

## Central Valley Regional Water Quality Control Board

15 January 2015

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**NOTICE OF APPLICABILITY; GENERAL WASTE DISCHARGE REQUIREMENTS FOR COLD WATER CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY DISCHARGES TO SURFACE WATERS, ORDER R5-2014-0161 (CAAP GENERAL ORDER); CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE AND EAST BAY MUNICIPAL UTILITY DISTRICT, MOKELUMNE RIVER FISH HATCHERY, SAN JOAQUIN COUNTY**

The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) issued a Notice of Applicability (NOA) to the California Department of Fish and Wildlife and the East Bay Municipal Utility District (hereinafter "Discharger") on 2 May 2012, for coverage under the CAAP General Order for the Mokelumne River Fish Hatchery (hereinafter "Facility").

On 5 December 2014, the Central Valley Water Board adopted Order R5-2014-0161 renewing the CAAP General Order. The Discharger submitted a Notice of Intent on 2 July 2014, to continue coverage for the Facility under the CAAP General Order. Effective **15 January 2015**, this NOA provides continued coverage for the Facility under the CAAP General Order to discharge to the Mokelumne River, superseding the previous NOA issued 2 May 2012. CAAP General Order R5-2014-0161-017 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG135001 are assigned for this Facility. Please reference your CAAP General Order number **R5-2014-0161-017**, 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
- 4) Enclosure D - Monitoring and Reporting Program
- 5) Enclosure E - Approved Aquaculture Drugs and Chemicals Use

The CAAP General Order is enclosed and may also be viewed at the following web address: [http://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/](http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/). You are urged to familiarize yourself with the contents of the entire CAAP General Order. 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.

**FACILITY INFORMATION/DISCHARGE DESCRIPTION**

The Facility is located on the south bank of the Mokelumne River, immediately downstream of Camanche Dam in Clements, San Joaquin County (T4N, R6E, MDB&M, latitude N 38° 13' 29"/longitude W 121° 01' 29"), as shown in Enclosure B. The Facility is located on property owned by the East Bay Municipal Utility District. The Facility is owned by the East Bay Municipal Utility District and it is operated by the California Department of Fish and Wildlife (CDFW).

The Facility produces juvenile Chinook salmon and steelhead to mitigate the loss of anadromous fisheries resources due to the operation of Camanche Dam. CDFW traps adult fish, collects, incubates, and hatches fish eggs, and rears juvenile fish. The fish rearing occurs in troughs and concrete raceways utilizing a flow-through, single-pass water system. The Facility consists of two fish ladders for adult salmon and steelhead, a gathering tank with a capacity of about 800 fish, four holding ponds for adult fish (60 ft. long by 10 ft. wide and 6 ft. deep), a hatchery spawning and incubation building, 48 fiberglass troughs (16 ft. long by 3 ft. wide and 30 in. deep) for rearing eggs and fry, 20 cement rearing raceways (322 ft. long by 10 ft. wide and 42 in. deep), two circular stand-alone fish tanks used for research (15 ft. in diameter by 3 ft. deep), and an office/shop/freezer building.

The Facility spawning process begins at the entrance of the fish ladder. Once fish get to the top of the ladder, salmon and steelhead pass through a one way gate that keeps the fish from exiting the gathering tank. When the eggs hatch, the fish are kept in troughs for about 12-13 weeks until they are ready to be transferred to the raceways. Salmon are reared for up to 8 months (4 inches) and trucked to be planted at the Sherman Island Levee Road above the Antioch Bridge on the San Joaquin River, while steelhead are kept for up to 14 months (8 inches) and planted at New Hope Landing or at the Feist Ranch on the Mokelumne River.

Intake water from Camanche Reservoir, upstream from Camanche Dam, is conveyed to the hatchery via a common 42-inch line fed by the Deck Line or the Gallery Line. Water intake for the Facility was reported by the Discharger as approximately 49 million gallons per day (mgd). All water is used on a flow-through basis, and the process wastewater is discharged to the Mokelumne River through multiple outfalls. Wastewater from the incubator building, raceways, and local surface drainage is directed to two parallel settling ponds (1500 ft. long by 30 ft. wide and 6 ft. deep). The effluent from the two parallel settling ponds is discharged into a third settling pond (1600 ft. long by 30 ft. wide and 6 ft. deep) before being shunted to Outfall 001.

