CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

2501 Lake Tahoe Boulevard, South Lake Tahoe, CA 96150
(530) 542-5400, Fax (530) 544-2271
State Water Resources Control Board
(http://www.waterboards.ca.gov)

WATER QUALITY ORDER NO. R6V-2023-TENT
NPDES NUMBER. CA0102806
WDID NO. 6B140800002

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, FISH SPRINGS FISH HATCHERY, INYO COUNTY DISCHARGE TO FISH SPRINGS CREEK

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

Discharger	**State of California, Department of Fish and Wildlife**
Name of Facility	**Fish Springs Fish Hatchery**
Facility Address	**215 Fish Springs Road** **Big Pine, California 93513** **Inyo County**

Table 1. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North-South)	Discharge Point Longitude (East-West)	Receiving Water
001	Fish Hatchery and Egg Incubation Wastewater	37º, 05', 42" N	-118º, 15', 15" W	Fish Springs Creek

This Order was adopted on:	**<Date>**
This Order shall become effective on:	**<Date>**
This Order shall expire on:	**<Date>**

The Discharger shall file a Report of Waste Discharge (ROWD) 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: **<insert date>.** The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Lahontan

Region have classified this discharge as follows: Minor discharge.

I, Michael R. Plaziak, 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, Lahontan Region, on **<Date>**.

MICHAEL R. PLAZIAK, PG
EXECUTIVE OFFICER

TABLE OF CONTENTS

TABLE OF TABLES

TABLE OF ATTACHMENTS

1. FACILITY INFORMATION

Information describing the Fish Springs Fish 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, Lahontan Region (Lahontan Water Board), finds:

2.1. **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 U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 1 subject to the WDRs in this Order.

2.2. **Background and Rationale for Requirements.** The Lahontan 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 and G through K are also incorporated into this Order.

2.3. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections 4.2, 4.3, and 5.2 of this Order 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 Lahontan Water Board has notified the Discharger 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 Lahontan 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

THEREFORE, IT IS HEREBY ORDERED that Order R6V-2015-0034 is rescinded upon the effective date of this Order except for enforcement purposes, and, to meet the provisions contained in division 7 of the Water Code (commencing with section 13000)

and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Lahontan Water Board from taking enforcement action for past violations of the previous Order.

3. DISCHARGE PROHIBITIONS

3.1. **General Requirements and Prohibitions.** In accordance with the Region-wide and Unit/Area-Specific Prohibitions in section 4.1 of the Water Quality Control Plan for the Lahontan Region (Basin Plan), unless a specific exemption is granted by the Lahontan Water Board:

3.1.1. The discharge of waste into waters of the state that causes violation of any numeric water quality objective contained in the Basin Plan, including the Nondegradation Objective, is prohibited. For the purposes of this prohibition, “waste” is defined to include any waste or deleterious material including, but not limited to, waste earthen materials (such as soil, silt, sand, clay, rock, or other organic or mineral material) and any other waste as defined in Water Code section 13050 subdivision (d).

3.1.2 Where any numeric or narrative water quality objective contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation or pollution is prohibited.

3.1.3. The discharge of waste that could affect the quality of waters of the state that is not authorized by the State Water Board or Regional Board through waste discharge requirements, NPDES permit, cease and desist order, certification of water quality compliance pursuant to CWA section 401, or other appropriate regulatory mechanism is prohibited.

3.1.4. The discharge of untreated sewage, garbage, or other solid wastes into surface waters of the Region is prohibited. For the purposes of this prohibition, “untreated sewage” is that which exceeds secondary treatment standards of the Federal Water Pollution Control Act, which are incorporated in section 4.4 of the Basin Plan.

3.1.5. The discharge of pesticides to surface or groundwaters is prohibited.

3.1.6. The discharge of waste, except to the authorized discharge points (Discharge Point 001), is prohibited.

3.1.7. There shall be no discharge, bypass, or diversion from the transport or treatment facilities to surface waters except as in compliance with Standard Provisions for bypass (Attachment D).

3.1.8. The discharge shall not cause pollution as defined in section 13050 of the Water Code, or a threatened pollution.

3.1.9. Neither the treatment nor the discharge shall cause a nuisance as defined in section 13050 of the Water Code.

3.1.10. The discharge shall not cause a violation of any applicable water quality standards for receiving water adopted by the Lahontan Water Board or the State Water Board.

3.1.10.1. The discharge of any therapeutic or pharmaceutical aquaculture drug or chemical resulting in toxicity in receiving waters is prohibited.

3.1.10.2. The discharge or threatened discharge of any aquaculture drug or chemical not authorized for discharge in section 6.3.2.1 of this Order to waters of the state is prohibited.

3.1.10.3. The application of more than one aquaculture drug or chemical to the raceways or incubation building per treatment period (as defined in Attachment A) is prohibited.

3.1.11. The discharge of hazardous or toxic substances including cleaning chemicals, solvents, oil, grease, or other petroleum products to waters of the state is prohibited.

3.1.12. The discharge of accumulated sludge, grit, and solid residues to surface waters is prohibited.

3.1.13. The use of any aquaculture drug or chemical that may be potentially discharged to waters of the state and that are not authorized for discharge in section 6.3.2.1 of this Order is prohibited. Modifications to the authorized use and disposal of aquaculture drugs and chemicals at the Facility may be allowed by the Lahontan Water Board as specified in section 6.3.2.1 of this Order.

3.1.14. Discharges exceeding an average monthly flow of 26 million gallons per day (MGD) are prohibited.

4. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

4.1. Effluent Limitations – Discharge Point 001

4.1.1. **Final Effluent Limitations – Discharge Point 001**

Table 2. Effluent Limitations

Parameter	Units	Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Formaldehyde	mg/L	0.65	1.3	--	--
Hydrogen Peroxide	mg/L	--	1.3	--	--
Nitrate, Total (as N)	mg/L	--	--	--	1.0 [Reference Note 1 following Table-2]
Nitrogen, Total (as N)	mg/L	--	--	--	1.8 [Reference Note 1 following Table-2]
Potassium Permanganate	mg/L	0.098	0.197	--	--
Settleable Solids	ml/L	0.1	--	--	--
Total Dissolved Solids (TDS)	mg/L	--	--	--	265 [Reference Note 1 following Table-2]
Total Suspended Solids (TSS)	mg/L	6.0	--	--	15

Table 2 Notes:

1. Effluent limitations for Nitrate, Total (as N), Nitrogen, Total (as N), and Total Dissolved Solids are equal to the instantaneous maximum value. Where the influent water concentration equals or exceeds this value, then the effluent limitation is equal to the influent quality. The discharger may add mass of the pollutant to its waste stream if an equal or greater mass is removed prior to discharge, so there is no net addition of the pollutant in the discharge compared to the intake water. Report compliance with respect to the limit by providing both influent concentration and the discharge concentration as: Effluent Limit = Instantaneous Maximum; not to exceed influent supply water concentration.

4.1.1.1. The Discharger shall maintain compliance with the above effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location

EFF-001 as described in the Monitoring and Reporting Program (MRP), Attachment E.

4.1.1.2. **pH.** The pH of discharges to Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the MRP, Attachment E, shall not be depressed below 6.5 standard units nor raised above 8.5 standard units. However, when the pH of the source groundwater exceeds 8.5 standard units, the pH of the effluent shall not exceed the pH of the groundwater by more than 0.5 standard units. When the pH of the groundwater is less than 6.5 standard units, the pH of the effluent shall not be less than the pH of the groundwater by more than 0.5 standard units.

