



Central Valley Regional Water Quality Control Board

14 August 2023

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NOTICE OF APPLICABILITY (NOA); GENERAL WASTE DISCHARGE REQUIREMENTS ORDER R5-2022-0006 FOR LIMITED THREAT DISCHARGES TO SURFACE WATER; SOUTHERN CALIFORNIA EDISON, BIG CREEK DAM NO. 4 LOW-LEVEL OUTLET REPAIR AND DAM RESURFACING PROJECT, FRESNO COUNTY

Our office received a Report of Waste Discharge on 10 October 2022 from Southern California Edison (hereinafter Discharger), for discharge of treated hydro-demolition water and seepage to surface water. Based on the application packet and subsequent information submitted by the Discharger, staff has determined that the project meets the required conditions for approval under the General Order for Limited Threat Discharges to Surface Water (Limited Threat General Order). This project is hereby assigned Limited Threat General Order R5-2022-0006-015 and National Pollutant Discharge Elimination System (NPDES) Permit CAG995002. Please reference your Limited Threat General Order number, **R5-2022-0006-015**, in your correspondence and submitted documents.

The project activities shall be operated in accordance with the requirements contained in the Limited Threat General Order and as specified in this NOA. You are urged to familiarize yourself with the entire contents of the enclosed [Limited Threat General Order](#) (https://www.waterboards.ca.gov/rwqcb5/board_decisions/adopted_orders/general_orders/r5-2022-0006_npdes.pdf).

CALIFORNIA TOXICS RULE / STATE IMPLEMENTATION POLICY MONITORING

The Limited Threat General Order incorporates the requirements of the California Toxics Rule (CTR) and the State Water Resources Control Board's (State Water Board), *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, 2005, also known as the State Implementation Policy (SIP). Screening levels for CTR constituents and other constituents of concern are found in Attachment I of the Limited Threat General Order.

MARK BRADFORD, CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

Review of your water quality data in comparison to the screening values, showed reasonable potential for the discharge to cause or contribute to an exceedance of total suspended solids, total recoverable aluminum, total recoverable copper, and pH water quality objectives in Big Creek, which is a water of the United States and a tributary to the San Joaquin River. However, the proposed treatment system is expected to address the water quality concerns by reducing total suspended solids, total recoverable aluminum, total recoverable copper, and pH concentrations below water quality objectives; therefore, the Project qualifies for the Limited Threat General Order.

PROJECT DESCRIPTION

The Big Creek Dam 4 Safety Repairs Project (Project) is located between Huntington Lake and the San Joaquin River. Big Creek Dam 4 is owned and operated by the Discharger and is located just south of Big Creek Powerhouse No. 1 at the confluence of Big Creek and Pitman Creek. The dam has a spillway, which consists of 27 ungated bays separated by piers, with a total length of 187 feet. An outlet in the forebay upstream of the southern abutment of the dam releases water from the forebay to Tunnel No. 2, which flows to Powerhouse No. 2. The whole Project is composed of two portions, the low-level outlet (LLO) repair and the dam surface repairs. This NOA covers discharges associated with the dam surface repairs only, which is the only activity for the Project that requires discharge of process water.

The LLO system consists of a single 72-inch intake slide gate at the upstream base of the dam and a 60-inch-diameter conduit (i.e., pipe), approximately 32 feet long, that extends downstream through the base of the dam to its outflow into Big Creek. The slide gate is manually operated from the walkway across the dam by a rising stem fastened to the upstream face of the dam. The slide gate is currently closed and not functionally reliable due to age and wear including accumulation of corrosion byproducts (i.e., rust) in the valve and operator and on the gate guides. The proposed Project will ensure the LLO valve operates in compliance with the California Department of Water Resources Division of Safety of Dams regulations. The Discharger estimates 20 to 30 gallons per minute of water consistently leaks from the dam conveying water to Big Creek, predominantly through the existing LLO, but also as seepage through the face of the dam. The Project schedule is phased such that the LLO valve will be repaired prior to dam resurfacing. Thus, no additional leakage is anticipated through the LLO during the hydro-demolition phase.

