



Central Valley Regional Water Quality Control Board

19 May 2022

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California Department of Fish and Wildlife
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CERTIFIED MAIL:
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Pacific Gas & Electric Company
3600 Meadowview Drive
Redding, CA 96002

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NOTICE OF APPLICABILITY; GENERAL WASTE DISCHARGE REQUIREMENTS FOR COLD WATER CONCENTRATED AQUATIC ANIMAL PRODUCTION (CAAP) FACILITY DISCHARGES TO SURFACE WATERS; ORDER R5-2019-0079 (CAAP GENERAL ORDER, NPDES NO. CAG135001); CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE & PACIFIC GAS AND ELECTRIC COMPANY, CRYSTAL LAKE FISH HATCHERY, SHASTA COUNTY

The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) issued a Notice of Applicability (NOA) to California Department of Fish and Wildlife and Pacific Gas & Electric Company (collectively referred to as Discharger) on 11 April 2016 for coverage under the CAAP General Order for the Crystal Lake Fish Hatchery (Facility).

On 5 December 2019, the Central Valley Water Board adopted Order R5-2019-0079 renewing the CAAP General Order. The Discharger submitted a Notice of Intent on 18 June 2019 to continue coverage for the Facility under the CAAP General Order. Effective **1 June 2022**, this NOA provides continued coverage for the Facility under the CAAP General Order to discharge to the Baum Lake, superseding the previous NOA issued 11 April 2016. CAAP General Order R5-2019-0079 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG135001 are assigned for this Facility. Please reference your CAAP General Order number **R5-2019-0079-009** in all correspondence and submitted documents. The following enclosures are included as part of this NOA:

1. Enclosure A - Administrative Information
2. Enclosure B - Location Map
3. Enclosure C - Flow Schematic

MARK BRADFORD, CHAIR | PATRICK PULUPA, EXECUTIVE CHAIR

- 4. Enclosure D - Monitoring and Reporting Program
- 5. Enclosure E - Approved Aquaculture Drugs and Chemicals Use

The enclosed [CAAP General Order](http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders) (http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders) is also available online. You are urged to familiarize yourself with the entire contents of the enclosed document. The Facility operations and discharges shall be managed in accordance with the requirements contained in the CAAP General Order, this NOA, and with the information submitted by the Discharger.

I. FACILITY INFORMATION/DISCHARGE DESCRIPTION

The Facility is located in Cassel at 40158 Baum Lake, in Section 12, T5S, R14E, MDB&M, as shown in Enclosure B of this NOA. The Facility is owned and operated by the California Department of Fish and Wildlife on land owned by the Pacific Gas and Electric Company. The Facility is a flow through system that annually produces approximately 265,000 pounds of rainbow trout; 75,000 pounds of brook trout; 130,000 pounds of eagle lake trout; 15,000 pounds of chinook salmon, and 65,000 of brown trout. The Facility is phasing-out brook trout. Additionally, brook trout and Chinook salmon are not raised annually, however, the Discharger may raise some in a given year.

In the Notice of Intent, the Discharger reported the predicted 5-year maximum annual harvestable fish production (Table 1) and the maximum monthly feed use of 69,150 pounds for the Facility.

Table 1. 5-Year Maximum Aquatic Animal Production

Species	5-Year Maximum Annual Harvestable Maximum Hatchery Aquatic Animal Production (lbs)
Rainbow trout	300,000
Brook trout	120,000
Eagle Lake trout	150,000
Chinook salmon	25,000
Brown trout	75,000

Hatchery structures are distributed over approximately 40 acres and consist of: twelve concrete-lined upper/lower raceways (with five 100 foot (ft) ponds in each raceway, for a total of 60 ponds), two concrete-lined broodstock raceways (with three 100 ft. ponds in each raceway, for a total of 6 ponds), a hatchery building to accommodate egg/fry rearing with flow-through deep tanks and troughs, a building with eight additional deep tanks and three small circular tanks, an office/shop building, a truck garage, a storage freezer building, a domestic water pump house, public restrooms, three unlined settling ponds, several bulk feed storage bins, and seven residential housing units.

The upper/lower raceways and fry/egg rearing building receive approximately 11.6 million gallons per day (mgd) (18 cubic feet per second (cfs)) of resurgence water from Rock Creek Springs. Source water is screened for large debris before conveyance

into six upper raceways. Water from the upper raceways is circulated through an aeration tower prior to entrance into six lower raceways. Hatchery wastewater flow is then split and discharged into two parallel unlined settling ponds before entering Baum Lake.

Approximately 4.2 mgd (or 6.5 cfs) of surface water from Crystal Lake (a spring supplied lake) is conveyed into two concrete-lined broodstock raceways that are located near the northernmost part of the Facility. Surface water from Crystal Lake passes through a screen before entering the raceways, which are split into three 100-foot segmented discrete rearing zones per raceway. After passing through the rearing area, hatchery wastewater is discharged to a single unlined settling pond before entrance into Baum Lake.