4.1.2. Interim Effluent Limitations – Not Applicable

4.2. Land Discharge Specifications – Not Applicable

4.3. Recycling Specifications – Not Applicable

4.4. Non-Storm Water Discharges Specifications

4.4.1. The following non-storm water discharges are authorized by this Order provided that they satisfy the conditions specified in section 4.5.2 below: fire hydrant flushing; potable water sources, including potable water related to the operation, maintenance, or testing of potable water systems; drinking fountain water; atmospheric condensates including refrigeration, air conditioning, and compressor condensate; irrigation drainage; landscape watering; springs; groundwater; foundation or footing drainage.

4.4.2. The non-storm water discharges as identified in section 4.5.1 above, are authorized by this Order if all the following conditions are met:

4.4.2.1. The non-storm water discharges are in compliance with these waste discharge requirements.

4.4.2.2. Best Management Practices (BMPs) are specifically included in a Storm Water Pollution Prevention Plan (SWPPP) to (1) prevent or reduce the contact of non-storm water discharges with materials or equipment which may contribute contaminants to the discharge and (2) minimize, to the extent practicable, the flow or volume of non-storm water discharges.

4.4.2.3. The monitoring program includes quarterly visual observations of each non-storm water discharge and its sources to ensure that BMPs are being implemented and are effective.

4.4.2.4. The non-storm water discharges are reported and described in the subsequent quarterly report and are summarized in the annual report.

5. RECEIVING WATER LIMITATIONS

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. Compliance with numeric and narrative receiving water limitations shall be measured at Monitoring Location RSW-002. The discharge shall not cause the following in Fish Springs Creek:

5.1. Receiving Water Limitations

5.1.1. This Discharger shall not cause a violation of any applicable water quality standard for receiving water adopted by the Lahontan Water Board or the State Water Board as required by the federal Water Pollution Control Act and regulations adopted thereunder.

5.1.2. **Water Quality Objectives Which Apply to All Surface Waters:** The discharge to surface waters of flows generated within, or as a result of, the Facility shall not cause a violation of the following water quality objectives for the surface waters of the Owens Hydrologic Unit:

5.1.2.1. **Ammonia.** Ammonia concentrations shall not exceed the values listed for the corresponding conditions in Tables 3-1 and 3-3 of the Basin Plan. For temperature and pH values not explicitly in the tables, the most conservative value neighboring the actual value may be used or criteria can be calculated from numerical formulas developed by U.S. EPA. The neutral, unionized ammonia species (NH_3) is highly toxic to freshwater fish. The fraction of toxic NH_3 to total ammonia species ($NH_4^+ + NH_3$) is a function of temperature and pH.

5.1.2.2. **Bacteria, Coliform.** Waters shall not contain concentrations of coliform organisms attributable to anthropogenic sources, including human and livestock wastes. The fecal coliform concentration during any 30-day period shall not exceed a log mean most probable number (MPN) of 20 per 100 mL, nor shall more than 10 percent of all samples collected during any 30-day period exceed 40 MPN per 100 mL. U.S. EPA recommends that the log mean should ideally be based on a minimum of not less than five samples collected as evenly spaced as practicable during any 30-day period (Reference: Ambient Water Quality Criteria for Bacteria – 1986, EPA 440/5-84-002, page 2). However, a log mean concentration exceeding 20 MPN per 100 mL for any 30-day period shall indicate violation of this objective even if fewer than five samples were collected.

5.1.2.3. **Biostimulatory Substances.** Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses.

5.1.2.4. **Chemical Constituents.** Waters shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses.

The receiving waters have been designated as municipal and domestic supply (MUN) and shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) established for drinking water and specified in Title 22 of the California Code of Regulations, which are incorporated by reference into this Order: Table 64431-A (MCLs for Inorganic Chemicals), Table 64444-A (MCLs for Organic Chemicals), Table 64431-B (Fluoride), Table 64449-A (SMCLs, Consumer Acceptance Contaminant Levels), and Table 64449-B (SMCLs, Consumer Acceptance Contaminant Level Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as changes take effect.

The receiving waters have been designated as agricultural supply (AGR) and shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e., agricultural purposes).

5.1.2.5. **Chlorine, Total Residual.** For the protection of aquatic life, total chlorine residual shall not exceed either a median value of 0.002 mg/L or a maximum value of 0.003 mg/L in the receiving water. Median values shall be based on daily measurements taken within any six-month period.

5.1.2.6. **Color.** Waters shall be free of coloration that causes nuisance or adversely affects the water for beneficial uses.

5.1.2.7. **Dissolved Oxygen.** The dissolved oxygen concentration, as percent saturation, shall not be depressed by more than 10 percent, nor shall the minimum dissolved oxygen concentration be less than 80 percent of saturation. For waters with the beneficial uses of COLD, COLD with SPWN, WARM, and WARM with SPWN, the minimum dissolved oxygen concentration shall not be less than that specified in Table 3-6 of the Basin Plan.

5.1.2.8. **Floating Materials.** Waters shall not contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect the water for beneficial uses. For natural high-quality waters, the concentrations of floating material shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.

5.1.2.9. **Nondegradation of Aquatic Communities and Populations.** All wetlands shall be free of substances attributable to wastewater or other discharges that produce adverse physiological responses in humans, animals, or plants; or that lead to the presence of undesirable or nuisance aquatic life. All wetlands shall be free from activities that would substantially impair the biological community as it naturally occurs due to physical, chemical, and hydrologic processes.

5.1.2.10. **Oil and Grease.** Waters shall not 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 adversely affect the water for beneficial uses. For natural high quality waters, the concentration of oils, greases, or other film or coat generating substances shall not be altered.

5.1.2.11. **pH.** In fresh waters with designated beneficial uses of COLD or WARM, changes in normal ambient pH levels shall not exceed 0.5 pH units. For all other waters of the Region, the pH shall not be depressed below 6.5 nor raised above 8.5. The Regional Board recognizes that some waters of the Region may have natural pH levels outside of the 6.5 to 8.5 range. Compliance with the pH objective for these waters will be determined on a case-by-case basis.

5.1.2.12. **Radioactivity.** Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life. Waters designated as MUN shall not contain concentrations of radionuclides in excess of the limits specified in section 64443 (Radioactivity) of Title 22 of the California Code of Regulations, which is incorporated by reference into this Order. This incorporation-by-reference is prospective including future changes to the incorporated provisions as changes take effect.

5.1.2.13. **Sediment.** The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect the water for beneficial uses.

5.1.2.14. **Settleable Materials.** Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or that adversely affects the water for beneficial uses. For natural high-quality waters, the concentration of settleable materials shall not be raised by more than 0.1 milliliter per liter.

5.1.2.15. **Suspended Materials.** Waters shall not contain suspended materials in concentrations that cause nuisance or that adversely affect the water for beneficial uses. For natural high-quality waters, the concentration of total suspended materials shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.

5.1.2.16. **Taste and Odor.** Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish or other edible products of aquatic origin, that cause nuisance, or that adversely affect the water for beneficial uses. For naturally high-quality waters, the taste and odor shall not be altered.

5.1.2.17. **Temperature.** The natural receiving water temperature of all waters shall not be altered unless it can be demonstrated to the satisfaction of the Lahontan

Water Board that such an alteration in temperature does not adversely affect the water for beneficial uses. For waters designated WARM, water temperature shall not be altered by more than five degrees Fahrenheit (5°F) above or below the natural temperature. For waters designated COLD, the temperature shall not be altered.

