of this SWPPP will be posted at a publicly accessible location near the active portions of the project. A copy of the SWPPP will be made available, if requested, to the Central Valley Regional Water Quality Control Board, Sacramento office, and the general public for review. The District will retain copies of the SWPPP and all reports required by the General Permit for a period of at least 3 years from the date that the project is completed.

Duty to Comply with Permit Conditions

The EPA can impose substantial penalties for noncompliance with NPDES regulations. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action,

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including fines; permit termination, revocation, reissuance, or modifications; or denial of permit renewal application. Individuals responsible for such violations are subject to criminal, civil, and administrative penalties.

Final Stabilization and Termination of Coverage

Final stabilization for the purpose of terminating coverage under the general permit is achieved when all soil-disturbing activities are completed and either 1) a uniform vegetative cover of 70% has been established, or 2) equivalent stabilization measures have been employed. Where pre-project background vegetation covers less than 100% of the surface, the coverage criterion is 70% of the preconstruction background level.

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Contractor's Certification

Form to be inserted for final document

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Training Documentation

Section 12 of the General permit states "individuals responsible for SWPPP preparation, implementation and permit compliance shall be appropriately trained, and the SWPPP shall document all training. This includes those personnel responsible for installation, inspection, maintenance, and repair of BMPs. Those responsible for overseeing, revising and amending the SWPPP shall also document their training. "

In satisfaction of this requirement, the person or persons designated herein should indicate below the training that each has received. Trainings should be both formal and informal and may include such things as attendance at seminars, review of technical manuals, discussions with experts, and personal experience on jobs where reduction of pollutants was an important part of the project. One copy of this form should be included for each person designated in the "Discharger Certification".

_____ has received the following training:

Attendance at a training session organized by the RWQCB Date _____

Attendance at a training session or seminar presented by _____ :

_____ Date _____ :

Previous job experience : _____

Other: _____

In addition to the above, a training form is included with this document for continuous training during the construction of this project.

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Narrative Description

Site Estimates and Description of Onsite Soils

The area of the construction site is approximately 30 acres plus an additional 20 acres for construction laydown area of the 2,480 acres owned by the Sacramento Municipal Utility District. The existing runoff and runoff coefficients are approximately (*tobecalculated*) and the post construction runoff coefficient is approximately (*tobecalculated*). Upon completion of the job about (%) of the site will be impervious. In addition, there is approximately 26 miles of pipeline to be installed.

Construction of the CPP and associated gas pipeline include building facilities, parking and road laydown areas, trenching and directional drilling, land grading, and other activities. The degree to which soil erosion related to construction occurs depends on soil erodibility (see Table 1), proximity of construction to surface water, construction timing and method, and implementation of best management practices for erosion control.

Soils associated with the project construction area are mapped as level or gently sloping (<2.0 percent), suggesting that the project sites slopes should not be a major erosion enhancement factor. Erosion hazards typically range from non to moderate, indicating that standard Best Management Practices (BMP) for controlling erosion and sediment loss (e.g., straw bales, mulch cover, watering exposed soils surface to minimize dust, silt fences, etc.) will be sufficient to control soil erosion during construction.

Soils, erodibility, stabilization requirements for the pipeline will be included at a later date.

Soil revegetation potential is rated good for most soil mapping units at the project site and proposed pipeline route. Thus, there should not be limitations for re-establishment of vegetation following completion of construction.

Mitigation Measures and Monitoring

BMPs required during construction to maintain water quality, preserve topsoil, prevent loss of productivity, and maintain air quality will include temporary erosion control measures that will be implemented before and removed after construction activities.

Following any deep excavations, stockpiled soils would be replaced to minimize soil loss from the construction area. Standard erosion measures, such as silt fences and fiber rolls, should be sufficient to minimize off-site runoff and erosion. Dust control measures, such as water application, will be used to minimize soil loss from wind erosion.

Sediment barriers, such as straw bales or silt fences, will be placed to slow runoff velocity and trap sediment. These structures will be placed down slope of the disturbed areas.

Sediment barriers are particularly important near sensitive receptors, such as streams, creeks, wetlands, irrigation ditches or canals, or storm drains, to prevent sediment loss to surface water.