There are several domestic sewage sources and disposal methods utilized at the Facility. Domestic sewage from both the hatchery buildings and the residential housing is pumped from a holding tank into two sewage lagoons for disposal via evaporation and percolation; the sewage lagoon is encircled with a steel barbed-wire fence to prevent public contact. Impacts from the sewage lagoons are monitored via two groundwater monitoring wells located adjacent to the lagoons.

There are two septic systems at the Facility. Wastewater from an onsite public restroom is discharged into a septic system near the Facility's entrance and another septic system serves the shop and a residence located near the broodstock raceways.

Wastewater is discharged from the Facility to the Baum Lake at Discharge Point 001 and 002 as shown in Enclosure C, a part of this NOA.

The Discharger indicated in the 18 June 2019 Notice of Intent that the Facility discharges approximately 15.8 million gallons per day (mgd) of wastewater, on average, from the Facility continuously to the Baum Lake (Discharge Points 001 and 002).

Outfall 001 – Flow-through hatchery wastewater, sourced from Rock Creek Springs, enters the upper/lower raceways and main hatchery building before the flow splits into two parallel unlined settling ponds. Approximately 11.6 mgd is released to Baum Lake at Outfall 001. Latitude: 40° 56' 00.03" N; and Longitude: 121° 32' 38.99" W

Outfall 002 – Flow-through hatchery wastewater, sourced from Crystal Lake (a spring recharged lake), enters the broodstock raceways before discharge into an unlined settling pond. Approximately 4.2 mgd of hatchery wastewater is released to Baum Lake at Outfall 002. Latitude: 40° 56' 02.07" N; and Longitude: 121° 32' 51.89" W

II. DISCHARGE PROHIBITIONS (CAAP GENERAL ORDER SECTION IV)

The Discharge Prohibitions contained in CAAP General Order Section IV are applicable to this Facility.

III. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS (CAAP GENERAL ORDER SECTION V)

A. Effluent Limitations (CAAP General Order Section V)

Effluent limitations are specified in Section V., Effluent Limitations and Discharge Specifications, of the CAAP General Order. The following effluent limitations (Table 2) are applicable to this discharge and are contained in Sections V.A of the CAAP General Order:

1. Discharges to surface waters shall not exceed the effluent limitations contained in Table 2 below.

Table 2. Effluent Limitations

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitations
Formaldehyde	mg/L	0.65	1.3
Chlorine	mg/L	--	0.018

Table 2 Notes:

Compliance with the effluent limitations for formaldehyde may be evaluated using an estimated effluent concentration in lieu of effluent monitoring data. The estimated effluent concentration shall be calculated as described in the CAAP General Order (Section IX.A of Enclosure C, Monitoring and Reporting Program).

2. The Discharger shall minimize the discharge of Total Suspended Solids through the implementation of the best management practices established in Special Provision VII.C.3 of the CAAP General Order.

B. Land Discharge Specifications (CAAP General Order Section V.C)

The Land Discharge Specifications contained in CAAP General Order Section V.C are applicable to this Facility.

IV. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations (CAAP General Order Section VI.A)

The discharge to the Baum Lake is subject to the Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan), therefore, the receiving water limitations contained in the CAAP General Order based on the Basin Plan, as indicated below, are applicable to this discharge.

- Un-ionized Ammonia (VI.A.1) – Not Applicable
- Bacteria (VI.A.2);
- Biostimulatory Substances (VI.A.3);

- Chemical Constituents (VI.A.4);
- Color (VI.A.5);
- Dissolved Oxygen (VI.A.6.a and VI.A.6.b);
- Electrical Conductivity (VI.A.7) – Not Applicable;
- Floating Material (VI.A.8);
- Oil and Grease (VI.A.9);
- pH (VI.A.10);
- Pesticides (VI.A.11.a, b, c, d, e, g);
- Radioactivity (VI.A.12);
- Suspended Sediments (VI.A.13);
- Settleable Substances (VI.A.14);
- Suspended Material (VI.A.15);
- Taste and Odors (VI.A.16);
- Temperature (VI.A.17);
- Toxicity (VI.A.19); and
- Turbidity (VI.A.20.a).

B. Ground Water Limitations (CAAP General Order Section VI.B)

The Groundwater Limitations contained in CAAP General Order Section VI.B are applicable to this Facility.

V. PROVISIONS

Provisions are contained in Section VII of the CAAP General Order, and the applicable provisions are referenced below.

A. Standard Provisions. (CAAP General Order Section VII.A)

The Standard Provisions contained in CAAP General Order Section VII.A are applicable to this Facility.

B. Monitoring and Reporting Program Requirements. (CAAP General Order Section VII.B)

Each Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment C, of the CAAP General Order and as specified in Enclosure D of this NOA.