5.1.2.18. **Toxicity.** All waters must be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, the Lahontan Water Board has selected ceriodaphnia dubia to be considered as the sensitive indicator species for both acute and chronic toxicity.

Ceriodaphnia dubia testing must follow the method identified in Code of Federal Regulations, title 40, part 136 or, for acute toxicity, Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition (EPA-821-R-02-012) or, for chronic toxicity, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (EPA-821-R-02-013). The regulatory decision will be based on the test results in comparison to controls using the respective information below for acute and chronic toxicity.

5.1.2.18.1 **Acute Toxicity.** The acute aquatic toxicity water quality objective is expressed as a null hypothesis and an alternative hypothesis with a regulatory management decision (RMD) of 0.80, where the following null hypothesis, Ho, shall be used:

Ho: Mean response (ambient water) ≤ 0.80 • mean response (control)

And where the following alternative hypothesis, Ha, shall be used:

Ha: Mean response (ambient water) > 0.80 • mean response (control)

Attainment of the water quality objective is demonstrated by conducting acute aquatic toxicity testing and rejecting this null hypothesis in accordance with the TST statistical approach. When the null hypothesis is rejected, the alternative hypothesis is accepted in its place, and there is no exceedance of the acute aquatic toxicity water quality objective. Failing to reject the null hypothesis (referred to as a “fail”) is equivalent to an exceedance of the acute aquatic toxicity water quality objective.

5.1.2.18.2 **Chronic Toxicity**. The chronic aquatic toxicity water quality objective is expressed as a null hypothesis and an alternative hypothesis with a regulatory management decision (RMD) of 0.75, where the following null hypothesis, Ho, shall be used:

Ho: Mean response (ambient water) ≤ 0.75 • mean response (control)

And where the following alternative hypothesis, Ha, shall be used:

Ha: Mean response (ambient water) > 0.75 • mean response (control)

Attainment of the water quality objective is demonstrated by conducting chronic aquatic toxicity testing and rejecting this null hypothesis in accordance with the Test of Significant Toxicity (TST) statistical approach described in the Statewide Toxicity Provisions Section IV.B.1.c. When the null hypothesis is rejected, the alternative hypothesis is accepted in its place, and there is no exceedance of the chronic aquatic toxicity water quality objective. Failing to reject the null hypothesis (referred to as a "fail") is equivalent to an exceedance of the chronic aquatic toxicity water quality objective.

5.1.2.19. **Turbidity.** Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent.

5.1.2.20. **Specific Numeric Receiving Water Limitations.** Surface receiving water limitations for Owens River (Tinemaha Reservoir Outlet) in Table 3 are based on Table 3-17 (page 3-46) of the Basin Plan. Discharges from the Facility shall not cause or contribute to exceedances of the following limitations:

Table 3. Surface Water Limitations

Constituent	Limit as an Annual Average, mg/L	Limit as a 90th Percentile, mg/L
Total Dissolved Solids (TDS)	207	343
Chloride	17.9	42.0
Sulfate	26.8	59.0
Fluoride	0.57	0.90
Boron	0.61	1.50
Nitrate (NO_3) as Nitrogen	0.6	1.1
Total Nitrogen	0.9	1.5
Orthophosphate, Dissolved	0.32	0.56

5.2. Groundwater Limitations

5.2.1. Groundwater is the sole source of influent water into the Facility and to Fish Springs Creek. Groundwater from two wells is combined into a single source and influent samples are collected prior to filling the raceway ponds. The groundwater limitations in this Order are based upon the water quality objectives contained in the Basin Plan (pages 3-13 and 3-14) and are a required part of this Order. Water quality objectives that apply to the Owens Valley Ground Water Basin include the following:

5.2.1.1. **Bacteria, Coliform.** In groundwaters designated as MUN, the median concentration of coliform organisms over any seven-day period shall be less than 1.1 MPN per 100 mL.

5.2.1.2. **Chemical Constituents:**

5.2.1.2.1 Groundwaters designated as MUN shall not contain concentrations of chemical constituents in excess of the MCL or SMCL based upon drinking water standards specified in the following provisions of Title 22 of the California Code of Regulations, which are incorporated by reference into this Order: Table 64431-A (Inorganic Chemicals), Table 64431-B (Fluoride), Table 64444-A (Organic Chemicals), Table 64449- A (SMCLs-Consumer Acceptance Limits), and Table 64449-B (SMCLs-Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

5.2.1.2.2 Groundwaters designated as AGR shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e., agricultural purposes).

5.2.1.2.3 Groundwaters shall not contain chemical constituents that adversely affect the water for beneficial uses.

5.2.1.3. **Radioactivity.** Groundwaters designated as MUN shall not contain concentrations of radionuclides in excess of the limits specified in Table 4 of section 64443 (Radioactivity) of Title 22 of the California Code of Regulations, which is incorporated by reference into this Order. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

5.2.1.4. **Taste and Odor.** Groundwaters shall not contain taste- or odor-producing substances in concentrations that cause nuisance or that adversely affect beneficial uses. For groundwaters designated as MUN, at a minimum, concentrations shall not exceed adopted SMCLs specified in Table 64449-A (SMCLs-Consumer Acceptance Limits) and Table 64449-B (Secondary Maximum Contaminant Levels Ranges) of Title 22 of the California Code of Regulations, which is incorporated by reference into this Order. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

6. PROVISIONS

6.1. Standard Provisions

6.1.1. The Discharger shall comply with all Standard Provisions included in Attachment D.

6.1.2. The Discharger 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. Surface waters as used in this Order include, but are not limited to, wetlands and live streams, either perennial or ephemeral, which flow in natural or artificial watercourses, and natural lakes and artificial impoundments of waters within the State of California.

6.1.2.2. Groundwaters as used in this Order include, but are not limited to, all subsurface waters being above atmospheric pressure, and the capillary fringe of these waters.

6.1.2.3. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the Discharger from liabilities under federal, state, or local laws, nor guarantee the Discharger a capacity right in the receiving waters.

6.1.2.4. All discharges authorized by this Order shall be consistent with the terms and conditions of this Order. The discharge of any pollutant more frequently than, or at a level in excess of, that identified and authorized by this Order shall constitute a violation of the terms and conditions of this Order.

6.1.2.5. Pursuant to Water Code section 13263, subdivision (g), no discharge of waste into the waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights.

6.1.2.6. Failure to comply with provisions or requirements of this Order, or violations of other applicable laws or regulations governing discharges from this facility, may constitute a violation of the Water Code or the CWA, or both, and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

6.1.2.7. The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order.

6.1.2.9. A copy of the NPDES permit shall be kept and maintained by the Discharger and be available at all times to operating personnel.

6.1.2.10. Provisions of the Order are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

6.1.2.12. Pursuant to Water Code section 13267, subdivision (b), the Discharger must notify the Lahontan Water Board of any substantial change in the volume or character of pollutants introduced into the Facility from the conditions existing at

the time of adoption of this Order. The notice must include information on the quality and quantity of effluent discharged into the receiving waters for the Facility, as well as any anticipated impact of the change on the quantity or quality of the effluent to be discharged from the Facility. A substantial change in volume is considered an increase in excess of 10 percent of the mean daily flow rate. The Discharger must forward a copy of such notice directly to the U.S. EPA Regional Administrator.

6.1.2.16. If a Discharger becomes aware that any information submitted to the Lahontan Water Board is incorrect, the Discharger must immediately notify the Lahontan Water Board, in writing, and correct that information.

6.1.2.17. If the Discharger becomes aware that its NPDES Permit is no longer needed (because the discharge will cease), the Discharger must notify the Lahontan Water Board in writing within 10 days and request that the Order be rescinded.