The dam's surface protects it from elemental decay associated with freeze/thaw cycles and other natural weather events. The downstream face of the dam shows clear evidence of deterioration. Removing unsound concrete from the dam face and resurfacing with new concrete will protect the dam's structural integrity to support continued long-term operation of the facility and will also prevent deteriorating concrete from eroding into Big Creek. Concrete removal is proposed through a process known as hydro-demolition which uses water under high pressure to remove concrete. The source

water for the hydro-demolition process is Big Creek. Due to water rights constraints, treated hydro-demolition water is proposed to be discharged back to Big Creek.

The dam surface repairs are expected to start in April 2024 and are proposed to last until December 2025. Work done would include demolition of the existing concrete surfacing at the downstream face of the dam, removal and off-haul of the demolition material, treatment of the construction effluent, and disposal of the treated effluent back into Big Creek.

The estimated daily discharge anticipated during working hours (07:00 AM to 05:00 PM) is 48,000 gallons per day. Discharge is not anticipated during non-working hours (05:00 PM to 07:00 AM). Any seepage collected during non-working hours will be pumped to tanks and detained until working hours.

The proposed treatment system will be sized to manage 90 gallons per minute for hydro-demolition water and any seepage. The system will include pH management, solids management using flocculants and coagulant, four 18,900 gallon weir tanks, two treated water monitoring tanks, and an electrical generator. Also included in the system is a recirculation line to allow any water that is not meeting water quality criteria to reenter the system for additional treatment prior to discharge. Prior to the first discharge, the Discharger plans to perform a test run and collect all water in tanks until sampling is conducted and verified to be within effluent limitations.

DISCHARGE PROHIBITIONS

Discharge prohibitions are specified in Section IV Discharge Prohibitions of the Limited Threat General Order. Based on the information provided in the Report of Waste Discharge, the following discharge prohibitions are applicable to this discharge:

- Prohibition IV.A
- Prohibition IV.B
- Prohibition IV.C
- Prohibition IV.D. The flow shall not exceed 0.054 Million Gallons per Day (MGD).

EFFLUENT LIMITATIONS

Effluent limitations are specified in Section V Effluent Limitations and Discharge Specifications of the Limited Threat General Order. Based on the information provided in the Report of Waste Discharge, effluent limitations are only required for the parameters identified in items 1-7, below:

1. **pH (Section V.A.1.b.i).** The pH of all limited threat discharges within the Sacramento and San Joaquin River Basins (except Goose Lake in Modoc County) shall at all times be within the range of 6.5 and 8.5.
2. **Salinity (Section V.A.1.d.i).** The monthly average effluent electrical conductivity shall not exceed 700 $\mu\text{mhos/cm}$.

3. **Whole Effluent Toxicity, Chronic (Section V.A.2.a).** There shall be no chronic toxicity in the discharge.
4. **Whole Effluent Toxicity, Acute (Section V.A.3.a).** Survival of aquatic organisms in 96-hour bioassays of undiluted waste for all limited threat discharges shall be no less than:
 - i. 70%, minimum for any one bioassay; and
 - ii. 90%, median for any three consecutive bioassays.
5. **Constituents and Parameters of Concern (Section V.A.1.e).** The following constituent/parameter in Table 1 below has been identified as having reasonable potential to cause or contribute to an in-stream excursion from water quality objectives and shall not exceed the effluent limitations as listed.

Table 1. Effluent Limitations for Constituents and Parameters of Concern

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Section Reference
Aluminum, Total Recoverable	µg/L	310	620	V.A.1.e.

6. **Effluent Limitations for Priority Pollutants (Section V.A.1.f).** The following priority pollutant, subject to effluent limitations as identified in this NOA, shall not exceed the effluent limitations in Table 2 for discharges to receiving waters:

Table 2. Effluent Limitations for Priority Pollutants

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Section Reference
Copper, Total Recoverable	µg/L	2.8	5.6	V.A.1.f

7. **Technology-Based Effluent Limitations (Section V.B.1.a).** The discharge shall not exceed the effluent limitations in Table 3.

Table 3. Technology-Based Effluent Limitations

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Section Reference
Total Suspended Solids	mg/L	10	20	V.B.1.a

Big Creek is not listed under the Clean Water Act 303(d) List of impaired water bodies. Therefore, no additional 303(d) based effluent limitations or monitoring requirements will be added to this Limited Threat Notice of Applicability.

