

## Central Valley Regional Water Quality Control Board

2 September 2015

**CERTIFIED MAIL**

7014 3490 0001 2981 7468

Linda Radford  
Senior Hatchery Supervisor, Northern Region  
California Department of Fish and Wildlife  
601 Locust St  
Redding, CA 96001

**CERTIFIED MAIL**

7014 3490 0001 2981 7475

Kevin Ceccato  
Fish Hatchery Manager II  
California Department of Fish and Wildlife  
29661 Wildcat Road  
Paynes Creek, CA 96075

**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; DARRAH SPRINGS 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 the California Department of Fish and Wildlife's (hereinafter Discharger) Darrah Springs Fish Hatchery (hereinafter Facility) on 28 September 2010 for coverage under Order R5-2010-0018-01.

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 28 April 2014 to continue coverage under the CAAP General Order. Effective **2 September 2015**, this NOA establishes continued coverage for the Facility under the CAAP General Order for the discharge of hatchery wastewater to Darrah Springs Creek and Pacific Gas and Electric Company's (PG&E) Pacific Power Ditch, superseding a previous NOA issued on 28 September 2010. This Facility is assigned Order R5-2014-0161-027 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG135001. Please reference CAAP General Order **R5-2014-0161-027** 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

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/). The Central Valley Water Board advises the Discharger to be familiar with the entire CAAP General Order. Facility operations and discharges shall be managed in accordance with requirements contained in the CAAP General Order, this NOA, and with information submitted by the Discharger.

**FACILITY INFORMATION/DISCHARGE DESCRIPTION**

The Facility is located west of Manton, CA, near Darrah Springs on property owned and operated by the Discharger. The property is located within the Battle Creek Hydrologic Subarea No. 507.12, in Paynes Creek, CA, Shasta County (NW ¼ of NE ¼ of S29, T30N, R1W, MDB&M; NE ¼ of NE ¼ of S29, T30N, R1W, MDB&M; SW ¼ of SE ¼ of S20, T30N, R1W, MDB&M; SE ¼ of SE ¼ of S20, T30N, R1W, MDB&M; near 40°25'53.36"N latitude and 121°59'45.12"W longitude), as shown in Enclosure B, a part of this NOA.

Rainbow trout, eagle lake trout, and cutthroat trout are raised at the Facility. Hatchery structures are distributed throughout an 82.59 acre land parcel and consist of: a hatchery building, two separate raceway series (Upper Raceway Series and Lower Raceway Series) consisting of ten raceways with each raceway divided into six 100-foot ponds, 14 nursery tanks, a spring fed broodstock raceway divided into three separate ponds, a main office building, a vehicle maintenance shop, a freezer building (used for storage), and six feed storage silos. The Facility is supplied with resurgence water from Darrah Springs, an unnamed spring near the brood pond, and PG&E's Pacific Power Ditch. The Facility has a maximum design flow rate of 41.3 cubic feet per second (cfs) or 26.7 million gallons per day (mgd) of continuous flow-through water. Hatchery wastewater is discharged from the Facility to Darrah Springs Creek and PG&E's Pacific Power Ditch, as shown in Enclosure C, a part of this NOA.

Employees and their family members currently occupy residences located at the Facility. Potable water is supplied from a domestic well located on-site. Domestic wastewater is discharged into three separate septic tank/leachfields from the following sources: (1) easterly residential buildings (Leachfield #1), (2) residential buildings near the Upper Raceway Series (Leachfield #2), and (3) the office/hatchery buildings (Leachfield #3). Sewage going to Leachfield #3 is diverted to an approximate 0.15 acre sewage lagoon when wet weather events elevate the groundwater table. Leachfield #3 has been raised from its original design to reduce use of the sewage lagoon. For safety, the sewage lagoon is encircled with a barbed wire fence. A groundwater observation and pumping well are positioned adjacent to the sewage lagoon. The pumping well is float switch operated and activates when the groundwater elevation reaches a threshold differential elevation between the leachfield and the water table.

The Facility has a 1,000-gallon Convault tank for storage of gasoline. Vehicle maintenance is performed in a garage. Used oil, oil filters and extra oil are hauled off-site on a routine basis by a licensed hazardous waste hauler.