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Larger scale erosion control, such as drainage diversions, runoff retention basins, or sediment traps associated with the gas pipeline, will not be unnecessary due to the level topography and relatively cohesive soils of the area. Rerouting an ephemeral stream on the northeast corner of the Project Site will require more substantial earthmoving at the site. This will require implementation of BMPs to prevent erosion in this area during construction. Because the affected soils are mapped as rangeland, no prime farmland or farmland of state or local importance will be affected. However, re-engineering of the stream channel may require establishment of suitable soil conditions for riparian habitat.

Long-term erosion control will include re-vegetation with a combination of species that include those adapted for rapid establishment as well as native perennials.

A Monitoring Plan is included in this SWPPP, and located in Appendix VIII.

Estimate of Runoff Coefficient and Run-On Calculation

This section to be completed when final grading plans are available.

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Soils information provided for the CPP site is as follows:

TABLE 1

Soil Mapping Units and Properties^a

Map Symbol	Drainage	Permeability (in/hr) ^b	Water Erosion Hazard	Runoff Rate	Revegetation Potential ^c	Storie Index	Land Capability Class ^d	Soil Map Units Within Farmland Resource Type ^e	Prime Farmland ^e
198	Moderately well drained	0 to 7 in: Moderate 7 to 20 in: Moderately slow	Slight to moderate	Slow to medium	Fair	16	N: I Ve, I: I Ve	P, U, G	Y
125	Well drained or moderately well drained	0 to 28 in: Moderate 28 to 47 in: Very slow 47 to 62 in: Slow	Moderate to severe	Medium	Fair	36	N: III e, I: II e	G	

^a All data from *Soil Survey of Sacramento County, California* (NRCS, 1993).

^b Permeability ratings (units in inches per hour): Very slow—<0.06, slow—0.06 to 0.20, moderately slow—0.20 to 0.60, moderate—0.60 to 2.00, moderately rapid—2.00 to 6.00, rapid—6.00 to 20.00, and very rapid—>20.00.

^c Based on the potential for establishment of wild herbaceous plants.

^d Land capability class designations: I—arable land with few or no limitations to productivity; II—arable land with limitations such as drainage, salinity, structure or slope; III—severely limited arable land with restricted range of suitable crops; IV—very severe limitations requiring careful management and plant selection; V—no erosion hazard but only suitable for pasture, range, woodland, or wildlife; VI—suitable for pasture, range, woodland, or wildlife, but severe problems with slope or soil; VII—similar to Class VI, but very severe limitations, some of which are uncorrectable; and, VIII—only suitable for wildlife or recreation. Land capability subclass designations: e—risk of erosion; w—wetness, drainage, or flooding problems; s—rooting zone limitations; and c—climatic limitations.

^e Soil ratings based on the type of parent material and degree of subsoil development, surface texture, slope and management factors

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TABLE
Soil Mapping Units and Properties^a

MapSymbol	SoilSeries	SlopeClass (%) ^b	Landscape Locations	SoilDepth	Texture	ParentMaterial
198	Redding gravellyloam	Nearlylevel to gently sloping (0to8)	Dissected highterraces andterrace remnants	Moderately deep	Gravellyloam(0to7in.) Loam(7to13in.) Gravellyloam(13to20in.) Gravellyclay(20to28in.) Cementedduripan(28-66in.)	Gravellyorcobblyalluviumfrommixedrock sources
125	Corning complex	Nearlylevel tomoderately steep (0to30)	Highterraces andterrace remnants	Verydeep	Gravellysandyloam(0to2in.) Gravellyfinesandy loam (2to7in.) Loam(7to20in.) Clay(20to32in.) Gravellysandy clay loam (32to39 in.) Gravellycoarsesandyloam (39to48in.)	Gravellyalluviumfrommixedrocksources

^aAll data from Soil Survey of Sacramento County, California (NRCS, 1993).

^bQualitative designations from *Soil Survey Manual*, U.S. Department of Agriculture (USDA, 1993).

Pipeline soils detail to be provided with final plan.

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Pollutants Likely to be present in Storm Water Discharges

The primary pollutant that is likely to be present in storm water discharges from the site is sediment-laden runoff from grading activities and non-visible pollutants originating from construction materials, either by their use or from improperly protected storage/stockpile areas.

