CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION

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WATER QUALITY ORDER R1-2023-0014
NPDES NO. CA1000004

Waste Discharge Requirements for the California Department of Fish and Wildlife and PacifiCorp, Fall Creek Hatchery, Siskiyou County

The following Permittees are subject to waste discharge requirements (WDRs) set forth in this Order:

Permittees	**California Department of Fish and Wildlife and PacfiCorp**
Name of Facility	**Fall Creek Hatchery**
Facility Address	**Copco Road** **Hornbrook, 96044** **Siskiyou County**

Table 1. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North-South)	Discharge Point Longitude (East-West)	Receiving Water
001	Settling Pond Discharge	41° 59’ 0.81”	-122° 21’ 43.75”	Fall Creek
002	Chinook Release	41° 59’ 3.79”	-122° 21’ 44.29”	Fall Creek
003	Coho Release	41° 59’ 5.01”	-122° 21’ 44.57”	Fall Creek

This Order was adopted on: **April 6, 2023**
This Order shall become effective on: **June 1, 2023**
This Order shall expire on: **May 31, 2028**

The Permittees shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than: July 31, 2027. The U.S. Environmental Protection Agency (U.S. EPA) and

the California Regional Water Quality Control Board, North Coast Region have classified this discharge as follows: Major discharge.

I, Valerie M. Quinto, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, North Coast Region, on the date indicated above.

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Valerie M. Quinto, Executive Officer

TABLE OF CONTENTS

TABLE OF TABLES

TABLE OF ATTACHMENTS

1. FACILITY INFORMATION

Information describing the Fall Creek Hatchery (Facility) is summarized on the cover page and in sections 1 and 2 of the Fact Sheet (Attachment F). Section 1 of the Fact Sheet also includes information regarding the Facility's permit application.

2. FINDINGS

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board), finds:

2.1. Legal Authorities

This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Permittee to discharge into waters of the United States, at the discharge locations described in Table 1 and subject to the WDRs in this Order.

2.2. Background and Rationale for Requirements

The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E are also incorporated into this Order.

2.3. Provisions and Requirements Implementing State Law

The provisions/requirements in subsections 6.3 (Operations and Maintanence Plan, Solids Disposal and Carcass Disposal) are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

2.4. Notification of Interested Parties

The Regional Water Board has notified the Permittees and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

2.5. Consideration of Public Comment

The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

2.6. Anticipated Water Quality Impacts in Disadvantaged or Tribal Communities

The Permittees operate a concentrated cold water fish hatchery facility located along Fall Creek in the middle Klamath River watershed in Siskiyou County. The Facility will produce Coho and Chinook salmon as a necessary mitigation measure for the removal the Iron Gate Fish Hatchery that will be removed as part of decommissioning of four large dams on the Klamath River. The Facility will serve as a conservation hatchery, with the primary objective of enabling naturally produced fishes to fully support re-establishing populations. Permitting the facility is consistent with the North Coast Water Board's Basin Plan and included *Policy in Support of Restoration in the North Coast Region*, and the *Policy on the Regulation of Fish Hatcheries, Fish Rearing Facilities and Aquaculture Operations.* Pursuant to Water Code section 13149.2, the Regional Water Board has reviewed readily available information and information raised to the Board by interested persons concerning anticipated water quality impacts in disadvantaged or tribal communities resulting from adoption of this Order. The Board also considered environmental justice concerns within the Board’s authority and raised by interested persons with regard to those impacts. Data collected at Iron Gate Hatchery (IGH) indicates that loading from IGH represents 0.03 percent of the total loading for phosphorus and nitrogen to the Klamath River on an annual basis, with 0.02 percent of the total loading for BOD annually. IGH currently has an average effluent flow of approximately 15 mgd. Fall Creek Hatchery (FCH) will have a flow of approximately 6.5 mgd, which will result in reduced loading to the Klamath River. With the minimal impacts to water quality listed above, acknowledgment that the Facility will need to operate for eight years as a conservation hatchery and the removal of the dams on the Klamath, water quality for disadvantage communities or tribal communities on the Klamath River is not anticipated to be negatively impacted from the Facility’s discharge. The Regional Water Board publicly noticed the permit and provided opportunities for public comment. Public notice was provided to interested persons, Tribes, and public agencies in the region with jurisdiction over natural resources in the affected area. Based on the facility design and proposed operation, and requirements included in the permit, the discharge regulated by this Order is not expected to result in a disproportionate impact to tribal or disadvantaged communities. The Regional Water Board has satisfied the outreach requirements set forth in Water Code section 189.7.

3. DISCHARGE PROHIBITIONS

3.1. The discharge of any waste not disclosed by the Permittees or not within the reasonable contemplation of the Regional Water Board is prohibited.

3.2. Creation of pollution, contamination, or nuisance, as defined by Water Code section 13050, is prohibited.

3.3. The discharge of waste to land that is not under the control of the Permittees is prohibited, except as authorized under section 6.3.6.1 of this Order (Solids Disposal and Handling Requirements).

3.4. The discharge of waste for which the Permittees have not explicitly been permitted is prohibited.

3.5. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited under Water Code section 13375.

3.6. The discharge of waste resulting from cleaning activities is prohibited.

3.7. The discharge of detectable levels of chemicals used for the treatment and control of disease, other than salt (NaCl), is prohibited. This provision on treatment waste, is intended to prevent discharge of chemicals at levels that would cause toxicity, exceed water quality objectives, or otherwise impair beneficial uses.

3.8. Discharges of waste that violate any narrative or numerical water quality objective that are not authorized by waste discharge requirements or other order or action by the Regional or State Water Board, are prohibited.

4. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

4.1. Effluent Limitations – Discharge Point 001

4.1.1. Final Effluent Limitations – Discharge Point 001

The Permittees shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Locations EFF-001:

4.1.1.1. **Temperature.** There shall be no net increase in loading of temperature from Discharge Point 001 to Fall Creek.

4.1.1.2. **Total Nitrogen.** There shall be no net increase in loading of total nitrogen from Discharge Point 001 to Fall Creek.

4.1.1.3. **Total Phosphorus.** There shall be no net increase in loading of total phosphorus from Discharge Point 001 to Fall Creek.

4.1.1.4. **Carbonaceous Biochemical Oxygen Demand (CBOD).** There shall be no net increase in loading of CBOD from Discharge Point 001 to Fall Creek.

4.1.1.5. **pH.** The pH of discharges to Fall Creek shall not be depressed below 7.0 nor raised above 8.5, except when the pH of the influent exceeds 8.5 at Monitoring Location EFF-001, in which case the pH of discharges shall not exceed the pH of the influent. In no case shall effluent pH exceed 9.0.

4.1.2. **Interim Effluent Limitations**

The Permittees shall maintain compliance with the following interim effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001:

4.1.2.1. **Total Nitrogen, Total Phosphorus, and Carbonaceous Biochemical Oxygen Demand (CBOD).** During the period beginning on the permit effective date and ending eight years after dam removal, the Permittee shall maintain compliance with the interim effluent limitations specified in Table 2. These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified in sections 4.1.1.2, 4.1.1.3, and 4.1.1.4 for the same parameters during the time period indicated in this Order.

Table 2. Interim Effluent Limitations for Total Phosphorus, Total Nitrogen, and Carbonaceous Biochemical Oxygen Demand for the Fall Creek Hatchery

Parameter	Units	Average Monthly
Total Nitrogen	mg/L	1.7
Total Phosphorus	mg/L	0.25
Carbonaceous Biochemical Oxygen Demand	mg/L	8.2

4.1.2.2. **Temperature.** During the period beginning on the permit effective date and ending and ending ten years after first discharge from the Facility, the monthly average effluent temperature shall not exceed the monthly average upstream receiving water temperature, with compliance measured at effluent Monitoring Locations EFF-001 and upstream receiving water Monitoring Location RSW-001. This interim effluent limitation shall apply in lieu of the corresponding final effluent limitations specified in sections 4.1.1.1 for temperature during the time period indicated in this Order.

4.2. **Land Discharge Specifications – Not Applicable**

4.3. **Recycling Specifications – Not Applicable**

5. RECEIVING WATER LIMITATIONS

5.1. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. Receiving water conditions not in conformance with the limitation are not necessarily a violation of this Order. Compliance with receiving water limitations shall be measured at monitoring locations described in the MRP (Attachment E). The Regional Water Board may require the Permittees to conduct an investigation to determine cause and culpability prior to asserting that a violation has occurred. Discharges from the Facility shall not cause the following in the receiving water:

5.1.1. The discharge shall not cause the dissolved oxygen (DO) concentration of the receiving water to be depressed below 9.0 mg/L.

In those waterbodies for which the aquatic life-based DO requirements are unachievable due to natural conditions, site-specific background DO requirements can be applied as water quality objectives by calculating the daily minimum DO necessary to maintain 85 percent DO saturation during the dry season and 90% DO saturation during the wet season under site salinity, site atmospheric pressure, and natural receiving water temperature. In no event may controllable factors reduce the daily minimum DO below 6.0 mg/L.

Natural conditions are conditions or circumstances affecting the physical, chemical, or biological integrity of water that are not influenced by past or present anthropogenic activities. Site specific DO requirements can be applied upon approval from the Regional Water Board Executive Officer. The method(s) used to estimate natural temperatures for a given waterbody or stream length must be approved by the Executive Officer and may include, as appropriate, comparison with reference streams, simple calculation, or computer models.

5.1.2. The discharge shall not cause the specific conductance (micromhos[1]) concentration of the receiving waters to increase above 275 micromhos more than 50 percent of the time, or above 350 more than 10 percent of the time.

5.1.3. The discharge shall not cause the hardness (mg/L) concentration of the receiving waters to increase above 80 mg/L more than 50 percent of the time.

[1] Measured at 77°F.

5.1.4. The discharge shall not cause the Boron (mg/L) concentration of the receiving waters to increase above 0.2 mg/L more than 50 percent of the time, or above 0.5 mg/L more than 10 percent of the time.

5.1.5. The discharge shall not cause the pH of receiving waters to be depressed below 7.0 nor raised above 8.5. Within this range, the discharge shall not cause the pH of the receiving waters to be increased more than 0.5 units from that which normally occurs.

5.1.6. The discharge shall not cause the turbidity of receiving water to be increased more than 20 percent above naturally occurring background levels.

5.1.7. Authorized discharges shall not alter the sediment load and suspended sediment discharge rate to receiving waters in such a manner as to cause nuisance or adversely affect beneficial uses.

5.1.8. The discharge shall not cause receiving water to contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

5.1.9. The discharge shall not cause receiving water to contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

5.1.10. The discharge shall not cause receiving water to contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or that adversely affect beneficial uses.

5.1.11. The discharge shall not cause bottom deposits in receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.

5.1.12. The discharge shall not cause receiving waters to contain concentrations of biostimulatory substances that promote objectionable aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

5.1.13. The discharge shall not cause receiving waters to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, plants, animals, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Water Board.

5.1.14. Authorized discharges shall not cause alteration of natural temperature of receiving waters unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall discharges cause an increase of

the receiving water by more than 5°F above natural receiving water temperature.

5.1.15. The discharge shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses. The discharge shall not cause bioaccumulation of pesticide concentrations in bottom sediments or aquatic life.

5.1.16. The discharge shall not cause receiving waters to contain concentrations of pesticides in excess of Maximum Contaminant Levels (MCLs) established for these pollutants in title 22, division 4, chapter 15, article 5.5 of the CCR.

5.1.17. The discharge shall not cause receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise affect beneficial uses.

5.1.18. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board, as required by the federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Clean Water Act, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

5.1.19. The discharge shall not cause concentrations of chemical constituents to occur in excess of MCLs and secondary MCLs (SMCLs) established for these pollutants in title 22, division 4, chapter 15, article 4, section 64431, article 5.5, section 64444, and article 16, section 64449 of the CCR.

5.1.20. The discharge shall not cause receiving waters to contain radionuclides in concentrations which are deleterious to human, plant, animal or aquatic life, nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal or indigenous aquatic life, nor in excess of the MCLs and SMCLs established for these pollutants in title 22, division 4, chapter 15, article 5, sections 64442 and 64443 of the CCR.

5.2. **Groundwater Limitations – Not Applicable**

6. **PROVISIONS**

6.1. **Standard Provisions**

6.1.1. **Federal Standard Provisions.** The Permittees shall comply with all Standard Provisions included in Attachment D.

6.1.2. **Regional Water Board Standard Provisions.** The Permittees shall comply with the following provisions. In the event that there is any conflict, duplication,

or overlap between provisions specified by this Order, the more stringent provision shall apply:

6.1.2.1. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this Facility, may subject the Permittees to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittees to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

6.1.2.2. In the event the Permittees do not comply or will be unable to comply for any reason, with any prohibition, final effluent limitation, other specification, receiving water limitation, or provision of this Order that may result in a significant threat to human health or the environment, such as inundation of treatment infrastructure, breach of pond containment, etc., that results in a discharge to a drainage channel or a surface water, the Permittees shall:

6.1.2.2.1. Notify Regional Water Board staff within 24 hours of having knowledge of such noncompliance. Spill notification and reporting shall be conducted in accordance with section 5.5 of Attachment D and section 10.5 of the MRP (Attachment E).

6.1.2.2.2. Investigate the cause(s) of final effluent limitation violations and failures to comply with any prohibition, specification, or provision of this Order that may result in significant threat to human health or the environment.

6.1.2.2.3. Identify and implement corrective actions to prevent future exceedances or failures to comply with Order requirements.

6.1.2.2.4. Report the results of such investigations and corrective actions implemented in the monthly SMR as required by MRP section 10.2.6.2.5 and 10.2.6.2.6.

6.2. Monitoring and Reporting Program (MRP) Requirements

The Permittees shall comply with the MRP, included in Attachment E of this Order, and future revisions thereto.

6.3. Special Provisions

6.3.1. Reopener Provisions

6.3.1.1. **Standard Revisions.** If applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this Order and make modifications in accordance with such revised standards.

6.3.1.2. **Reasonable Potential.** This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes or has the reasonable potential to cause or contribute to, an excursion above a water quality criterion or objective applicable to the receiving water.

6.3.1.3. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a narrative or numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.

6.3.1.4. **303(d)-Listed Pollutants.** If a Total Maximum Daily Load (TMDL) is adopted and is applicable to a discharge(s) authorized by this Order, this Order may be reopened to incorporate the requirements of the TMDL. Point source waste load allocations (WLAs) have been assigned to the Iron Gate Hatchery in accordance with the applicable TMDLs. Accordingly, this Order implements those WLAs. The Permittees shall refer to Chapter 4 of the Basin Plan to determine whether there are any applicable TMDLs for the receiving water.

6.3.1.5. **Water Effects Ratios (WERs) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. If the Permittees perform studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators and submits a report that demonstrates that WER or translator studies were performed in accordance with U.S. EPA or other approved guidance, this Order may be reopened to modify the effluent limitations for the applicable constituents.

6.3.2. **Special Studies, Technical Papers, and Additional Monitoring Requirements**

6.3.2.1. **New Chemical and Aquaculture Drug Use Reporting**

Based on information provided by the existing CAAP facilities in the North Coast Region, chemicals and aquaculture drugs used for the treatment and control of disease include thiamine mononitrate, thiamine (vitamin B1), oxytetracycline, penicillin G, florfenicol, amoxicillin trihydrate, erythromycin, Romet, formalin, PVP iodine, hydrogen peroxide, potassium permanganate, sodium chloride, acetic acid, chloramine-T, SLICE, and ivermectin. Chemicals and aquaculture drugs used for anesthesia include MS 222, sodium bicarbonate, carbon dioxide, and Aqui-S. Other chemicals and aquaculture drugs can only be authorized if the Permittees submit a written request to the Executive Officer to use a new drug or chemical. The request for new chemical usage shall contain the following:

- The common name(s) and active ingredient(s) of the drug or chemical proposed for use and discharge;

- The purpose for the proposed use of the drug or chemical (i.e., list the specific disease for treatment and specific species for treatment);
- The amount proposed for use and the resulting calculated concentration in the discharge;
- The duration and frequency of the proposed use;
- Safety Data Sheets (SDS) and available information; and
- Any related Investigational New Animal Drug (INAD), New Animal Drug Application (NADA) information, extra-label use requirements, and/or veterinarian prescriptions.

The Permittees shall also submit chronic toxicity test information on any new chemical or drug applied in solution for immersive treatment in accordance with methods specified in the U.S. EPA Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms (EPA-821-R-02-014) using *Ceriodaphnia dubia* and apply the Test of Significant Toxicity (TST) described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R10-003, 2010). The submission may include previous, valid chronic toxicity test results. Upon review of the written request for new chemical usage, the Executive Officer shall determine the suitability of the chemical(s) for use under this Order. If the chemical(s) is deemed eligible for coverage, the Executive Officer shall issue a letter of approval.

6.3.3. **Best Management Practices and Pollution Prevention**

6.3.3.1. **Best Management Practices (BMP) Plan**

The Permittees must submit within 180 days of the issuance of the Order, or when Facility operations change, a site-specific BMP Plan developed and implemented as required by 40 C.F.R. part 451, subpart A. The Permittees 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 Permittees 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. The BMP Plan must include, at a minimum, the following BMPs:

6.3.3.1.1. **Chemical and Solids Controls**

6.3.3.1.1.1. Feed management and feeding strategies must minimize the discharge of unconsumed food.

6.3.3.1.1.2. Raceways and ponds must be cleaned at such frequency and in such a manner to prevent the discharge of accumulated solids discharged to waters of the United States.

6.3.3.1.1.3. Fish grading, harvesting and other activities within raceways or ponds must be conducted in such a manner to minimize the discharge of accumulated solids

6.3.3.1.1.4. Fish mortalities must be removed and properly disposed of on a regular basis to prevent discharge to waters of the United States, except in cases where the discharge of fish mortalities to surface waters is determined to be beneficial for the aquatic environment. Procedures must be identified and implemented to collect, store, and dispose of fish and other solid wastes.

6.3.3.1.1.5. A description of practices used to minimize use of drugs and chemicals to the extent feasible.

6.3.3.1.1.6. All drugs and pesticides must be used in accordance with applicable label directions (Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) or Federal Food and Drug Administration (FDA)), except under the following conditions, both of which must be reported in writing to the Executive Officer:

6.3.3.1.1.6.1. Participation in Investigational New Animal Drug (INAD) studies, using established protocols; or ·

6.3.3.1.1.6.2. Extra-label drug use, as prescribed by a veterinarian.

6.3.3.1.2. **Materials Storage**

6.3.3.1.2.1. Ensure proper storage of drugs, chemicals, and feed in a manner designed to prevent spills that may result in the unauthorized discharge of drugs, pesticides or feed to land or waters of the United States.