6.1.2.18. 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 Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

6.1.2.19. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation (MDEL), average monthly effluent limit (AMEL), or receiving water limitation of this Order, the Discharger shall notify the Lahontan Water Board by telephone (530) 542-5400 within 24 hours of having knowledge of such noncompliance and shall confirm this notification in writing within five days, unless the Lahontan Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

6.1.2.20. Authorization pursuant to this Order does not constitute an exemption to applicable discharge prohibitions in the Basin Plan.

6.2. Monitoring and Reporting Program (MRP) Requirements

6.2.1. The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E.

6.3. Special Provisions

6.3.1. **Reopener Provisions**

6.3.1.1. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal Water Pollution Control Act or amendments thereto, the Lahontan Water Board may revise and modify this Order in accordance with such more stringent standards.

6.3.1.2. **Effluent Limitations Based on New Information.** If after review of new data and information regarding aquatic toxicity testing, information collected as specified below in section 6.3.2.1 of this Order, monitoring for constituents listed in Basin Plan Table 3-17 (Page 3-47), or the drug and chemical use reporting required in the MRP (Attachment E) indicate any monitored parameter, drug, or chemical is, or may be, discharged at a level that will cause, have the reasonable potential to cause, or contribute to an in-stream excursion above any chemical-specific water quality criteria or objective, or contribute to an excursion of the numeric Water Quality Objectives or narrative Water Quality Objectives contained in the Basin Plan for the Owens River (Tinemaha Reservoir Outlet), or violate any narrative water quality objective for chemical constituents from the Basin Plan, or narrative water quality objective for toxicity from the Basin Plan, this Order may be reopened to establish effluent limitations.

6.3.1.3. **Toxicity Test Exposure Times.** Chemical specific concentrations of toxicity, as specified in section 6.3.2.1 of this Order, are based on exposure times of 48 or 96 hours. If the Discharger provides sufficient justification that shorter exposure times are a closer approximation of actual exposure times, then this Order may be reopened to account for shorter exposure times.

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

6.3.2.1. **Chemical and Aquaculture Drug Use**. Attachment G of this Order lists all aquaculture drugs and chemicals that may potentially be used at the Facility, as well as expected application methods and dosages. This Order authorizes the discharge of acetic acid, amoxicillin trihydrate, carbon dioxide, Chloramine-T, Chorulon®, Epsom salt, erythromycin, enteric redmouth vaccine, florfenicol, formalin, hydrogen peroxide, ivermectin, MS-222, Ovaplant®, oxytetracycline dihydrate, oxytetracycline hydrochloride, penicillin G potassium, potassium permanganate, PVP Iodine, SLICE, sodium bicarbonate, sodium chloride,Romet-30®, and Vibrio vaccine in accordance with label directions, effluent limitations, BMP Plan requirements, monitoring and reporting requirements and other conditions of this Order.

Other aquaculture chemicals or drugs that may be used at the Facility can only be authorized by the Lahontan Regional Board's Executive Officer. The Discharger must notify the Lahontan Water Board in writing of the intent to use a new drug or chemical **10 days before** the expected date of first application. The notification must contain the following supplemental information:

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

6.3.2.1.2. The purpose for the proposed use of the drug or chemical (i.e., list the specific disease for treatment and specific species for treatment).

6.3.2.1.3. The amount proposed for use or disposal, and the resulting calculated estimate of concentration in the discharge. Calculations used to derive estimated concentrations must also be submitted.

6.3.2.1.4. The location, duration, and frequency of the proposed use or disposal.

6.3.2.1.5. Safety Data Sheets and available toxicity information.

6.3.2.1.6. Any related Investigational New Animal Drug (INAD), New Animal Drug Application (NADA) information, extra-label use requirements and/or veterinarian prescriptions.

6.3.2.1.7. The Discharger shall also submit acute 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 Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA 600/4-90/027) using *Ceriodaphnia dubia* (*C. dubia*) to determine the concentrations at which the specific chemical causes toxicity (e.g. No Observed Adverse Effect Level (NOAEL) and Lowest Observed Adverse Effect Level (LOAEL)).

Where exposure of aquatic life to any aquaculture drug or chemical may be long-term or continuous, the Discharger also shall conduct and/or submit the results of chronic toxicity testing in accordance with the U.S. EPA *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, October 2002* (EPA-821-R-02-013), using *C. dubia*, to determine the concentrations at which the specific chemical causes toxicity (e.g. No Observed Effect Concentration (NOEC) or Inhibition Concentration (IC25)).

The Discharger shall not use other aquaculture drugs or chemicals until notified in writing by the Lahontan Water Board that the notification requirements specified in this provision have been satisfied and the request for a proposed chemical use has been approved. The Lahontan Water Board may reopen this Order to establish appropriate waste discharge requirements for new proposed chemical uses after notice to the Discharger and the public, as may be required.

6.3.2.2. **Reporting of Unanticipated Discharges**

6.3.2.2.1. The Discharger must provide to the Lahontan Water Board an oral report within 24 hours of discovery of the failure in, or damage to, a settling pond (effluent treatment system) or an aquatic animal containment system resulting in an unanticipated material discharge of pollutants to waters of the United States or state. The Discharger must describe the cause of the failure or damage to the containment system and identify materials that have been released to the environment as a result of this failure/damage.

6.3.2.2.2. The Discharger must provide a written report within seven (7) days of discovery of the failure or damage, documenting the cause, the estimated time that elapsed before the failure or damage was repaired, an estimate of the material released as a result of the failure or damage, and steps being taken to prevent a reoccurrence.

6.3.2.2.3. In the event of a spill of drugs, chemicals, pesticides, or feed that results in a discharge to waters of the United States or state, the Discharger must provide an oral report of the spill to the Lahontan Water Board within 24 hours of discovery of its occurrence and a written report within seven (7) days. The report shall include the identity and quantity of the material spilled.

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

6.3.3.1. **Best Management Practices Plan – Aquaculture Operations**

The Discharger must certify in writing to the Lahontan Water Board no later than **180 days after the adoption date** that the BMP Plan is updated to include the requirements specified in this Order and is being implemented as required by 40 Code of Federal Regulations (C.F.R.) part 451. The existing BMP Plan, dated June 30, 2019, may be modified for use under this section. The Discharger must develop and implement the BMP Plan to prevent or minimize the generation and discharge of wastes and pollutants to waters of the state and ensure disposal or land application of wastes is conducted in a manner in compliance at all times with Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in California Code of Regulations, title 27, division 2, subdivision 1, section 20005, et seq. The Discharger shall consider the recommendations provided in U.S. EPA's March 2006 *Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category* (EPA821-B-05-001) when updating the BMP Plan. The Discharger shall review and certify in writing to the Lahontan Water Board the BMP Plan annually (by **February 1** of each year) 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. **Solids Management**

6.3.3.1.1.1. Conduct fish feeding in a manner that limits feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth and minimizes the discharge of unconsumed food and waste products to surface waters.

6.3.3.1.1.2. Clean aquaculture raceways and settling pond using procedures and at frequencies that minimize the disturbance and subsequent discharge of accumulated solids during routine activities such as inventorying, grading, and harvesting.

6.3.3.1.1.3. Report the final disposition of all other solids and liquids, including aquaculture drugs and chemicals, and a description of practices used to minimize use of drugs and chemicals to the extent feasible.