Storm water falling on the proposed development area of the project site during construction and operation may potentially dissolve oils, grease, and other contaminants and carry them along with entrained sediments into Clay Creek downstream of the project. A detention basin will be constructed on the CPP site to capture essentially all site runoff.

Toxic Materials

Any toxics report available to be included in the final SWPPP, and reference in this section

We recommend that compliance with BMPCA 22 if any contaminated soil is encountered during construction, (Appendix VI).

During construction it is anticipated that the following hazardous materials may be used on site: adhesives, cleaners, paint, polishes, curing compounds, insulation, petroleum products, wash waters, pesticides, herbicides, sealing agents, concrete and vehicle fluids, septic fluids. Construction personnel should be alerted to the use of hazardous materials used on the site, including proper use of, handling, storage and disposal of these materials in accordance with Federal, State and local regulations. Refer to BMPCA 21 for hazardous waste management. (Appendix VI)

Erosion and Sediment Control Practices

Soil erosion, sediment control and storm water management measures are used to reduce or eliminate the potential for accelerated erosion and sedimentation in receiving waters caused by project construction. The contractor must implement an effective combination of erosion and sediment control measures on all disturbed areas during the construction period. This section provides a general description of the control measures planned for the project. All applicable erosion and sediment control measures will be implemented in accordance with the guidelines contained herein prior to commencement of field construction activities. The measures will be maintained during and after the construction activity until final stabilization, as defined by the General Permit, is accomplished. Upon successful re-vegetation of disturbed areas, all temporary erosion and sediment control measures will be removed, as appropriate.

Construction of this project will require diverting and relocating three tributaries to Clay Creek, as well as grading and clearing up to 50 acres. The 20 acres south of Clay East Road will be used as a construction laydown area, and detailed erosion control measures are described in Appendix VII. This project is impacted by requirement of a Section 404 permit, under the Clean Water Act. It also requires a Water Quality Certification, Section 401, issued by the RWQCB. Both of these permits are included with this SWPPP and are located in the Appendix VII.

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Both of the construction laydown areas will have both ingress and egress designated, and meet the requirements as described in the Appendix VII.

The BMP's described herein include both vegetative and structural measures. The measures and practices will help to:

- Prevent runoff from offsite areas from flowing across the construction site,
- Slow runoff rates across the site,
- Provide soil stabilization, and
- Remove sediment from on-site runoff before it leaves the site.

Discretion should be exercised by the contractor in implementing the BMPs described in this SWPPP and in implementing other BMPs as required to prevent stormwater pollution.

Temporary Stabilization Measures

Temporary stabilization measures will be employed both before and during project construction. Details of these measures are provided, with construction drawings, in Appendix VII.

Temporary stabilization consists of mulching or seeding those disturbed areas that were both previously vegetated and that are exposed during prolonged periods either between or after construction activities. Temporary stabilization measures are provided as site conditions warrant. Seeding or mulching will be done if construction is to cease for more than 21 days during the rainy season (October 15 through April 30).

Silt Fence and Straw Bale Dike

Silt fences or straw bale dikes will be used to intercept and retain small amounts of sediment carried by sheet flow from disturbed areas during construction activities and to prevent this sediment from leaving the project site. The silt fences or dikes will be placed in critical areas where high surface runoff is expected and around spoil piles in work areas. On slopes, they will be placed perpendicular to the flow of runoff, except where there may be significant concentrated overland flow. Straw bale dikes will be installed at locations where keyway cannot be constructed, such as on hard surfaces. Straw bale dikes will be installed in a manner not to exceed the maximum slope-to-slope length relationship, as shown in Appendix VII.

The northern perimeter and portions of the east and west perimeters will have specified coded habitat designated areas silt fencing installed. At that area around the detention basin, (northeast corner of CPP site), there will be a double line of habitat designated silt fencing installed.

All silt fencing will be installed in compliance with the specifications included in Appendix VII, (see Sediment Trapping/Filtering).

Straw bale dikes will be removed and properly disposed of when the area has been adequately stabilized. Silt fencing will not be removed by cutting the material off above ground.