6.3.3.1.2.2. Implement procedures for properly containing, cleaning, and disposing of any spilled material.

6.3.3.1.3. **Structural Maintenance**

6.3.3.1.3.1. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.

6.3.3.1.3.2. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.

6.3.3.1.4. **Recordkeeping**

6.3.3.1.4.1. In order to calculate representative feed conversion ratios, maintain records for aquatic animal rearing units documenting the feed amounts and estimates of the numbers and weight of aquatic animals.

6.3.3.1.4.2. Keep records documenting the frequency of cleaning, inspections, maintenance and repairs.

6.3.3.1.5. **Training**

6.3.3.1.5.1. Train all facility personnel in spill prevention and how to respond in the event of a spill in order to ensure the proper clean-up and disposal of spilled material adequately.

6.3.3.1.5.2. Train personnel on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment. The Permittees shall ensure that its operations staff are familiar with the BMP Plan and have been adequately trained in the specific procedures it requires.

6.3.4. **Construction, Operation and Maintenance Specifications**

6.3.4.1. **Proper Operation and Maintenance.** This Order (Attachment D, Standard Provision 1.4) requires that the Permittees at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Permittees to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality assurance procedures.

6.3.4.2. **Operation and Maintenance Manual.** The Permittees shall maintain an updated Operation and Maintenance (O&M) Manual for the operational components of the Facility. The Permittees shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the Facility. The Permittees shall operate and maintain the Facility in accordance with the most recently updated O&M Manual. The O&M Manual shall be readily available to operating personnel onsite and for review by state or federal inspectors. The O&M Manual shall include the following:

6.3.4.2.1. Description of laboratory and quality assurance procedures.

6.3.4.2.2. Process and equipment inspection and maintenance schedules.

6.3.4.2.3. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Permittees will be able to comply with requirements of this Order.

6.3.4.2.4. Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

6.3.5. **Special Provisions for Publicly-Owned Treatment Works (POTWs) – Not Applicable**

6.3.6. **Other Special Provisions**

6.3.6.1. **Solids Disposal**

6.3.6.1.1. The application to land of collected screenings and other solids is not covered or authorized by this Order. Collected screenings and other solids shall be disposed of in a manner consistent with Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste , as set forth in California Code Regulations., title 27, division 2, subdivision 1, section 20005, et seq.

6.3.6.1.2. A report describing solids handling, disposal method, and final disposition of solids and/or fish carcasses shall be submitted to the Regional Water Board within 180 days of the effective date of this Order. The report may be submitted in conjunction with the Permittees' BMP Plan.

6.3.6.1.3. All aquaculture drugs and chemicals not discharged in accordance with the provisions of this Order shall be disposed of in an environmentally safe manner, according to label guidelines, MSDS guidelines, and the Permittees' BMP Plan. Any other form of disposal requires approval from the Executive Officer.

6.3.6.2. **Carcass Disposa**l

Before the carcass disposal commences, the Permittees shall submit scientific justification on why fish carcass disposal is a benefit to the receiving water, the amount (in pounds) of carcasses to be disposed, the month(s) of disposal, and copies of any permits required by other agencies. Executive Officer approval is necessary to proceed with disposal of carcasses.

6.3.7. **Compliance Schedules – Compliance with TMDL Wasteload Allocations and Point Source Discharge Prohibition**

Task	Task Description	Due Date
1	The Permittees shall submit an annual certification that the Facility will be decommissioned eight years after dam removal year two. The certification shall also include a summary of the mass loading on Fall Creek from the Facility for temperature, total nitrogen, total phosphorus and temperature.	Annually every February 1
2	The Permittees shall submit a decommissioning plan outlining, and updating, if necessary, the plans and schedule to decommission the Facility.	Two years before decommissioning of the Facility
3	The Permittees shall cease discharge from the Facility	Ten years after first discharge from the Facility

7. COMPLIANCE DETERMINATION

Compliance with the prohibitions and effluent limitations contained in sections 3 and 4 of this Order will be determined as specified below.

7.1. General

Compliance with effluent limitations for priority pollutants, when effluent limitations have been established, shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Permittees shall be deemed out of compliance with effluent limitations if the concentration of a pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported minimum level (ML).

7.2. Multiple Sample Data

When determining compliance with an AMEL for priority pollutants, and more than one sample result is available, the Permittees shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Permittees shall compute the median in place of the arithmetic mean in accordance with the following procedure.

7.2.1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

7.2.2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two middle values unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ and a value of zero shall be used for the ND or DNQ value in the median calculation for compliance purposes only. Using a value of zero for DNQ or ND samples does not apply when performing.

7.3. **Average Monthly Effluent Limitation (AMEL)**

If the average (or when applicable, the median determined by subsection 7.2.2, above, for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Permittees will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Permittees will be considered out of compliance for that calendar month. The Permittees will only be considered out of compliance for days when the discharge occurs. If there are ND or DNQ results for a specific constituent in a calendar month, the Permittees shall calculate the median of all sample results within that month for compliance determination with the AMEL as described in section 7.2, above.

7.4. **Maximum Daily Effluent Limitation (MDEL)**

If a daily discharge (or when applicable, the median determined by subsection 7.2.2, above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Permittees will be considered out of compliance for that parameter for that 1 day only within the reporting period.

7.5. **Instantaneous Minimum Effluent Limitation**

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Permittees will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

If the Permittees monitor pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittees shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total sum of time

during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

7.6. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Permittees will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

If the Permittees monitor pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittees shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total sum of time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

ATTACHMENT A - DEFINITIONS

Aquaculture Facility
A hatchery, fish farm, or other facility that contains, grows, or holds fish for later harvest (or process) and for sale or release.

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

$$\text{Arithmetic mean } (\mu) = \frac{\Sigma x}{n}$$

where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative
Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic
Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as wasteload allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Inland Surface Waters
All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with

limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
The middle measurement in a set of data. See section 7.2.2. of the Compliance Determination Section above.

Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 C.F.R. part 136, Attachment B.

Minimum Level (ML)
ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear

environmental benefits of such an approach are identified to the satisfaction of the State Water Board or the Regional Water Board.

Reporting Level (RL)
The RL is the ML (and its associated analytical method) chosen by the Permittees for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in the North Coast Regional Water Board Basin Plan.

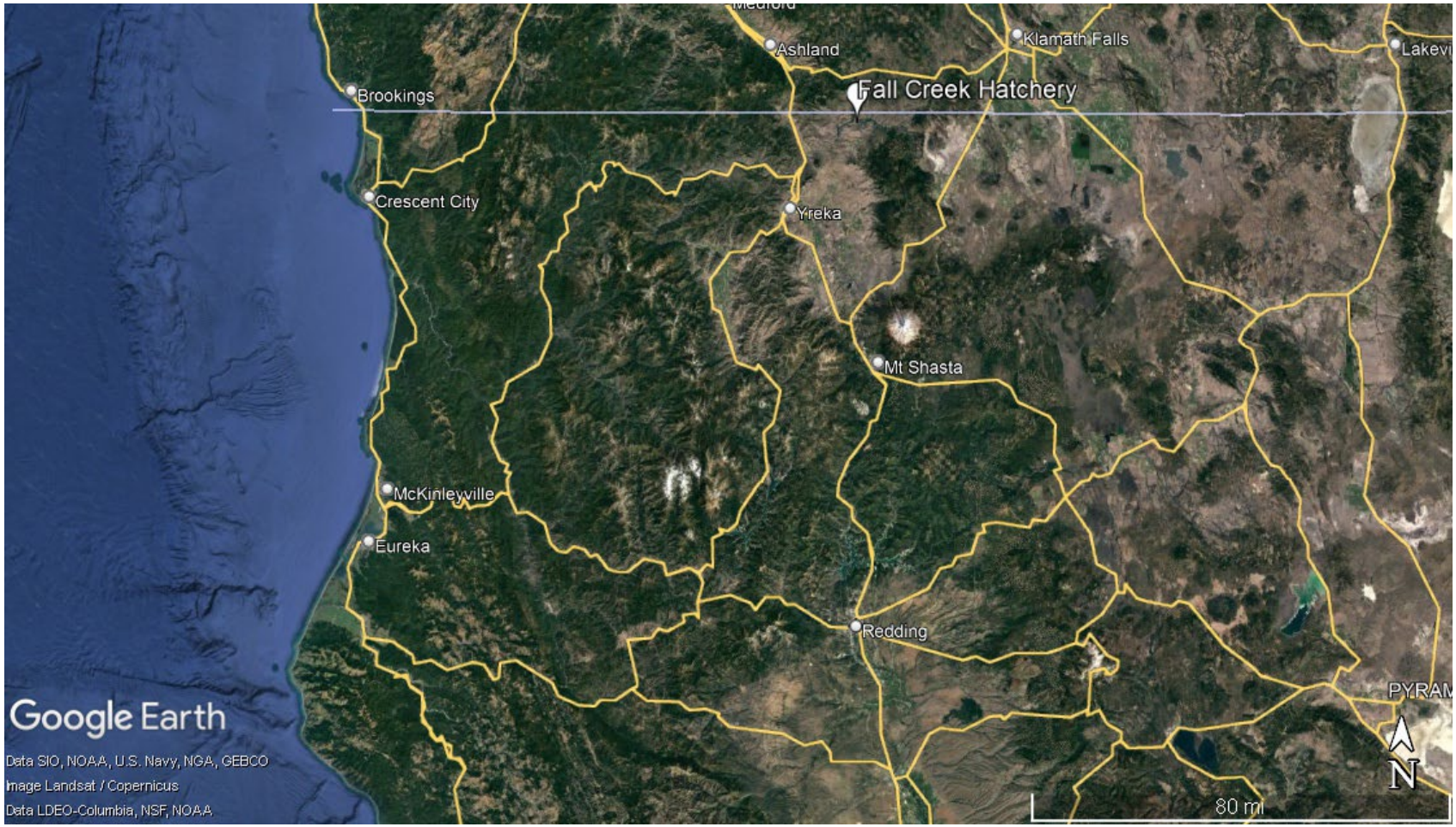
Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

$$\text{Standard Deviation } (\sigma) = \frac{\Sigma(X-\mu)^2}{(n-1)^{0.5}}$$

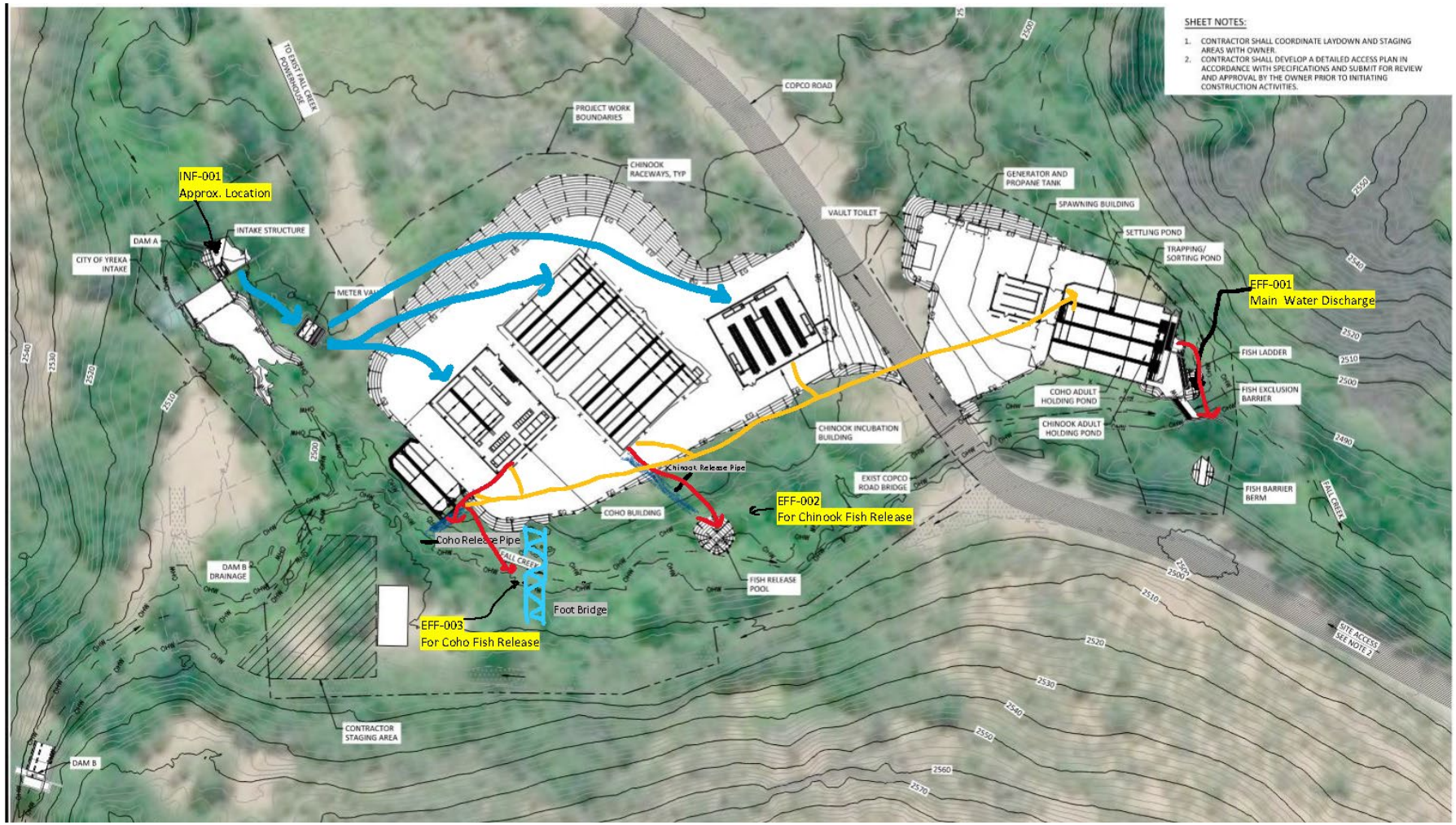
where: x is the observed value; μ is the arithmetic mean of the observed values; and n is the number of samples.

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B - MAP



ATTACHMENT C - FLOW SCHEMATIC



ATTACHMENT D - STANDARD PROVISIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply

1.1.1. The Permittees must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

1.1.2. The Permittees shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

1.2. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittees in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

1.3. Duty to Mitigate

The Permittees shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

1.4. Proper Operation and Maintenance

The Permittees shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittees to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Permittees only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

1.5. Property Rights

1.5.1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

1.5.2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

1.6. **Inspection and Entry**

The Permittees shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1.6.1. Enter upon the Permittees' premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);

1.6.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);

1.6.3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and

1.6.4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

1.7. **Bypass**

1.7.1. **Definitions**

1.7.1.1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)

1.7.1.2. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

1.7.2. Bypass not exceeding limitations. The Permittees may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not

subject to the provisions listed in Standard Provisions – Permit Compliance 1.7.3, 1.7.4, and 1.7.5 below. (40 C.F.R. § 122.41(m)(2).)

1.7.3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittees for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):

1.7.3.1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));

1.7.3.2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

1.7.3.3. The Permittees submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance 1.7.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

1.7.4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance 1.7.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

1.7.5. **Notice**

1.7.5.1. **Anticipated bypass.** If the Permittees know in advance of the need for a bypass, they shall submit prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the Regional Water Board. As of December 21, 2025, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(i).)

1.7.5.2. **Unanticipated bypass.** The Permittees shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting 5.5 below (24-hour notice Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(ii).)

1.8. **Upset**

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittees. An upset does not include noncompliance to the extent caused by operational error, improperly

designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1.8.1. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance 1.8.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

1.8.2. **Conditions necessary for a demonstration of upset.** The Permittees who seek to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

1.8.2.1. An upset occurred and that the Permittees can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

1.8.2.2. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));

1.8.2.3. The Permittees submitted notice of the upset as required in Standard Provisions – Reporting 5.5.2.2 below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

1.8.2.4. The Permittees complied with any remedial measures required under Standard Provisions – Permit Compliance 1.3 above. (40 C.F.R. § 122.41(n)(3)(iv).)

1.8.3. **Burden of proof.** In any enforcement proceeding, the Permittees seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

2. STANDARD PROVISIONS – PERMIT ACTION

2.1. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittees for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

2.2. Duty to Reapply

If the Permittees wish to continue an activity regulated by this Order after the expiration date of this Order, the Permittees must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

2.3. **Transfers**

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Permittees and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. §§ 122.41(l)(3), 122.61.)

3. STANDARD PROVISIONS – MONITORING

3.1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

3.2. Monitoring must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

3.2.1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

3.2.2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. §§ 122.21(e)(3),122.41(j)(4), 122.44(i)(1)(iv).)

4. STANDARD PROVISIONS – RECORDS

4.1. The Permittees shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or

application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

4.2. Records of monitoring information shall include:

4.2.1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));

4.2.2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));

4.2.3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));

4.2.4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));

4.2.5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and

4.2.6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

4.3. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

4.3.1. The name and address of any permit applicant or Permittees (40 C.F.R. § 122.7(b)(1)); and

4.3.2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information

The Permittees shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Permittees shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

5.2. Signatory and Certification Requirements

5.2.1. All applications, reports, or information submitted to the Regional Water Board State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 C.F.R. § 122.41(k).)

5.2.2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

5.2.3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting 5.2.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

5.2.3.1. The authorization is made in writing by a person described in Standard Provisions – Reporting 5.2.2 above (40 C.F.R. § 122.22(b)(1));

5.2.3.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

5.2.3.3. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

5.2.4. If an authorization under Standard Provisions – Reporting 5.2.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5.2.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5.2.5. Any person signing a document under Standard Provisions – Reporting 5.2.2 or 5.2.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

5.2.6. Any person providing the electronic signature for documents described in Standard Provisions – 5.2.1, 5.2.2, or 5.2.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting 5.2, and shall ensure that all relevant requirements of 40 C.F.R. part 3 (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R § 122.22(e).)

5.3. **Monitoring Reports**

5.3.1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)

5.3.2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i).)