6.3.3.1.1.4. Remove and properly dispose of dead fish on a regular basis to prevent discharge to waters of the United States, except in cases where the discharge to surface waters is determined to benefit the aquatic environment. The Permittee shall submit with the annual report, 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. Procedures must be consistent with Section 6.3.4.1 of this Order. Procedures must be identified and implemented to collect, store, and dispose of fish and other solid wastes in a manner so as to minimize discharge to waters of the United States or waters of the state.

6.3.3.1.1.5. 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:

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

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

6.3.3.1.2. **Operations and Maintenance**

6.3.3.1.2.1. Maintain the Facility to prevent bypassing of the settling ponds or the discharge of floating matter that would violate water quality objectives or cause a nuisance.

6.3.3.1.2.2. Inspect the Facility and the settling ponds daily in order to identify and promptly repair any damage.

6.3.3.1.2.3. 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.

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

6.3.3.1.2.5. Prevent fish from being harvested from the raceway ponds and sold or released until the full withdrawal time of any drug or chemical with which they have been treated has been met, as required by the U.S. Food and Drug Administration (FDA).

6.3.3.1.2.6. All drugs and pesticides[1] must be used in accordance with applicable label directions (Federal Insecticide, Fungicide, and Rodenticide Act or FDA), except under the following conditions, both of which must be reported in advance to the Executive Officer:

6.3.3.1.2.6.1. Participation in Investigation New Animal Drug (INAD) studies, using established protocols; or

6.3.3.1.2.6.2. Extra label drug use, as prescribed by a veterinarian.

6.3.3.1.2.7. Implement protocols to ensure that pesticides and chemicals stored or used on site will not spill, drift, or be transported by storm water into waters of the United States, or of the state.

6.3.3.1.2.8. Limit the number of raceways treated during chemical treatments to ensure compliance with effluent limitations and provisions of this Order.

6.3.3.1.3. **Recordkeeping**

6.3.3.1.3.1. Maintain records for aquatic animal rearing units documenting the feed amounts and estimates of the numbers and weight of aquatic animals in order to calculate representative feed conversion ratios using the Feed Conversion Ratios Log provided in Attachment K of this Order.

6.3.3.1.3.2. Maintain records documenting the frequency of cleaning, inspections, maintenance, repairs, spills, and spill response.

6.3.3.1.3.3. Maintain records documenting compliance with training requirements.

[1] This Order prohibits the discharge of pesticides to surface or groundwaters. Exemptions may be granted by the Water Board under a separate Action provided that specific exemption criteria specified in section 4.1 of the Basin Plan are satisfied.

6.3.3.1.4. **Training**

6.3.3.1.4.1. Adequately train all relevant 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.

6.3.3.1.4.2. Train staff on the proper operation and cleaning of production and wastewater treatment systems, including training in feeding procedures and proper use of equipment.

6.3.3.1.4.3. Ensure that Facility staff is familiar with the BMP Plan and have been adequately trained in the specific procedures it requires.

6.3.3.2. **Storm Water Pollution Prevention Plan (SWPPP)**

Storm water runoff and infiltration of storm water at the Facility has the potential to come in contact with pollutants directly associated with aquaculture activities and secondary activities such as, but not limited to, vehicle maintenance, transportation of fish, construction, maintenance of structures on the Facility, or outdoor storage of unused or salvaged items. Pollutants that may come in contact with storm water and discharge to waters of the state in runoff or infiltration to groundwater include, but are not limited to, chemicals, fuel, waste oil, vehicle wash water, cleaning solutions, landscaping supplies, landscaping wastes, and other stored materials with the potential for discharge to surface waters. The Discharger must develop and implement, in accordance with the requirements in Attachment I, a SWPPP that describes site-specific BMPs for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff from being discharged directly to waters of the state. The SWPPP must be reviewed at least annually, in accordance with Attachment I, and updated to represent current site conditions. The SWPPP must also address the control of non-storm water discharges to the storm drainage system and the control measures needed to meet applicable prohibitions and requirements.

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

6.3.4.1. This Order requires that the Permittee 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 Permittee to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality assurance procedures.

6.3.4.2. Collected screenings, sludges, and other solids, including fish carcasses, must be disposed of in a manner consistent with the BMP Plan section 6.3.3.1.1.4 and consistent with the Consolidated Regulations for Treatment, Storage,

Processing, or Disposal of Solid Waste, as set forth in the California Code of Regulations, title 27, division 2, subdivision 1, section 20005, et seq.

6.3.4.3. All aquaculture drugs and chemicals not authorized for discharge to receiving waters in accordance with the provisions of this Order must be disposed of in an environmentally safe manner, according to label guidelines, Safety Data Sheet guidelines and the Discharger's BMP Plan (see section 6.3.3.1 of this Order). The disposal onto permeable ground, or in any manner or in quantities that may result in a discharge to surface water or to groundwater, is prohibited (see also section 3, Discharge Prohibitions).

6.3.4.4. All facilities used for transport and treatment of waste must be adequately protected against either structural damage or significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

6.3.4.5. The vertical distance between the water surface elevation and the lowest point of a pond dike or the invert of an overflow structure must not be less than 1.5 feet.

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

6.3.6. **Other Special Provisions**

6.3.6.1. **Storm Water Runoff and Storm Water Collection Systems Provisions**

6.3.6.1.1. This Order does not supersede any obligation to obtain and maintain coverage under the General Order for Discharges of Storm Water Associated with Construction Activity (Construction General Order) or any other permit when such permits are applicable.

6.3.6.1.2. The State Water Board's Water Quality Order 2014-0057-DWQ, General Order for Storm Water Discharges Associated with Industrial Activities (NPDES General Order No. CAS000001) (Industrial General Order) does not regulate storm water discharges from concentrated aquatic animal production (CAAP) facilities/fish hatcheries. Nevertheless, the Lahontan Water Board finds that industrial wastes in storm water runoff from CAAP facilities/fish hatcheries may impact water quality.

6.3.6.1.3. Unless authorized by a separate NPDES Permit or WDR, storage and use of materials not designated for outdoor use must be protected from exposure to storm water.

6.3.6.1.4. Liquids and solutes that may spill, leak, or leach from materials and or equipment used in the Facility must be protected from exposure to storm water.

6.3.7. **Compliance Schedules – Not Applicable**

7. COMPLIANCE DETERMINATION

Compliance with the prohibitions and effluent limitations contained in section 4 of this Order will be determined as specified below:

7.1. Multiple Sample Data

When determining compliance with an average monthly effluent limitation (AMEL) or MDEL and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

7.1.1. 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.

7.1.2. 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 values around the middle 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.

7.2. Average Monthly Effluent Limitation (AMEL)

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance 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 Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month. Additional samples, above specified minimum, may be collected to demonstrate compliance.

7.3. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that one day only within the reporting period. For any one day during which no sample is taken, no compliance determination can be made for that calendar day.

7.4. 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 Discharger will be considered out of compliance for that parameter for that single sample, except for pH. For pH, if the source groundwater pH equals or exceeds the instantaneous maximum effluent limitation, then the effluent pH of the corresponding discharge point may not exceed the groundwater pH by more than 0.5 standard units for that sampling event only. For example, if the pH of INF-001 is 8.6 standard units, then the pH of EFF-001 may not exceed 9.1 standard units for that particular sampling event.

Noncompliance for each sample will be considered separately (e.g., the results of two grab samples taken different times within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of noncompliance with the instantaneous maximum effluent limitation). Duplicate samples taken at the same time and location for QA/QC purposes will not be subject to duplicate fines. QA/QC includes splitting a sample and/or collection of duplicate samples for analysis by a different laboratory. Reanalysis of samples after re-calibration and maintenance of field test instruments will not be subject to duplicate fines. The Discharger will calculate and report whether the influent supply water concentration equals or exceeds the instantaneous maximum effluent limitation.