The Discharger reported, in a notice of intent, the estimated maximum five-year annual harvestable fish produced and estimated maximum monthly feed use (Table 1):

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

Maximum Annual Harvestable Aquatic Animal Production (lbs)	Maximum Monthly Feed Use (lbs)
Rainbow Trout – 450,000	92,100
Eagle Lake Trout – 140,000	
Cutthroat Trout – 25,000	

Hatchery wastewater is discharged from the Facility to PG&E's Pacific Power Ditch and/or Darrah Springs Creek through four outfalls (Outfall 001, Outfall 002, Outfall 003, and Outfall 004) as shown in Enclosure C, a part of this NOA, and as described below:

**Outfall 001**– Flow-through wastewater from the hatchery building can be released at Outfall 001. The source of this water originates from Darrah Springs Creek. Outfall 001 is no longer used but its designation is retained in the event of future use. The hatchery building flow-through water is reused into the Lower Raceway Series.

**Outfall 002**– Several unnamed springs supply water to a concrete-lined broodstock raceway that is divided into three separate ponds. Estimated flow from this outfall is between 1 and 10 cfs. At times, approximately 80 percent of water departing the broodstock raceway can be pumped, aerated, and re-circulated through the Lower Raceway Series. Broodstock are not kept in the broodstock raceway on a regular basis and discharge from this outfall depends on resurgence rates from the unnamed springs. Monitoring completed at Outfall 003 can be used to meet monitoring requirements at this location.

**Outfall 003**– The Lower Raceway Series is supplied by several water sources including: surface water from Darrah Springs Creek, flow-through water from the hatchery building, and re-circulated water from the broodstock raceway. Estimated flow from this outfall is between 11 and 23 cfs. Darrah Springs Creek flows into Ward's Pond, located approximately 1,000 feet downstream of the Lower Raceway Series. Water from Ward's Pond is diverted into the Coleman Canal via the Asbury Pumping Station and Asbury Siphon. Overflow from Ward's Pond enters Baldwin Creek, a tributary to Battle Creek.

**Outfall 004**– The Upper Raceway Series is supplied with surface water from PG&E's Pacific Power Ditch. Estimated flow from this outfall is between 8 and 18 cfs. For approximately six weeks during the summer, when PG&E completes maintenance on the Pacific Power Ditch, hatchery wastewater from the Upper Raceway Series is diverted to Darrah Springs Creek downstream of Outfall 003.

### EFFLUENT LIMITATIONS

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:

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

Discharge from the Facility to Darrah Springs Creek and PG&E's Pacific Power Ditch 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. Discharge from Outfall 1, Outfall 2, Outfall 3, and Outfall 4 shall not exceed a combined average daily flow of 41.3 cfs. A description of each outfall location is provided in Table D-1 of Enclosure D.
2. Collected screenings and other solids, including fish carcasses, shall be disposed of in a manner approved by the Executive Officer, and consistent with the *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, California Code of Regulations, Division 2, Subdivision 1, Section 2005, et seq.
3. The Discharger shall comply with Groundwater Limitations, Section VI.B. of the CAAP General Order. To determine compliance, the Discharger shall monitor the groundwater monitoring well adjacent to the sewage lagoon quarterly. When depth to ground water is less than five feet as measured from the bottom of the sewage lagoon, groundwater samples shall be collected and analyzed for total and fecal coliform and the results submitted to the Central Valley Water Board.
4. 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>). Directions for SMR submittal are provided on the CIWQS website in the event of a service interruption during electronic submittal.
5. 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.
6. The CAAP General Order expires on **31 December 2019**. Only those CAAP facilities authorized to discharge and who submit a notice of intent **at least 180 days** prior to the expiration date of Order R5-2014-0161 will remain authorized to discharge under administratively continued permit conditions.
7. 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 1 December 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, if any, 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 can be subject to a mandatory minimum penalty (MMP) of \$3,000 per violation. In addition, late monitoring reports can be subject to penalties. When discharges do not occur during a monitoring period, the Discharger must still submit monitoring reports indicating that no discharge occurred to avoid being subject to enforcement actions.