RECEIVING WATER LIMITATIONS

The Limited Threat General Order includes receiving surface water limitations in Section VIII.A. Based on the information provided in the Report of Waste Discharge, only the following receiving surface water limitations are applicable to this discharge:

- Bacteria (VIII.A.2);
- Biostimulatory substances (VIII.A.3);
- Chemical constituents (VIII.A.4);
- Color (VIII.A.5);
- Dissolved oxygen (VIII.A.6.a.i, ii, iii, and iv);
- Floating material (VIII.A.7);
- Oil and grease (VIII.A.8);
- pH (VIII.A.9.a);
- Pesticides (VIII.A.10);
- Radioactivity (VIII.A.11);
- Suspended sediments (VIII.A.12);
- Settleable substances (VIII.A.13);
- Suspended material (VIII.A.14);
- Taste and odors (VIII.A.15);
- Temperature (VIII.A.16.a);
- Toxicity (VIII.A.17); and
- Turbidity (VIII.A.18.a).

MONITORING AND REPORTING

Monitoring and reporting requirements are contained in Attachment C of the Limited Threat General Order. The Discharger is required to comply with the following specific monitoring and reporting requirements for the effluent and receiving water in accordance with Attachment C of the Limited Threat General Order.

Monitoring Locations – The Discharger shall monitor the effluent and receiving water at the specified locations as follows:

Table 4. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	A location where a representative sample of the effluent can be collected after the last treatment process and prior to discharging to Big Creek.

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	RSW-001	Upstream of the discharge location, in the Dam 4 Forebay at the barge area.
	RSW-002	Big Creek, no more than 1,000 feet downstream from the point of discharge.

Effluent Monitoring – When discharging to surface water, the Discharger shall monitor the effluent at EFF-001 in accordance with Effluent Monitoring Tables of the Limited Threat General Order and this NOA. The applicable monitoring requirements are as follows in Table 5 and subsequent Table 5 Notes:

Table 5. Effluent Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Flow	MGD	Estimate or Meter	1/Day
Electrical Conductivity @ 25 degrees Celsius	µmhos/cm	Grab	1/Week
pH	standard units	Grab	3/Week
Turbidity	NTU	Grab	3/Week
Temperature	degrees F	Grab	1/Week
Dissolved Oxygen (DO)	mg/L	Grab	1/Week
Total Suspended Solids	mg/L	Grab	1/Week
Hardness, Total (as CaCO ₃)	mg/L	Grab	1/Month
Dissolved Organic Carbon	mg/L	Grab	1/Month
Copper, Total Recoverable	µg/L	Grab	1/Month
Aluminum, Total Recoverable	µg/L	Grab	1/Month
Chronic Toxicity	--	Grab	1/Year

Table 5 Notes

- Electrical conductivity, pH, turbidity, temperature, and DO.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
- All parameters, except flow.** Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
- For hardness, dissolved organic carbon, copper, and aluminum.** Monitoring for

hardness and dissolved organic carbon shall be performed concurrently with effluent sampling for copper and aluminum.

4. **Chronic toxicity.** See the Monitoring and Reporting Program (Attachment C, section V) for toxicity monitoring requirements.

Receiving Water Monitoring - When discharging to surface water, the Discharger shall monitor the receiving water at RSW-001 and RSW-002 in accordance with the Receiving Water Monitoring Table of the Limited Threat General Order and this NOA. The applicable monitoring requirements are as follows in Table 6 and subsequent Table 6 Notes:

Table 6. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Frequency
Dissolved Oxygen	mg/L	Grab	1/Month
Electrical Conductivity @ 25 degrees C	µmhos/cm	Grab	1/Month
pH	standard units	Grab	1/Week
Temperature	degrees F	Grab	1/Month
Turbidity	NTU	Grab	1/Week

Table 6 Notes

1. **All parameters.** Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
2. **All parameters.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained by the Discharger.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002. Attention shall be given to the presence or absence of:

- a. Floating or suspended matter
- b. Discoloration
- c. Bottom deposits
- d. Aquatic life
- e. Visible films, sheens, or coatings
- f. Fungi, slimes, or objectionable growths
- g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the Monitoring Report.