Fiber Roll Sediment Barrier

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Fiber rolls will be used to intercept and retain small amounts of sediment carried from disturbed areas, preventing the sediment from leaving the construction site. The fiber roll typically will be installed in a single row immediately down slope of the disturbed area, parallel to the contour, to protect wetlands and drainage ways. They will be keyed into the soil as shown on the detail in the Appendix VII. The fiber rolls and stakes will be left to decompose in place.

Protection of Soil Stockpiles

Any soil stockpiled on the construction site that is subject to water erosion will either be located on the upslope side of the trench, protected using straw baled dikes or silt fences, or covered with plastic, as appropriate. Should the soil be subject to wind erosion, it should be treated according to the description for dust control, Appendix VII.

Other BMPs

Detailed description, installation and maintenance instructions, and drawings not described in this section, but specific to this project are in Appendix VII.

Non-Storm Water Management

To be specified.

Maintenance, Inspection, and Repair of Structural Controls

The contractor is responsible for inspecting, maintaining and repairing all the facilities and systems of treatment which are installed to achieve compliance with the Storm Water Pollution Prevention Plan and General permit. Any facility that fails shall be reported to the site superintendent and replaced within 48 hours .

Spill Prevention and Control

Spill prevention shall be incorporated into all activities. If any significant hazardous materials spills occur, the contractor should notify the local emergency response agency. Refer to BMP CA 12 for spill prevention and control.

The contractor should contain minor spills, use absorbent material to clean up the spill if it occurs on an impermeable surface, or construct a earthen dike around it if located in a dirt area. Dig up and remove any contaminated soil to an appropriate off site disposal site.

If a spill occurs during rain, cover the impacted area to avoid runoff.

Record all steps taken to report and contain the spill.

Should a major spill occur, notify the local emergency response agency, The Governor's Office of Emergency Services Warning Center at (800) 852-7550. For spill of federal reportable quantities, also notify the National Response Center at (800) 424-8802.

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Written reports should be sent to all notified parties.

Post-Construction Storm Water Management

To be developed

List of Contractors and Subcontractors

The following is a list of Contractors and Subcontractors responsible for implementing SWPPP for the project:

NAME	CONTACT PERSON	DATE WORK BEGINS	DATE WORK ENDS

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Monitoring and Reporting Requirements

The Contractor shall refer to the Storm Water Monitoring Plan and Sampling and Analysis Guideline, which are included in this SWPPP Manual .

Following installation of erosion and sediment controls, a maintenance designee should meet with the contractor to review the SWPPP. A walk-through or site inspection should be performed to verify that all measures have been implemented in the field. Any improper installations or repairs necessary to complete the job should be noted at this time.

During DRY weather periods, the site should be inspected weekly. During WET weather periods, the site should be inspected daily. On days before predicted rainfall, inspection of the site before, during and after the storm event is required. All disturbed areas of the site, areas for material storage, locations where vehicles enter and exit the site, perimeter ditches, inlet filters and other sediment controls identified on the erosion control plan must be inspected.

Closely inspect each BMP within 48 hours after each rainfall event sufficient to create sediment transport. Check BMPs for (1) structural integrity, (2) sediment accumulation, (3) evidence of excessive sediment downstream of the site and (4) evidence of other construction materials washed off-site. Any problem areas must be documented, and control measures identified and implemented immediately. Inspection and report forms are found in Appendix VIII, Storm Water Monitoring Plan.

The site inspector should keep a log of weekly pre-storm inspections. This log should also provide the location of BMPs that needed maintenance or repairs, actions taken, the date completed, and any observations made. Also, the inspector should keep post-storm inspection reports that include similar information plus the size and duration of the storm.

The contractor should maintain records of the major grading and stabilization activities occurring on the site and the timing of each activity. The contractor should also keep track of the dates and the required control measures (BMPs) to be installed and by whom.

A reportable quantity release report should be kept for the site that provides the date, type of material spilled, approximate quantity, and agencies notified. This form must be completed on any occasion that a reportable quantity (as established under 40 CFR Parts 110, 117 or 302) spill occurs at the site. Refer to the Caltrans Guidance Manual: Stormwater Monitoring Protocols for recommended reporting guidelines (Table 12-1).