#### **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 the Central Valley Water Board's NPDES unit at (530) 224-4845.

Please note that we are transitioning to a paperless office. Therefore, all documents other than monitoring reports shall be converted to a searchable portable document format (i.e., a document with a "pdf" extension) and submitted by email to [centralvalleyredding@waterboards.ca.gov](mailto:centralvalleyredding@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 Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 et seq. 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.

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.



Pamela C. Creedon  
Executive Officer

Enclosures (6): (see next page)

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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)

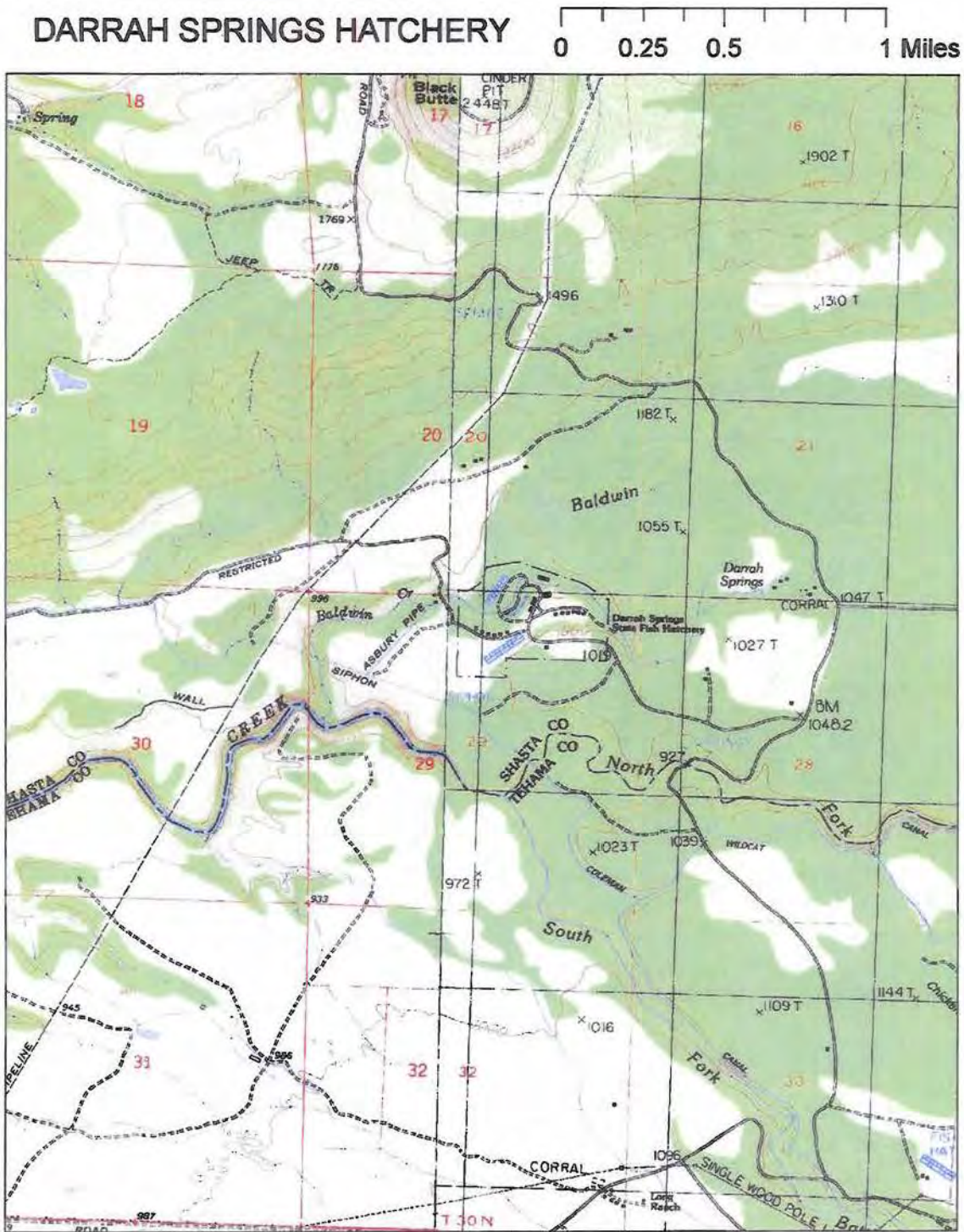
cc: David Smith, U.S. EPA, Region IX, San Francisco (via email)  
Phil Isorena, State Water Resources Control Board, Sacramento (via email)  
Terry Jackson, California Department of Fish and Wildlife, Rancho Cordova (via email)  
Linda Radford, California Department of Fish and Wildlife, Redding  
Kevin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