C. Special Provisions. (CAAP General Order Section VII.C)

Special Provisions are contained in Section VII.C of the CAAP General Order. Only the following Special Provision sections from the CAAP General Order specified in Table 3 below apply to this Facility:

Table 3: Summary of Applicable Special Provisions

Special Provision	CAAP General Order Section Reference
Reopener Provisions	Section VII.C.1
Drug and Other Chemical Use Reporting	Section VII.C.2
Best Management Practices and Pollution Prevention	Section VII.C.3
Waste Disposal	Section VII.C.4
Special Provisions for Municipal Facilities (POTWs Only).	Section VII.C.5 - Not Applicable
Other Special Provisions.	Section VII.C.6 - Not Applicable
Compliance Schedules.	Section VII.C.7 – Not Applicable

VI. COMPLIANCE DETERMINATION (CAAP GENERAL ORDER SECTION VIII.A)

Compliance with the effluent limitations for formaldehyde may be evaluated using an estimated effluent concentration in lieu of effluent monitoring data. The estimated effluent concentration shall be calculated as described in Section IX.A of Enclosure C, Monitoring and Reporting Program.

VII. OTHER REQUIREMENTS

- A.** The discharge from the Facility (Discharge Point 001) shall not exceed a monthly average flow of 19.4 million gallons per day (mgd).
- B.** The CAAP General Order expires on **31 January 2025**. Only those CAAP facilities authorized to discharge under the expiring Order and who submit a Notice of Intent at least **one year** prior to the expiration date of the CAAP General Order (unless the Executive Officer grants permission for a later date) will remain authorized to discharge under administratively continued permit conditions.
- C.** Aquaculture activities defined in 40 C.F.R. 122.25(b) will be subject to the annual fee for general NPDES permits and *de minimus* discharges that are regulated by individual or general NPDES permits (California Code of Regulations Section 2200(b)(9) for Category 3 discharges).
- D.** In accordance with section VII.C.3.a of the CAAP General Order, the Discharger shall certify within **90 days** from the issuance of this NOA that a Best Management Practices (BMP) Plan has been developed and is being implemented. To satisfy this requirement the Discharger shall submit a letter to the Central Valley Water Board

certifying compliance with the BMP Plan requirements by **17 August 2022**. The Discharger can develop a new BMP Plan, or an existing BMP Plan may be modified for use under this requirement. The Discharger shall develop and implement the BMP Plan to prevent or minimize the generation and discharge of wastes and pollutants to waters of the United States and waters of the State and ensure disposal or land application of wastes is in compliance with applicable solid waste disposal regulations. The BMP Plan shall include practices used during salt treatments at the Facility to minimize salinity discharges to the receiving water. The Discharger shall review the BMP Plan annually and must amend the BMP Plan whenever there is a change in the Facility or in the operation of the Facility which materially increases the generation of pollutants or their release or potential release to surface waters.

VIII. ENFORCEMENT

Failure to comply with the CAAP 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, as well as discretionary penalties. In addition, late monitoring reports are subject to discretionary penalties and MMPs. When discharges do not occur during a quarterly monitoring report period, the Discharger must still submit a quarterly monitoring report indicating that no discharge occurred to avoid being subject to enforcement actions.

IX. COMMUNICATION

All monitoring report submittals, notification of the beginning and end of discharge, questions regarding compliance and enforcement, and questions regarding permitting aspects shall be directed to Stacey Alexander of the Central Valley Water Board's NPDES Unit. Stacey Alexander can be reached at (530) 224-3219 or by email at Stacey.Alexander@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, technical, and progress reports required by this NOA via CIWQS submittal. In general, if any monitoring data for a monitoring location can be submitted using a computable document format (CDF) file upload, then it should be submitted as a CDF file upload. However, certain parameters that cannot be uploaded to the CIWQS data tables, such as the BMP Plan, should be uploaded as a Portable Document Format (PDF), Microsoft Word, or Microsoft Excel file attachment. Also, please upload or enter a cover letter summarizing the content of the report to the submittal tab of the CIWQS module for each submittal.

All other documents not required to be submitted via CIWQS shall be converted to a searchable PDF and submitted by email to the Central Valley Water Board email centralvalleyfresno@waterboards.ca.gov with the following information:

- Attention: NPDES Unit
- Discharger: California Department of fish and Wildlife
- Facility: Crystal Lake Hatchery
- County: Shasta County
- CIWQS Place ID: 216265

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".

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board (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 NOA 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 [laws and regulations applicable to filling petitions](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality) may be found on the internet or will be provided upon request.

Original Signed By Clint E. Snyder

(for) Patrick Pulupa
Executive Officer

Enclosure: Enclosure A – Administrative Information
Enclosure B – Location Map
Enclosure C – Flow Schematic
Enclosure D – Monitoring and Reporting Program
Enclosure E – Approved Aquaculture Drug and Chemical Use

Enclosure: CAAP General Order R5-2019-0079 (Discharger only)

cc: Shasta County Department of Resource Management, Division of
Environmental Health, Redding

cc via email

w/ encl: Terry Jackson, California Department of Fish and Wildlife, Rancho Cordova
Shane Overton, California Department of Fish and Wildlife, Cassel

cc via email

w/o encl: Elizabeth Sablad, U.S.EPA, Region IX, San Francisco
Peter Kozelka U.S.EPA, Region IX, San Francisco
Prasad Gullapalli, U.S. EPA Region IX, San Francisco
Division of Water Quality, State Water Board, Sacramento