5.3.3. If the Permittees monitor any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Regional Water Board or State Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

5.3.4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

5.4. **Compliance Schedules**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

5.5. **Twenty-Four Hour Reporting**

5.5.1. The Permittees shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittees become aware of the circumstances. A report shall also be provided within five (5) days of the time the Permittees become aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

5.5.2. The following shall be included as information that must be reported within 24 hours:

5.5.2.1. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

5.5.2.2. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

5.5.3. The Regional Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

5.6. **Planned Changes**

The Permittees shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

5.6.1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

5.6.2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).) **OR**

5.6.3. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1). (40 C.F.R. § 122.41(l)(1)(ii).)

5.7. **Anticipated Noncompliance**

The Permittees shall give advance notice to the Regional Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

5.8. **Other Noncompliance**

The Permittees shall report all instances of noncompliance not reported under Standard Provisions – Reporting 5.3, 5.4, and 5.5 above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5.5 above. The Regional Water Board may also require the Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(7).)

5.9. **Other Information**

When the Permittees become aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or U.S. EPA, the Permittees shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

5.10. **Initial Recipient for Electronic Reporting Data**

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the initial recipient defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9).)

6. STANDARD PROVISIONS – ENFORCEMENT

6.1. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

7.1. **Non-Municipal Facilities**

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

7.1.1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):

7.1.1.1. 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));

7.1.1.2. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4 dinitrophenol and 2 methyl 4,6 dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));

7.1.1.3. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or

7.1.1.4. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

7.1.2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 C.F.R. § 122.42(a)(2)):

7.1.2.1. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));

7.1.2.2. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));

7.1.2.3. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or

7.1.2.4. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

ATTACHMENT E - MONITORING AND REPORTING PROGRAM

TABLE OF CONTENTS

TABLE OF TABLES

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 C.F.R.) require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

1. GENERAL MONITORING PROVISIONS

1.1. Wastewater Monitoring Provision.

Composite samples may be taken by a proportional sampling device or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed 1 hour.

1.2. Supplemental Monitoring Provision.

If the Permittees monitor any pollutant more frequently than required by this Order, using test procedures approved by 40 C.F.R. part 136 or as specified in this Order, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the monthly and annual discharge monitoring reports.

1.3. Laboratory Certification

Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board (State Water Board), in accordance with the provision of Water Code section 13176 and must include quality assurance/quality control data with their reports.

The Permittees may analyze pollutants with short hold times (e.g., pH, chlorine residual, etc.) with field equipment or its on-site laboratory provided that the Permittees have standard operating procedures (SOPs) that identify quality assurance/quality control procedures to be followed to ensure accurate results. The Permittees must demonstrate sufficient capability to adequately perform these field tests (e.g., qualified and trained employees, properly calibrated and maintained field instruments). The program shall conform to U.S. EPA guidelines or other approved procedures.

1.4. Instrumentation and Calibration Provision.

All monitoring instruments and devices used by the Permittees to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall

be calibrated no less than the manufacturer's recommended intervals or one-year intervals, (whichever comes first) to ensure continued accuracy of the devices.

1.5. **Minimum Levels (ML) and Reporting Levels (RL).**

U.S. EPA published regulations for the Sufficiently Sensitive Methods Rule (SSM Rule) which became effective September 18, 2015. Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 C.F.R. 136, Guidelines Establishing Test Procedures for Analysis of Pollutants. All analyses shall be conducted using the lowest practical quantitation limit achievable using U.S. EPA approved methods. For the purposes of the NPDES program, when more than one test procedure is approved under 40 C.F.R., part 136 for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv).

A U.S. EPA-approved analytical method is sufficiently sensitive where:

1.5.1. The ML is at or below both the level of the applicable water quality criterion/objective and the permit limitation for the measured pollutant or pollutant parameter; or

1.5.2. In permit applications, the ML is above the applicable water quality criterion/objective, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

1.5.3. The method has the lowest ML of the U.S. EPA-approved analytical methods where none of the U.S. EPA-approved analytical methods for a pollutant can achieve the MLs necessary to assess the need for effluent limitations or to monitor compliance with a permit limitation.

Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed by the California Toxics Rule (CTR) shall also adhere to guidance and requirements contained in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005) (SIP). However, there may be situations when analytical methods are published with MLs that are more sensitive than the MLs for analytical methods listed in the Ocean Plan. For instance, U.S. EPA Method 1631E for mercury is not currently listed in SIP Appendix 4, but it is published with an ML of 0.5 ng/L that makes it a sufficiently sensitive analytical method. Similarly, U.S. EPA Method 245.7 for mercury is published with an ML of 5 ng/L.

1.6. **Discharge Monitoring Report Quality Assurance (DMR-QA) Study.**

The Permittees shall participate in the DMR-QA program and ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study from each laboratory providing testing services for the permit are submitted annually to the State Water Board at qualityassurance@waterboards.ca.gov. For more information on the DMR-QA Program, contact the State DMR-QA Coordinator at the aforementioned email address.

2. MONITORING LOCATIONS

The Permittees shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Source water from Fall Creek Intake
001	EFF-001	Settling Pond Discharge Latitude: 41° 59’ 0.81” Longitude: -122° 21’ 43.75”
002	EFF-002	Chinook Raceway Discharge Latitude: 41° 59’ 3.79” Longitude: -122° 21’ 44.29”
003	EFF-003	Coho Raceway Discharge Latitude: 41° 59’ 5.01” Longitude: -122° 21’ 44.57”
	RSW-001	Fall Creek surface water upstream beyond the influence of the discharge.
	RSW-002	Fall Creek surface water at a point of discharge from the settling pond discharge.

The North latitude and West longitude information in Table E-1 are approximate for administrative purposes.

3. INFLUENT MONITORING REQUIREMENTS

3.1. Monitoring Location INF-001

The Permittees shall monitor the raw water supply to the Facility at Monitoring Location INF-001 follows:

Table E-2. Influent Monitoring – Monitoring Location INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method (Table Note 1)
Total Suspended Solids	mg/L	Grab	Quarterly	Standard Methods
Settleable Solids	ml/L	Grab	Quarterly	Standard Methods
Total Nitrogen	mg/L	Grab	Monthly	Standard Methods
Total Phosphorus	mg/L	Grab	Monthly	Standard Methods
Carbonaceous Biochemical Oxygen Demand	mg/L	Grab	Monthly	Standard Methods
Temperature	°F	Grab	Monthly	Standard Methods

Table Notes:

1. In accordance with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.

4. EFFLUENT MONITORING REQUIREMENTS

4.1. Monitoring Location EFF-001

4.1.1. The Permittees shall monitor treated effluent from the flow-through settling pond at EFF-001 as follows:

Table E-3. Effluent Monitoring – Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow	Mgd	Meter1	Continuous	---
Total Suspended Solids	mg/L	Grab	Quarterly	Standard Methods2
Net Total Suspended Solids	mg/L	Calculation4	Quarterly	---
Settleable Solids	ml/L	Grab	Quarterly3	Standard Methods
Net Settleable Solids	ml/L	Calculation4	Quarterly	---
Turbidity	NTU	Grab	Quarterly	Standard Methods

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	pH units	Grab	Quarterly	Standard Methods
Ammonia Nitrogen	mg/L	Grab	Quarterly5	Standard Methods
Hardness	mg/L	Grab	Annually	Standard Methods
CTR Priority Pollutants6	µg/L	Grab	Once per permit term7	Standard Methods8
Total Nitrogen	mg/L	Grab	Monthly	Standard Methods
Total Phosphorus	mg/L	Grab	Monthly	Standard Methods
Carbonaceous Biochemical Oxygen Demand	mg/L	Grab	Monthly	Standard Methods
Temperature	°F	Meter	Continuous	Standard Methods

Table Notes

1. The Permittees shall monitor the discharge flow rates when there is a discharge. Daily flows shall be calculated or measured and recorded monthly.
2. In accordance with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.
3. The net concentration shall be calculated by subtracting the influent concentration from the effluent concentration.
4. Measurements must be taken to coincide with quarterly effluent and receiving water sampling for temperature and pH.
5. Those pollutants identified by the California Toxics Rule at 40 C.F.R. section 131.38.
6. Monitoring shall consist of a full priority pollutant scan one time at least 180 days but no more than 365 days prior to expiration of this Order, and the results shall be submitted with the Report of Waste Discharge. The Permittees are not required to sample and analyze for asbestos. Effluent hardness shall be monitored concurrently with the priority pollutant sample.
7. Analytical methods must achieve the lowest minimum level (ML) specified in Attachment 4 of the SIP; and in accordance with Section 2.4 of the SIP, the Permittees shall report the ML and MDL for each sample result.

5. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS – NOT APPLICABLE

6. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

7. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

8. RECEIVING WATER MONITORING REQUIREMENTS

8.1. Monitoring Location RSW-001

8.1.1. The Permittees shall monitor the upstream receiving water at Monitoring Location RSW-001 as follows:

Table E-4. Receiving Water Monitoring Requirements – Monitoring Location RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[1]
Dissolved Oxygen	mg/L	Grab	Quarterly	Standard Methods1
pH	pH Units	Grab	Quarterly2	Standard Methods
Temperature	°F	Grab	Quarterly2	Standard Methods
Turbidity	mg/L	Grab	Quarterly	Standard Methods
Hardness (CaCO3)	mg/L	Grab	Annually	Standard Methods
CTR Priority Pollutants3	µg/L	Grab	Once per permit term4	Standard Methods5

Table Notes

1. In accordance with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.
2. Measurements must be taken to coincide with quarterly effluent monitoring for ammonia.
3. Those pollutants identified by the California Toxics Rule at 40 C.F.R. section 131.38.
4. Monitoring shall consist of a full priority pollutant scan one time at least 180 days but no more than 365 days prior to expiration of this Order, concurrent with effluent sampling. The Permittees are not required to sample and analyze for asbestos. Upstream receiving water hardness shall be monitored concurrently with the priority pollutant sample.
5. Analytical methods must achieve the lowest minimum level (ML) specified in Attachment 4 of the SIP; and in accordance with Section 2.4 of the SIP, the Permittee shall report the ML and MDL for each sample result.

8.2. **Monitoring Location RSW-002**

8.2.1. The Permittees shall monitor the downstream receiving water at RSW-002 as follows:

Table E-5. Receiving Water Monitoring Requirements – Monitoring Location RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	Quarterly	Standard Methods1
pH	pH Units	Grab	Quarterly2	Standard Methods
Temperature	°F	Grab	Quarterly2	Standard Methods
Turbidity	mg/L	Grab	Quarterly	Standard Methods
Hardness (CaCO3)	mg/L	Grab	Annually	Standard Methods
CTR Priority Pollutants3	µg/L	Grab	Once per permit term4	Standard Methods5

Table Notes

1. In accordance with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.
2. Measurements must be taken to coincide with quarterly effluent monitoring for ammonia.
3. Those pollutants identified by the California Toxics Rule at 40 C.F.R. section 131.38.
4. Monitoring shall consist of a full priority pollutant scan one time at least 180 days but no more than 365 days prior to expiration of this Order, concurrent with effluent sampling. The Permittees are not required to sample and analyze for asbestos. Upstream receiving water hardness shall be monitored concurrently with the priority pollutant sample.
5. Analytical methods must achieve the lowest minimum level (ML) specified in Attachment 4 of the SIP; and in accordance with Section 2.4 of the SIP, the Permittee shall report the ML and MDL for each sample result.

9. OTHER MONITORING REQUIREMENTS

9.1. Quarterly Drug and Chemical Use Report

The Permittees shall submit a quarterly report describing all aquaculture drugs or chemicals used at the Facility using the Chemical Use Report in Attachment G of this Order. The information that shall be provided includes:

9.1.1. The name(s) and active ingredient(s) of the drug or chemical.

9.1.2. The date(s) of application.

9.1.3. The purpose(s) for the application.

9.1.4. The method of application (e.g., immersion bath, administered in feed), duration of treatment, whether the treatment was static or flush (for drugs or chemicals applied directly to water), amount in gallons or pounds used, treatment concentration(s), and the flow measured in million gallons per day (MGD) in the treatment units.

9.1.5. The total flow through the facility measured in MGD to the discharge point after mixing with the treated water.

9.1.6. For drugs and chemicals used for the treatment and control of diseases (other than NaCl), the calculations used to demonstrate compliance with Discharge Prohibition 3.7 of this Order.

9.1.7. The method of disposal for drugs or chemicals used but not discharged in the effluent.

9.2. Visual Monitoring (Monitoring Location EFF-001)

Visual observations of the discharge and receiving water shall be recorded monthly and on the first day of each intermittent discharge. Visual monitoring shall include, but not be limited to, observations for floating materials, coloration, objectionable aquatic growths, oil and grease films, and odors. Visual observations shall be recorded and included in the Permittees' **quarterly SMRs**.

10. REPORTING REQUIREMENTS

10.1. General Monitoring and Reporting Requirements

10.1.1. The Permittees shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

10.2. Self-Monitoring Reports (SMRs)

10.2.1. The Permittees shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website

(http://www.waterboards.ca.gov/water_issues/programs/ciwqs/). The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal. The Permittees shall maintain sufficient staffing and resources to ensure it submits eSMRs that are complete and timely. This includes provisions of training and supervision of individuals (e.g., Permittees' personnel or consultant) on how to prepare and submit eSMRs.

10.2.2. The Permittees shall report in the SMR the results for all monitoring specified in this MRP under sections 3 through 9. The Permittees shall submit monthly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Permittees monitor any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

10.2.3. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses.

10.2.4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-6. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	First day of second calendar month following the month of sampling
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling	First day of second calendar month following the month of sampling

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following the month of sampling
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	First day of second calendar month following the month of sampling
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	First day of second calendar month following the month of sampling
Annually	January 1 following (or on) permit effective date	January 1 through December 31	March 1, each year (with annual report)
Once per Permit Term	Permit Effective Date	All	March 1 following the year that monitoring is completed (with annual report) with last data to be submitted at least 180 days prior to permit expiration

10.2.5. **Reporting Protocols**. The Permittees shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

The Permittees shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

10.2.5.1. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

10.2.5.2. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to Est. Conc.").

The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

10.2.5.3. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

10.2.5.4. Permittees are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time are the Permittees to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

10.2.6. The Permittees shall submit SMRs in accordance with the following requirements:

10.2.6.1. The Permittees shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with effluent limitations. The Permittees are not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Permittees shall electronically submit the data in a tabular format as an attachment.

10.2.6.2. The Permittees shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:

10.2.6.2.1. Facility name and address.

10.2.6.2.2. WDID number

10.2.6.2.3. Applicable period of monitoring and reporting.

10.2.6.2.4. Violations of the WDRs (identified violations must include a description of the requirement that was violated and a description of the violation.

10.2.6.2.5. Corrective actions taken or planned.

10.2.6.2.6. The proposed time schedule for corrective actions.

10.2.6.3. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the CIWQS Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html).

10.2.6.4. In the event that an alternate method for submittal of SMRs is required, the Permittees shall submit the SMR electronically via e-mail to NorthCoast@waterboards.ca.gov or on disk (CD or DVD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at http://waterboards.ca.gov/northcoast.

10.2.6.5. At any time during the term of this permit, the Regional Water Board may notify the Permittees to electronically submit both technical and Self-Monitoring Reports (SMRs) to the State Water Board's GeoTracker database in searchable Portable Document Format (pdf). In addition, analytical data will be required to be uploaded to the GeoTracker database under a site-specific global identification number that will be assigned to the Permittees. Information on the GeoTracker database is provided on the State Water Board website at: https://www.waterboards.ca.gov/resources/data_databases/groundwater.shtml.

10.3. **Discharge Monitoring Reports (DMRs)**

10.3.1. DMRs are U.S. EPA reporting requirements. The Permittees shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. DMRs shall be submitted quarterly on the first day of the second calendar month following the end of each quarter (February 1, May 1, August 1, November 1). Information about electronic DMR submittal is available at the DMR website: (http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring).

10.4. **Other Reports**

10.4.1. **Special Study Reports and Progress Reports**. As specified in the Special Provisions contained in section 6.3. of the Order, special study and progress reports shall be submitted in accordance with the following reporting requirements.

Table E-7. Reporting Requirements for Special Provisions Reports

Order Section	Special Provision Requirement	Reporting Requirement
Special Provision 6.3.2.1	New Chemical and Aquaculture Drug Use Reporting	If a new chemical or drug is needed for use
Special Provision 6.3.3.1	Best Management Practices (BMP) Plan	Within 180 days of issuance of this Order
MRP Reporting Requirement 10.4.2	Annual Report	March 1, annually

10.4.2. **Annual Report.**

The Permittees shall submit an annual report to the Regional Water Board for each calendar year through the CIWQS Program Web site. In the event that a paper copy of the annual report is required, the Permittees shall submit the report to the email address in section 10.2.6.3, above. The report shall be submitted by **March 1st** of the following year. The report shall, at a minimum, include the following:

10.4.2.1. Where appropriate, tabular and/or graphical summaries of the monitoring data and disposal records from the previous year. If the Permittees monitor any pollutant more frequently than required by this Order, using test procedures approved under 40 C.F.R. part 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and report of the data submitted in the SMR.

10.4.2.2. A comprehensive discussion of the Facility's compliance (or lack thereof) with all effluent limitations and other WDRs, and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the Order.

10.4.2.3. The names and general responsibilities of all persons employed at the Facility;

10.4.2.4. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations; and

10.4.2.5. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.

10.5. **Spill Notification**

10.5.1. **Spills and Unauthorized Discharges.** Information regarding all spills and unauthorized discharges that may endanger health or the environment shall be provided orally to the Regional Water Board [2] **within 24 hours** from the time the Permittee becomes aware of the circumstances and a written report shall also be provided **within five days** of the time the Permittee becomes aware of the circumstances, in accordance with section 5.5 of Attachment D.

Information to be provided verbally to the Regional Water Board includes:

10.5.1.1. Name and contact information of caller;

10.5.1.2. Date, time, and location of spill occurrence;

10.5.1.3. Estimates of spill volume, rate of flow, and spill duration, if available and reasonably accurate;

10.5.1.4. Surface water bodies impacted, if any;

10.5.1.5. Cause of spill, if known at the time of the notification;

10.5.1.6. Cleanup actions taken or repairs made at the time of the notification; and

10.5.1.7. Responding agencies.

[2] The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to the California Governor's Office of Emergency Services Warning Center (CalOES) will satisfy the 24-hour spill reporting requirement for the Regional Water Board. The contact number for spill reporting for the CalOES is (800) 852-7550.

ATTACHMENT F - FACT SHEET

TABLE OF CONTENTS

TABLE OF TABLES

ATTACHMENT F - FACT SHEET

As described in section 2.2 of this Order, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to these Permittees. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to these Permittees.

1. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	1A22157NSIS
Permittees	California Department of Fish and Wildlife and PacifiCorp
Name of Facility	Fall Creek Hatchery
Facility Address	Copco Road Hornbrook, CA 96044 Siskiyou County
Facility Contact, Title and Phone	Patrick Brock, Fish Hatchery Manager II, 530-475-3420
Authorized Person to Sign and Submit Reports	Patrick Brock, Fish Hatchery Manager II, 530-475-3420
Mailing Address	601 Locust Street Redding, CA 96001 Shasta County
Billing Address	Same as Mailing Address
Type of Facility	Fish Hatchery
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Facility Permitted Flow	6.46 Maximum Daily Flow (mgd)
Facility Design Flow	6.46 Maximum Daily Flow (mgd)

Watershed	Middle Klamath River
Receiving Water	Fall Creek
Receiving Water Type	Inland Surface Water

California Department of Fish and Wildlife is the operator and PacifiCorp (hereinafter Permittees) is the owner of Fall Creek Hatchery (hereinafter Facility), a cold water concentrated aquatic animal production (CAAP) facility as defined in Federal Regulations at 40 C.F.R. section 122.24.

For the purposes of this Order, references to the "dischargers" or "permittees" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Permittee herein.

The Facility discharges treated wastewater to the Klamath River, a water of the United States. This Order is a new NPDES permit for the Facility. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

The Permittees filed a report of waste discharge (ROWD) and submitted an application for issuance of its waste discharge requirements (WDRs) and NPDES permit on **August 4, 2020**. The application was deemed complete on **August 14, 2020.**

Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. However, pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Permittees comply with all federal NPDES requirements for continuation of expired permits.

2. FACILITY DESCRIPTION

The Permittees own and operate an existing cold water concentrated aquatic animal production facility at the confluence of Fall Creek and the Klamath River. The Facility will be replacing Iron Gate Hatchery as a mitigation hatchery for Chinook and Coho salmon. Iron Gate Hatchery is being demolished as part of the Klamath River Renewal Project. The Facility is operated to mitigate the loss of fish habitat due to hydro-electric dams on the Klamath River. The Facility is constructed to simulate natural cold-water streams and is used to produce cold water fish species such as Chinook and Coho. Fresh water from Fall Creek is supplied as influent to the Facility by surface diversion from Fall Creek to maintain flows of up to 6.46 million gallons per day (MGD)

2.1. Description of Wastewater and Biosolids Treatment and Controls

The Facility is owned by PacifiCorp and operated by the California Department of Fish and Wildlife (Permittees). The Facility is a cold water concentrated aquatic animal production facility, which was last operational in 2003 when 180,000 juvenile Chinook salmon were reared in the existing raceways. As a component of the Klamath River Renewal Project, the Facility will receive significant investment and infrastructure and returned to service in order to accommodate Coho salmon and Chinook salmon production following the removal of the four hydroelectric dams on the Klamath River. The Facility will have the capacity for producing 25,000 pounds of Coho salmon and 30,000 pounds of Chinook salmon annually at maximum production. These fish will require approximately 26,640 pounds of feed monthly, at full capacity and during the months between April and October. The Facility will include a water intake structure on Fall Creek, three hatchery buildings (Chinook Incubation Building, Coho Building, and a Spawning Building), three adult fish holding ponds, one flow-through settling pond, two Coho rearing ponds/raceways, eight Chinook production raceways, and three points of discharge to Fall Creek.

The Facility's intake structure will divert up to 10 cubic feet per second (cfs) (6.46 mgd) from Fall Creek and will be the sole water supply for Facility operations. From the intake, the water will be conveyed through a buried 24-inch diameter pipe to four water supply pipes that will deliver flow to distribution piping within the Chinook Incubation Building, Coho building, adult holding ponds, and raceways. Each of the four water supply pipes will be equipped with a magnetic flow meter and isolation valves that will be enclosed in a concrete vault (meter vault). The flow meter will transmit flow rates to a programmable logic controller inside the electrical room of the Chinook Incubation Building.

The Facility will have two drain systems: a production drain system and a waste drain system. The flow-through water for hatchery production will be routed through the production drain system, which is the primary drain system for the Facility. This drain system conveys flows through the facility primarily via gravity with the exception of the lower portion of the system which will convey flows via pressurized pipes to the adult holding ponds. The system terminates at the adult holding ponds where the flows exit the Facility through discharge point EFF-001 to Fall Creek without treatment. Discharge point EFF-001 is the primary point of discharge for the Facility.

Wastewater flows consisting of solids collected through vacuuming rearing vessels will be transported via the waste drain system to the flow-through settling pond. The settling pond will be used to settle out biosolids or other solid waste from the upstream facilities and will be parsed into two distinct chambers such that solids can be dried, removed, and disposed of in one chamber while the other chamber is available to receive wastewater flows. Each chamber will be approximately 12 feet 6 inches wide by 31 feet 8 inches long and have a depth of 5 feet. Total volume of the settling pond is 3,200 cubic feet. The downstream end of the settling

pond bays will be equipped with overflow structures that will divert flow-through water into a pipe to discharge point EFF-001 where it will mix with the flow-through water from the adult holding ponds before entering Fall Creek.

In addition to discharge point EFF-001, the Coho salmon and Chinook salmon raceways will be equipped with volitional release pipes to allow for volitional fish passage to Fall Creek. These are the only other points of discharge from the Facility. Up to 500 gallons per minute (gpm) of flow will be released from the Coho salmon rearing ponds/raceways to facilitate fish movement through the volitional release pipe (discharge point EFF-003) to Fall Creek.

The Chinook volitional release pipe will convey flow-through water and fish from the Chinook raceways to a constructed plunge pool located along the east bank of Fall Creek (discharge point EFF-002). Up to 550 gpm of flow will be released from the raceway during this period to support fish movement through the volitional release pipe.

The combined maximum daily outflow from the three outfalls will be 6,463,168 gallons. The three points of discharge are located approximately 0.9 mile upstream of the confluence with the Klamath River.

The use of therapeutants or inorganics for treatment of fish are not anticipated due to the high quality of the intake water, carefully calculated and conservative fish densities, and the short design life of the Facility; however, since the Coho are listed as threatened under State and Federal law, if absolutely necessary, any water containing therapeutants will be shunted to the waste drain system and settling pond for treatment. At Iron Gate Hatchery, the facility scheduled for decommissioning for dam removal, the California Department of Fish and Wildlife (CDFW)has previously used during the last permit term the following chemicals and drugs in the raceways: sodium chloride (salt) and tricaine methanesulfonate (Tricaine S, or MS222), and by Veterinary prescription , penicillin G potassium, potassium permanganate (KmNO4), thiamine (vitamin B1), oxytetracycline dihydrate (Terramycin), oxytetracycline hydrochloride, and florfenicol (Aquaflor).

In addition to the above aquaculture chemicals, the Permittees and the CDFW Fish Health Laboratory requested to include in this Order a list of aquaculture drugs and chemicals that are approved for specific circumstances involving fish species, life stage and pathogen by the U.S. Food and Drug Administration for aquaculture, as they pertain to cold water salmonids. These aquaculture drugs and chemicals, prescribed by the DFW Fish Health Laboratory, are to be used on an "as needed” basis to treat various fish disease and parasitic outbreaks. As mentioned, the Permittees expect the vastly improved water quality of the Fall Creek site and the planned low densities of fish to result in less or no need for therapeutics as compared to the Iron Gate Hatchery water supply and facility.

2.2. Discharge Points and Receiving Waters

Effluent discharges Fall Creek, a tributary to the Klamath River, from the Facility are described above and summarized in the following table:

Table F-2. Discharge Points to Fall Creek for the Facility

Discharge Point	Discharge Description
001	Settling Basins
002	Chinook Fish Release
003	Coho Fish Release

2.2.1. The Facility discharges to Fall Creek at Discharge points 001, 002 and 003 in the Copco Lake Hydraulic Subarea within the Klamath River Hydrologic Unit.

2.3. Summary of Existing Requirements and SMR Data – Not Applicable

2.4. Compliance Summary – Not Applicable

2.5. Planned Changes -Not Applicable

3. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

3.1. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit authorizing the Permittees to discharge into waters of the United States at the discharge locations described in Table 1 subject to the WDRs in this Order.

3.2. California Environmental Quality Act (CEQA)

The Facility is being upgraded and reopened and is considered an existing Facility under CWA section 306(a)(2). CEQA was completed for the reopening of the hatchery in **April 2020.** Under Water Code section 13389, this action to adopt an NPDES permit to regulate discharges from the Facility is exempt from CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

3.3. State and Federal Laws, Regulations, Policies, and Plans

3.3.1. Water Quality Control Plan

The Regional Water Board adopted a *Water Quality Control Plan for the North Coast Region* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to Fall Creek, a tributary to the Klamath River, are as follows:

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001, 002 and 003	Fall Creek within the Middle Klamath River Watershed	Existing: Freshwater Replenishment (FRESH); Navigation (NAV); Hydropower generation (POW); Water contact recreation (REC-1); Non-contact water recreation (REC-2); Commercial and sport fishing (COMM); Warm freshwater habitat (WARM); Cold freshwater habitat (COLD); Wildlife habitat (WILD); Rare, threatened, or endangered species (RARE); Migration of aquatic organisms (MIGR); Spawning, reproduction, and/or early development (SPWN); Shellfish Harvesting (SHELL); and Aquaculture (AQUA). Potential: Municipal and domestic supply (MUN); Agricultural supply (AGR); Industrial service supply (IND); and Industrial process supply (PRO).

The Basin Plan includes waste discharge prohibitions which prohibit point source discharges to the Klamath River year-round. These prohibitions are applicable except as stipulated in action plans and policies contained in the

Point Source Measures section of the Basin Plan. As described in sections 3.5.2 and 3.5.3 of this Fact Sheet, the discharges authorized by this Order are consistent with the Basin Plan's Policy on the Regulation of Fish Hatcheries, Fish Rearing Facilities, and Aquaculture Operations and supported by the Policy in Support of Restoration in The North Coast Region. Therefore, this Order authorizes discharges to Fall Creek year-round.

3.3.2. Thermal Plan

The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters. Fall Creek, to which the Fall Creek Hatchery discharges, is an inland surface water. This Order includes final effluent limitations for temperature for Fall Creek Hatchery based on waste load allocations specified in the Basin Plan (see section 3.4 of this Fact Sheet), which were designed to implement the Thermal Plan prohibition.

3.3.3. National Toxics Rule (NTR) and California Toxics Rule (CTR)

U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

3.3.4. State Implementation Policy

On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

3.3.5. Domestic Water Quality

In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and

accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels implemented by the Basin Plan that are designed to protect human health and ensure that water is safe for domestic use.

3.3.6. Antidegradation Policy

Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

3.3.7. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

3.3.8. Endangered Species Act Requirements

This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare, threatened, or endangered species. The Permittees are responsible for meeting all requirements of the applicable Endangered Species Act.

3.3.9. Sewage Sludge and Biosolids

This Order does not authorize any act that results in violation of requirements administered by U.S. EPA to implement 40 C.F.R. Part 503, Standards for the Use or Disposal of Sewage Sludge. These standards regulate the final use or disposal of sewage sludge that is generated during the treatment of domestic sewage in a municipal wastewater treatment facility. The Permittees are

responsible for meeting all applicable requirements of 40 C.F.R. Part 503 that are under U.S. EPA's enforcement authority.

3.4. Impaired Water Bodies on the CWA section 303(d) List

Section 303(d) of the federal CWA requires states to identify waterbodies that do not meet water quality standards and are not supporting their beneficial uses after implementation of technology-based effluent limitations on point sources. Each state must submit an updated list, the 303(d) List of Impaired Waterbodies, to U.S. EPA by April of each even numbered year. In addition to identifying the waterbodies that are not supporting beneficial uses, the 303(d) list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. U.S. EPA requires the Regional Water Board to develop TMDLs for each 303(d) listed pollutant and water body contaminant. TMDLs establish the maximum quantity of a given pollutant that can be added to a water body from all sources without exceeding the applicable water quality standard for that pollutant and determine waste load allocations (the portion of a TMDL allocated to existing and future point sources) for point sources and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources) for nonpoint sources.

On October 11, 2011, U.S. EPA gave final approval to the 2008-2010 303(d) list of impaired water bodies prepared by the State.

The Klamath River is listed for cyanobacteria hepatotoxic microcystins, nutrients, organic enrichment/low dissolved oxygen, sediment, mercury, aluminum, and temperature. On March 24, 2010, the Regional Water Board adopted Resolution No. R1-2010-0026 amending the Basin Plan to include an Action Plan for the Klamath River TMDLs Addressing Temperature, Dissolved Oxygen, Nutrients, and Microcystin Impairments in the Klamath River in California and the Lost River Implementation Plan (Action Plan). The Action Plan was approved by the State Water Board on September 7, 2010 and the U.S. EPA on December 28, 2010. The Regional Water Board developed the March 2010 Final Staff Report for the Klamath River Total Maximum Daily Loads (TMDLs) Addressing Temperature, Dissolved Oxygen, Nutrient, and Microcystin Impairments in California, the Proposed Site-Specific Dissolved Oxygen Objectives for the Klamath River in California, and the Klamath River and Lost River Implementation Plans (TMDL Staff Report) which contains information and findings supporting the Action Plan.

On February 18, 2010, participants in the Klamath settlement process signed the Klamath Basin Restoration Agreement (KBRA) and Klamath Hydroelectric Settlement Agreement (KHSA). The KHSA lays out the process for additional studies, environmental review, and a decision by the Secretary of the Interior (Secretarial Determination) regarding whether removal of four dams owned by PacifiCorp 1) will advance restoration of the salmonid fisheries of the Klamath Basin; and 2) is in the public interest. The KHSA includes provisions for the interim operation of the dams and the process to transfer, decommission, and remove the

dams. As documented further in the TMDL Staff Report, the TMDLs are based on a modeling scenario representing natural conditions in the Klamath River in the absence of upstream dams and reservoirs, hereinafter referred to as the "California allocation scenario" or "dams out" scenario.

The Action Plan identifies the Iron Gate Hatchery as the only point source of heat in the Klamath River watershed, and states in section III.C, "The interstate water quality objective for temperature prohibits the discharge of thermal waste to the Klamath River, and therefore the waste load allocation for Iron Gate Hatchery is set to zero, as monthly average temperatures." Section 5.2.4 of the TMDL Staff Report states, in part, "the temperature load allocation for the Hatchery equals zero temperature increase above natural temperatures (see Table 5.6)." Table 5.6 of the TMDL Staff Report includes numeric targets for Iron Gate Hatchery, expressed as monthly averages, based on the California allocation scenario. This Order establishes final effluent limitations for temperature equivalent to the numeric targets in Table 5.6 of the TMDL Staff Report. The effluent limitations have been rounded to the nearest degree to account for the degree of certainty for continuous temperature loggers (±2°F), which is expected to have a de minimis impact on receiving water quality.

The Action Plan identifies the Iron Gate Hatchery as the only point source of nutrients and organic matter in the Klamath River watershed and includes daily waste load allocations for the Iron Gate Hatchery for total phosphorus, total nitrogen, and carbonaceous biochemical oxygen demand (CBOD) of 0 lbs/day. Section 5.3.3 of the TMDL Staff Report states, "The waste load allocation to the Iron Gate Hatchery is zero net increase of nutrient and organic matter loads in the river above California dissolved oxygen compliance conditions (i.e., no dams)." Table 5.12 of the TMDL Staff Report includes numeric targets for Iron Gate Hatchery, expressed as monthly mean concentrations, based on the California allocation scenario. This Order includes final effluent limitations for total nitrogen, total phosphorus, and CBOD expressed as no net loading effluent limitations. The net concentration represents the difference between the effluent and natural background concentrations, as defined in Table 5.12 of the TMDL Staff Report.

The Action Plan did not establish waste load allocations for the Iron Gate Hatchery for dissolved oxygen or microcystins. As discussed in section IV.B of the Action Plan, the TMDLs addressing dissolved oxygen and nutrient-related water quality impairments, including microcystin, are closely interrelated because of the strong relationship between biostimulatory conditions, decomposition of organic matter, and resulting dissolved oxygen conditions. The load and waste load allocations for nutrients (i.e., total nitrogen, total phosphorus, and CBOD) were set to ensure that the site-specific dissolved oxygen objectives are met in the Klamath River. Likewise, as discussed in section VI.B of the Action Plan, the microcystin impairment is addressed by total phosphorus and total nitrogen load allocations.

The California allocation scenario is based on achievement of water quality standards, which are set to protect all beneficial uses of water. Regional Water

Board staff have determined that achievement of water quality standards is necessary to support a balanced indigenous population of fish and shellfish. The numeric targets for temperature, nitrogen, phosphorus and CBOD are listed below.

Table F-4. Temperature, Nutrient and Organic Matter Monthly Mean Targets for Iron Gate Hatchery Based on California Allocation Scenario Conditions

Month	Temperature (°F)	Total Phosphorus (mg/L)	Total Nitrogen (mg/L)	CBOD (mg/L)
January	37.3	0.021	0.220	2
February	42.7	0.025	0.289	2
March	48.9	0.026	0.299	2
April	52.7	0.028	0.295	2
May	59.1	0.027	0.282	2
June	65.6	0.024	0.198	1
July	68.0	0.025	0.167	1
August	67.1	0.024	0.160	1
September	60.0	0.022	0.149	1
October	51.0	0.021	0.166	1
November	38.2	0.024	0.186	1
December	35.9	0.026	0.214	1

3.5. Other Plans, Polices and Regulations

3.5.1. Storm Water.

Coverage under the State Water Board Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (Industrial Storm Water General Permit) is not required for CAAP facilities.

3.5.2. Policy on the Regulation of Fish Hatcheries, Fish Rearing Facilities, and Aquaculture Operations

Fish hatcheries, fish rearing facilities, and aquaculture operations, if regulated, may enhance beneficial water uses. These operations characteristically require the utilization of large quantities of water on a continuous basis. Most of the water is used to satisfy the flow-through requirements of the fish and is returned to the receiving waters without alteration of beneficial uses. Wastes generated during the care and feeding of fish may include suspended and settleable solids, salt (sodium chloride), antibiotics, anesthetics, and disease control agents. The following criteria shall apply to the discharge from fish hatcheries, rearing facilities, and aquaculture operations:

- The discharge shall not adversely impact the recognized existing and potential beneficial uses of the receiving waters.
- The discharge of waste resulting from cleaning activities shall be prohibited.
- The discharge of detectable levels of chemicals used for the treatment and control of disease, other than salt (NaCl) shall be prohibited.
- The discharge will be subject to review by the Regional Water Board for possible issuance of Waste Discharge Requirements/NPDES permit.
- The Regional Water Board may waive WDRs for fish hatcheries, fish rearing, and aquaculture facilities, provided that the discharge complies with applicable sections of the Basin Plan and satisfies the conditions for Order No. R1-2022-0031 the *Conditional Waiver of Waste Discharge Requirements for Specific Categories of Low Threat Discharge in the North Coast Region.*
- The public interest is served by the fish hatchery, rearing facility, or aquaculture operation.