Monitoring Report Submittals - Monitoring in accordance with the Limited Threat General Order shall begin upon initiation of discharge. Monitoring Reports shall be submitted to the Central Valley Water Board on a quarterly basis, beginning with the **Second Quarter 2024**. This report shall be submitted on **1 August 2024**. All Monitoring Reports shall specify the dates during the monitoring period the discharge did or did not occur. If monitoring samples were not obtained within 24 hours of initiation of the discharge, the Discharger must document the reasons in the corresponding Monitoring Report. If discharge has not begun, there is no need to monitor. However, a certified Monitoring Report must be submitted stating that there has been no discharge. Table 7, below, summarizes the Monitoring Report due dates required under the Limited Threat General Order. Quarterly Monitoring Reports must be submitted until your coverage is formally terminated in accordance with the Limited Threat General Order, even if there is no discharge during the reporting quarter.

Table 7. Monitoring Periods and Reporting Schedule

Monitoring Period for All Sampling Frequencies	Quarterly Report Due Date
First Quarter (1 January through 31 March)	1 May
Second Quarter (1 April through 30 June)	1 August
Third Quarter (1 July through 30 September)	1 November
Fourth Quarter (1 October through 31 December)	1 February of the following year

GENERAL INFORMATION AND REQUIREMENTS

The Discharger must notify Central Valley Water Board staff 24 hours before the start of the discharge and within 24 hours of having knowledge of noncompliance with any prohibition, effluent limitation, or receiving water limitation.

Discharge of material other than what is described in the application is prohibited. The required annual fee (as specified in the annual invoice you will receive from the State Water Resources Control Board) shall be submitted until this NOA is officially terminated. You must notify this office in writing when the discharge regulated by the Limited Threat General Order is no longer necessary by submitting the Request for Termination of Coverage (Attachment E). If a timely written request is not received, the Discharger will be required to pay additional annual fees as determined by the State Water Resources Control Board.

ENFORCEMENT

Failure to comply with the Limited Threat General Order may result in enforcement actions, which could include civil liability. Effluent limitation violations are subject to a Mandatory Minimum Penalty (MMP) of \$3,000 per violation. In addition, late Monitoring Reports may be subject to MMPs or discretionary penalties of up to \$1,000 per day late. When discharges do not occur during a quarterly monitoring period, the Discharger must still submit a quarterly certified Monitoring Report indicating that no discharge occurred to avoid being subject to enforcement actions.

Julie Granbery
Senior Manager
Southern California Edison

14 August 2023
Big Creek Dam 4 Low-Level Outlet Repair
and Dam Resurfacing Project
R5-2022-0006-015

COMMUNICATION

All notification of non-compliance and questions regarding compliance and enforcement shall be directed to Omar Mostafa of the Central Valley Water Board's NPDES Compliance and Enforcement Unit. Mr. Mostafa can be reached at (559) 445-5197 or by email at Omar.Mostafa@waterboards.ca.gov.

Questions regarding the permitting aspects of this NOA and written notification for termination of coverage under the Limited Threat General Order, shall be directed to Lovdeep Singh of the Central Valley Water Board's NPDES Permitting Unit. Mr. Singh can be reached at (559) 445-5130 or by email at Lovdeep.Singh@waterboards.ca.gov.

The Central Valley Water Board is implementing a Paperless Office system to reduce our paper use, increase efficiency, and provide a more effective way for our staff, the public, and interested parties to view documents in electronic form. Therefore, the Discharger is required to submit all self-monitoring and technical reports required by this NOA via the paperless office system. Please convert all documents to a searchable Portable Document Format (PDF) and email them to centralvalleyfresno@waterboards.ca.gov.

Please include the following information in the body of the email:

- Attention: NPDES Compliance Unit
- Discharger: Southern California Edison
- Facility: Big Creek Dam 4 Low-Level Outlet Repair and Dam Resurfacing Project
- County: Fresno County
- CIWQS Place ID: 888227

Documents that are 50 megabytes or larger must be transferred to a DVD, or flash drive, and mailed to our office, attention "ECM Mailroom-NPDES".