ENCLOSURE A - ADMINISTRATIVE INFORMATION

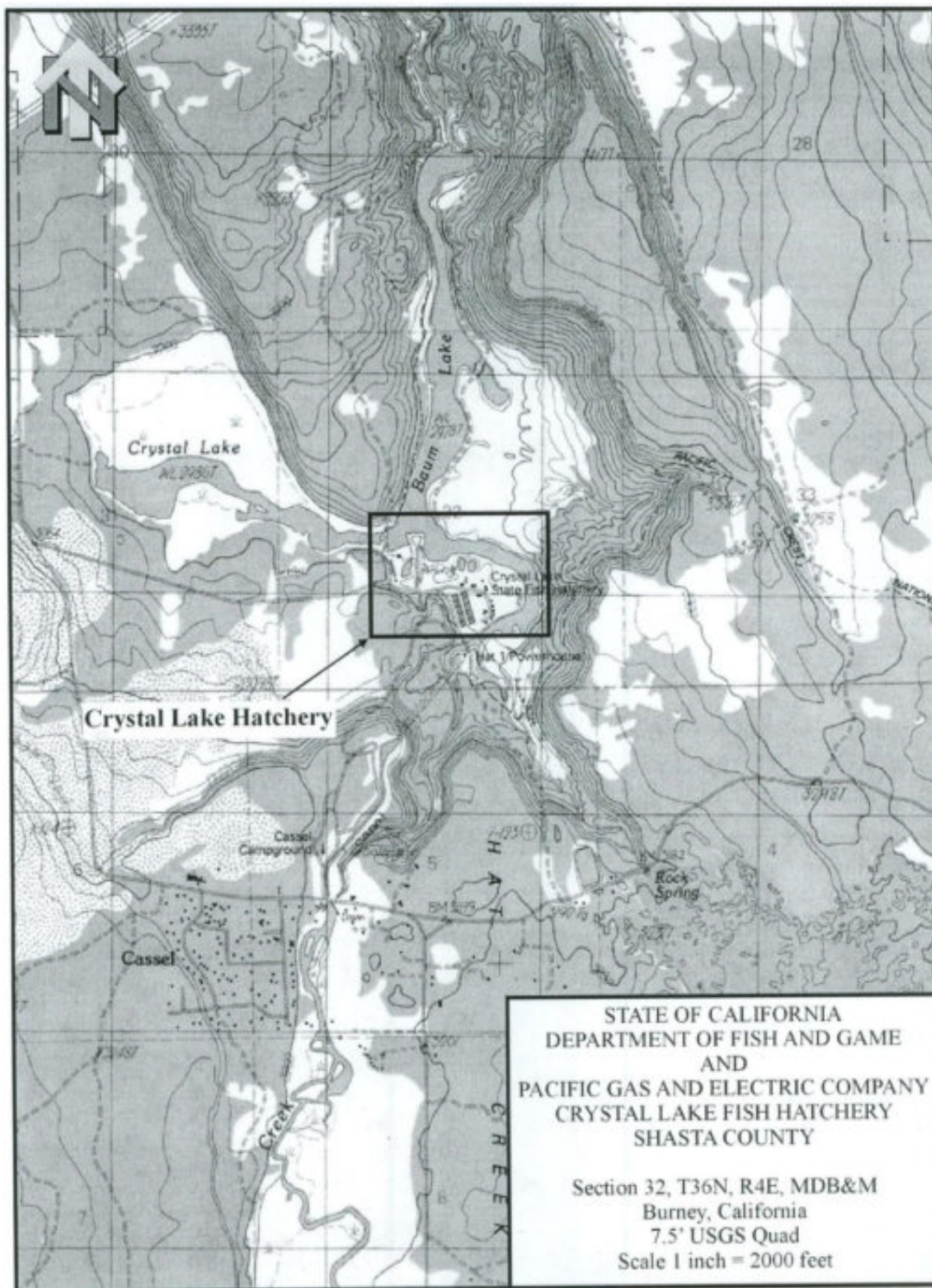
Waste Discharge ID:	5A450803001
CIWQS Facility Place ID:	216265
General Order NOA Enrollee Number:	R5-2019-0079-009
Discharger:	California Department of Fish and Wildlife (CDFW) -Facility Owner/Operator and Pacific Gas and Electric Company (PG and E)- Property Owner
Name of Facility:	Crystal Lake Fish Hatchery
Facility Address:	40156 Baum Lake Road
Facility City, State Zip:	Cassel, CA 96016
Facility County:	Shasta County
Facility Contact, Title and Phone Number:	Shane Overton, Fish Hatchery Manager II (530) 335-4111
Landowner:	PG and E
Landowner Address:	20818 Black Ranch Road
Landowner City, State Zip:	Burney, CA 96013
Landowner Contact and Phone Number:	Pacific Gas and Electric Company 20818 Black Ranch Road Burney, CA 96013 (530) 335-5640
Authorized Person to Sign and Submit Reports:	Eric Jones, Senior Environmental Scientist Supervisor (530) 510-3898 Shane Overton Hatchery Manager (530) 335-4111
Mailing Address:	CDFW – Region 1 601 Locust Street Redding, CA 96001
Billing Address:	Same
Total Weight Produced (Year one through five):	605,000 – 670,000 pounds/year
Type of Facility:	CAAP Facility, SIC Code 0921
Major or Minor Facility:	Minor
Threat to Water Quality:	2
Complexity:	B
Pretreatment Program:	No
Recycling Requirements:	No