Requirements of this Order implement the Policy on the Regulation of Fish Hatcheries, Fish Rearing Facilities, and Aquaculture Operations. In lieu of establishing numeric effluent limitations or detection levels for aquaculture drugs and chemicals and to ensure compliance with the Policy on the Regulation of Fish Hatcheries, Fish Rearing Facilities, and Aquaculture Operations and demonstrate that discharges are protective of aquatic life and other beneficial uses, section 6.3.2.1 of this Order requires chronic toxicity test information and calculation of effluent concentrations for all chemicals and drugs applied in solution for immersive treatment so the result is non-detect on discharge. Non-detect is considered when sample results are less than the laboratory's MDL.

3.5.3. Klamath Basin Restoration Agreement

Section 1.2.1 of the 2010 Klamath Basin Restoration Agreement (KBRA) states, "The Klamath Hydroelectric Project (FERC No. 2082), located on the Klamath River and its tributaries, blocks the upstream passage of anadromous and other fish at River Mile 195 and has other adverse impacts as a result of flow regulation. The Klamath Hydroelectric Settlement Agreement (Hydroelectric Settlement or KHSA) establishes a process for potential Facilities Removal and operation of the Hydroelectric Project until that time".

Section 11.4.1 of the KBRA states, "Natural reintroduction of anadromous fish within the California portion of the Klamath Basin will commence immediately once fish passage is restored. The California Department of Fish and Game shall adopt a passive (wait and see) approach to reintroduction which shall include development of reintroduction goals, monitoring protocols, habitat assessments and other investigations as appropriate. The Plan shall also include development of guidelines for use of a conservation fish hatchery to more quickly establish naturally producing populations in the wild if deemed appropriate and necessary."

Section 11.4.4 of the KBRA states, "In the context of this Agreement, a conservation hatchery is an artificial fish production facility with the primary objective of enabling naturally produced fishes to fully support re-establishing populations. Fishes produced in such a facility must fit within the ecological context of the Klamath River such that (i) artificially produced fishes demonstrate the range of life history characteristics representative of naturally produced fishes; (ii) the genetic structure of the artificially produced fishes matches that of the naturally produced fishes; (iii) the number of fishes produced in the hatchery does not overwhelm the naturally produced fishes as returning adults; and (iv) artificially produced fishes do not introduce new diseases or greater susceptibility to existing diseases to the naturally producing population(s). A successful conservation hatchery program will continually decrease the dependence on artificial production as naturally produced fishes become more abundant, successful, and dispersed among the range of available habitats. A successful conservation hatchery eventually stops operating because natural production is capable of fully supporting the reestablished populations."

Under this Order, the Facility is considered the conservation hatchery as described by the KBRA.

3.5.4. **Policy In Support Of Restoration In The North Coast Region**

To achieve the objectives of the Clean Water Act and Porter-Cologne, the Regional Water Board must take an active role in promoting the implementation of restoration projects that are expected to help restore the chemical, physical, and biological integrity of the waters within the North Coast Region.

Restoration projects are implemented for the purpose of eliminating, reducing or ameliorating a variety of conditions that can negatively impact aquatic ecosystems, including but not limited to: water pollution, eutrophication, desiccation, habitat simplification, species displacement, migration barriers, erosion from diverted streams, riparian zone disturbance, effects of climate change, or other impairments to the beneficial uses of waters of the State.

The Policy in Support of Restoration in the North Coast Region includes Resolution No. R1-2015-0001, which accomplishes the following: (1) recognizes the important role that restoration plays in restoring and maintaining water quality, (2) highlights some of the barriers that inhibit implementation of restoration projects, (3) describes the work being done by the Regional Water Board and its staff to support restoration, (4) describes the regulatory requirements for permitting restoration projects, and (5) provides direction on how the Regional Water Board and its staff will continue to promote and support restoration in the future.

The State Water Board has identified the following Proposed Project objectives, for the Lower Klamath Project License Surrender in the Environmental Impact Report:

In a timely manner:

- Improve the long-term water quality conditions associated with the Lower Klamath Project in the California reaches of the Klamath River, including water quality impairments due to *Microcystis aeruginosa* and associated toxins, water temperature, and levels of biostimulatory nutrients.

- Advance the long-term restoration of the natural fish populations in the Klamath Basin, with particular emphasis on restoring the salmonid fisheries used for subsistence, commerce, tribal cultural purposes, and recreation.

- Restore volitional anadromous fish passage in the Klamath Basin to viable habitat currently made inaccessible by the Lower Klamath Project dams.

- Ameliorate conditions underlying high disease rates among Klamath River salmonids. These objectives further the underlying purpose of timely improving water quality related to the Lower Klamath Project within and downstream of the current Hydroelectric Reach and restoring anadromous access upstream of Iron Gate Dam (the current barrier to anadromy).

The Regional Water Board supports the proposed project objectives listed above. In addition, the Regional Water Board authorizes discharge from the

conservation hatchery as defined above and in support of restoration of the Klamath River.

3.5.5. Regulations for Use of Aquaculture Drugs and Chemicals

The following discussion is provided for reference and the review and authorization of the drugs described below are under FDA authority. CAAP facilities produce fish and other aquatic animals in greater numbers than natural stream conditions would allow; therefore, system management is important to ensure that fish do not become overly stressed, making them more susceptible to disease outbreaks. The periodic use of various aquaculture drugs and chemicals is needed to ensure the health and productivity of cultured aquatic stocks and to maintain production efficiency. It is the responsibility of those using, prescribing, or recommending the use of these products to know which aquaculture drugs and chemicals may be used in CAAP facilities under all applicable federal, State, and local regulations and which aquaculture drugs and chemicals may be discharged to waters of the United States and waters of the State in accordance with this Order.

Drugs and chemicals used in aquaculture are strictly regulated by the U.S. Food and Drug Administration (FDA) through the Federal Food, Drug, and Cosmetic Act (FFDCA; 21 U.S.C 301 - 392). FFDCA, the basic food and drug law of the United States, includes provisions for regulating the manufacture, distribution, and the use of, among other things, new animal drugs and animal feed. FDA's Center for Veterinary Medicine (CVM) regulates the manufacture, distribution, and use of animal drugs. CVM is responsible for ensuring that drugs used in food-producing animals are safe and effective and that food products derived from treated animals are free from potentially harmful residues. CVM approves the use of new animal drugs based on data provided by a sponsor (usually a drug company). To be approved by CVM, an animal drug must be effective for the claim on the label, and safe when used as directed for 1) treated animals; 2) persons administering the treatment; 3) the environment, including non-target organisms; and 4) consumers. CVM establishes tolerances and animal withdrawal periods as needed for all drugs approved for use in food producing animals. CVM has the authority to grant investigational new animal drug (INAD) exemptions so that data can be generated to support the approval of a new animal drug. CAAP facilities may legally obtain and use aquaculture drugs in one of several ways. Some aquaculture drugs and chemicals used at the Facility are approved by the FDA for certain aquaculture uses on certain aquatic species. Others have an exemption from this approval process when used under certain specified conditions. Others are not specifically approved for use in aquaculture but are of "low regulatory priority" by FDA (hereafter "LRP drug"). FDA is unlikely to take regulatory action related to the use of a LRP drug if an appropriate grade of the chemical or drug is used, good management practices are followed, and local environmental requirements are met (including NPDES permit requirements). Finally, some drugs and chemicals may be used for purposes, or in a manner not listed on their label (i.e., "extralabel" use), under

the direction of licensed veterinarians for the treatment of specific fish diseases diagnosed by fish pathologists. It is assumed that veterinarian-prescribed aquaculture drugs are used only for short periods of duration during acute disease outbreaks. Each of these methods of obtaining and using aquaculture drugs is discussed in further detail below.

3.5.5.1. **FDA-approved Animal Drugs**

Approved animal drugs have been screened by the FDA to determine whether they cause significant adverse public health or environmental impacts when used in accordance with label instructions. Currently, there are ten animal drugs approved by FDA for use in food-producing aquatic species. These ten FDA-approved animal drugs include the following:

- Chorionic gonadrotropin (Chlorulun®), used for spawning;
- Oxytetracycline hydrochloride (Terramycin®), an antibiotic;
- Oxytetracycline dihydride (Terramycin® 200 for fish), an antibiotic
- Sulfadimethoxine - ormetoprim (Romet - 30®), an antibiotic;
- Tricaine methanesulfonate (MS-222, Finquel® and Tricaine-S), an anesthetic;
- Formalin (Formalin-F®, Paracide F® and PARASITE-S®), used as a fungus and parasite treatment;
- Sulfamerazine, an antibiotic;
- Chloramine-T (HALAMID® Aqua), a disinfectant;
- Florfenicol (Aquaflor), an antibiotic; and
- Hydrogen peroxide, used to control fungal and bacterial infections.

Each aquaculture drug in this category is approved by the FDA for use on specific fish species, for specific disease conditions, at specific dosages, and with specific withdrawal times. Product withdrawal times must be observed to ensure that any product used on aquatic animals at the Facility does not exceed legal tolerance levels in the animal tissue. Observance of the proper withdrawal time helps ensure that products reaching consumers are safe.

FDA-approved animal drugs that are added to aquaculture feed must be specifically approved for use in aquaculture feed. Drugs approved by FDA for use in feed must be found safe and effective. Approved animal drugs may be mixed in feed for uses and at levels that are specified in FDA medicated - feed regulations only. It is unlawful to add drugs to feed unless the drugs are

approved for such feed use. For example, producers may not top-dress feed with water-soluble, over-the-counter antibiotic product. Some medicated feeds, such as Romet-30®, may be manufactured only after the FDA has approved a medicated-feed application (FDA Form 1900) submitted by the feed manufacturer.

3.5.5.2. **FDA Investigational New Animal Drugs (INAD)**

Aquaculture drugs in this category can only be used under an investigational new animal drug or "INAD" exemption. INAD exemptions are granted by CVM to permit the purchase, shipment and use of an unapproved new animal drug for investigational purposes. INAD exemptions are granted by CVM with the expectation that meaningful data will be generated to support the approval of a new animal drug by FDA in the future. Numerous FDA requirements must be met for the establishment and maintenance of aquaculture INADs.

There are two types of INADs: standard and compassionate. Aquaculture INADs, most of which are compassionate, consist of two types: routine and emergency. A compassionate INAD exemption is used in cases in which the aquatic animal's health is of primary concern. In certain situations, producers can use unapproved drugs for clinical investigations (under a compassionate INAD exemption) subject to FDA approval. In these cases, CAAP facilities are used to conduct closely monitored clinical field trials. FDA reviews test protocols, authorizes specific conditions of use, and closely monitors any drug use under an INAD exemption. An application to renew an INAD exemption is required each year. Data recording and reporting are required under the INAD exemption in order to support the approval of a new animal drug or an extension of approval for new uses of the drug.

3.5.5.3. **FDA Unapproved New Animal Drugs of Low Regulatory Priority (LRP Drugs)**

LRP drugs do not require a new animal drug application (NADA) or INAD exemptions from FDA. Further regulatory action is unlikely to be taken by FDA on LRP drugs as long as an appropriate grade of the drug or chemical is used, good management practices are followed, and local environmental requirements are met (such as NPDES permit requirements contained in this Order). LRP drugs commonly used at CAAP facilities in the North Coast Region include the following:

- Acetic acid, used as a dip at a concentration of 1,000-2,000 mg/L for one to ten minutes as a parasiticide;
- Carbon dioxide gas, used for anesthetic purposes;

- Povidone iodine (PVP) compounds, used as a fish egg disinfectant at rates of 100 mg/L for 30 minutes during egg hardening and 100 mg/L solution for ten minutes after water hardening, a fish egg disinfectant;

- Sodium bicarbonate (baking soda), used at 142-642 mg/L for five minutes as a means of introducing carbon dioxide into the water to anesthetize fish, an anesthetic;

- Sodium chloride (salt), used at 0.5-1% solution for an indefinite period as an osmoregulatory aid for the relief of stress and prevention of shock. Used as 3% solution for ten to thirty minutes as a parasiticide, an osmoregulatory aid for the relief of stress and prevention of shock; and

- Potassium permanganate is an LRP drug, but regulatory action has been deferred pending further study.

FDA is unlikely to object at present to the use of these LRP drugs if the following conditions are met:

- The aquaculture drugs are used for the prescribed indications, including species and life stages where specified.

- The aquaculture drugs are used at the prescribed dosages.

- The aquaculture drugs are used according to good management practices.

- The product is of an appropriate grade for use in food animals.

- An adverse effect on the environment is unlikely.

FDA's enforcement position on the use of these substances should be considered neither an approval nor an affirmation of their safety and effectiveness. Based on information available in the future, FDA may take a different position on their use. In addition, FDA notes that classification of substances as new animal drugs of LRP does not exempt the Facility from complying with all other federal, state and local environmental requirements, including compliance with this Order.

3.5.5.4. **Extra-Label Use of an Approved New Animal Drug**

Extra-label drug use is the actual or intended use of an approved new animal drug in a manner that is not in accordance with the approved label directions. This includes, but is not limited to, use on species or for indications not listed on the label. Only a licensed veterinarian may prescribe extra-label drugs under CVM's extra-label drug use policy. CVM's extra-label use drug policy

(CVM Compliance Policy Guide 7125.06) states that licensed veterinarians may consider extra-label drug use in treating food-producing animals if the health of the animals is immediately threatened and if further suffering or death would result from failure to treat the affected animals. CVM's extra-label drug use policy does not allow the use of drugs to prevent diseases (prophylactic use), improve growth rates, or enhance reproduction or fertility. Spawning hormones cannot be used under the extra-label policy. In addition, the veterinarian assumes the responsibility for drug safety and efficacy and for potential residues in the aquatic animals.

4. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

4.1. Discharge Prohibitions

4.1.1. **Discharge Prohibition 3.1.** The discharge of any waste not disclosed by the Permittees or not within the reasonable contemplation of the Regional Water Board is prohibited.

This prohibition is based on the Basin Plan and State Water Board Order No. WQO-2002-0012 regarding the petition of WDRs Order No. 01-072 for the East Bay Municipal Utility District and Bay Area Clean Water Agencies. In State Water Board Order No. WQO 2002-0012, the State Water Board found that this prohibition is acceptable in orders but should be interpreted to apply only to constituents that are either not disclosed by the Permittees or are not reasonably anticipated to be present in the discharge but have not been disclosed by the Permittees. It specifically does not apply to constituents in the discharge that do not have "reasonable potential" to exceed water quality objectives.

The State Water Board has stated that the only pollutants not covered by this prohibition are those which were "disclosed to the permitting authority and … can be reasonably contemplated." [In re the Petition of East Bay Municipal Utilities District et al., (State Water Board, 2002) Order No. WQO 2002-0012, p. 24] In that Order, the State Water Board cited a case which held the Permittee is liable for the discharge of pollutants "not within the reasonable contemplation of the permitting authority ….whether spills or otherwise…" [Piney Run

Preservation Assn. v. County Commissioners of Carroll County, Maryland (4th Cir. 2001) 268 F. 3d 255, 268.] Thus, the State Water Board authority provides that, to be permissible, the constituent discharged 1) must have been disclosed by the Permittees and 2) can be reasonably contemplated by the Regional Water Board.

Whether or not the Permittees reasonably contemplates the discharge of a constituent is not relevant. What matters is whether the Permittees disclose the constituent to the Regional Water Board or whether the presence of the pollutant in the discharge can otherwise be reasonably contemplated by the Regional Water Board at the time of Order adoption.

4.1.2. **Discharge Prohibition 3.2.** Creation of pollution, contamination, or nuisance, as defined by Water Code section 13050, is prohibited.

This prohibition is based on section 13050 of the Water Code.

4.1.3. **Discharge Prohibition 3.3.** The discharge of waste to land that is not under the control of the Permittees is prohibited, except as authorized under section 6.3.6.1. of this Order (Solids Disposal).

Wastewater treatment and storage facilities associated with the Permittees must be owned or under the control of the Permittees.

4.1.4. **Discharge Prohibition 3.4.** The discharge of waste for which the Permittees have not explicitly been permitted is prohibited.

This prohibition is a general prohibition that allows the Permittees to discharge waste only in accordance with WDRs. It is based on sections 301 and 402 of the federal CWA and section 13263 of the Water Code.

4.1.5. **Discharge Prohibition 3.5.** The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited under Water Code section 13375.

This prohibition is a general prohibition that allows the Permittees to discharge waste only in accordance with WDRs. It is based on section 13375 of the Water Code.

4.1.6. **Discharge Prohibition 3.6.** The discharge of waste resulting from cleaning activities is prohibited.

This prohibition applies to the direct discharge of untreated cleaning waste to waters of the United States and is based on the Basin Plan's Policy on the Regulation of Fish Hatcheries, Fish Rearing Facilities, and Aquaculture Operations.

4.1.7. **Discharge Prohibition 3.7.** The discharge of detectable levels of chemicals used for the treatment and control of disease, other than salt (NaCl), is prohibited.

This prohibition is based on the Basin Plan's Policy on the Regulation of Fish Hatcheries, Fish Rearing Facilities, and Aquaculture Operations. Based on information provided by the existing CAAP facilities in the North Coast Region, chemicals and aquaculture drugs used for the treatment and control of disease include oxytetracycline, penicillin G, florfenicol, amoxicillin trihydrate, erythromycin, Romet, formalin, PVP iodine, hydrogen peroxide, potassium permanganate, sodium chloride, acetic acid, chloramine-T, SLICE, and ivermectin. When chemicals and aquaculture drugs used for the treatment and control of disease are used, the Permittees are required to submit a chemical use report documenting the method used to determine compliance with this prohibition.

4.1.8. **Discharge Prohibition 3.8.** Discharges of waste that violate any narrative or numerical water quality objective that are not authorized by waste discharge requirements or other order or action by the Regional or State Water Board, are prohibited.

This prohibition is based on the Basin Plan's Klamath River Implementation Plan.