In the Notice of Intent the Discharger reported the 5-year maximum annual harvestable fish production and the maximum monthly feed use for the Facility (Table 1):

**Table 1. Aquatic Animal Production and Feed Use**

Species	Maximum Annual Harvestable Aquatic Animal Production (lbs) <sup>1</sup>	Maximum Monthly Feed Use (lbs) <sup>1</sup>
Salmon	110,000	51,000
Steelhead	65,000	

<sup>1</sup> Maximum production and feed use within the last 5 years

Wastewater is discharged from the Facility to the Mokelumne River through three outfalls (001, 002, and 003) as shown in Enclosure C, and as described below:

**Outfall 001** – The settling pond overflow is discharged to the Mokelumne River through Outfall 001. Raceway cleaning wastewater is diverted into a separate drain system, gravity fed to the raceway pump station and pumped to earthen settling ponds. Discharges to the settling ponds usually occur twice weekly during peak production months (March, April, and May) and once monthly for the rest of the year. Average flows into the settling ponds are 6 cfs (3.8 mgd). The hatchery building is operated from October through July and flows average 4.5 cfs (2.9 mgd). Wastewater from the hatchery building and storm water runoff is also discharged from Outfall 001.

**Outfall 002** – Wastewater from the raceways and holding ponds is discharged from Outfall 002. The estimated peak flow from Outfall 002 occurs in April and is approximately 55 cfs (35.5 mgd).

**Outfall 003** –Wastewater from the sand filter backwash and two stand alone fish tanks is discharged from Outfall 003. Excess flow from the raceways and holding ponds discharging to Outfall 002 is also routed occasionally to Outfall 003. Outfall 003 is usually operated from October through April and the estimated flow ranges between 3 cfs to 35 cfs (2 mgd to 22 mgd).

All domestic wastewater is discharged to an on-site septic system, which is regulated by the County of San Joaquin.

**EFFLUENT LIMITATIONS**

Effluent limitations are specified in Section V. Effluent Limitations and Discharge Specifications of the CAAP General Order. The discharge exhibits reasonable potential for formaldehyde, chlorine, and total suspended solids. There is no reasonable potential for copper. The following effluent limitations are applicable to this discharge and are contained in Section V.A of the CAAP General Order:

- a. 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 Limitation
Formaldehyde	mg/L	0.65 <sup>1</sup>	1.3 <sup>1</sup>
Chlorine	mg/L	--	0.018

<sup>1</sup> 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 Attachment C, Monitoring and Reporting Program).

- b. 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.

### RECEIVING WATER LIMITATIONS

The discharge to the Mokelumne River is within the Sacramento and San Joaquin River Basins, therefore, the receiving water limits contained in the CAAP General Order for the Sacramento and San Joaquin River Basins are applicable to this discharge.

### OTHER REQUIREMENTS

1. The discharge from the Facility shall not exceed a daily average flow of 46 mgd.
2. The Discharger shall continue to electronically submit Self-Monitoring Reports (SMRs) using the State Water Resources Control Board's California Integrated Water Quality System (CIWQS) Program website (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS website will provide directions for SMR submittal in the event there will be service interruption for electronic submittal.
3. Aquaculture activities defined in the Code of Federal Regulations (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, as described in Title 23 of the California Code of Regulations, Division 3, Chapter 9, Article 1, Section 2200(b)(9) for Category 3 discharges.
4. The CAAP General Order expires on **31 December 2019**. Only those enrolled CAAP facilities authorized to discharge and who submit a Notice of Intent **at least 180 days** prior to the expiration date of the CAAP General Order will remain authorized to discharge under administratively continued permit conditions.
5. 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 **15 April 2015**. 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 a salinity evaluation and minimization plan to address salt treatments at the Facility. 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.

### 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.

**COMMUNICATION**

All monitoring report submittals, notification of non-compliance, and questions regarding compliance and enforcement shall be directed to Mohammad Farhad of the Central Valley Water Board's NPDES Compliance and Enforcement Unit. Mr. Farhad can be reached at (916) 464-1181 or [Mohammad.Farhad@waterboards.ca.gov](mailto:Mohammad.Farhad@waterboards.ca.gov).