Enclosure A – Administrative Information
Crystal Lake Fish Hatchery

Facility Permitted Flow:	19.4 million gallons per day (mgd)
Watershed:	Sacramento River Basin
Receiving Water:	Baum Lake, a tributary to the Pit River
Receiving Water Type:	Inland surface water

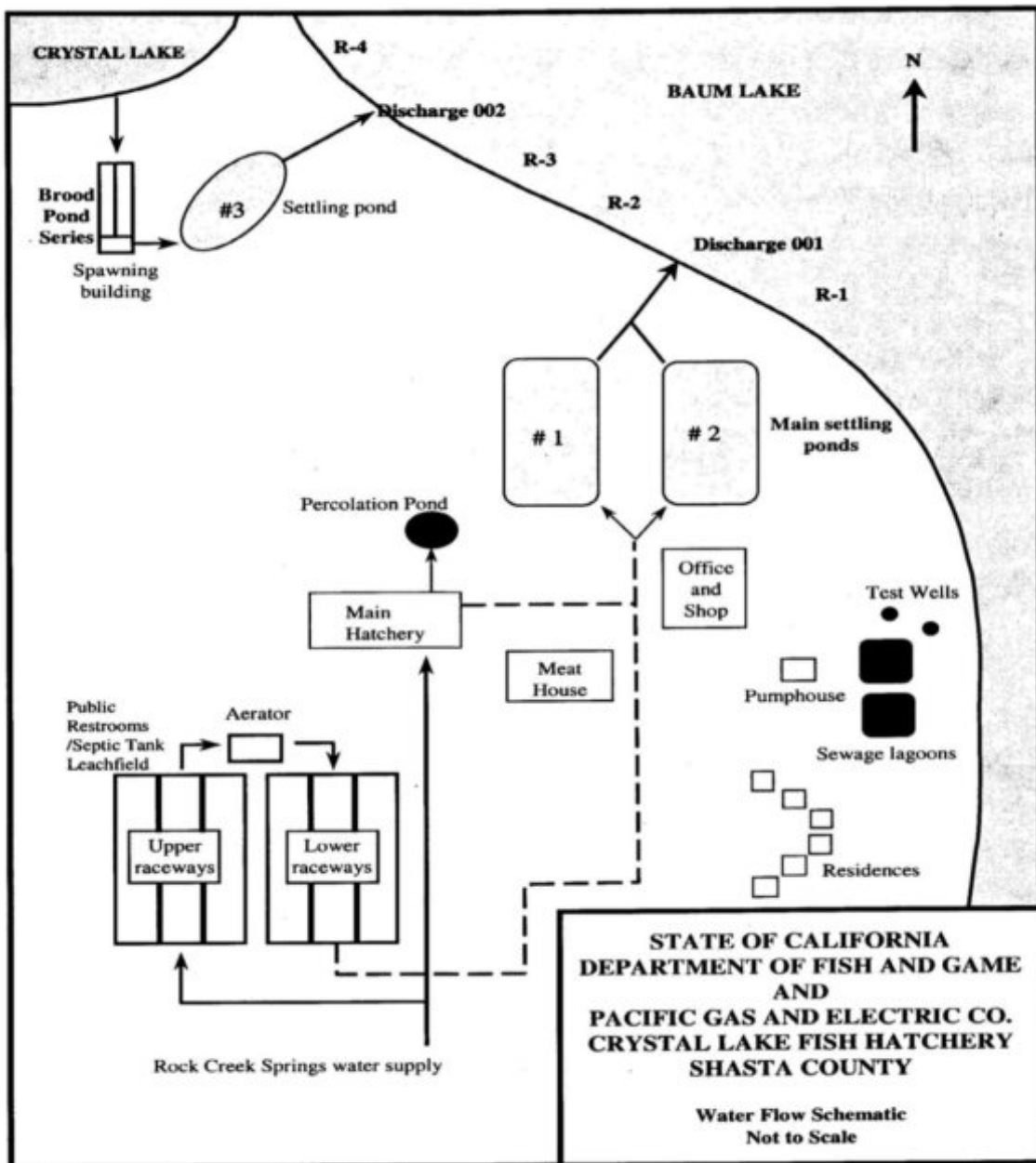
Enclosure B – Location Map
Crystal Lake Fish Hatchery

ENCLOSURE B – LOCATION MAP



Enclosure C – Flow Schematic
Crystal Lake Fish Hatchery

ENCLOSURE C – FLOW SCHEMATIC



ENCLOSURE D – MONITORING AND REPORTING PROGRAM

The Discharger is required to comply with all the Monitoring and Reporting Requirements contained in Attachment C of the CAAP General Order, as specified in this NOA Enclosure D.

This Facility is the category of production of greater than 100,000 pounds of aquatic animals produced per year. Tables D-2, D-3, and D-4 below are based on the monitoring in the CAAP General Order, Attachment C for facilities producing greater than 100,000 pounds of aquatic animals produced per year (Enclosure C - Sections III.A, IV.A.1, and VIII.C).