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**ENCLOSURE A – ADMINISTRATIVE INFORMATION**

<b>Name of Facility</b>	Darrah Springs Fish Hatchery
<b>Type of Facility</b>	Cold Water Concentrated Aquatic Animal Production Facility, SIC Code 0921
<b>WDID</b>	5A450803002
<b>General Order NOA Enrollee Number</b>	R5-2014-0161-027
<b>Discharger</b>	California Department of Fish and Wildlife
<b>Facility Address</b>	29661 Wildcat Road Paynes Creek, CA 96075
<b>Land Owner (Address)</b>	California Department of Fish and Wildlife 601 Locust Street Redding, CA 96001
<b>Facility Contact, Title, and Phone</b>	Kevin Ceccato, Fish Hatchery Manager II 530-474-3141
<b>Authorized Person to Sign and Submit Reports</b>	Linda Radford, Senior Hatchery Supervisor, Northern Region 530-225-2369
<b>Mailing Address</b>	601 Locust Street Redding, CA 96001
<b>Billing Address</b>	601 Locust Street Redding, CA 96001
<b>Maximum Estimated Total Annual Weight of Fish Production</b>	615,000 lbs
<b>Major or Minor Facility</b>	Minor
<b>Threat to Water Quality</b>	2
<b>Complexity</b>	B
<b>Facility Permitted Flow</b>	41.3 cfs or 26.7 mgd
<b>Watershed</b>	Sacramento River Basin
<b>Receiving Water</b>	Darrah Springs Creek and PG&E's Pacific Power Ditch, tributaries to Battle Creek
<b>Receiving Water Type</b>	Inland surface water