4.2. Technology-Based Effluent Limitations

4.2.1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Limitations Guidelines and Standards for the Concentrated Aquatic Animal Production Point Source Category in 40 C.F.R. part 451 and Best Professional Judgment (BPJ) in accordance with 40 C.F.R. section 125.3.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

- Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are

economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

- Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.

- New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

4.2.2. Applicable Technology-Based Effluent Limitations

4.2.2.1. Best Management Practices (BMP) Plan

On August 23, 2004, U.S. EPA published ELGs for the Flow-Through and Recirculating Systems Subcategory of the Concentrated Aquatic Animal Production Point Source Category at 40 C.F.R. part 451, subpart A. The ELGs became effective on September 22, 2004. The ELGs establish national technology-based effluent discharge requirements for CAAP facilities that produce 100,000 pounds or more of aquatic animals in flow-through and recirculation systems based on BPT, BCT, BAT and NSPS. In its proposed rule, published on September 12, 2002, U.S. EPA proposed to establish numeric limitations for TSS while controlling the discharge of other constituents through narrative requirements. In the final rule, however, U.S. EPA determined that, for a nationally applicable regulation, it would be more appropriate to promulgate qualitative TSS limitations in the form of solids control BMP requirements.

In the process of developing the ELG, U.S. EPA identified an extensive list of pollutants of concern in discharges from the aquaculture industry, including

several metals, nutrients, solids, BOD, bacteria, drugs, and residuals of federally registered pesticides. U.S. EPA did not include specific numeric limitations in the ELG for any pollutants on this list, believing that BMPs would provide acceptable control of these pollutants. U.S. EPA did conclude during the development of the ELG that control of TSS would also effectively control concentrations of other pollutants of concern, such as BOD, metals and nutrients, because other pollutants are either bound to the solids or are incorporated into them. And, although certain bacteria are found at high levels in effluents from settling basins, U.S. EPA concluded that disinfection is not economically achievable. U.S. EPA also allowed permitting authorities to apply technology-based limits for other pollutants and WQBELs for pollutants considered in the ELGs in order to comply with applicable water quality standards.

The ELGs at 40 C.F.R. part 451, subpart A require implementation of BMPs, including solids control, materials storage, structural maintenance, recordkeeping, and training requirements, to represent the application of BPT. Consistent with the ELGs at 40 C.F.R. part 451, subpart A. Special Provision 7.3.3.2 of this Order requires Permittees to maintain a BMP Plan.

4.2.2.2. TSS and Settleable Solids

Technology-based requirements in this Order are based on the BMPs established in 40 C.F.R. part 451, subpart A.

Existing wastewater treatment technology (such as settling basins and vacuum cleaning) is capable of dependably removing solids (primarily fish feces and uneaten feed) from the Facility effluent prior to discharge. The Facility will treat their entire discharge using a full flow settling basin The Facility may also lower flow rates through raceways, allowing solids to accumulate and decompose by natural processes.

4.2.2.3. Flow

This Order does not contain a maximum daily effluent discharge flow limitation.

4.3. Water Quality-Based Effluent Limitations (WQBELs)

4.3.1. Scope and Authority

CWA Section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality

standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

4.3.2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

4.3.2.1. Beneficial Uses

Beneficial use designations for receiving waters are presented in section 3.3.1 of this Fact Sheet.

4.3.2.2. Basin Plan Water Quality Objectives

In addition to the specific water quality objectives indicated above, the Basin Plan contains narrative objectives for color, tastes and odors, floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, turbidity, pH, dissolved oxygen, bacteria, temperature, toxicity, pesticides, chemical constituents, and radioactivity that apply to inland surface waters, enclosed bays, and estuaries. For waters designated for use as domestic or municipal supply (MUN), the Basin Plan establishes as applicable water quality criteria the Maximum Contaminant Levels (MCLs) established by the State Water Board, Division of Drinking Water (DDW) for the protection of public water supplies at Cal. Code Regs., tit. 22 § 64431 (Inorganic Chemicals) and § 64444 (Organic Chemicals).

4.3.2.3. SIP, CTR and NTR

Water quality criteria and objectives applicable to this receiving water are established by the CTR, established by the U.S. EPA at 40 C.F.R. section 131.38; and the NTR, established by the U.S. EPA at 40 C.F.R. section 131.36. Criteria for most of the 126 priority pollutants are contained within the CTR and the NTR. The SIP, which is described in section 4.3.3 of this Fact Sheet, includes procedures for determining the need for, and the calculation of, WQBELs and requires Permittees to submit data sufficient to do so. At title 22, division 4, chapter 15 of the CCR, DDW has established MCLs for certain

pollutants for the protection of drinking water. Chapter 3 of the Basin Plan establishes these MCLs as water quality objectives applicable to receiving waters with the beneficial use designation of municipal and domestic supply.

4.3.3. Determining the Need for WQBELs

NPDES regulations at 40 C.F.R. section 122.44(d) require effluent limitations to control all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard.

4.3.3.1. Non-Priority Pollutants

4.3.3.1.1. Chloride

Sodium chloride (NaCl or salt) will be used as needed at the Facility as a fish-cleansing agent to control parasites and fish disease, and as an osmoregulatory aid to reduce stress amongst the confined fish population. Salt usage is generally restricted to one raceway at a time and water from the raceway mixes with flow from other raceways and other areas of the facility prior to discharge.

Based on effluent monitoring data and current BMPs employed at CDFW operated facilities in Region 1, Order No. R1-2021-0010 (General Order) concluded that CAAP facilities do not have reasonable potential to cause or contribute to an exceedance of water quality objectives for chloride. Based on chloride monitoring results sampled during the previous General Order for the existing CAAP facilities, (minimum of 1.5 mg/L and a maximum of 105 mg/L), the current BMPs employed at CAAP facilities have been adequate to ensure effluent chloride concentrations do not exceed the Secondary MCL of 250 mg/L. Therefore, the discharge of chloride from the Facility does not have reasonable potential to cause or contribute to an exceedance of water quality objectives for chloride, and effluent limitations for chloride have not been included in this Order.

4.3.3.1.2. pH

The Basin Plan includes water quality objectives for specific water bodies in Table 3-1. For waters not listed in Table 3-1 and where pH objectives are not prescribed, the Basin Plan specifies that the pH shall not be depressed below 7.0 nor raised above 8.5. The discharge of hatchery wastewater has a reasonable potential to cause or contribute to an exceedance of the water quality objectives for pH. Therefore, this Order includes effluent limitations for pH based on the respective site-specific water quality objectives established in Chapter 3 of the Basin Plan.

Based on historical influent data collected at Iron Gate Hatchery, the influent pH is occasionally outside of the allowable range and,

consequently, the effluent pH may exceed the objective due to the flowthrough nature of the facilities. The influent water to the facilities is from the same water body as the receiving water body and the facilities do not alter the influent water chemically or physically with respect to pH. Therefore, in instances where the pH of the influent is below 7.0 or above 8.5, this Order specifies that the effluent pH shall not exceed the pH of the influent, but in no case shall the effluent pH exceed 9.0.

4.3.3.1.3. Total Nitrogen, Total Phosphorus and CBOD

As described further in section 3.4 of this Fact Sheet, the Facility is subject to waste load allocations for total nitrogen, total phosphorus, and CBOD as part of the TMDL Action Plan in the Basin Plan. The Action Plan identifies the Iron Gate Hatchery as the only point source of nutrients and organic matter in the Klamath River watershed and includes daily waste load allocations for the Facility in Table 4-16 for total phosphorus, total nitrogen, and carbonaceous biochemical oxygen demand (CBOD) of 0 lbs/day. The Facility will be replacing Iron Gate Hatchery as a mitigation hatchery for salmonids on the Klamath River. Section 5.3.3 of the TMDL Staff Report states, “The waste load allocation to the Iron Gate Hatchery is zero net increase of nutrient and organic matter loads in the river above California dissolved oxygen compliance conditions (i.e., no dams).” Table 5.12 of the TMDL Staff Report includes numeric targets for Iron Gate Hatchery (IGH), expressed as monthly mean concentrations, based on the California allocation scenario. This Order includes final effluent limitations for total nitrogen, total phosphorus, and CBOD for the Facility expressed as no net loading effluent limitations. The net concentration represents the difference between the effluent and natural background concentrations, as defined in Table 5.12 of the TMDL Staff Report.

Effluent monitoring data from IGH indicates that IGH could not immediately comply with the final effluent limitations for total nitrogen, total phosphorus, or CBOD. Best Professional Judgment leads Staff to believe that the Facility cannot comply with the final effluent limitations either. Review of current hatchery sampling data shows that the Facility discharges approximately 2,500 lbs of nitrogen per year, 500 lbs of phosphorus per year and 14,000 lbs of organic matter per year measured as Biochemical Oxygen Demand (BOD). This represents 0.03% of the overall loading of nitrogen and phosphorus and 0.02% of the overall loading of organic matter to the Klamath River every year. Table 4-18 of the Action Plan identified Implementation Actions for the Regional Water Board and the Facility. The Implementation Actions specified that the Regional Water Board should “Revise NPDES Permit No. CA0006688 and WDR No. R1-2000-17 to incorporate revised effluent limits to implement the TMDL wasteload allocations, and the recalculated site-specific objectives for dissolved oxygen, and to require that the responsible parties implement measures to improve the water quality of discharges from the Iron Gate Hatchery to meet

TMDL allocations and targets on a compliance schedule." The Implementation Actions specified that the Facility should "Implement measures to improve the water quality of discharges from the Iron Gate Hatchery to meet and/or offset the Klamath River TMDL wasteload allocations and targets." This Order includes a compliance schedule that authorizes the Permittees to discharge effluent to Fall Creek under Resolution No. R1-2015-0001, the Policy in Support of Restoration in the North Coast Region to meet mitigation obligations per the Klamath River Hydroelectric Settlement Agreement.

This Order includes Final Effluent Limitations for total nitrogen, total phosphorus and CBOD as established in the Klamath River TMDL. Interim Effluent Limitations for total nitrogen, total phosphorus and CBOD have been established, based on historical discharge data from Iron Gate Hatchery, covering the span of time established in the Compliance Schedule.

The Facility discharges to the Klamath River through three discharge points. Discharges from the chinook return line and the coho return line from Discharge Points 002 and 003, respectively, are not expected to contribute significant amounts of nutrients since these are primarily once-through flows with no additions of drugs, chemicals, or feed and minimal concentrations of animal wastes. Settling basin discharges at Discharge Point 001 is the primary source of nutrients from fish feces and uneaten feed. Accordingly, this Order applies effluent limitations and monitoring requirements for total nitrogen, total phosphorus, and CBOD at Discharge Point 001 only.

4.3.3.1.4. **Temperature**

As described further in section 3.4 of this Fact Sheet, the Facility is subject to waste load allocations for temperature as part of the TMDL Action Plan in the Basin Plan.

The Action Plan identifies the IGH as the only point source of heat in the Klamath River watershed, and states in section III.C, "The interstate water quality objective for temperature prohibits the discharge of thermal waste to the Klamath River, and therefore the waste load allocation for Iron Gate Hatchery is set to zero, as monthly average temperatures." Section 5.2.4 of the TMDL Staff Report states, in part, "the temperature load allocation for the Hatchery equals zero temperature increase above natural temperatures (see Table 5.6)." Table 5.6 of the TMDL Staff Report includes numeric targets for IGH, expressed as monthly averages, based on the California allocation scenario. This Order establishes final effluent limitations for IGH for temperature equivalent to the numeric targets in Table 5.6 of the TMDL Staff Report. The effluent limitations have been rounded to the nearest degree to account for the degree of certainty for continuous temperature

loggers (±2°F), which is expected to have a de minimis impact on receiving water quality.

Effluent monitoring data indicates that IGH cannot immediately comply with the final effluent limitations for temperature. The Permittee samples influent and effluent temperature 187 times since 2012 with 76 samples of the effluent temperature samples exceeding the influent, or 41 percent. Table 4-18 of the Action Plan identified Implementation Actions for the Regional Water Board and the Facility. The Implementation Actions specified that the Regional Water Board should "Revise NPDES Permit No. CA0006688 and WDR No. R1-2000-17 to incorporate revised effluent limits to implement the TMDL wasteload allocations, and the recalculated site-specific objectives for dissolved oxygen, and to require that the responsible parties implement measures to improve the water quality of discharges from IGH to meet TMDL allocations and targets on a compliance schedule." The Implementation Actions specified that the Facility should "Implement measures to improve the water quality of discharges from the Iron Gate Hatchery to meet and/or offset the Klamath River TMDL wasteload allocations and targets." This Order includes a compliance schedule that temporarily authorizes the Permittees to discharge effluent to Fall Creek. The compliance schedule is supported by Regional Water Board Resolution No. R1-2015-0001, *Policy in Support of Restoration in the North Coast Region,* (Restoration Policy) which is incorporated into the Regional Water Board's Basin Plan. The Restoration Policy supports allowing a time schedule for the Facility to operate in order to support Restoration objectives in the Klamath River and meet mitigation obligations per the Klamath River Hydroelectric Settlement Agreement.

This Order includes Final Effluent Limitations for temperature as established in the Klamath River TMDL. Interim Effluent Limitations for temperature have been established, based on historical discharge data from Iron Gate Hatchery, covering the span of time established in the Compliance Schedule.

The Facility discharges to the Klamath River through three discharge points. Discharges from the chinook return line and the coho return line from Discharge Points 002 and 003, respectively, are not expected to contribute significant amounts of temperature since these are primarily once-through flows with short residence times. Settling basin discharges at Discharge Points 001 is expected to be the primary source of heat due to the longer residence time within the raceways and settling basins. Accordingly, this Order applies effluent limitations and monitoring requirements for temperature at Discharge Points 001 only.

4.3.3.2. **Priority Pollutants**

The SIP establishes procedures to implement water quality criteria from the NTR and CTR and for priority, toxic pollutant objectives established in the Basin Plan. The implementation procedures of the SIP include methods to determine reasonable potential (for pollutants to cause or contribute to excursions above state water quality standards) and to establish numeric effluent limitations, if necessary, for those pollutants showing reasonable potential.

Since no effluent data is available for the proposed discharge to the Fall Creek at Discharge Point 001, a qualitative RPA using RPcalc 2.2 could not be conducted. The Monitoring and Reporting Program (MRP) (Attachment E) for this Order requires the Permittees to conduct monitoring for the parameters subject to water quality objectives within 1 year following commencement of discharges from the Facility at Discharge Point 001 in order to obtain representative data to conduct an RPA. Results from the RPA will be used to determine the need for effluent limitations. This Order may be reopened to establish new effluent limitations based on the monitoring results.

The Facility is a land-based aquaculture facility as defined in 40 C.F.R., part 451. Pollutants of concern from aquaculture facilities include conventional pollutants and certain toxic pollutants, such as ammonia. U.S. EPA's September 2010 NPDES Permit Writer's Manual, states, "State Implementation procedures might allow, or even require, a permit writer to determine reasonable potential through a qualitative assessment process without using available facility-specific effluent monitoring data or when such data are not available…A permitting authority might also determine that WQBEL's are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBEL's for pathogens in all permits for POTW's discharging to contact recreational waters)." U.S. EPA's Technical Support Document for Water Quality Based Toxics Control (TSD) also recommends that factors other than effluent data should be considered in the RPA, "When determining whether or not a discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criterion for individual toxicants or for toxicity, the regulatory authority can use a variety of factors and information where facility specific effluent monitoring data are unavailable. These factors also should be considered with available effluent monitoring data.

Based on the Permittees' design specifications, the Proposed Facility will be designed to remove solids via a settling basin before discharge.

4.3.4. **WQBEL Calculations**

CWA Section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water, as specified in the SIP, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the SIP.

At this time, no effluent data for priority pollutants are available since the Facility has yet to be constructed. Therefore, this Order does not establish WQBELs applicable to the discharge to Fall Creek at Discharge Point 001. The need for WQBELs will be reexamined once Priority Pollutant data has been collected.

4.3.5. **Whole Effluent Toxicity (WET)**

On December 1, 2020, the State Water Resources Control Board adopted the Resolution establishing the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California and adopted the Toxicity Provisions. The Toxicity Provisions establish water quality objectives for acute and chronic toxicity. Section IV.B.2.k.i. of the Toxicity Provisions discuses insignificant discharges. Specifically, the section states:

"The permitting authority is authorized to exempt certain non-storm water NPDES dischargers from some or all of the provisions of section IV.B.2 if the permitting authority makes a finding that the discharge will have no reasonable potential to cause or contribute to an exceedance of the numeric aquatic toxicity water quality objectives. The reasonable potential conclusion necessary to exempt insignificant discharges need not be based on the reasonable potential analysis methods set forth in Section IV.B.2.c."

"If exempt, the permitting authority shall include the water quality objectives in Section III.B.2 as receiving water limitations in the NPDES permit and the permitting authority may assign routine monitoring as necessary. Routine monitoring schedules for insignificant discharges shall not be more frequent than the applicable frequency specified in Section IV.B.2.d for the discharger's authorized rate of discharge."

Effluent limitations for whole effluent, acute and chronic toxicity, protect the receiving water from the aggregate effect of a mixture of pollutants that may be present in effluent. There are two types of WET tests – acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic test is conducted over a longer period and may measure mortality, reproduction, and/or growth.

WET requirements are derived from the CWA, the Toxicity Provisions and the Basin Plan. The Basin Plan establishes a narrative water quality objective for toxicity that states "All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or aquatic life." Detrimental responses may include, but are not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota.

Due to the nature of CAAP facility operations, the effluent quality is very consistent, and additions consist of feed and occasionally drugs and chemicals under controlled use. Section 6.3.2.1 of this Order require chronic toxicity test information and calculation of effluent concentrations for all chemicals and drugs applied in solution for immersive treatment, so the result is non-detect on discharge. Other North Coast hatcheries submitted chronic toxicity test information on April 2, 2021, showing no impacts from effluent due to chronic toxicity.

This Order prohibits detectable amounts of aquaculture drugs and chemicals used for the treatment or control of disease and includes reporting requirements for the Permittees to demonstrate compliance with this prohibition during use. Therefore, the Regional Water Board finds that discharges from the Facility does not have reasonable potential to cause or contribute to narrative toxicity objectives.

4.4. Final Effluent Limitation Considerations

4.4.1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Anti-backsliding requirements do not pertain to this Order, since the planned Facility is a newly regulated discharge.