Julie Granbery
Senior Manager
Southern California Edison

14 August 2023
Big Creek Dam 4 Low-Level Outlet Repair
and Dam Resurfacing Project
R5-2022-0006-015

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this NOA, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Links to the law and regulations applicable to filing petitions may be found on the [Petitions Home Page](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

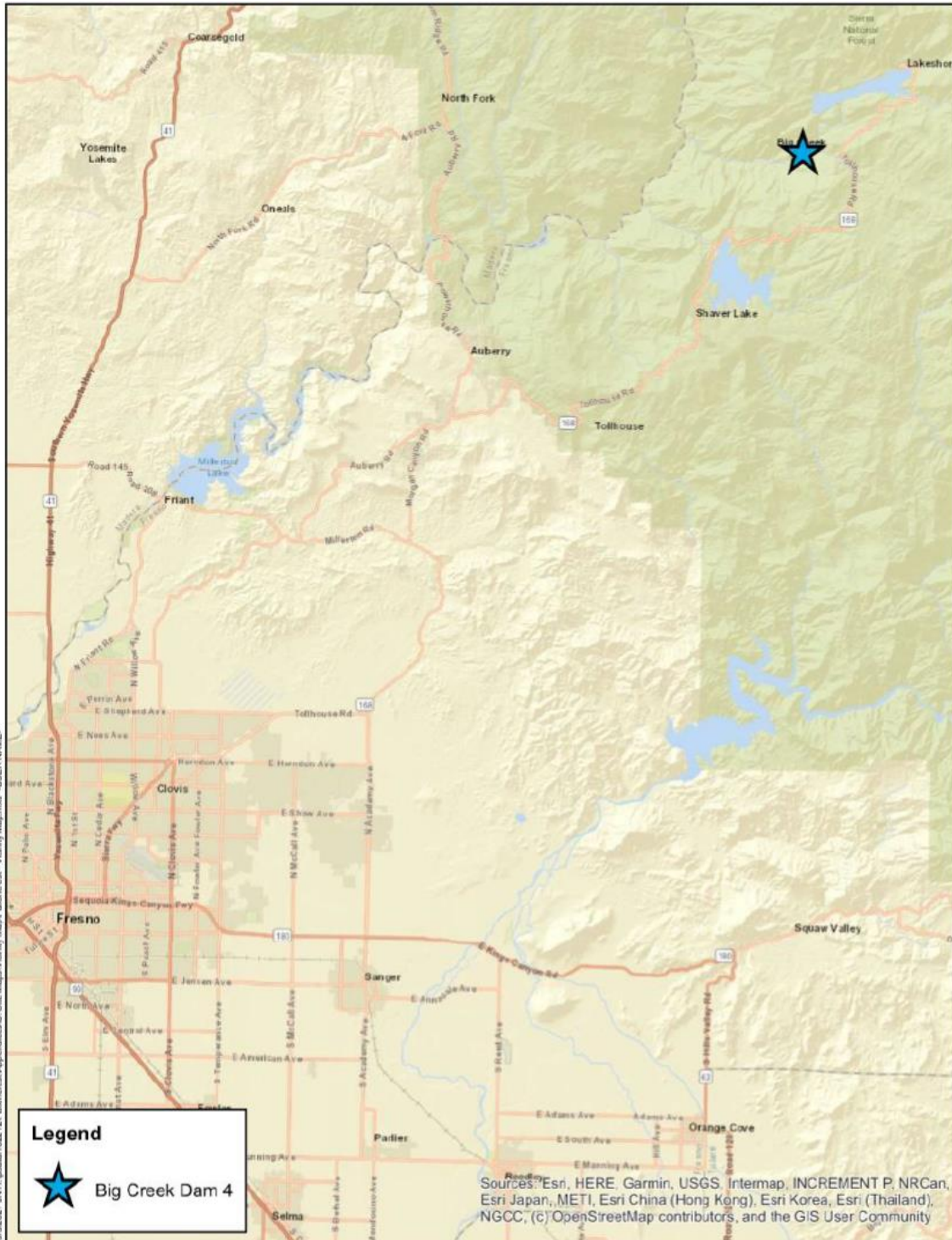
Original Signed by Scott J. Hatton for:
Patrick Pulupa
Executive Officer