I. GENERAL MONITORING PROVISIONS

The Discharger shall comply with the General Monitoring Provisions specified in the CAAP General Order, Attachment C, Section I.

II. MONITORING LOCATIONS

The monitoring locations are defined as follows in Table D-1 below, and a flow schematic showing the site-specific monitoring locations is provided in Enclosure C to this NOA.

Table D-1. Monitoring Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	INF-001	Surface water diverted from Rock Creek shall be collected at a location where a representative sample can be obtained, prior to source water entering the fish rearing raceways [Approximate location: near 40°55'49.59" N latitude and 121°32'39.42" W longitude].
	INF-002	Surface water diverted from Crystal Lake shall be collected at a location where a representative sample can be obtained, prior to source water entering the broodstock raceways [Approximate location: near 40°55'59.42" N latitude and 121°32'54.42" W longitude].
001	EFF-001	Hatchery wastewater shall be collected and sampled after the last point of treatment and prior to hatchery wastewater entering Baum Lake through Outfall 001 [Approximate location: 40°56'0.03" N latitude and 121°32'38.99" W longitude].
002	EFF-002	Hatchery wastewater shall be collected and sampled after the last point of treatment and prior to hatchery wastewater entering Baum Lake through Outfall 002 [Approximate location: 40°56'2.07" N latitude and 121°32'51.89" W longitude].

Enclosure D – Monitoring and Reporting Program
 Crystal Lake Fish Hatchery

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	RSW-001	Upstream receiving water shall be collected approximately 100 feet southeast of Outfall 001 in Baum Lake. Samples shall be collected at least 10 feet from the shoreline [Approximate location: near 40°56'0.34" N latitude and 121°32'37.64" W longitude].
	RSW-002	Downstream receiving water shall be collected approximately 100 feet northwest of Outfall 001 in Baum Lake. Samples shall be collected at least 10 feet from the shoreline [Approximate location: near 40°56'0.45" N latitude and 121°32'40.35" W longitude].
	RSW-003	Downstream receiving water shall be collected approximately 100 feet northeast of Outfall 002 in Baum Lake. Samples shall be collected at least 10 feet from the shoreline [Approximate location: near 40°56'3.14" N latitude and 121°32'51.70" W longitude].
	RSW-004	Upstream receiving water shall be collected approximately 100 feet southwest of Outfall 002 in Baum Lake. Samples shall be collected at least 10 feet from the shoreline [Approximate location: near 40°56'1.58" N latitude and 121°32'53.06" W longitude].

III. INFLUENT MONITORING REQUIREMENTS (INF-001 and INF-002)

- A. The Discharger shall monitor the source water supply to the Facility at Monitoring Locations INF-001 and INF-002 as specified in Table D-2 below. Samples shall be collected at approximately the same time as effluent and receiving water samples.

Table D-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
pH	S.U.	Grab	1/month
Electrical Conductivity @ 25 degrees Celsius	µmhos/cm	Grab	1/month
Total Suspended Solids	mg/L	Grab	1/month

- B. **Table D-2 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table D-2.

Enclosure D – Monitoring and Reporting Program
 Crystal Lake Fish Hatchery

1. Parameters shall be analyzed using the analytical methods described in 40 C.F.R. Part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
2. Constituents shall be monitored using analytical methods with sufficiently sensitive reporting levels consistent with the SSM Rule specified in 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv).

C. Influent Monitoring for Facilities with Intake Water Credits. Not applicable.

IV. EFFLUENT MONITORING REQUIREMENTS (EFF-001 and EFF-002).

- A.** The Discharger shall monitor the effluent at Monitoring Locations EFF-001 and EFF-002 as specified in Table D-3 below. Effluent samples shall be representative of the volume and quality of the discharge. Effluent samples shall be collected during or immediately following raceway cleaning or administration of drug or chemical treatments and must be representative of the volume and quality of the discharge at the time when representative levels of solids, drugs, chemicals, or other pollutants are present in the discharge. Time of collection of samples shall be recorded.

Table D-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	cfs	Meter	1/month
Total Suspended Solids (TSS)	mg/L	Grab	1/month
Net TSS (effluent minus influent)	mg/L	Net Calculation	1/month
Turbidity	NTU	Grab	1/month
pH	S.U.	Grab	1/month
Electrical Conductivity @ 25 degrees Celsius	µmhos/cm	Grab	1/month
Formaldehyde	mg/L	Grab	1/month during Formalin use
Chlorine	mg/L	Grab	1/quarter during chlorine use

Table D-3 Testing Requirements. The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table D-3.

1. Parameters shall be analyzed using the analytical methods described in 40 C.F.R. Part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
2. Electrical conductivity samples shall be collected monthly. If sodium chloride is used, the monthly monitoring of electrical conductivity shall be conducted during treatment.