ATTACHMENT A – DEFINITIONS

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.

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

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.

Best Management Practices (BMPs)
Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of surface waters. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, and solids or waste disposal.

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.

Cold Water Species
Cold water aquatic animals include, but are not limited to, the Salmonidae family of fish, e.g., trout and salmon.

Concentrated Aquatic Animal Production (CAAP)
Facility Point Sources subject to the National Pollutant Discharge Elimination System (NPDES) Permit program including those upland facilities that discharge for at least 30 days per year and contain, grow, or hold cold water fish species or other cold water aquatic animals except facilities which produce less than 9,000 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year and facilities which feed less than 2,285 kilograms (approximately 5,000 pounds) of food during the calendar month of maximum feeding.

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 Method Detection Limit (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).

Enclosed Bays
Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

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

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Extra Label Drug Use
A drug approved under the Federal Food, Drug, and Cosmetic Act that is not used in accordance with the approved label directions (see 21 C.F.R. part 530).

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).

Investigational New Animal Drug (INAD)
A drug for which there is a valid exemption in effect under section 512(j) of the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. 360(j), to conduct experiments.

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. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order)

If the number of measurements (n) is odd, then:

$$\text{median} = \frac{X_{(n+1)}}{2}$$

If n is even, then:

$$\text{median} = \frac{X_{\frac{n}{2}} + X_{\frac{n}{2}+1}}{2}$$

(i.e., the midpoint between the (n/2 and ((n/2)+1))).

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 Code of Federal Regulations (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.

Mixing Zone
Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

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

Off-line Settling Basins
A constructed retention basin that receives wastewater from cleaning of aquaculture facility rearing/holding units, or quiescent zones, or both, for the retention and treatment of wastewater through settling of solids.

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 Lahontan 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 Resources Control Board (State Water Board) or Lahontan Water Board.

Raceway
Raceways are typically long, rectangular chambers at or below grade, constructed of earth, concrete, plastic, or metal to which water is supplied by nearby rivers or springs.

Reporting Level (RL)
The RL is the ML (and its associated analytical method) chosen by the Discharger 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 Lahontan 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.

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

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

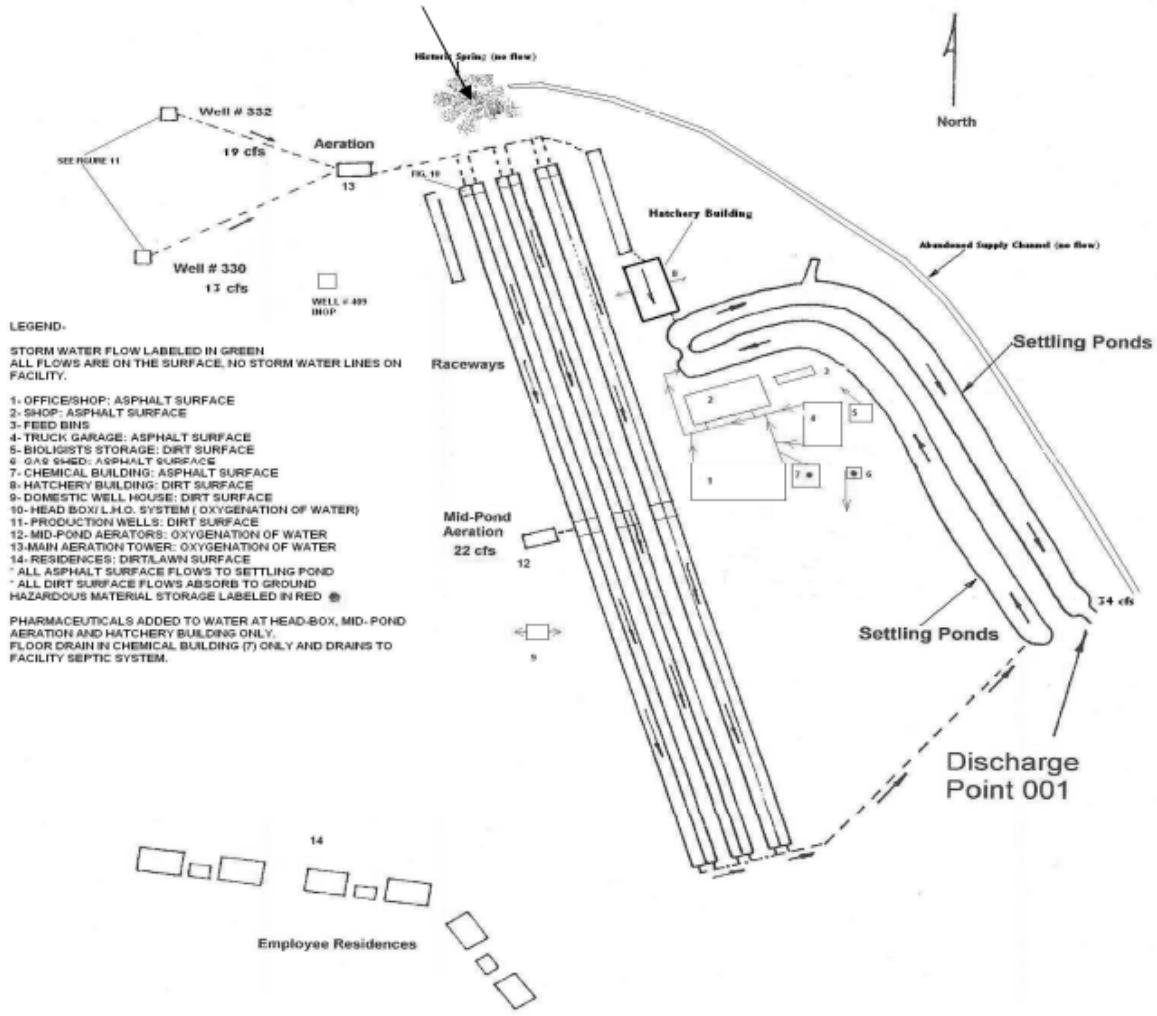
where: x is the observed value; μ is the arithmetic mean of the observed values; and n is the number of samples.

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.)

Treatment Period
For flush treatments, the treatment period is the period beginning with the initial application of an aquaculture drug or chemical to a raceway or incubation building and ending when the aquaculture drug or chemical concentration is no longer present in the effluent following cessation of application in that raceway or incubation building or any subsequently treated raceways or incubation building. Where an aquaculture drug or chemical is applied for a period of more than one day in accordance with the label instructions and/or a veterinarian’s prescription, the treatment period ends when the aquaculture drug or chemical concentration is no longer present in the effluent following cessation of application on the final day of the treatment.

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 Discharger 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 Code of Federal Regulations (C.F.R.) § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385)

1.1.2. The Discharger must comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Permit 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 a Discharger 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 Discharger 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 Discharger 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 Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include 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 a Discharger 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 Discharger shall allow the Lahontan 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 Discharger's 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 Discharger 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 Lahontan Water Board may take enforcement action against a Discharger 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 Discharger submitted notice to the Lahontan 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 Lahontan Water Board may approve an anticipated bypass, after considering its adverse effects, if the Lahontan 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 Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the date of the bypass. The notice shall be sent to the Lahontan Water Board. As of December 21, 2023, all notices must 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 Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the Lahontan Water Board. As of December 21, 2023, all notices must 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)(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 Discharger. 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.** A Discharger who wishes 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 Discharger 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 Discharger 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 Discharger 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 Discharger 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 Discharger 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 Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger 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 Lahontan Water Board. The Lahontan Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger 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 Discharger 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 Lahontan 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 Discharger (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 Discharger shall furnish to the Lahontan Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Lahontan 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 Discharger shall also furnish to the Lahontan 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 Lahontan 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 must be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). [40 C.F.R. § 122.22(a)(3)]

5.2.3. All reports required by this Order and other information requested by the Lahontan 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 Lahontan 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 Lahontan 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 Lahontan 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 Discharger monitors 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

Lahontan 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 Discharger shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Discharger becomes 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.