4.4.2. Antidegradation Policies

The Permittees have requested authorization to discharge up to a maximum daily flow of 6.5 mgd from the Facility to Fall Creek, a tributary to the Klamath River. As discussed below, the Regional Water Board conducted an

antidegradation analysis to evaluate whether changes in water quality associated with the proposed discharge of treated wastewater to Fall Creek is consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. The Regional Water Board followed the procedures established in State Water Board Administrative Procedures Update (APU) 90-004 to conduct the antidegradation analysis.

APU 90-004 specifies that a simple antidegradation analysis is sufficient and a complete antidegradation analysis is not required under certain conditions, including where a Regional Board determines that the proposed action will produce minor effects which will not result in a significant reduction in water quality and where the Regional Board determines that the reduction of water quality will be spatially localized or limited with respect to the waterbody; e.g., confined to the mixing zone. Based on the level of treatment provided, the use of an approved BMP Plan and modeling performed, the Regional Water Board finds that the proposed discharge will produce minor effects which will not result in a significant reduction in water quality. Additionally, construction and operation of the Facility on Fall Creek was evaluated as part of the April 2020 **Environmental Impact Report for the Lower Klamath Project License Surrender (**State Clearinghouse No. 2016122047). Therefore, the Regional Water Board determined that a simple antidegradation analysis is sufficient. Findings of the antidegradation analysis are summarized below.

4.4.2.1. **Water Quality Parameters and Beneficial Uses Which Will be Affected by the Proposed Expansion and the Extent of the Impact.**

Compliance with this Order will not adversely impact beneficial uses of the receiving water. All beneficial uses will be maintained and protected. 40. C.F.R. section 131.12 defines the following tier designations to describe water quality in the receiving water body.

*Tier 1 Designation: Existing instream water uses, and the level of water quality is necessary to protect the existing uses shall be maintained and protected. (*40. C.F.R. §131.12)

Tier 2 Designation: Where the quality of waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and

reasonable best management practices for nonpoint source control. (40 C.F.R. §131.12

The tier designation is assigned on a pollutant-by-pollutant basis. Pollutants of concern in aquaculture facilities include conventional pollutants and certain toxic pollutants, such as ammonia. The Klamath River is listed as impaired for cyanobacteria hepatotoxic microcystins, nutrients, organic enrichment/low dissolved oxygen, sediment, mercury, aluminum, and temperature in the 2018 303(d) list. Therefore, Fall Creek, a tributary of the Klamath River, is considered a Tier 2 receiving water for all pollutants considered.

Monitoring data for the pollutants of concern is not available to characterize the extent of their impact since the Facility has yet to be constructed. Nevertheless, this Order establishes terms and conditions to ensure that the discharge does not unreasonably affect the present and anticipated beneficial uses of the Klamath River, including effluent limitations for temperature, total nitrogen, total phosphorus, CBOD and pH. This Order includes effluent monitoring for ammonia, total suspended solids, settleable solids and priority pollutants per the SIP. This Order may be reopened to include effluent limitations for any parameters that indicate reasonable potential to cause or contribute to and exceedance of a water quality objective.

This Order requires compliance with applicable federal effluent limitation guidelines, including implementation of a BMP plan to minimize the discharge of pollutants to the receiving waters, and with WQBELs where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. Discharges from the Facility will be required to maintain protection of the beneficial uses of the receiving water and comply with applicable provisions of the Basin Plan and State Water Board Plans and Policies. Limitations and conditions of this Order assure protection and maintenance of the existing quality of receiving waters and the measures implemented by the Facility and required by this Order constitute BPTC.

As discussed below, the antidegradation analysis evaluated whether allowance of the proposed discharge and associated increase in concentration and mass loading in this Order will result in the best practicable treatment or control of the discharge necessary to assure a pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit of the people of the State will be maintained.

4.4.2.2. Scientific Rational for Determining Potential Lowering of Water Quality

The Rationale used in the Antidegradation Analysis is based on 40 C.F.R. section 131.12, U.S. EPA Region 9 Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. section 131.12 (U.S. EPA 1987), State Water Board Resolution No. 68-16, a State Water Board 1987 policy

memorandum to the Regional Water Boards, and APU 90-004 issued by the State Water Board to the Regional Water Boards.

4.4.2.3. Alternative Control Measures Considered

The 2007 Federal Energy Regulatory Commission (FERC) Environmental Impact Statement (EIS) analyzed five action alternatives: (1) PacifiCorp's Proposal at that time for continued operation; (2) FERC Staff Alternative for continued operation; (3) FERC Staff Alternative with Mandatory Conditions imposed through the licensing process by other federal agencies; (4) Retirement of Copco No. 1 and Iron Gate Developments; and (5) Retirement of J.C. Boyle, Copco No. 1, Copco No. 2, and Iron Gate Developments. The 2007 FERC EIS considered, but decided not to move forward with, analysis of federal take-over of the dams and cessation of power generation at the facilities, but not requiring removal of the dam facilities themselves.

The 2012 Klamath Hydroelectric Settlement Agreement (KHSA) EIS/Environmental Impact Report (EIR) analyzed four action alternatives: (1) Dam Removal of Four Dams; (2) Partial Removal of Four Dams; (3) Fish Passage at Four Dams; and (4) Removal of Copco 1 and Iron Gate with Fish Passage at Copco 2 and J.C. Boyle. These were selected from the 17 action alternatives and the No Action/No Project Alternative in the initial alternatives screening process. The 13 rejected action alternatives were: (a) Three Dam Removal; (b) Sequenced Removal of Four Dams; (c) Full Facilities Removal of Four Dams without KBRA; (d) Trap and Haul; (e) Bogus Creek Bypass; (f) Bogus Creek Bypass – Alternative Tunnel Route; (g) Notching Four Dams; (h) Federal Takeover of Project; (i) Full Removal of Five Dams; (j) Full Removal of Six Dams; (k) Dredge Upper Klamath Lake; (l) Predator Control; and (m) Partition Upper Klamath Lake.

The State Water Board revisited the aforementioned listed alternatives, as well as three additional potential alternatives raised in Lower Klamath Project scoping. First, Siskiyou County and others proposed examining a fish passage alternative that looked at a combination of trap and haul, fish cannons (a new technology since 2012), and other mechanisms for fish passage without dam removal. The Siskiyou County proposal combined elements of other Lower Klamath Project scoping comments regarding methods of fish passage with dams in place. Second, Siskiyou County and Siskiyou Water Users Association scoping comments also suggested developing an alternative of additional water storage in the Scott and Quartz valleys to augment late summer and fall instream flows. Third, Siskiyou County and Siskiyou County Water Users Association scoping comments also suggested transferring 60,000 acre-feet of water from Iron Gate Reservoir (or J.C. Boyle Reservoir or Keno Reservoir) to the Shasta River sub-watershed as irrigation supply to allow Lake Shastina discharges to go directly into the Shasta River rather than being used as irrigation supply first.

From this initial pool of 24 alternatives, the State Water Board selected five feasible action alternatives that would reduce one or more potentially significant impacts of the Proposed Project (dam removal) and would meet the underlying purpose of the Proposed Project and most of the Proposed Project objectives. Consistent with CEQA Guidelines section 15126.6(e)(2), the State Water Board also included the No Project Alternative in the set of alternatives considered in this EIR. Alternatives that were eliminated from consideration because they would not meet the underlying purpose of the Proposed Project or most of the Proposed Project objectives, were substantially similar to other alternatives, would not avoid or substantially lessen significant environmental effects of the Proposed Project, or were otherwise infeasible.

The No Hatchery Alternative is the same as the Proposed Project except that operations at the Iron Gate Hatchery would cease at the time of dam removal and would not continue for eight years following dam removal, and the Fall Creek Hatchery would not reopen with upgraded facilities. Under this alternative, all hatchery production of salmonids would be discontinued after hatchery releases occur in the fall of dam removal year 1.

Post-dam removal adult fall-run Chinook salmon could continue to return to the former location of the hatchery through post-dam removal year 2 (age 4 returning adults), and post-dam removal adult coho salmon could continue to return potentially through post-dam removal year 1 (age 3 adults)

Under this alternative, there would be no discharges from Iron Gate Hatchery to the Middle Klamath River. While these hatchery discharges would be eliminated under this alternative, hatchery discharges under existing conditions have a less than significant impact on water quality, including water temperature, suspended material, nutrients, biochemical oxygen demand, and inorganic and organic contaminants (i.e., water treatment chemicals) based on an evaluation of the water quality impacts of California Department of Fish and Wildlife hatcheries, including Iron Gate Hatchery. There would be no changes to water quality in Fall Creek or the Klamath River under this alternative relative to existing conditions since Fall Creek Hatchery production has been zero since 2003 and it would remain zero under this alternative. Potential impacts to water quality in Fall Creek and the Klamath River under the Proposed Project would not occur under this alternative since the Fall Creek Hatchery would not be reopened, fish production and associated water quality changes would not occur, and there would be no upgrades to Fall Creek Hatchery facilities to accommodate the fish production specified under the Proposed Project.

Overall, eliminating the Iron Gate Hatchery effluent discharges would reduce potential less-than-significant variations in water quality due to hatchery discharges compared to existing conditions or the lower fish production conditions under the Proposed Project, thus there would be no significant

impact on water quality due to ceasing Iron Gate Hatchery operations under the No Hatchery Alternative. Additionally, there would be no change in water quality under this alternative compared to existing conditions due to Fall Creek Hatchery fish production continuing to be zero and potential impacts to water quality due to increases in fish production at Fall Creek Hatchery under the Proposed Project would be eliminated, thus there would be no significant impact on water quality due to Fall Creek Hatchery remaining closed under the No Hatchery Alternative.

Interim Measure 20 from the Klamath River Hydroelectric Settlement Agreement (KHSA), "After removal of Iron Gate Dam and for a period of eight years, PacifiCorp shall fund 100 percent of hatchery operations and maintenance costs necessary to fulfill annual mitigation objectives developed by the California Department of Fish and Wildlife in consultation with the National Marine Fisheries Service. The hatchery mitigation goals will focus on chinook production, with consideration for steelhead and coho, and may be adjusted downward from current mitigation requirements by the California Department of Fish and Wildlife and National Marine Fisheries Service, in consultation with the other Klamath River fish managers, in response to monitoring trends."

Given the alternatives discussed above, and the requirement of PacifiCorp to fund the operation of the Facility to meet mitigation requirements under the KHSA, the Regional Water Board finds that alternatives have been adequately analyzed.

4.4.2.4. Socioeconomic Evaluation

Economic studies completed in 2011−2012 by United States Bureau of Reclamation (USBR) (2012) and Department of the Interior (DOI) (Real Estate Subteam 2012) for removal of the four dams and alternatives considered likely costs and benefits for a number of topics, including the following:

- Hydroelectric energy costs
- Irrigated agriculture
- Commercial fishing
- In-river recreational fishing
- Ocean sport fishing
- Refuge recreation
- Nonuse values
- Real estate

The USBR/DOI economic studies determined direct dam removal costs from deconstruction, construction, operations, maintenance, and replacement, as well as forgone costs to hydropower, reservoir recreation, and whitewater recreation. Benefits were identified for irrigated agriculture, commercial fishing, ocean sport fishing, in-river sport fishing, tribal fisheries and cultural values, refuge recreation, nonuse values (e.g., desire to preserve ecosystems, altruism towards plants and animals), and real estate. Benefits to tribal fisheries and cultural values, the wildlife viewing component of refuge recreation, and real estate were not quantified in economic terms in USBR (2012).

Potential economic impacts on real estate were discussed in a separate report (Real Estate Sub Team 2012). Of the topics from the 2012 studies, several of the analyses are not relevant to the Proposed Project (i.e., irrigated agriculture, refuge recreation, nonuse values) because the prior studies related to implementation of the Klamath Basin Restoration Agreement (KBRA) (see Section 2.6.3 Klamath Settlement Agreements). Under the 2012 analysis, implementation of the KBRA was a “connected action” to dam removal and inclusion of the KBRA is an inherent assumption of the prior economic analyses. Other topics (i.e., hydroelectric energy costs, in-river recreational fishing) are analyzed in the EIR by focusing on physical changes that would occur as a result of the Proposed Project and the alternatives, and, consistent with CEQA Guidelines Section 15131(b), the results of the previous economic analyses are not required to determine if a physical change to the environment would be significant.

The prior economic studies of potential commercial fishing effects from dam removal is relevant to the EIR, since Proposed Project Objective 2 focuses on advancing the long-term restoration of the natural fish populations in the Klamath Basin, including commercial fisheries. The results of the USBR/DOI prior economic studies for commercial fishing are summarized in Section 5.4.1.1 of the EIR, Commercial Fishing. Although the EIR focuses on the analysis of potential impacts to in-river recreational fishing under the Proposed Project, the prior economic analysis of ocean sport fishing is summarized in Section 5.4.1.2 of the EIR (Ocean Sport Fishing) to provide broader context for possible increased recreational fishing opportunities given dam removal. Lastly, the State Water Board received several comments during the NOP public scoping process regarding the potential for regional economic impacts of the Proposed Project, including comments from the Pacific Coast Federation of Fishermen’s associations and the Institute for Fisheries Resources, estimating economic benefits from restored fisheries, and comments from the Siskiyou County Assessor-Recorder regarding reductions in property values and the loss of property tax revenues. The results of the DOI’s prior economic studies for real estate and the concerns from the Siskiyou County Assessor-Recorder are summarized in EIR Section 5.4.1.3 Real Estate and Property Taxes.

Overall, the prior economic studies concluded that commercial troll fishery harvests of SONCC coho and Klamath River fall- and spring-run Chinook salmon would increase over existing conditions due to an increased abundance of salmon resulting from dam removal. The KRRC's Proposed Project would be beneficial for populations of fall-run Chinook salmon, spring-run Chinook salmon, and coho salmon. Although some aspects of the KRRC's Proposed Project are different from the dam removal scenarios analyzed in the USBR/DOI economic analyses, the primary assumptions regarding the effects of dam removal on coho and Chinook salmon have remained the same, such that the prior economic indication of the benefits of dam removal to commercial fisheries also informs consideration in the EIR that dam removal would advance the long-term restoration of natural fish populations in the Klamath Basin, including having a significant beneficial effect on commercial fisheries and an associated significant beneficial economic impact on the coastal commercial fishing industry.

In addition to providing in-river recreational fishing opportunities, salmon support an ocean sport fishery. Based on prior economic studies, sport fishing of the SONCC coho ESU and the Klamath River fall- and spring-run Chinook salmon could economically benefit from the removal of the four dams and associated facilities. Although there would be a substantial economic benefit to the SONCC coho ESU, USBR (2012) determined that it would be unlikely to lead to de-listing from 'threatened' under the ESA. Using modeling from the EIR, the average combined annual net economic value of the ocean recreational Chinook salmon harvest (all stocks) attributable to Klamath Chinook salmon was modeled to increase from $6.415 million under the "No Project Alternative" to $9.159 million following the removal of the four dams and associated facilities (43 percent increase). With the removal of the four dams and associated facilities, this would equate to an increase in the net economic value for the period 2012 to 2061 (discounted to present value) of $50.5 million in excess of the "No Project Alternative." Potential for increases in the harvest of spring and fall-run Chinook salmon were also identified, with timing of migrations meaning that an increase in fall-run Chinook salmon abundance would be more likely to be advantageous to the ocean recreational fishery (USBR 2012). Overall, the prior economic studies concluded that ocean sport fishing of SONCC coho and Klamath River fall- and spring-run Chinook salmon would increase over existing conditions due to an increased abundance of salmon resulting from dam removal. This finding is generally consistent with the discussion in EIR Section 3.20.5 [Recreation] Potential Impacts and Mitigation that the KRRC's Proposed Project would benefit in-river recreational fishing opportunities in the long, although the aforementioned projected economic effects on ocean sport fishing are not required to support the significance determination for in-river recreational fishing.

Removal of the four dams and their reservoirs could affect real estate values of parcels surrounding Copco No. 1 and Iron Gate reservoirs, and parcels

adjacent to the Klamath River downstream of Iron Gate Dam. In prior studies, the outcome of the regional economic real estate analysis was complex indicating that there would be both positive and negative local value changes as a result of dam removal. Dam removal represented only one factor driving the value changes, while local circumstances and ongoing economic trends also had a major influence on predicted values (USBR 2012, Real Estate Sub-team 2012). USBR (2012) qualitatively assessed dam removal based on net economic benefits associated with various resources, and found that removal of the four dams and facilities could result in short-term declines in real estate values, which would be partially offset as the barren landscape is revegetated. USBR (2012) indicated that for some parcels that are currently adjacent to the reservoirs, loss of reservoir frontage may have a permanent adverse effect on their values. For other parcels downstream of Iron Gate Dam, USBR (2012) indicated that improvements of water quality could lead to increased real estate values in the long term.

The Siskiyou County Assessor-Recorder provided comments during the Lower Klamath Project scoping period expressing their view that the prior assessment on property values and tax revenues under a dam removal scenario was deficient. In their comment letter, the County Assessor-Recorder provided their assessment that PacifiCorp's assets (total $162.6 million) would be greatly reduced (by $32.5 million in value) by removal of the dams and associated infrastructure, resulting in a loss of approximately $370,000 per year in taxes for Siskiyou County, in addition to financial effects on the Hornbrook Elementary School District. While the assumptions used to arrive at the numbers in the USBR real estate reports are explained in the text of these reports, both viewpoints suggest that the County would lose some tax revenue from the removal of the dams.

The Siskiyou County Assessor-Recorder expressed concerns that while the USBR (2012) appraisal considered nearly 1,500 Potentially Impacted Parcels (PIPs) as part of their analysis, they determined that the number of parcels that could be impacted was only 700 Impacted Parcels (IPs). The County Assessor-Recorder also expressed their concern that the approach by USBR (2012) understates the reduction in appraised value and that structural and site improvements, the largest portion of a property's value, were excluded from the appraisals.

The Real Estate Sub-team (2012) Report provided the below reasoning for determining the numbers of PIPs and IPs:

"Based on the field inspection, it was determined that those parcels on the near side of the ridgeline were determined to have potential impacts and therefore were included in the parcel list. Those parcels on the far side (backside of the ridgeline) had limited to no views (no lake views), limited access to the reservoirs, and appeared to be larger parcels. It was concluded that these parcels would not be significantly impacted by the dam removals

(any influence could not be reliably measured); therefore, they were not included on the PIP list."

The Real Estate Sub-team (2012) Report also stated that the purpose of the study was "…to determine the impacts to the value of the real property of those parcels that align and/or are influenced by the reservoirs that have formed behind the three identified dams. This study is from a macro perspective, to wit, it is designed to look at the financial impacts, in the aggregate, it is not an analysis of an impact to any given parcel or property. It was determined that the primary value influences or enhancements to parcels attributable to the reservoirs include water-frontage and reservoir views. Since these value influences or enhancements are directly attributable to the land component of the real property interest and not to the improvement component it was determined that it would be unnecessary to evaluate the combined house/lot interest."