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APPENDIX

I NOTICE OF INTENT

II WATER DISCHARGER'S ID

III NOTICE OF TERMINATION

**IV STORMWATER PREVENTION PLAN WORKSHEET
CALIFORNIA CONSTRUCTION GENERAL PERMIT**

V SAMPLING AND ANALYSIS GUIDELINES

VI BMP CONTRACTOR ACTIVITIES

CONSTRUCTION PRACTICES
MATERIAL MANAGEMENT
WASTE MANAGEMENT
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CONTRACTOR TRAINING

VII BMP EROSION AND SEDIMENTATION CONTROL

SITE PLANNING CONSIDERATIONS
VEGETATIVE STABILIZATION
PHYSICAL STABILIZATION
DIVERSION OF RUNOFF
VELOCITY REDUCTION
SEDIMENT TRAPPING/FILTERING

VIII STORMWATER MONITORING PLAN

IX BMP TREATMENT CONTROL

X DISPOSAL ALTERNATIVES

XI EROSION CONTROL PLAN

PRELIMINARY DRAFT

SAMPLING AND ANALYSIS **OF NON-VISIBLE POLLUTANTS IN STORMWATER RUNOFF** **(Resolution No. 2001-046)**

SAMPLING AND ANALYSIS PROGRAM

BACKGROUND INFORMATION

On April 26, 2001, the State Water Resources Control Board under a court order modified the provisions of the Construction General Permit. These changes require permittees to implement specific sampling and analytical procedures to determine whether best management practices (BMPs) implemented on the construction sites are:

- 1) preventing further impact by sediment in the site runoff discharged directly into waters listed on the State's 303(d) List as impaired for sediment, silt, and/or turbidity;
- 2) preventing other non-visible pollutants that are known to exist on site and, if discharged in site runoff, may result in exceedances of applicable water quality objectives set by the Regional Water Quality Control Board.

SEDIMENTATION/SILTATION

None of the site runoff emanating from construction activities at the CPP Project, located in Sacramento County discharges directly into a waterbody listed in Attachment 3 of the Construction General Permit. Therefore, this project is not required to conduct sampling and analysis for sediment, siltation or turbidity in the site discharge(s). Runoff from this construction site flows into **NAME OF WATERBODY**.

POLLUTANTS NOT VISUALLY DETECTABLE IN SITE RUNOFF

This project has developed a contingency sampling and analysis program for potential pollutants that are not visually detectable in stormwater runoff. A list of the pollutants expected to be used at the

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site is included on Table 1. These pollutants, and the activities that may generate these pollutants, are also listed in Sections ** of the SWPPP. Additional pollutants not listed on Table 1, which are introduced to the site during the construction project, will be added to the table as soon as possible. Table 1 includes the visual observations, field test methods and laboratory tests relevant to each listed pollutant.

Every effort is being made by the project owner to contain and properly manage materials to avoid the need for sampling and analysis. Table 1 lists the various BMPs being employed at the site; these areas are also labeled on the Site Map in this SWPPP.

The sampling and analysis contingency plan will be triggered when a visual inspection of the project site indicates one or more of the following examples scenarios:

- 1) any of the visual observations noted on Table 1 (e.g., sheens, cloudiness, odor);
- 2) a breach of a containment area protecting and storing non-visible pollutants, where runoff or runoff is suspected to have contacted the pollutants;
- 3) malfunction of a BMP or device resulting in a suspected release of non-visible pollutants;
- 4) leakage or spill from installed BMPs;
- 5) exposure of stockpiled or spilled materials (containing non-visible pollutants) with site runoff or runoff; and
- 6) contact of stormwater or other site water with soluble or uncured soil amendments.

If a visual observation indicates the possible release of non-visible pollutants into site runoff, the trained persons or companies listed in Table 2 shall immediately conduct the appropriate field test, as shown in Table 1. If there is no field test available, samples will be collected and sent to a certified laboratory for analysis according to the methods specified in Table 1.

Table 2. Project Personnel Authorized to Conduct Sampling		
Name	Title/Company	Phone Number

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Sampling Locations

The locations for sampling site runoff will be selected when the sampling and analysis contingency plan is triggered, since it is not practical or feasible to locate these points before then. The trained project personnel will test and/or collect a sample of the water near a storm drain inlet down gradient from the area where the visual observation was made, or if more appropriate, at a location where the potentially polluted storm water exits the site. In addition, a control (background) sample will be collected in an undisturbed place on the site, where there is no potential for non-visible pollutants to be present. The control sample will be used for comparison with the potential pollutant sample. The actual locations will be indicated on a copy of the site map at the time of sampling, with notes as necessary indicating two distances of the point in relation to fixed objects in the field. This copy of the site map will be filed with the SWPPP records for the subject sampling event.