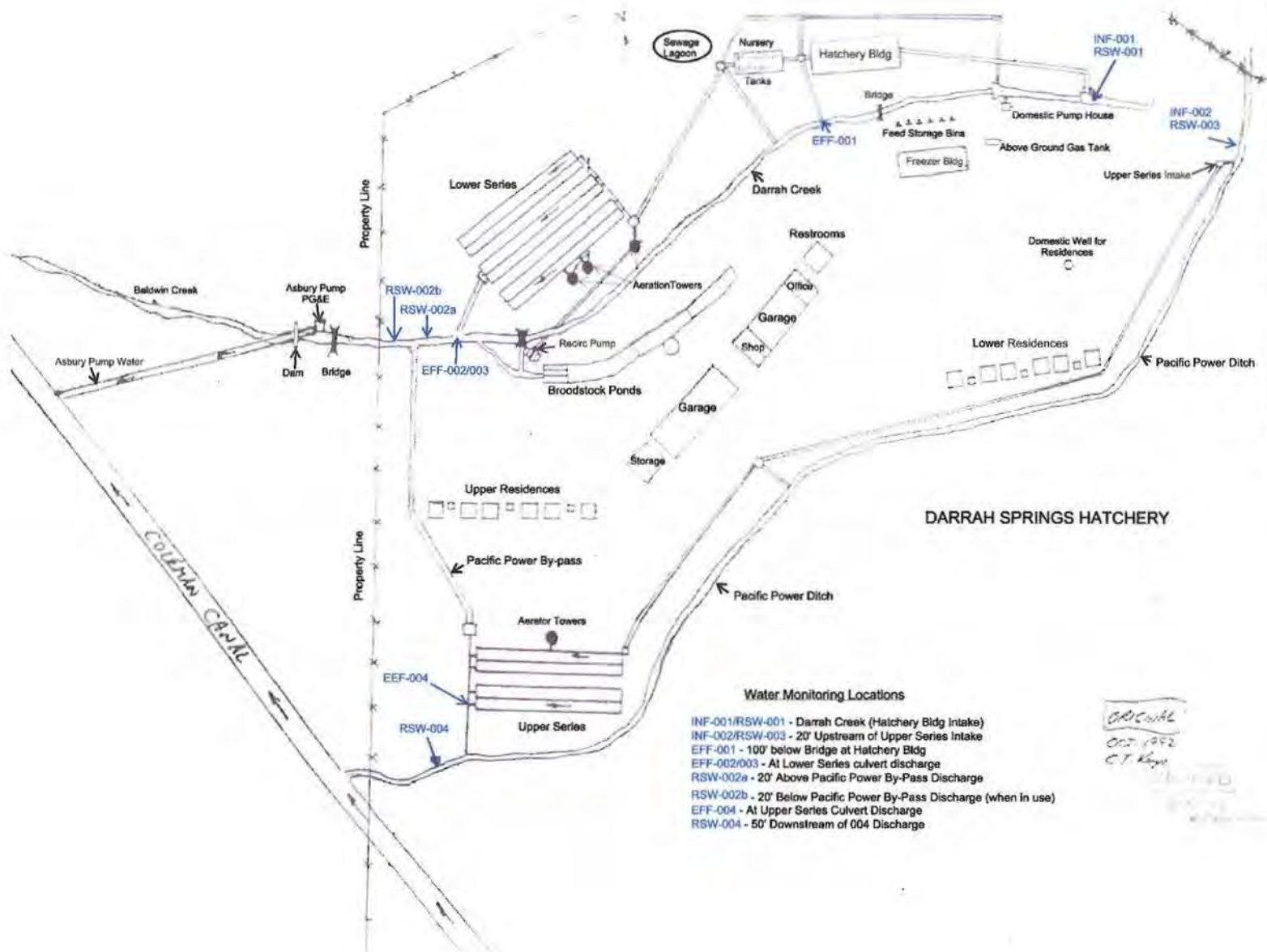
**ENCLOSURE B – LOCATION MAP**





STATE OF CALIFORNIA  
 DEPARTMENT OF FISH AND WILDLIFE  
 DARRAH SPRINGS FISH HATCHERY  
 SHASTA COUNTY

**ENCLOSURE C - FLOW SCHEMATIC**



*ORIGINAL  
 OCT 1992  
 C.T. King*

**Water Monitoring Locations**  
 INF-001/RSW-001 - Darrah Creek (Hatchery Bldg Intake)  
 INF-002/RSW-003 - 20' Upstream of Upper Series Intake  
 EFF-001 - 100' below Bridge at Hatchery Bldg  
 EFF-002/003 - At Lower Series culvert discharge  
 RSW-002a - 20' Above Pacific Power By-Pass Discharge  
 RSW-002b - 20' Below Pacific Power By-Pass Discharge (when in use)  
 EFF-004 - At Upper Series Culvert Discharge  
 RSW-004 - 50' Downstream of 004 Discharge

2 September 2015

C-1

**ENCLOSURE D – MONITORING AND REPORTING PROGRAM**

The Discharger is obligated to comply with the monitoring and reporting requirements contained in the CAAP General Order, Attachment C – Monitoring and Reporting Program. To the extent of the CAAP General Order, Attachment C provides conditions that the NOA specify certain requirements and Enclosure D provides such specificity. Enclosure D also provides a summary of other requirements described in Attachment C of the CAAP General Order.

This Facility produces greater than 100,000 pounds of aquatic animals per year. Tables D-2, D-3, and D-4 are based on the monitoring and reporting program shown in Attachment C of the CAAP General Order for facilities producing greater than 100,000 pounds of aquatic animals per year (Attachment C – Sections III.A, IV.A.1, and VIII.C).