With regard to concerns of diminishing property value as a result of the Proposed Project, confirmation of the property value effect is difficult because many variables, (including market conditions, number of distressed sales, buyer resistance) can affect the sale price of a residence (Bender and Rosenthal 2011). In the appraisal process, the Real Estate Sub-team (2012) looked at comparable units which had sold in a similar area of the development. The actual property value effect on housing units cannot be known until the first unit is sold after implementation of the Proposed Project, should this project occur. However, as described below, the Real Estate Sub Team (2012) Report notes that the effect of the Proposed Project on property values would not necessarily only be negative but may be mixed.

Further, the amount of property tax that municipalities, school districts, and fire districts receive from the State fluctuates over time due to a number of factors in addition to property values. Some of the most significant factors that affect local revenue-raising include (ILG 2016):

- The allocation of local property tax among a county, and cities, special districts and school districts within each county is controlled by the Legislature.
- Property taxes may not be increased except with a two-thirds vote to fund a general obligation bond.
- Voter approval is required prior to enacting, increasing or extending any type of local tax.
- Assessments to pay for public facilities that benefit real property require property owner approval.

The Siskiyou County Assessor-Recorder scoping comments also expressed their view that the prior studies ignored the perception that with removal of the dams, property values for residents downstream of Iron Gate Dam would drop because people believe that they will be subject to additional flooding as a result of the removal of the dams. The County asserted in their comment letter that “Perception is reality when it comes to property values”. The Real Estate Sub Team (2012) Report notes that dam removal would reduce or eliminate many of the effects of poor water quality in the river (e.g., extensive algae mats, odors and algal toxins), which could increase values for downstream properties located adjacent to the river, and that more robust runs of anadromous fish could also increase property value. The potential effects of the Proposed Project on flood risk, water quality, and fisheries, are robustly considered in this EIR by analyzing those specific resource topics in Section 3.6 Flood Hydrology, Section 3.2 Water Quality, and Section 3.3 Aquatic Resources.

Under CEQA, potential effects from implementing a project, such as reductions in property values, loss of property tax revenues, and increases in energy costs, that are solely social or economic in nature, would not constitute an effect (i.e., an impact) to the physical environment and are not further analyzed in this EIR. While Siskiyou County currently receives tax revenues from PacifiCorp for hydroelectric power generation at the Lower Klamath Project, it would be expected that these revenues would cease. This would result in a lowering of County tax revenues for operation of County government.

Under the Proposed Project, if Parcel B lands were operated as income-producing wildlife management areas after being transferred to the State then California Fish and Game Code section 1504 would apply. Subdivision (a) of section 1504 states:

“When income is derived directly from real property acquired and operated by the State as wildlife management areas, and regardless of whether income is derived from property acquired after October 1, 1949, the department shall pay annually to the county in which the property is located an amount equal to the county taxes levied upon the property at the time title to the property was transferred to the State. The department shall also pay the assessments levied upon the property by any irrigation, drainage, or reclamation district.”

4.4.2.5. Justification for Allowing Degradation

The Regional Water Board finds that the proposed discharge and associated degradation is appropriate, as follows:

- The proposed discharge will accommodate important economic and social development in the area and provide maximum benefit to the people of the state. Specifically, the dam removal project and mitigation

hatchery at FCH will increase Commercial Fishing, Ocean Sport Fishing, Tribal Fisheries and Cultural Beneficial Uses.

- The new discharge will not adversely affect existing or probable beneficial uses of the Klamath River, with negligible impacts to applicable water quality objectives.

Based on these findings, the Regional Water Board concludes that the proposed discharge of 6.5 mgd from the Facility is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. Compliance with these requirements will result in the best practicable treatment or control of the discharges from the Facility.

4.4.1. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on solids control through a BMP Plan as required by ELGs in 40 C.F.R part 451. Restrictions on these pollutants are discussed in section 4.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations for ammonia and pH that are more stringent than the minimum, federal technology-based requirements but are necessary to meet water quality standards. These requirements are discussed in section 4.3.3 of the Fact Sheet.

Water quality-based effluent limitations have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR implemented by the SIP, which was approved by U.S. EPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

The Regional Water Board has considered the factors in Water Code section 13263, including the provisions of Water Code section 13241, in establishing these requirements.

4.5. Interim Effluent Limitations

This Order does not establish interim effluent limitations but does include a compliance schedule for compliance with final limitations. The compliance schedule is included in section 6.3.8 and includes tasks to come into compliance with the TMDL Wasteload Allocations and Point Source Discharge Prohibition. The Facility is required to operate for eight years after year two of dam removal, as discussed in section 4.4.2.3. of this Fact Sheet.

4.6. Land Discharge Specifications

This Order does not establish land discharge specifications.

4.7. Recycling Specifications

This Order does not establish recycling specifications.

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

5.1. Surface Water

CWA section 303(a-c) requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that "[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional [Water] Board will apply to regional waters in order to protect the beneficial uses." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains Receiving Surface Water Limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, bacteria, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity.

The dissolved oxygen limitation in this Order reflects the new Basin Plan dissolved oxygen limit that was adopted by the Regional Water Board on June 18, 2015, and effective beginning April 24, 2017, after receiving approval from U.S. EPA. The new Basin Plan dissolved oxygen limitation specifies limits for the WARM, COLD, and SPWN beneficial uses. The WARM, COLD and SPWN beneficial uses occur in the Klamath River. This Order includes only the SPWN limitations because it is the most restrictive and protective limit and the SPWN beneficial use is present throughout the entire discharge season.

5.2. Groundwater

This Order does not authorize discharges to groundwater. Therefore, no groundwater monitoring is required.

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

6.1.1. Federal Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The Permittees must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The rationale for the special conditions contained in the Order is provided in section 6.2, below.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

6.1.2. Regional Water Board Standard Provisions

In addition to the Federal Standard Provisions (Attachment D), the Permittees shall comply with the Regional Water Board Standard Provisions provided in Standard Provisions 6.1.2 of the Order.

6.1.2.1. Order Provision 6.1.2.1 identifies the state's enforcement authority under the Water Code, which is more stringent than the enforcement authority specified in the federal regulations (e.g., 40 C.F.R. sections 122.41(j)(5) and (k)(2)).

6.1.2.2. Order Provision 6.1.2.2 requires the Permittees to notify Regional Water Board staff, orally and in writing, in the event that the Permittees do not comply or will be unable to comply with any Order requirement. This provision requires the Permittees to make direct contact with a Regional Water Board staff person.

6.2. Special Provisions

6.2.1. Reopener Provisions

6.2.1.1. **Standard Revisions (Special Provision 6.3.1.1).** Conditions that necessitate a major modification of a permit are described in 40 C.F.R. section 122.62, which include the following:

6.2.1.1.1. When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision. Therefore, if revisions of applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such revised standards.

6.2.1.1.2. When new information that was not available at the time of permit issuance would have justified different permit conditions at the time of issuance.

6.2.1.2. **Reasonable Potential (Special Provision 6.3.1.2).** This provision allows the Regional Water Board to modify, or revoke and reissue, this Order if present or future investigations demonstrate that the Permittees governed by this Permit is causing or contributing to excursions above any applicable priority pollutant criterion or objective, or adversely impacting water quality and/or the beneficial uses of receiving waters.

6.2.1.3. **Whole Effluent Toxicity (Special Provision 6.3.1.3).** This Order requires the Permittees to investigate the causes of and identify corrective actions to reduce or eliminate effluent toxicity through a TRE. This Order may be reopened to include a numeric chronic toxicity limitation, new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.

6.2.1.4. **303(d)-Listed Pollutants (Special Provision 6.3.1.4).** This provision allows the Regional Water Board to reopen this Order to modify existing effluent limitations or add effluent limitations for pollutants that are the subject of any future TMDL action.

6.2.1.5. **Water Effects Ratios (WERs) and Metal Translators (Special Provision 6.3.1.5).** This provision allows the Regional Water Board to reopen this Order if future studies undertaken by the Permittees provide new information and justification for applying a WER or metal translator to a water quality objective for one or more priority pollutants.

6.2.2. **Special Studies and Additional Monitoring Requirements**

6.2.2.1. **New Chemical and Aquaculture Drug Use Reporting**

The Effluent Limitations Guidelines and New Source Performance Standards for the Concentrated Aquatic Animal Production Point Source Category at 40 C.F.R. part 451 include the following reporting and narrative requirements for CAAP facilities:

- The facility must notify the permitting authority of any INAD or extralabel drug use where the use may lead to a discharge to waters of the United States.

- The facility must report for failure in or damage to the structure of an aquatic animal containment system, resulting in an unanticipated material discharge of pollutant to waters of the United States.

- The facility must develop and maintain a BMP Plan for solids control, material storage, structural maintenance, record keeping, and training.

Prior to using any new chemical or aquaculture drug at the Facility, the Permittees are required to notify the Regional Water Board of the proposed use. The notification must contain the toxicity testing results of the new chemical or aquaculture drug as specified in Section 6.3.2.1 of this Order. These reporting and toxicity testing requirements are needed for the Regional Water Board to determine if the discharge of a new drug or chemical by the Facility has reasonable potential to cause or contribute to an in-stream excursion above any chemical-specific water quality criteria, narrative water quality objective for chemical constituents from the Basin Plan, or narrative water quality objective for toxicity from the Basin Plan.

6.2.3. Best Management Practices and Pollution Prevention

6.2.3.1. Best Management Practices (BMP) Plan (Special Provision 6.3.3.1)

Provision 6.3.3.1 is established based on requirements in Effluent Limitations Guidelines and New Source Performance Standards for the Concentrated Aquatic Animal Production Point Source Category at 40 C.F.R. part 451. CAAP facilities are required to develop and maintain a BMP Plan that addresses the following requirements: solids control, material storage, structural maintenance, record-keeping, and training. The Permittees must make the BMP Plan available to the Regional Water Board upon request and submit certification that the BMP Plan has been developed.

6.2.4. Construction, Operation, and Maintenance Specifications (Special Provisions 6.3.4.1 and 6.3.4.2)

40 C.F.R. section 122.41(e) requires proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions. An up-to-date operation and maintenance manual, as required by Provision 6.3.4.2 of this Order, is an integral part of a well operated and maintained facility and must be complete and available prior to facility operation.

6.2.5. Special Provisions for Publicly-Owned Treatment Works (POTWs) – Not Applicable

6.2.6. Other Special Provisions

6.2.6.1. Solids Disposal (Special Provision 6.3.6.1)

Provision 6.3.6.1 is based on the requirements of title 27 of the California Code of Regulations and prevention of unauthorized discharges of solid wastes into waters of the United States or waters of the State. Other waste disposal specifications for drugs and chemicals are to prevent other unauthorized discharges to waters of the United States or waters of the State.

6.2.7. Compliance Schedules

In general, an NPDES permit must include final effluent limitations that are consistent with CWA section 301 and with 40 C.F.R. section 122.44(d). There are exceptions to this general rule. The State Water Board's Resolution 2008-0025 "Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits" (Compliance Schedule Policy) allows compliance schedules for new, revised, or newly interpreted water quality objectives or criteria, or in accordance with a Total Maximum Daily Load (TMDL). All compliance schedules must be as short as possible, and may not exceed ten years from the effective date of the adoption, revision, or new interpretation of the applicable water quality objective or criterion, unless a TMDL allows a longer schedule. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric effluent limitations for that constituent or parameter, interim requirements and dates toward achieving compliance, and compliance reporting within 14 days after each interim date. The Order may also include interim requirements to control the pollutant, such as pollutant minimization and source control measures.

The permit limitations for temperature, total nitrogen, total phosphorus and CBOD are more stringent than the limitations previously implemented. These new limitations are based on the Klamath River TMDL Action Plan that became effective on December 28, 2010. The Permittees have complied with the application requirements in paragraph 4 of the Compliance Schedule Policy, and the Permittees' application demonstrates the need for additional time to implement actions to comply with the new limitations. Therefore, a compliance schedule for compliance with final effluent limitations for temperature, total nitrogen, total phosphorus and CBOD is established in this Order.

A compliance schedule is necessary because the Permittees must operate for eight years after year two of dam removal to meet the requirements of a conservation hatchery as identified in the KBRA and KHSA.

The compliance schedule is as short as possible pursuant to 40 C.F.R. section 122.47. The compliance schedule for temperature, total nitrogen, total phosphorus and CBOD is included in Special Provisions section 6.3.8.

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 C.F.R. requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and

13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E, establishes monitoring and reporting requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

7.1. Influent Monitoring

Influent monitoring is required for the Facility for TSS and settleable solids when discharges from the Facility are occurring. Influent TSS and settleable solids concentrations will be subtracted from the effluent concentrations to calculate the net increase of these pollutants in the effluent for comparison with the applicable effluent limitations.

This Order establishes net effluent limitations for total nitrogen, total phosphorus, CBOD, and temperature for the Facility. Although the net limitations are to be determined based on the net loading over the numerical targets established in the TMDL Staff Report, this Order establishes monthly monitoring for these constituents to characterize the levels of these constituents in the intake water and evaluate the contribution of these pollutants from the hatchery.

7.2. Effluent Monitoring

Pursuant to the requirements of 40 C.F.R. section 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations.

Effluent monitoring requirements are necessary to determine compliance with prohibitions and/or effluent limitations established by this Order. Effluent monitoring is necessary to demonstrate compliance with technology-based effluent limitations and WQBELs and demonstrate whether or not the discharge poses reasonable potential for a pollutant to exceed any numeric or narrative water quality objective.

Effluent monitoring is required for flow (daily), TSS (quarterly), settleable solids (quarterly), and pH (quarterly) to characterize the effluent and determine compliance with the applicable effluent limitations for these constituents.

Effluent monitoring for turbidity is required to assess the effectiveness of solids removal and the impact of discharges on the receiving water.

U.S. EPA published updated National Ambient Water Quality Criteria for protection of aquatic life for ammonia, which are based on pH and temperature. Effluent monitoring data for ammonia at the Facility is not available. Therefore, this Order requires quarterly monitoring for ammonia in order to evaluate if discharges from the Facility have reasonable potential to cause or contribute to an exceedance of the Basin Plan’s narrative toxicity objective. In order to properly adjust the criteria for ammonia, this Order requires quarterly monitoring for pH and temperature concurrent with ammonia sampling.

This Order establishes annual effluent monitoring for hardness to ensure that adequate data is available to properly adjust water quality criteria for hardness-based metals.

In accordance with Section 1.3 of the SIP, periodic monitoring is required for priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires effluent monitoring for priority pollutants one time at least 180 days but no more than 365 days prior to expiration of this Order.

7.3. Whole Effluent Toxicity Testing Requirements

As discussed in section 4.3.5 of this Fact Sheet, discharges from CAAP facilities do not have reasonable potential to cause or contribute to an exceedance of the Basin Plan's narrative toxicity objective or the State Water Board's Toxicity Provisions. Therefore, this Order does not require routine acute or chronic toxicity monitoring.

7.4. Receiving Water Monitoring

7.4.1. Surface Water

Receiving water monitoring is required to demonstrate compliance with the receiving water limitations. This Order requires quarterly monitoring in the upstream and downstream receiving water for dissolved oxygen, pH, temperature, and turbidity.

This Order establishes annual upstream receiving water monitoring for hardness to ensure that adequate data is available to properly adjust water quality criteria for hardness-based metals.

In accordance with Section 1.3 of the SIP, periodic monitoring is required for priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires upstream receiving water monitoring for priority pollutants one time at least 180 days but no more than 365 days prior to expiration of this Order.

7.4.2. Groundwater

This Order does not authorize discharges to groundwater. Therefore, no groundwater monitoring is required.

7.5. Other Monitoring Requirements

7.5.1. Quarterly Drug and Chemical Use Report

The ELGs for the Facility requires reporting on the use of drugs, disinfectants, and other chemicals in discharges authorized by NPDES permits. Consistent

with the ELGs, this Order requires quarterly reporting of drug and chemical use using the Chemical Use Report in Attachment G.

8. PUBLIC PARTICIPATION

The Regional Water Board) has considered the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System permit for the Fall Creek Hatchery. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

8.1. Notification of Interested Parties

The Regional Water Board notified the Permittees and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following posting on the Regional Water Board's Internet site at: http://www.waterboards.ca.gov/northcoast/public_notices/public_hearings/npdes_permits_and_wdrs.shtml.

The public had access to the agenda and any changes in dates and locations through the Regional Water Board's website at: http://www.waterboards.ca.gov/northcoast/public_notices/public_hearings/npdes_permits_and_wdrs.shtml.

8.2. Written Comments

Interested persons were invited to submit written comments concerning these tentative WDRs as provided through the notification process. Comments were due to the Regional Water Board Executive Office electronically via e-mail to NorthCoast@waterboards.ca.gov or on disk (CD or DCD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at http://www.waterboards.ca.gov/northcoast.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on **March 1, 2023**.

8.3. Public Hearing

The Regional Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **April 6, 2022**
Time: 9:00 a.m. or as announced in the Regional Water Board's agenda
Location: Weed City Council Chambers

550 Main St.
Weed, CA 96094

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony, pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

Please be aware that dates and venues may change. Our Web address is http://www.waterboards.ca.gov/northcoast where you can access the current agenda for changes in dates and locations.

8.4. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with 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., within 30 calendar days of the date of adoption of this Order at the following address, 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:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see the Water Quality Petitions Website at http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

8.5. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (707) 576-2220.

8.6. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this Facility, and provide a name, address, and phone number.

8.7. Additional Information

Requests for additional information or questions regarding this order should be directed to Justin McSmith at Justin.McSmith@waterboards.ca.gov or (707) 576-2082.

ATTACHMENT G – CHEMICAL USE REPORT

Chemical Name	Date	Purpose	Amount Applied	Units	Duration of Treatment	Treatment Type (Immersion, Feed, Injection)	Flow Treated (MGD)	Total Effluent Flow (MGD)

For drugs and chemicals used for the treatment and control of diseases (other than NaCl), use the space below to describe the method used to demonstrate compliance with Discharge Prohibition 3.7 of this Order. Information that may be used to demonstrate compliance includes monitoring data for the drug or chemical at the time of application or calculation of the concentration (C) at the point of discharge as compared to the reporting level for the drug or chemical using the equation C = (treatment concentration) x (flow in treatment area) ÷(flow at point of discharge).