Enclosure D – Monitoring and Reporting Program
Crystal Lake Fish Hatchery

3. pH and formaldehyde shall be monitored using analytical methods with sufficiently sensitive reporting levels consistent with the SSM Rule specified in 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv).
4. Estimated concentrations of formaldehyde may be reported in lieu of analytical monitoring during formaldehyde use. If calculations are reported then formaldehyde concentrations should be reported daily to match the concentrations reported in the Monthly Chemical Use Report (Attachment F). See Section IX.A for calculation procedures. If analytical monitoring is conducted, when Formaldehyde is added to the waters of the Facility, formaldehyde concentration shall be measured during time of peak discharge of Formaldehyde, at least one hour after start of treatment.
5. Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.018 mg/L.
6. Per Section IX.A, the discharger shall report all aquaculture drug and chemical use as part of the Monthly Drug and Chemical Use Report that is submitted on a quarterly basis.

B. Effluent Monitoring for Facilities with Intake Water Credits. Not applicable.

V. LAND DISCHARGE MONITORING REQUIREMENTS.

- A. Septic Tank/Leachfields.** The monitoring requirements contained in CAAP General Order, Attachment C, Section VI.A are applicable to this Facility.
- B. Sewage Lagoons.** Sewage lagoon freeboard and dissolved oxygen shall be monitored weekly. Groundwater monitoring for total and fecal coliform shall be conducted when depth to groundwater is less than 5 feet as measured from the bottom of the sewage lagoon.

VI. RECEIVING WATER MONITORING REQUIREMENTS.

- A. Sampling Locations.** Receiving water samples shall be collected from Monitoring Locations RSW-001, RSW-002, RSW-003, and RSW-004 as specified below.
- B. Receiving Water Observations.** In conducting the receiving water sampling, a log shall be kept of the receiving water conditions. Attention shall be given to the presence or absence of:
 - a. Floating or suspended matter
 - b. Discoloration
 - c. Bottom deposits
 - d. Aquatic life

Enclosure D – Monitoring and Reporting Program
Crystal Lake Fish Hatchery

- 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.

C. Receiving Water Monitoring. The Discharger shall monitor the receiving water at Monitoring Locations RSW-001, RSW-002, RSW-003, and RSW-004 as follows:

Table D-4. Receiving Water Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Dissolved Oxygen	mg/L	Grab	1/month
Temperature	Degrees C	Grab	1/month
Turbidity	NTU	Grab	1/month
pH	S.U.	Grab	1/month
Electrical Conductivity @ 25 degrees Celsius	µmhos/cm	Grab	1/month

Table D-4 Testing Requirements. The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table D-4.

1. Parameters shall be analyzed using the analytical methods described in 40 C.F.R. Part 136 or by methods approved by the Central Valley Water Board or the State Water Board.

VII. OTHER MONITORING REQUIREMENTS.

- A. Monthly Drug and Chemical Use Report.** The Discharger shall develop a monthly drug and chemical use report in accordance with CAAP General Order, Attachment C, Section IX.A describing all aquaculture drugs or chemicals used at the Facility. The report shall be submitted with the quarterly self-monitoring reports.
- B. Priority Pollutant Metals Monitoring.** In accordance with CAAP General Order, Attachment C, Section IX.B., the Discharger shall monitor the effluent (Monitoring Location EFF-001 and EFF-002) and the upstream receiving water (Monitoring Location RSW-001) for the metals listed in Table G-1 of the CAAP General Order once during the term of the CAAP General Order. **The monitoring shall occur beginning on or after 1 January 2021, but no later than 1 January 2023.** The Discharger shall electronically submit the priority pollutants metals monitoring results using the State Water Board's [California Integrated Water Quality System](http://www.waterboards.ca.gov/water_issues/programs/ciwqs) (CIWQS) Program Web site (http://www.waterboards.ca.gov/water_issues/programs/ciwqs) **within 60 days of the final sampling event.** Refer to CAAP General Order, Attachment G for the specific

monitoring requirements. Constituents shall be monitored using analytical methods with sufficiently sensitive reporting levels consistent with the SSM Rule specified in 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv).

C. Annual Feeding and Production Report. The Discharger shall develop an annual feeding and production report in accordance with CAAP General Order, Attachment C, Section IX.C. The annual report shall be submitted on **1 February, annually**, and included the following information:

1. Monthly food usage in pounds for each calendar month.
2. Annual production of aquatic animals in pounds per year.

VIII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements. The Discharger shall comply with the General Monitoring and Reporting Requirements specified in the CAAP General Order, Attachment C, Section X.A.

B. Self-Monitoring Reports (SMRs). The Discharger shall comply with the Self-Monitoring Report requirements specified in the CAAP General Order, Attachment C, Section X.B. Monitoring in accordance with the renewed CAAP General Order is required to begin on the effective date of **1 June 2022**. SMRs are required to be submitted quarterly and annually. The Discharger shall comply with the reporting requirements specified in CAAP General Order, Attachment C, Section X. The first SMR required under the renewed CAAP General Order is due **1 August 2021** and shall include monitoring conducted from 1 November through 31 December. Table D-5, below, summarizes the SMR due dates required under the CAAP General Order. Quarterly monitoring reports must be submitted until your coverage is formally terminated in accordance with the CAAP General Order, even if there is no discharge during the reporting quarter.