Questions regarding the permitting aspects of this CAAP General Order, and written notification for termination of coverage under the CAAP General Order, shall be directed to Dania Jimmerson of the Central Valley Water Board's NPDES Permitting Unit. Ms. Jimmerson can be reached at (916) 464-4742 or [Dania.Jimmerson@waterboards.ca.gov](mailto:Dania.Jimmerson@waterboards.ca.gov).

Please note that we have transitioned to a paperless office. Therefore, all documents other than monitoring reports shall be converted to a searchable Portable Document Format (PDF) and submitted by email to [centralvalleysacramento@waterboards.ca.gov](mailto:centralvalleysacramento@waterboards.ca.gov). Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to our office, attention "ECM Mailroom."

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.

Copies of the law and regulations applicable to filing petitions may be found on the Internet at: [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 Adam Laputz*  
Pamela C. Creedon  
Executive Officer

- Enclosures (6):
- 1) Enclosure A – Administrative Information
  - 2) Enclosure B – Location Map
  - 3) Enclosure C – Flow Schematic
  - 4) Enclosure D – Monitoring and Reporting Program
  - 5) Enclosure E – Approved Aquaculture Drug and Chemical Use
  - 6) CAAP General Order R5-2014-0161 (Discharger only)

cc: David Smith, U.S. EPA, Region IX, San Francisco (via email only)  
Phil Isorena, State Water Resources Control Board, Sacramento (via email only)  
Terry Jackson, California Department of Fish and Wildlife, Rancho Cordova

**ENCLOSURE A – ADMINISTRATIVE INFORMATION**

<b>Name of Facility</b>	Mokelumne River Fish Hatchery
<b>Type of Facility</b>	Cold Water Concentrated Aquatic Animal Production Facility, SIC Code 0921
<b>WDID</b>	5B390800001
<b>General Order NOA Enrollee Number</b>	R5-2014-0161-017
<b>Discharger</b>	California Department of Fish and Wildlife and East Bay Municipal Utility District
<b>Facility Address</b>	25800 N. McIntire Road Clements, CA 95227
<b>Land Owner (Address)</b>	East Bay Municipal Utility District 375 Eleventh St. Oakland, CA 94607 (Contact Person: Michelle Workman 209-365-1467)
<b>Facility Contact, Title and Phone</b>	William Smith (Fish Hatchery Manager II) 209-759-3383
<b>Authorized Person to Sign and Submit Reports</b>	Anna Kastner Fish Hatchery Manager II
<b>Mailing Address</b>	P.O. Box 158 Clements, CA 95227
<b>Billing Address</b>	1 Winemaster Way, Suite 'K'. Lodi, CA 95240
<b>Total Weight Produced (Annual)</b>	175,000 lbs (chinook salmon and steelhead trout)
<b>Major or Minor Facility</b>	Minor
<b>Threat to Water Quality</b>	2
<b>Complexity</b>	B
<b>Facility Permitted Flow</b>	46 million gallons per day (mgd)
<b>Watershed</b>	Mokelumne River Watershed
<b>Receiving Water</b>	Mokelumne River
<b>Receiving Water Type</b>	Inland surface water