For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

As of December 21, 2023, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the Lahontan Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 The reports shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. The Lahontan Water Board may also require the Discharger 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)(6)(i))

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 Lahontan 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 Discharger shall give notice to the Lahontan 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 subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels 7.1.1). (40 C.F.R. § 122.41(l)(1)(ii))

5.7. Anticipated Noncompliance

The Discharger shall give advance notice to the Lahontan 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 Discharger 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. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting 5.5 and the applicable required data in appendix A to 40 C.F.R. part 127. The Lahontan Water Board may also require the Discharger 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 Discharger becomes 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 Lahontan Water Board, State Water Board, or U.S. EPA, the Discharger 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 Lahontan 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 Lahontan 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 Lahontan 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 Lahontan 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

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 National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Lahontan Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This Monitoring and Reporting Program (MRP) establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

1. GENERAL MONITORING PROVISIONS

1.1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge. Monitoring locations shall not be changed without notification to and the approval from the Lahontan Water Board's Executive Officer, or designee.

1.2. Effluent samples shall be taken at the effluent monitoring location specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters.

1.3. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure accuracy and reliability for measuring discharge volumes. The flow measurement devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ±10 percent from true discharge rates throughout the range of expected discharge volumes.

1.4. **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 (QA/QC) data with their reports. In the event a certified laboratory is not available to the Discharger, analyses performed by a non-certified laboratory or using field test kits will be accepted provided that a QA/QC Program is instituted by the laboratory and approved by the Executive Officer or Designee. Documentation of QA/QC protocols and adherence to the protocols must be kept in the laboratory or at the site for field test kits and shall be available for inspection by Lahontan Water Board staff. The QA/QC Program must conform to U.S. Environmental Protection Agency (U.S. EPA) guidelines or to procedures approved by the Lahontan Water Board. Supplemental field testing for constituents

that could be analyzed by a certified laboratory may be done in the field with test kits and meters provided:

1.4.1. Samples collected at the minimum-required monitoring frequencies are performed by a certified lab,

1.4.2. A QA/QC Program approved by the Executive Officer or Designee is followed,

1.4.3. Detection limits, accuracy, and precision of the kits and meters meet U.S. EPA and Surface Water Ambient Monitoring Program (SWAMP) standards, and

1.4.4. All results for field testing must be reported to the Lahontan Water Board in quarterly and annual self-monitoring reports (SMRs). Supporting QA/QC data must be determined using an established program and retained onsite and reported if requested.

1.5. All monitoring instruments and devices used by the Discharger 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 at least once per year to ensure continued accuracy of the devices.

1.6. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.

1.7. The results of all monitoring required by this Order shall be reported to the Lahontan Water Board and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

1.8. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

State Water Resources Control Board;
Quality Assurance Program Officer;
Office of Information Management and Analysis;
1001 I Street, Sacramento, CA 95814

2. MONITORING LOCATIONS

The Discharger 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	Shall be located where a representative sample of influent water from supply groundwater wells can be collected prior to entering the raceways. Latitude: 37º, 05', 47" N Longitude: -118º, 15', 33" W
001	EFF-001	Final settling pond outfall, discharge to Fish Springs Creek Latitude: 37º, 05', 42" N Longitude: -118º, 15', 15" W
--	RSW-002	Fish Springs Creek at Highway 395 bridge

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

3.1.1. The Discharger shall monitor the influent to the Facility at Monitoring Location INF-001 as described in Table E-2.

3.1.2. All chemicals and parameters including pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136. Where no methods are specified for a given pollutant, pollutants shall be analyzed in accordance with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or by a method proposed by the Discharger and approved by the Executive Officer. Field tests are authorized for Electrical Conductivity, pH, Dissolved Oxygen (DO), Temperature, and Turbidity because it is impractical to analyze these parameters in an ELAP certified lab. Standard quality control must be exercised regarding equipment calibration etc..

3.1.3. All pH and Electrical Conductivity measurements, taken as field tests, must be conducted concurrently with the respective collection of influent and effluent samples

3.1.4. 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.

3.1.4.1. **Minimum Level (ML) and Analytical Method Selection:** U.S. EPA published regulations for the Sufficiently Sensitive Methods Rule (SSM Rule) which became effective September 18, 2015. 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). Both 40 C.F.R sections 122.21(e)(3) and 122.44(i)(1)(iv) apply to the selection of a sufficiently sensitive analytical method for the purposes of monitoring and reporting under NPDES permits, including review of permit applications. A U.S. EPA-approved analytical method is sufficiently sensitive where:

A. 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

B. 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

C. 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.

Table E-2. Influent Monitoring (INF-001)

Parameter	Units	Sample Type	Minimum Sampling Frequency
pH	standard units	Grab	Once per Quarter
Total Suspended Solids (TSS)	mg/L	Grab	Once per Quarter
Nitrate, Total (as N)	mg/L	Grab	Once per Quarter
Nitrogen, Total (as N)	mg/L	Calculated	Once per Quarter
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	Once per Quarter
Total Dissolved Solids (TDS)	mg/L	Grab	Once per Quarter
Electrical Conductivity @ 25˚C	µmhos/cm	Grab	Once per Quarter
Flow	MGD	Meter	Once per Quarter

4. EFFLUENT MONITORING REQUIREMENTS

4.1. Monitoring Location EFF-001

4.1.1. The Discharger shall monitor effluent from the Facility at Monitoring Location EFF-001 as described in Table E-3.

4.1.2. For all parameters, a sample of the effluent shall be collected at a time when the concentration of the parameter in the effluent is expected to be at a maximum. All pH and Electrical Conductivity measurements, taken as field tests, must be conducted concurrently with the respective collection of influent and effluent samples

4.1.3. All chemicals and parameters including pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136. Where no methods are specified for a given pollutant, pollutants shall be analyzed in accordance with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or by a method proposed by the Discharger and approved by the Executive Officer. Field tests are authorized for Electrical Conductivity, pH, Dissolved Oxygen (DO), Temperature, and Turbidity because it is impractical to analyze these parameters in an ELAP certified lab. Standard quality control must be exercised regarding equipment calibration etc.4.1.4. When a chemical is added to the waters of the Facility, a sample of the effluent must be collected after the application of the chemical. After the initial sample, if subsequent treatments within a given quarter use the same amount of chemical and flow rate at the time of application, and the applied concentration is calculated to be the same as the initial sample the Discharger must either submit a calculated final effluent concentration each reporting period or monitoring results from a new collected sample.

4.1.5. 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.