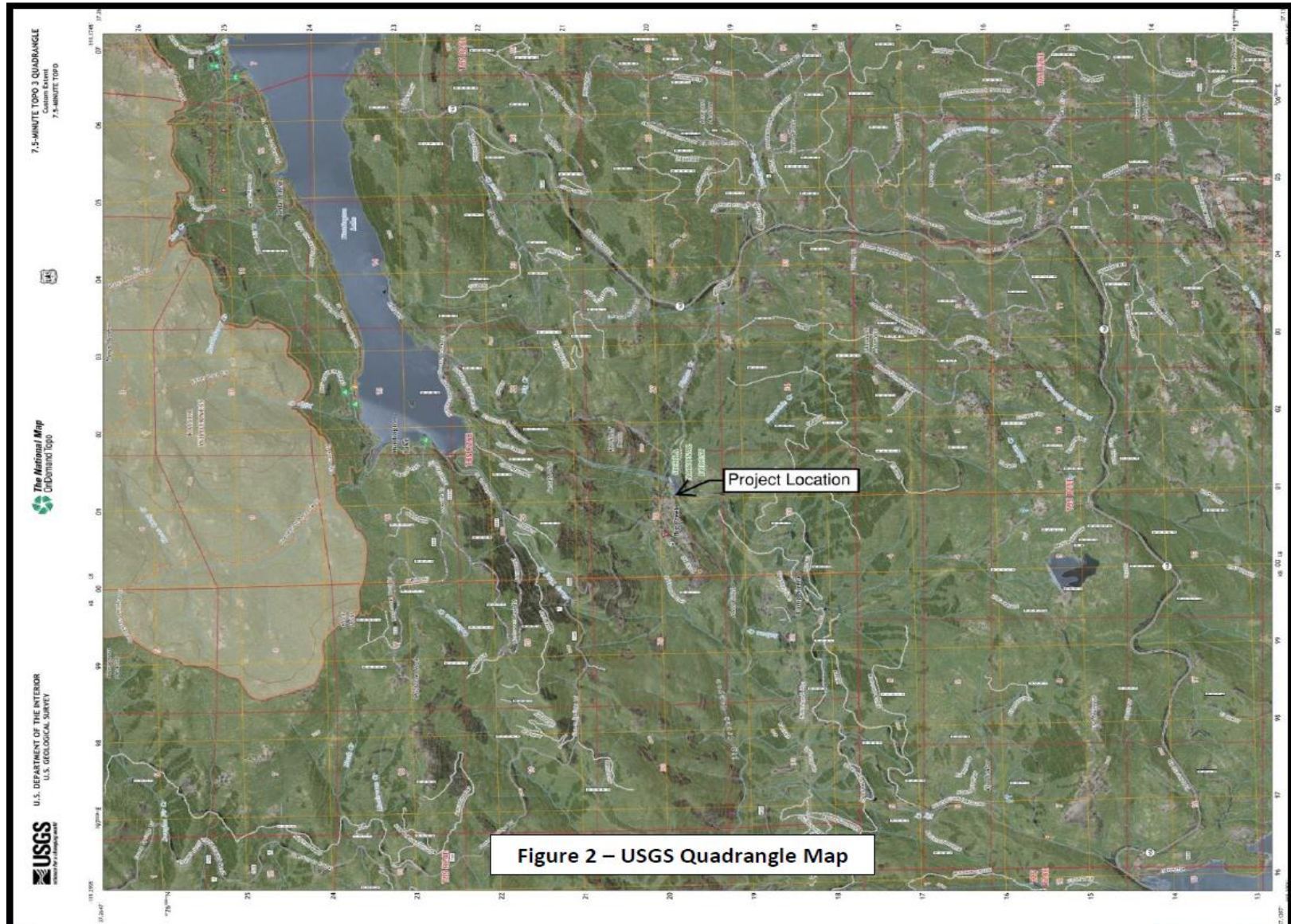
Attachment (1): Attachment A - Project Location Maps