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

**Table D-1. Monitoring Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	At a location where a representative sample can be collected of surface water from Darrah Springs Creek, before surface water enters the screen filters at the entrance to INF-001 [Approximate location: near 40°25'54.80" N latitude and 121°59'33.79" W longitude].
--	INF-002	At a location where a representative sample can be collected of surface water diverted from PG&E's Pacific Power Ditch, 20 ft. upstream of the Upper Raceway Series intake [Approximate location: near 40°25'48.24" N latitude and 121°59'28.57" W longitude].
Outfall 001	EFF-001	Flow-through wastewater from the hatchery building can be released at Outfall 001. The source of this water originates from Darrah Springs Creek. Outfall 001 is no longer used but its designation is retained in the event of future use [Approximate location: 40°25'57.10" N latitude and 121°59'45.13" W longitude].
Outfall 002	EFF-002	Several unnamed springs supply water to a concrete-lined broodstock raceway that is divided into three separate ponds. Estimated flow from this outfall is between 1 and 10 cfs. At times, approximately 80 percent of water departing the broodstock raceway can be pumped, aerated, and re-circulated through the Lower Raceway Series. Broodstock are not kept in the broodstock raceway on a regular basis and discharge from this outfall depends on resurgence rates from the unnamed springs. Monitoring completed at Outfall 003 can be used to meet monitoring requirements at this location. [Approximate location: 40°25'51.48" N latitude and 121°59'55.62" W longitude].

STATE OF CALIFORNIA  
DEPARTMENT OF FISH AND WILDLIFE  
DARRAH SPRINGS FISH HATCHERY  
SHASTA COUNTY

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Discharge Point Name	Monitoring Location Name	Monitoring Location Description
Outfall 003	EFF-003	The Lower Raceway Series is supplied by several water sources including: surface water from Darrah Springs Creek, flow-through water from the hatchery building, and re-circulated water from the broodstock raceway. Estimated flow from this outfall is between 11 and 23 cfs. Darrah Springs Creek flows into Ward's Pond, located approximately 1,000 feet downstream of the Lower Raceway Series. Water from Ward's Pond is diverted into the Coleman Canal via the Asbury Pumping Station and Asbury Siphon. Overflow from Ward's Pond enters Baldwin Creek, a tributary to Battle Creek [Approximate location: 40°25'51.48" N latitude and 121°59'55.62" W longitude].
Outfall 004	EFF-004	The Upper Raceway Series is supplied with surface water from PG&E's Pacific Power Ditch. Estimated flow from this outfall is between 8 and 18 cfs. For approximately six weeks during the summer, when PG&E completes maintenance on the Pacific Power Ditch, hatchery wastewater from the Upper Raceway Series is diverted to Darrah Springs Creek downstream of Outfall 003 [Approximate location: 40°25'43.39" N latitude and 121°59'56.04" W longitude].
-	RSW-001	Monitoring at RSW-001 can be completed at monitoring location INF-001 (i.e., the Darrah Springs Creek hatchery building intake). Constituents monitored at INF-001, which are equivalent to parameters monitored at RSW-001, can be used for both INF-001 and RSW-001 monitoring requirements [Approximate location: near 40°25'54.80" N latitude and 121°59'33.79" W longitude].
-	RSW-002a	At a location in Darrah Springs Creek 20 ft. upstream of the spillway where discharge is routed from the Upper Raceway Series (when maintenance is performed on PG&E's Pacific Power Ditch) and before discharge from the grayling pond enters Darrah Springs Creek. Monitoring location RSW-002a is to be used when maintenance is <u>not</u> occurring in PG&E's Pacific Power Ditch [Approximate location: 40°25'51.58" N latitude and 121°59'56.35" W longitude].
-	RSW-002b	At a location in Darrah Springs Creek 20 ft. downstream of the spillway where discharge is routed from the Upper Raceway Series (when maintenance is performed on PG&E's Pacific Power Ditch) and before discharge from the grayling pond enters Darrah Springs Creek. Monitoring location RSW-002b is to be used only during times of maintenance on PG&E's Pacific Power Ditch [Approximate location: 40°25'51.93" N latitude and 121°59'57.56" W longitude].
-	RSW-003	Monitoring should be completed for this location at INF-002. Parameters monitored at INF-002 that are equivalent to parameters monitored at RSW-003 can be used for both INF-002 and RSW-003 monitoring requirements [Approximate location: 40°25'48.24" N latitude and 121°59'28.57" W longitude].
-	RSW-004	At a location in PG&E's Pacific Power Ditch that is 50 feet downstream of Outfall 004. Monitoring at this location is unnecessary when discharge from Outfall 004 is diverted to Darrah Springs Creek [Approximate location: 40°25'42.57" N latitude and 121°59'55.73" W longitude].