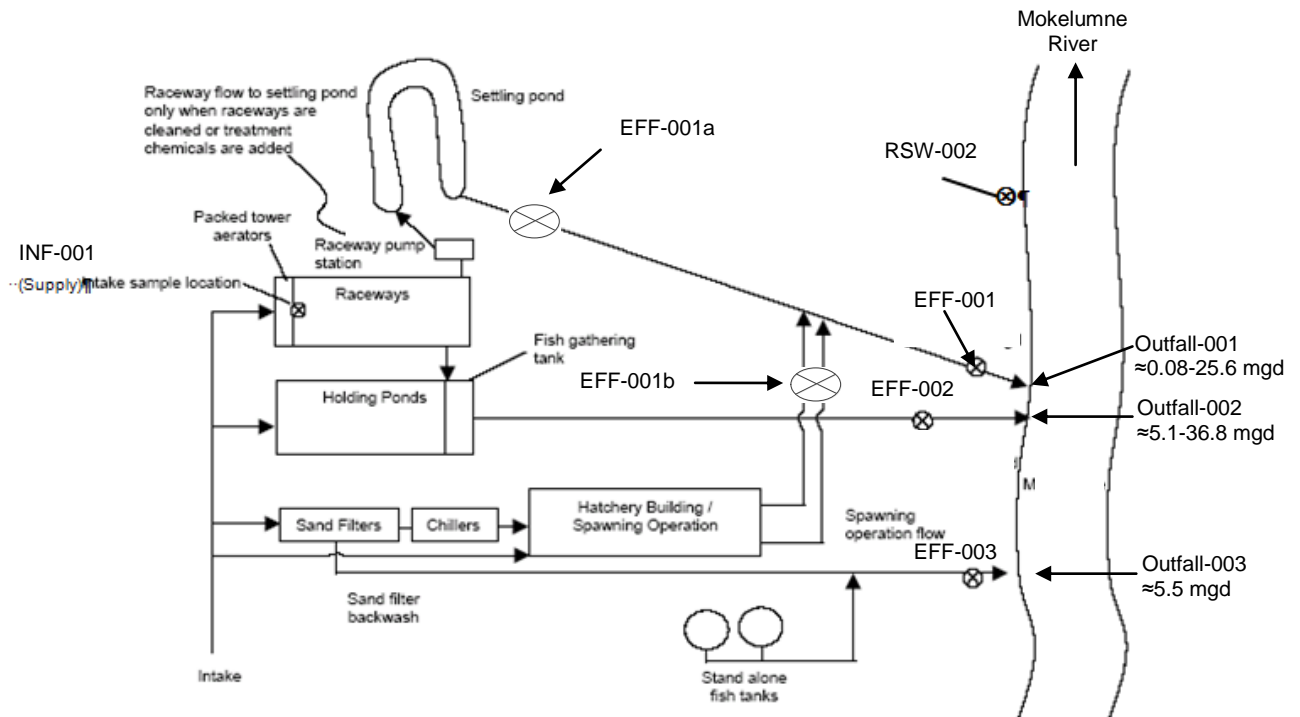
Enclosure B – Location Map  
Mokelumne River Fish Hatchery

**ENCLOSURE B – LOCATION MAP**



**ENCLOSURE C – FLOW SCHEMATIC**

**FACILITY FLOW DIAGRAM**  
California Department of Fish and Game and East Bay Municipal Utilities District  
Mokelumne River Fish Hatchery  
San Joaquin County, California



⊗ See Notice of Applicability (NOA) for description of the Sampling Locations

**Outfall Summary**

001 - Hatchery buildings (water used for egg hatching, incubation, fish troughs and the spawning operation) and settling pond overflow.

002 - Raceway and holding pond/gathering tank flow

003 - Sand filter backwash and stand alone fish tank discharge



**ENCLOSURE D – MONITORING AND REPORTING PROGRAM**

This Facility is in the category of production of greater than 100,000 pounds of aquatic animals produced per year. The Discharger is required to comply with all the Monitoring and Reporting Requirements contained in Attachment C of the CAAP General Order for facilities with production greater than 100,000 pounds of aquatic animals per year, and as required in Enclosure D in this NOA. A summary of the monitoring requirements is provided below:

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

**Table D-1. Monitoring Locations**

<b>Discharge Point Name</b>	<b>Monitoring Location Name</b>	<b>Monitoring Location Description</b>
--	INF-001	<b>Mokelumne River Intake.</b> Location where influent sample can be collected prior to entering the Mokelumne River Fish Hatchery. [Latitude: 38° 13' 29.46" N; Longitude: 121° 01' 29.36" W]
Outfall 001	EFF-001	Effluent wastewater flow from the <b>Settling Ponds, Hatchery Building/Spawning Operation, and Storm Water Runoff</b> prior to discharge to the Mokelumne River. [Latitude: 38° 13' 34" N; Longitude: 121° 01' 32.26" W]
Outfall 002	EFF-002	Effluent wastewater flow from the <b>Raceways and Holding Ponds</b> prior to discharge to the Mokelumne River. [Latitude: 38° 13' 34" N; Longitude: 121° 01' 32.17 W]
Outfall 003	EFF-003	Effluent wastewater flow <b>Sand Filter Backwash</b> and <b>Stand Alone Fish Tanks</b> prior to discharge to the Mokelumne River. [Latitude: 38° 13' 33.46" N; Longitude: 121° 01' 25.12 W]
	EFF-001a <sup>1</sup>	Effluent wastewater flow from the <b>Settling Ponds</b> prior to mixing with storm water run-off and wastewater from hatchery building/spawning operation. [Latitude: 38° 13' 33" N; Longitude: 121° 01' 35" W]
	EFF-001b <sup>1</sup>	Effluent wastewater flow from the <b>Hatchery Building/Spawning Operations</b> prior to mixing with storm water run-off and back-up receiving water. Settling Pond discharge is not included in this site. [Latitude: 38° 13' 31.70" N; Longitude: 121° 01' 27" W]
--	RSW-002	100 feet <b>downstream</b> of Outfall 001 discharge to the Mokelumne River. [Latitude: 38° 13' 35" N; Longitude: 121° 01' 35" W]

<sup>1</sup> When receiving water elevations cause a backup at monitoring location EFF-001, a representative effluent sample may be collected using flow-weighted samples from EFF-001a and EFF-001b. The self monitoring report must indicate that receiving water elevations caused backup at EFF-001.

Enclosure D – Monitoring and Reporting Program  
Mokelumne River Fish Hatchery

**B. Influent Monitoring Requirements.** When discharging at Outfall(s) 001, 002, and/or 003, the Discharger shall monitor the influent to the Facility at Monitoring Location INF-001 as follows:

**Table D-2. Influent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	S.U.	Grab	1/month <sup>2</sup>	1
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/month <sup>2</sup>	1
Total Suspended Solids	mg/L	Grab	1/month <sup>2</sup>	1

<sup>1</sup> Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136.

<sup>2</sup> Samples shall be collected approximately at the same time as effluent samples.

**C. Effluent Monitoring Requirements.** When discharging at Outfall(s) 001, 002, and/or 003 the Discharger shall monitor the effluent at corresponding Monitoring Locations EFF-001, EFF-002, and EFF-003, respectively, as follows.

**Table D-3. Effluent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	cfs	Meter	1/month	
Total Suspended Solids (TSS)	mg/L	Grab	1/month	1
Net TSS (effluent minus influent)	mg/L	Net Calculation	1/month	
Turbidity	NTU	Grab	1/month	1
pH	S.U.	Grab	1/month	1
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/month <sup>2,3</sup>	1
Formaldehyde	mg/L	Grab <sup>4</sup>	1/month during Formalin use <sup>4,3</sup>	1
Chlorine	mg/L	Grab	1/quarter during chlorine use <sup>5,3</sup>	1, 5

<sup>1</sup> Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136.

<sup>2</sup> Samples shall be collected monthly. If sodium chloride is used, the monthly monitoring of EC shall be conducted during treatment.

<sup>3</sup> Per Section IX.A of the CAAP General Order, 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.

<sup>4</sup> Estimated concentrations of formaldehyde may be reported in lieu of analytical monitoring during Formalin use. See Section IX.A of the CAAP General Order for calculation procedures. If analytical monitoring is conducted, when Formalin is added to the waters of the Facility, formaldehyde concentration shall be measured during time of peak discharge of Formalin, at least one hour after start of treatment.

<sup>5</sup> Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.018 mg/L.

**D. Receiving Water Monitoring Requirements.** When discharging at Outfall(s) 001, 002, and/or 003, receiving water samples shall be collected from RSW-002 as follows.

**Table D-4. Receiving Water Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1/month	1
Temperature	°C	Grab	1/month	1
Turbidity	NTU	Grab	1/month	1
pH	S.U.	Grab	1/month	1
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/month	1

<sup>1</sup> Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136.

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
- 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.

**E. Land Discharge Monitoring Requirements.** The Discharger shall conduct septic tank and leachfield inspections annually and report the findings in the annual self-monitoring reports (SMRs) in accordance with Section VI.A of the CAAP General Order.