Sampling Procedures and Analysis

Samples will be taken during the first two hours of discharge when the discharge occurs in daylight business hours. Mobilization of sampling will be initiated at least 72 hours prior to any predictable rain events.

Field Test Methods. Prior to testing using field test methods, trained project personnel shall verify that the field test meters or kits have been calibrated according to manufacturer specifications. Manufacturer instructions shall be followed for use of the field methods, and results shall be indicated on a sample event log such as that shown in Figure 1 **(needs sample)**.

Laboratory Analysis. All sampling, sample preservation, and analyses will be conducted according to test procedures in 40 CFR Part 136 and/or in accordance with Method 1060 of *Standard Methods for the Examination of Water and Waste Water*, latest edition. Sampling will be conducted by project personnel trained and experienced in sample collection, handling, preservation, and coordination with the laboratory. Copies of the Chain of Custody forms supplied by the laboratory and completed by the sampling personnel shall be filed with the sample event log in the SWPPP files.

On-Site Storage Of Sampling Equipment And Supplies

A sample event kit was put together for this project. It will be stored at the following location: _____ (also indicated on the SWPPP site map) for the duration of the construction project and contains the following:

Provide a list there of all sampling equipment, materials, field calibration solutions, containers, forms/logs and incidental supplies needed to implement the contingency sampling and analysis plan.

Alternatively, indicate that the site contractor will supply these materials should sampling be required.

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If Testing Indicates a Problem-Corrective Measures And Notification

Should the sampling program positively indicate the presence of non-visible pollutants that may affect or exceed the applicable water quality objectives in the San Joaquin River Basin Plan (or other criteria supplied by the local regulatory agencies), project personnel will immediately initiate corrective measures to find the source and eliminate and/or control it. The following are examples of corrective measures that might be employed:

Water with abnormal pH values due to contact with soil amendments will be diverted into an on-site detention basin or holding pond. The MSDS sheet will be consulted to determine the parameter to test for. The detained water will then be tested and treated if necessary (e.g., filtration) prior to release.

If testing indicates that washwaters of exposed aggregate concrete, concrete in sewers, and water from equipment washing operations are coming in contact with site runoff, these waters will be discharged to a bermed holding or infiltration area during rain events and the location of this area will be indicated on the SWPPP site map. The perimeter of this area will be surrounded by appropriate sediment barriers (e.g., fiber rolls fitted with absorbent or lipophilic material).

Berms around fuel and construction material storage areas will be repaired, strengthened, and/or increased in height and width as necessary.

Portable toilets will be relocated or contained with a berm if spills, leaks or cleaning activities contribute pollutants to site runoff.

In instances where polluted site discharges may cause or contribute to exceedances of applicable water quality standards in the local receiving water, the Regional Board will be notified by telephone as soon as possible, but not later than 48 hours. This verbal notification will be followed by written report within 14 calendar days, unless or otherwise directed by the Regional Board. The written report shall describe source of pollutants, and action taken to correct or reduce pollutants to the extent feasible, as appropriate.

Documentation

A separate sample event log such as the examples shown in Figure 1 shall be completed for each sampling event. A copy of the SWPPP site map showing the location of sampling points shall be attached. In the case of field tests, verification of calibration of field equipment should be noted on the log, and readings should be clearly written. In the case of laboratory analysis, a copy of the chain of custody should be attached to the log. When analytical results are received from the laboratory, they should also be attached to the log.

Documentation for each sampling event shall also include records of corrective action taken as a result of field tests or laboratory results. Space is provided for this on the sample event log (Figure 1). All sample event documentations shall be kept in the SWPPP files and shall remain at the site at all times until completion of the project.