**B. Influent Monitoring Requirements.** When there is a discharge at Outfall(s) 001, 002, and/or 003 the Discharger shall monitor influent to the Facility at monitoring location INF-001 for the frequencies/parameters shown in Table D-2. When there is a discharge at Outfall 004, the Discharger shall monitor influent to the Facility at monitoring location INF-002 for the frequencies/parameters shown in Table D-2. When maintenance is occurring in PG&E's Pacific Power Ditch, and water is unavailable at INF-002, please make a notation in the cover letter detailing that information. Samples shall be collected at approximately the same time as effluent samples.

**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
Copper (Total recoverable)	µg/L	Grab	1/month during CuSO <sub>4</sub> use <sup>2,3</sup>	1
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	1/month during CuSO <sub>4</sub> use <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.

<sup>3</sup> The maximum reporting level required for total recoverable copper is 0.5 µg/L, in accordance with Section 2.4.2 and Appendix 4 of the SIP.

**C. Effluent Monitoring Requirements.** When there is a discharge at Outfall(s) 001, 002, 003, and/or 004, the Discharger shall monitor effluent at any location in which a discharge occurs for the frequencies/parameters shown in Table D-3. Monitoring completed at Outfall 003 can be used to meet monitoring requirements at Outfall 002. When monitored, net calculations for Outfall-002 can be completed using monitoring data from INF-001. Samples shall be collected at approximately the same time as influent samples.

**Table D-3. Effluent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	cfs	Flow Measurement Device <sup>1</sup>	1/week	—
Total Suspended Solids (TSS)	mg/L	Grab	1/month	2
Net TSS (effluent minus influent)	mg/L	Net Calculation	1/month	--
Turbidity	NTU	Grab	1/month	2
pH	S.U.	Grab	1/month <sup>4</sup>	2
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/month <sup>3,7</sup>	2
Copper (Total Recoverable)	µg/L	Grab	1/month during CuSO <sub>4</sub> use <sup>4,7</sup>	2
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	1/month during CuSO <sub>4</sub> use <sup>4</sup>	2
Formaldehyde	mg/L	Grab	1/month during Formalin use <sup>7</sup>	2,5
Chlorine	mg/L	Grab	1/quarter during chlorine use <sup>7</sup>	2,6

<sup>1</sup> Effluent flow shall be monitored weekly using either a flow measurement device or method as required by CAAP General Order, Attachment C, Section I.E.

<sup>2</sup> Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136.

<sup>3</sup> Samples shall be collected monthly. If sodium chloride is used, the monthly monitoring of EC shall be conducted during treatment.

<sup>4</sup> The maximum reporting level required for total recoverable copper is 0.5 µg/L, in accordance with Section 2.4.2 and Appendix 4 of the SIP. The monthly sample shall be collected during the time of peak discharge of copper, at least one hour after start of treatment. Effluent hardness and pH shall be measured at the same time as total recoverable copper.

<sup>5</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>6</sup> Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.018 mg/L.

<sup>7</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.

**D. Receiving Water Monitoring Requirements.** When there is a discharge at Outfall(s) 001, 002, or 003, receiving water samples shall be collected from monitoring locations RSW-001 and RSW-002 for the frequencies/parameters shown in Table D-4. When there is a discharge at Outfall 004 the Discharger shall monitor the receiving water at monitoring locations RSW-003 and RSW-004 for the frequencies/parameters shown in Table D-4. The Discharger shall monitor the receiving water at monitoring locations RSW-001, RSW-002,

and RSW-003 when discharge from EFF-004 is diverted from PG&E's Pacific Power Ditch to Darrah Springs Creek.

**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
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	1/month during CuSO <sub>4</sub> use <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> When copper sulfate is added to waters of the facility, hardness (as CaCO<sub>3</sub>) shall be measured monthly during treatment.