**F. Monthly Drug and Chemical Use Report.** The Discharger shall develop a monthly drug and chemical use report in accordance with Section IX.A of the CAAP General Order, describing all aquaculture drugs or chemicals used at the Facility. The report shall be submitted with the quarterly SMRs.

**G. Annual Feeding and Production Report.** The Discharger shall develop an annual feeding and production report in accordance with Section IX.B of the CAAP General Order. The report shall be submitted **28 February, annually**, and include 1) monthly food usage in pounds for each calendar month for the previous year, and 2) annual production of aquatic animals in pounds per year for the previous year.

**H. Priority Pollutant Metals Monitoring.** When discharging at Outfall(s) 001, 002, and 003 the Discharger shall monitor the effluent at corresponding Monitoring Locations EFF-001, EFF-002, and EFF-003, respectively, and the influent receiving water at INF-001 for the metals listed in Table G-1 of the CAAP General Order, once during the term of Order R5-2014-0161. The

Enclosure D – Monitoring and Reporting Program  
 Mokelumne River Fish Hatchery

monitoring shall occur after **1 January 2018, but no later than 1 July 2019**. The discharger shall electronically submit the priority pollutants metals monitoring results using the State Water Board’s California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>), within 60 days of the final sampling event.

**REPORTING REQUIREMENTS**

Monitoring in accordance with the renewed CAAP General Order is required to begin on the effective date of **1 January 2015**. SMRs are required to be submitted quarterly and annually. The first SMR required under the renewed CAAP General Order is due **1 May 2015**, and shall include monitoring conducted from 1 January through 31 March 2015. 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 January 2015	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/year	1 January 2015	January 1 through December 31	1 Feb of following year

In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, 1-hour average effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Central Valley Water Board by telephone within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within 5 days, unless the Central Valley Water Board waives confirmation. The written notification shall include the information required by the Standard Provision contained in Attachment B section V.E.1. [40 C.F.R. 122.41(l)(6)(i)].

**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.

<b>Drug or Chemical</b>	<b>Maximum Daily Amount Used</b>	<b>Method of Application</b>	<b>Maximum Amount in Effluent</b>
Carbon Dioxide	Variable	Bath	N/A <sup>1</sup>
Chloramine T	10-20ppm for 1 hr.	Bath	0.55-1.1ppm
ERM vaccine	22L/4,400lbs of fish	Immersion	Negligible
Florfenicol	10mg/kg of fish/day/10days	Additive to feed	Negligible
Formalin	25ppm	Drip for 8 hrs	1.38ppm
Hydrogen Peroxide	52 Gal (100ppm)	Drip 1hr	14.28 mg/L
Iodine	9600mL	20 min bath	0.32 mg/L
Oxytetracycline	3.75g/100lbs of fish/day/for 10days	Additive to feed	Negligible
Oxytetracycline HCL	100mq/L@4 tanks	6-8 hr bath	1.9 mg/L
Penicillin G	60mg/L@4 tanks	6-8 hr bath	1.1mg/L
Potassium Permanganate	2mg/L	Flush in raceways	1.7mq/L
Romet(Sulfaimethoxine-ormetoprim)	50mg/kg of fish/day	Additive to feed	Trace amount in uneaten food
SLICE (emamectin benzoate;0.2% aquaculture premix)	50ug emamectin benzoate/Kg of fish biomass/day	Medicated feed	Not in use at this time
Sodium Bicarbonate	Variable	Bath	N/A <sup>1</sup>
Sodium Chloride	2700 lbs	Flush	1500mg/L
Tricaine Methanesulfonate	3mg/L@4 tanks	Immersion	0.029 mg/L
Vibrio Vaccine	128 oz	Dip	N/A

<sup>1</sup> Sodium Bicarbonate and Carbon Dioxide are used as anesthesia for fish. The rate at which these chemicals are used is determined by fish size, water chemistry and temperature and is done on a trial basis until the desired effect is reached. These chemical have not been used at the Facility in the past 15 years because they primarily use electro anesthesia and Tricaine Methanesulfonate; however, they would like to maintain the ability to use if they need to.