Table D-5. SMRs required in the MRP (Attachment C, CAAP General Order)

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
1/month	1 June 2022	First day of calendar month through last day of calendar month	1 May (1 Jan – 31 Mar) 1 Aug (1 Apr – 30 Jun) 1 Nov (1 Jul – 30 Sep) 1 Feb of following year (1 Oct – 31 Dec)
1/quarter	1 June 2022	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	1 May 1 Aug 1 Nov 1 Feb of following year
1/year	1 June 2022	January 1 through December 31	1 Feb of following year

C. Other Reports

- 1. Analytical Methods Report.** The Discharger shall complete and submit an Analytical Methods Report **18 July 2022**. The Analytical Methods Report shall include the following for each constituent to be monitored in accordance with this Order: 1) applicable water quality objective, 2) reporting level (RL), 3) method detection limit (MDL), and 4) analytical method. The analytical methods shall be sufficiently sensitive with RLs consistent with the SSM Rule per 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv), and with the Minimum Levels (MLs) in the SIP, Appendix 4. The “Reporting Level or RL” is synonymous with the “Method Minimum Level” described in the SSM Rule. If an RL is not less than or equal to the applicable objective for a constituent, the Discharger shall explain how the proposed analytical method complies with the SSM Rule. Central Valley Water Board staff will provide a tool with the NOA to assist the Discharger in completing this requirement. The tool will include the constituents and associated applicable water quality objectives to be included in the Analytical Methods Report.
- 2. Analytical Methods Report Certification.** Prior to beginning the Priority Pollutant Metals Monitoring, the Discharger shall provide a certification acknowledging the scheduled start date of the Priority Pollutant Metals Monitoring and confirming that samples will be collected and analyzed as described in the previously submitted Analytical Methods Report. If there are changes to the previously submitted Analytical Methods Report, the Discharger shall outline those changes. A one-page certification form will be provided by Central Valley Water Board staff with the NOA that the Discharger can use to satisfy this requirement. Central Valley Water Board staff will provide a tool with the NOA to assist the Discharger in completing this requirement. The tool will include the Analytical Methods Report Certification form, which will acknowledge the scheduled start date of the Effluent and Receiving Water Characterization monitoring and certifies that samples will be taken and analyzed as described in the previously submitted and approved Analytical Methods Report. If there are changes to the approved Analytical Methods Report, the Discharger shall outline those requested changes in the form and not commence characterization monitoring until the requested changes have been reviewed and approved by Central Valley Water Board staff.

ENCLOSURE E – APPROVED AQUACULTURE DRUGS AND CHEMICALS USE

The following drugs and chemicals are used at the Facility to treat fish for parasites, fungi, and bacteria, as well as to clean rearing raceways to reduce the spread of disease among the confined fish population.

Table E-1. Approved Aquaculture Drugs and Chemicals Use

Drug or Chemical	Maximum Daily Amount Used	Method of Application	Maximum Amount in Effluent
Acetic acid	1.5 to 2.2 gallons of glacial acetic acid added as a bolus to top of raceway	Bath/Flush	335 to 500 ppm
Amoxicillin trihydrate	40 milligrams amoxicillin per kilogram of fish	Injected intraperitoneally	N/A
Chloramine T	10-20 mg/L (as prescribed by veterinarian)	Flush	15 ppm
Epsom Salt (Magnesium Sulfate)	100 milligrams per kilogram of fish	Feed	None/ND
Florfenicol	50-300 grams (2-3 times per year)	Feed Additive	Unknown
Formalin at 37% active Formaldehyde	375.5 ppm (15-18 times per year)	Flush	0 (discharged to land)
Hydrogen Peroxide	8 gal/cfs (as needed)	Flush	100 ppm
Oxytetracycline HCL	3.75 grams per 100 lbs of fish (2-3 times per year)	Feed Additive or Bath	100 ppm
Penicillin G	32 grams per trough (3-6 times per year)	Bath	100 International Units per mL
Potassium Permanganate	2 ppm/1 hr/raceway	Flush	8-12 oz (4-5 times a month)
Povidone-Iodine (PVP-I) (Argentyne)	4.5 oz per 10 gal of water (when eggs are received)	Bath	100 ppm
Sodium Bicarbonate	142 to 642 mg/L	Bath	Unknown

Enclosure E – Approved Aquaculture Drugs and Chemicals Use
 Crystal Lake Fish Hatchery

Drug or Chemical	Maximum Daily Amount Used	Method of Application	Maximum Amount in Effluent
Sodium Chloride	200 lbs (6-7 times per month)	Flush	382 ppm
SLICE (emamectin benzoate)	5.5 grams (as prescribed by a veterinarian)	Feed Additive	Unknown
Sulfadimethoxine-orometoprim (Romet-30®)	50 milligrams of drug per kilogram of fish	Feed	Negligible
Tricaine Methanesulfonate (MS-222)	Varies (4-5 times per month)	Bath	80-135 ppm
Vibrio and Enteric Redmouth Bacterin	1 L per 200 lbs of fish (once per year)	Bath	0 (discharged to pavement)