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Table 1. Potential Pollutant Sources and Best Management Practices for Pollutants Not Visually Detectable in Construction Site Runoff NAME OF PROJECT: _____					
Activity and Site Location (also indicate on SWPPP site map)	Best Management Practices (BMPs)	Potential Pollutant Source	Visual Observation	Field Test Method	Laboratory Analysis
<i>EXAMPLE:</i> Storage of paint supplies	<i>EXAMPLE:</i> All materials are stored under a watertight roof for inside a portable container (<i>No Exposure</i>). <i>EXAMPLE:</i> Spilled materials are cleaned up immediately and disposed of at an approved site, or contained in a watertight container or inside a building.				
<i>EXAMPLE:</i> Soil amendments; all paved roads	<i>EXAMPLE:</i> No soil amendments are scheduled to be applied during the rainy season (Oct 1 – April 30)				

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CONSTRUCTION PRACTICES

DEWATERING OPERATIONS

PAVING OPERATIONS

STRUCTURE CONSTRUCTION AND PAINTING

PRELIMINARY DRAFT

MATERIAL MANAGEMENT

MATERIAL DELIVERY AND STORAGE

MATERIAL USE

SPILL PREVENTION AND CONTROL

PRELIMINARY DRAFT

WASTE MANAGEMENT

SOLID WASTE MANAGEMENT

HAZARDOUS WASTE MANAGEMENT

CONTAMINATED SOIL MANAGEMENT

CONCRETE WASTE MANAGEMENT

SANITARY/SEPTIC WASTE MANAGEMENT

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VEHICLE AND EQUIPMENT MANAGEMENT

VEHICLE AND EQUIPMENT CLEANING

VEHICLE AND EQUIPMENT FUELING

VEHICLE AND EQUIPMENT MAINTENANCE

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CONTRACTORTRAINING

EMPLOYEE/SUBCONTRACTORTRAINING

PRELIMINARY DRAFT

SITE PLANNING CONSIDERATIONS

SCHEDULING

PRESERVATION OF EXISTING VEGETATION

PRELIMINARY DRAFT

VEGETATIVE STABILIZATION

SEEDING AND PLANTING

MULCHING

PRELIMINARY DRAFT

PHYSICAL STABILIZATION

GEOTEXTILES AND MATS

DUST CONTROL

CONSTRUCTION ROAD STABILIZATION

STABILIZED CONSTRUCTION ENTRANCE

PRELIMINARY DRAFT

DIVERSION OF RUNOFF

EARTH DIKE

TEMPORARY DRAINS AND SWALES

SLOPEDRAIN

PRELIMINARY DRAFT

VELOCITY REDUCTION

OUTLET PROTECTION

CHECK DAMS

SLOPE ROUGHENING/TERRACING

PRELIMINARY DRAFT

SEDIMENT TRAPPING/FILTERING

SILT FENCE

STRAWBALE BARRIER

SANDBAG BARRIER

BRUSH OR ROCK FILTER

STORM DRAIN INLET PROTECTION

SEDIMENT TRAP

SEDIMENT BASIN

PRELIMINARY DRAFT

INDUSTRIAL ACTIVITIES REQUIRING BMP'S

NON-STORMWATER DISHACRGESTODRAINS

VEHICLE AND EQUIPMENT FUELING

VEHICLE AND EQUIPMENT WASHING AND STEAM CLEANING

VEHICLE AND EQUIPMENT MAINTENANCE AND REPAIR

OUTDOOR LOADING/UNLOADING OF MATERIALS

OUTDOOR CONTAINER STORAGE OF LIQUIDS

OUTDOOR PROCESS EQUIPMENT
OPERATIONS AND MAINTENANCE

OUTDOOR STORAGE OF RAW MATERIALS,
PRODUCTS AND BY-PRODUCTS

WASTE HANDLING AND DISPOSAL

CONTAMINATED OR ERODIBLE SURFACE AREAS

BUILDING AND GROUND MAINTENANCE

BUILDING REPAIR, REMODELING AND CONSTRUCTION

OVER-WATER ACTIVITIES

EMPLOYEE TRAINING

PRELIMINARY DRAFT

TREATMENT CONTROL BMP'S

INFILTRATION

WETPONDS

CONSTRUCTED WETLANDS

BIOFILTERS

EXTENDED DETENTION BASINS

MEDIA FILTRATION

OIL/WATER SEPARATORS AND WATER QUALITY INLETS

MULTIPLE SYSTEMS