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 quarterly 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 (due 1 February, annually) 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 describing all aquaculture drugs or chemicals used at the Facility in accordance with Section IX.A of the CAAP General Order. The report shall be submitted with the quarterly self-monitoring reports.

**G. Annual Feeding and Production Report.** The Discharger shall develop an annual feeding and production report in accordance with the CAAP General Order, Attachment C, Section IX.C. The report shall be submitted annually 28 February and include 1) monthly food

usage in pounds for each calendar month of the previous year, and 2) annual production of aquatic animals in pounds per year for the previous year.

**H. Priority Pollutant Metals Monitoring.** In accordance with the CAAP General Order, Attachment C, Section IX.B. the Discharger shall monitor the effluent (at monitoring locations EFF-001, EFF-002 or EFF-003, and EFF-004) and the upstream receiving water (RSW-001 and RSW-003) for the metals listed in Table G-1 of the CAAP General Order, once during the term of Order R5-2014-0161. **The 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 program website (<http://www.waterboards.ca.gov/ciwqs/index.html>), **within 60 days of the final sampling event.** Refer to CAAP General Order, Attachment G, for the specific monitoring requirements.

**REPORTING REQUIREMENTS**

Self-monitoring reports (SMRs) are required to be submitted quarterly and annually. Table D-5, below, summarizes SMR due dates required under the CAAP General Order. Quarterly monitoring reports must be submitted until coverage is formally terminated in accordance with the CAAP General Order, even if there is no discharge during a reporting quarter.

**Table D-5. SMRs required in the Monitoring and Reporting Program (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 February of following year (1 Oct – 31 Dec)
1/quarter	1 January 2015	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 February of following year
1/year	1 January 2015	January 1 through December 31	1 February of following year

In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition and/or limitation of the CAAP General Order, the Discharger shall notify the Central Valley Water Board by telephone at (530) 224-4845 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Central Valley Water Board waives confirmation. Written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe measures being taken to remedy current noncompliance and prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal self-monitoring report.

**ENCLOSURE E – APPROVED AQUACULTURE DRUGS AND CHEMICALS USE**

The following drugs and chemicals are used at the Facility to prevent/medicate fish for any potential contamination by bacteria, fungi, viruses and pathogens, and to reduce the spread of disease among the confined fish population. Some chemicals may be used to clean Facility treatment/operation components.

<b>Drug or Chemical</b>	<b>Estimated Maximum Daily Amount Used</b>	<b>Method of Application</b>	<b>Estimated Maximum Amount in Effluent</b>
Potassium Permanganate	8-12 oz (2-3 times per month)	Flush	8-12 ppm
Hydrogen Peroxide (37% Solution)	8 gal/cfs (1-2 treatments at 3 times per year)	Flush	100 ppm
Povidone-Iodine (PVP-I) (Argentyne)	4.5 oz per 10 gal of water (when eggs are received)	Bath	0 (discharged to pavement)
Sodium Chloride	200 lbs (4-6 times per month)	Flush	195 ppm
Acetic Acid	75mL per 10 gal of water (1 time per year)	Bath	0 (discharged to pavement)
Tricaine Methanesulfonate (MS-222)	Varies (2-3 times per month)	Bath	0 (discharged to pavement)
Chloramine-T	10-20 mg/L (as prescribed by veterinarian)	Flush	15 ppm
Penicillin G	32 grams per trough (1-4 times per year)	Bath	100 IU/mL
Terramycin (Oxytetracycline)	3.75 grams per 100 lbs of fish (4-6 times per year)	Feed Additive or Bath	100 ppm
Florfenicol	50-300 grams (4-6 times per year)	Feed Additive	10 mg/kg/day
Emamectin Benzoate 0.2% Aquaculture Premix (SLICE)	5.5 grams (as prescribed by veterinarian)	Feed Additive	50/mg/kg/day
Vibrio and Enteric Redmouth Bacterin	1 L per 200 lbs of fish (once per year)	Bath	0 (discharged to pavement)
Calcium Hypochlorite	2 oz per 100 gal of water (2-3 times per month)	Bath/Flush	0 (discharged to pavement)