Enclosures (2): General Order R5-2022-0006 (Discharger only)
Monitoring Report Transmittal Form (Discharger only)

cc: Elizabeth Sablad, U.S. EPA, Region IX, San Francisco (email only)
Peter Kozelka, U.S. EPA, Region IX, San Francisco (email only)
Prasad Gullapalli, U.S. EPA Region IX, San Francisco (email only)
Division of Water Quality, State Water Board, Sacramento (email only)
Sarah Torres, PG Environmental (via email at icis-mpdes@pgenv.com)
Karen Whiteside, Southern California Edison Company, Rosemead (email only)
Paul Ahn, Southern California Edison Company, Rosemead (email only)
Andrew Price, Michael Baker International, Santa Ana (email only)

ATTACHMENT A – PROJECT LOCATION MAPS AND TREATMENT SCHEMATIC





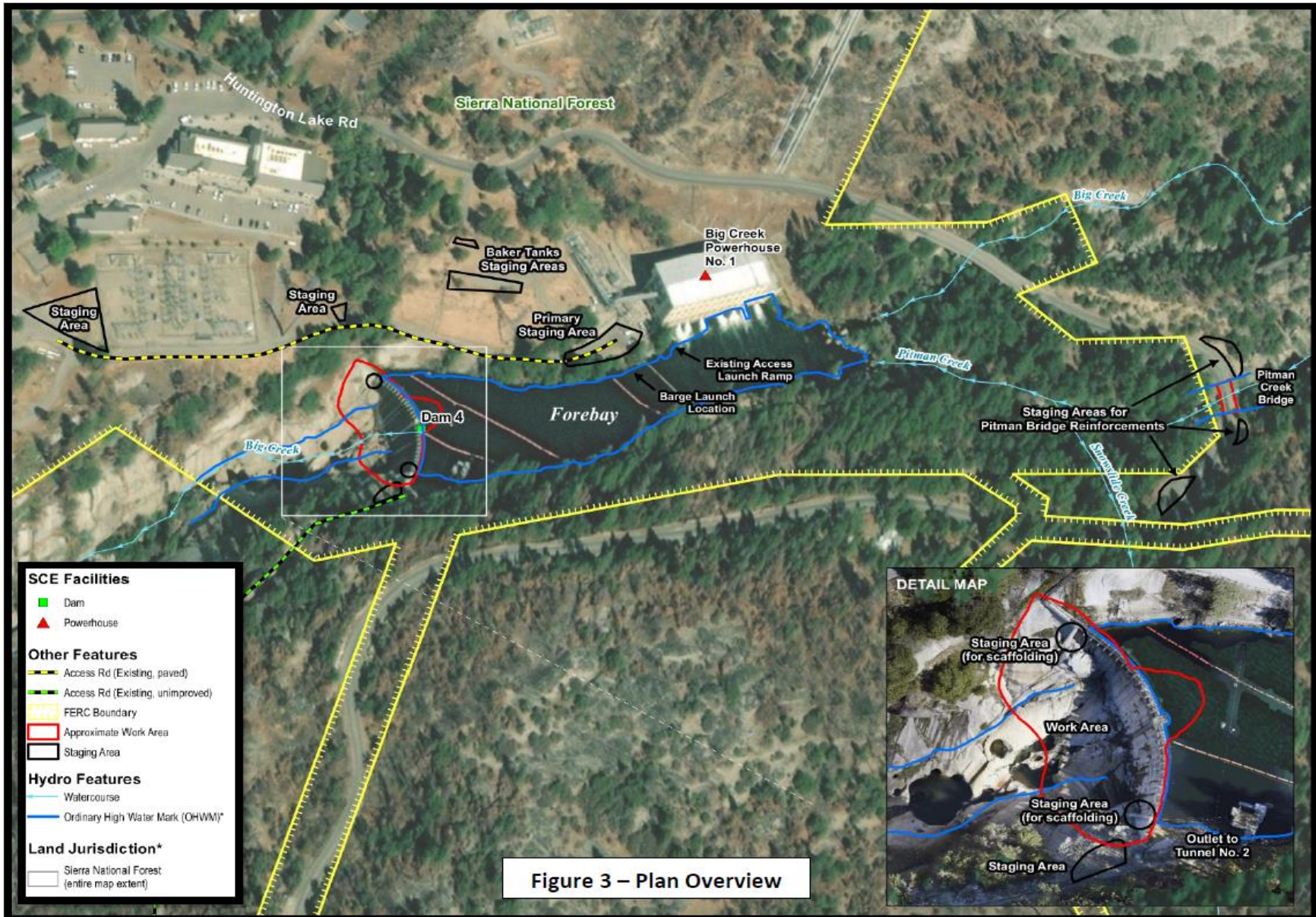


Figure 3 – Plan Overview

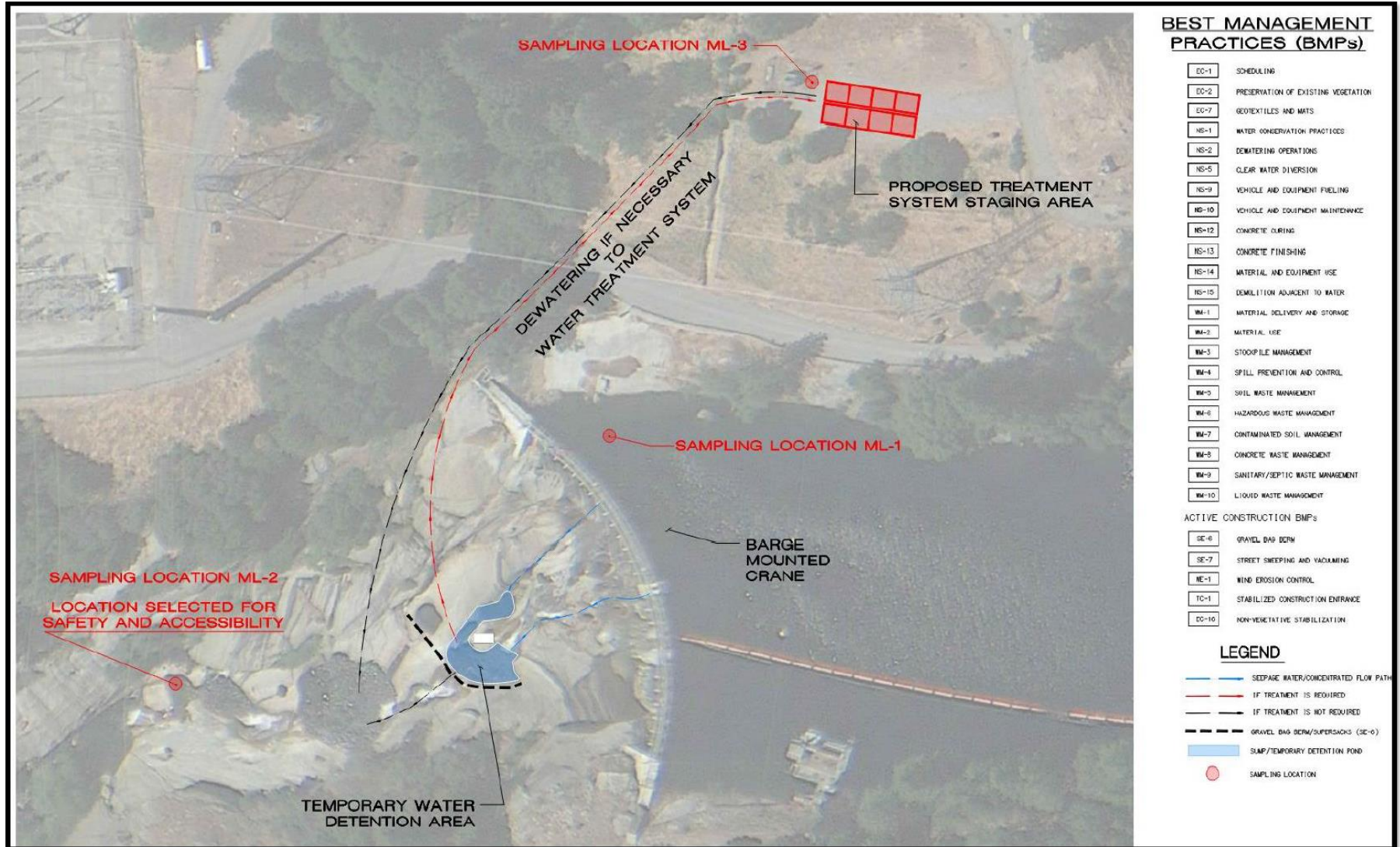


Figure 4 – Sampling Map

Figure 5 –Treatment System Schematic