4.1.5.1. **Minimum Level (ML) and Analytical Method Selection:** U.S. EPA published regulations for the Sufficiently Sensitive Methods Rule (SSM Rule) which became effective September 18, 2015. 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). Both 40 C.F.R sections 122.21(e)(3) and 122.44(i)(1)(iv) apply to the selection of a sufficiently sensitive analytical method for the purposes of monitoring and reporting under NPDES permits, including review of permit applications. A U.S. EPA-approved analytical method is sufficiently sensitive where:

A. 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

B. 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

C. 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.

Table E-3. Effluent Monitoring (EFF-001)

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Calculated	Once per Quarter
Settleable Solids	ml/L	Grab	Once per Quarter [Reference Note 4 following Table E-3]
pH	standard units	Grab	Once per Quarter [Reference Note 3 following Table E-3]
Total Suspended Solids (TSS)	mg/L	Grab	Once per Quarter [Reference Note 4 following Table E-3]
Nitrate, Total (as N)	mg/L	Grab	Once per Quarter
Nitrogen, Total (as N)	mg/L	Calculated	Once per Quarter
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	Once per Quarter
Total Dissolved Solids (TDS)	mg/L	Grab	Once per Quarter
Electrical Conductivity @ 25˚C	µmhos/cm	Grab	Once per Quarter [Reference Note 1 following Table E-3]
CTR Priority Pollutants [Reference Note 5 following Table E-3]	µg/L	Grab	Once in year 2025
Chloramine-T	mg/L	Grab	Once per Event
Formaldehyde	mg/L	Grab	Once per Event
Hardness, Total (as $CaCO_3$)	mg/L	Grab	Once per Event [Reference Note 2 following Table E-3]
Hydrogen Peroxide	mg/L	Grab	Once per Event
Manganese, Total Recoverable	µg/L	Grab	Once per Event [Reference Note 2 following Table E-3]
Potassium Permanganate	mg/L	Grab	Once per Event

Parameter	Units	Sample Type	Minimum Sampling Frequency
			[Reference Note 2 following Table E-3]
PVP Iodine	mg/L	Grab	Once per Event

Table E-3 Notes:

1. In addition to quarterly monitoring, monitoring for electrical conductivity shall be conducted during application of acetic acid, carbon dioxide, sodium bicarbonate, and/or sodium chloride, when the electrical conductivity is expected to be at a maximum.
2. Monitoring for hardness and total recoverable manganese shall occur when potassium permanganate is used and shall be conducted concurrent with monitoring for potassium permanganate.
3. In addition to quarterly monitoring, monitoring for pH shall be conducted during application of acetic acid when the pH of the effluent is expected to be at a minimum, and during the application of carbon dioxide and/or sodium chloride, when the pH expected to be at a maximum.
4. In addition to quarterly monitoring, monitoring for settleable solids and TSS must be conducted during cleaning operations or other operational modes that increase the discharge of solids.
5. Those pollutants identified by the California Toxics Rule at 40 C.F.R. section 131.38 and listed in Table J-1.

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-002

8.1.1. The Discharger shall monitor Fish Springs Creek at Monitoring Location RSW-002, located at the Fish Springs Creek at Highway 395 bridge, as described in table E-4.

8.1.2. All chemicals and parameters including pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136. Where no methods are specified for a given pollutant, pollutants shall be analyzed in accordance with the current edition of Standard Methods for Examination of Water and Wastewater

(American Public Health Administration) or by a method proposed by the Discharger and approved by the Executive Officer. Field tests are authorized for Electrical Conductivity, pH, Dissolved Oxygen (DO), Temperature, and Turbidity because it is impractical to analyze these parameters in an ELAP certified lab. Standard quality control must be exercised regarding equipment calibration

8.1.3. All pH, Electrical Conductivity, Dissolved Oxygen (DO), temperature, and Turbidity measurements, taken as field tests, must be conducted concurrently with the respective collection of influent and effluent samples.

8.1.4. 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.

8.1.4.1. **Minimum Level (ML) and Analytical Method Selection:** U.S. EPA published regulations for the Sufficiently Sensitive Methods Rule (SSM Rule) which became effective September 18, 2015. 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). Both 40 C.F.R sections 122.21(e)(3) and 122.44(i)(1)(iv) apply to the selection of a sufficiently sensitive analytical method for the purposes of monitoring and reporting under NPDES permits, including review of permit applications. A U.S. EPA-approved analytical method is sufficiently sensitive where:

A. 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

B. 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

C. 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.

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Table E-4. Receiving Water Monitoring (RSW-002)

Parameter	Units	Sample Type	Minimum Sampling Frequency
Ammonia, Unionized	mg/L	Calculated	Once per Quarter
Ammonia, Total	mg/L	Grab	Once per Quarter
Dissolved Oxygen	mg/L	Grab	Once per Quarter
Electrical Conductivity @ 25°C	µmhos/cm	Grab	Once per Quarter
Nitrate, Total (as N)	mg/L	Grab	Once per Quarter
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	Once per Quarter
Nitrogen, Total (as N)	mg/L	Calculated	Once per Quarter
pH	Standard units	Grab	Once per Quarter
Settleable Solids	ml/L	Grab	Once per Quarter
Temperature	°C	Grab	Once per Quarter
Turbidity	NTU	Grab	Once per Quarter
Total Dissolved Solids (TDS)	mg/L	Grab	Once per Quarter
Total Suspended Solids (TSS)	mg/L	Grab	Once per Quarter
Boron	mg/L	Grab	Once per Permit Term
Chloride	mg/L	Grab	Once per Permit Term
Fluoride	mg/L	Grab	Once per Permit Term
Sulfate, Total (as SO_4)	mg/L	Grab	Once per Permit Term
Phosphorus, Total (as P)	mg/L	Grab	Once per Permit Term

8.2. Visual Monitoring at Monitoring Location RSW-002

8.2.1. **Visual Observations.** The Discharger must perform quarterly, visual, non-storm water inspections of the Facility, to ensure that BMPs are being implemented and are effective.

8.2.2. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions at Monitoring Location RSW-002. In the event that no water is present or is frozen, notes on receiving water conditions must be maintained in the log and transmitted in the monitoring reports provided to the Lahontan Water

Board. Attention shall be given to observing and describing the presence or absence of:

8.2.2.1. Floating or suspended matter;

8.2.2.2. Discoloration;

8.2.2.3. Aquatic life (including plants, fish, shellfish, birds);

8.2.2.4. Visible film, sheen, or coating;

8.2.2.5. Fungi, slime, or objectionable growths; and

8.2.2.6. Potential nuisance conditions (unusual or objectionable conditions).

9. OTHER MONITORING REQUIREMENTS

9.1. Quarterly Drug and Chemical Use Report

The information listed below shall be submitted for all aquaculture drugs or chemicals used at the Facility, including those administered by injection or in medicated feed. This information shall be reported at quarterly intervals and submitted with the quarterly SMRs using the drug and chemical usage report table found in Attachment H of this Order.

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, flush, administered in feed, injection), 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), treatment unit, location (i.e., incubation building, pond, or raceway) where application was made, and the flow measured in million gallons per day (MGD) in the treatment units.

9.1.5. The flow rate through the Facility measured in MGD at Monitoring Location EFF-001.

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

9.1.7. For drugs and chemicals applied directly to water (i.e., immersion bath, “drip” treatment, flush treatment), the estimated concentration in the effluent at the point of discharge. The specific authorized drugs and chemicals that are applied directly to water include the following: acetic acid, carbon dioxide, Chloramine-T,

enteric redmouth vaccine, formalin, hydrogen peroxide, MS-222, oxytetracycline hydrochloride, penicillin G potassium, potassium permanganate, PVP Iodine, sodium bicarbonate, sodium chloride, and Vibrio vaccine. the discharger must report the estimated effluent concentration in the quarterly report after using the drug or chemical, even if an effluent sample has been collected. Reporting of the estimated effluent concentration is not required for drugs and chemicals administered by injection or in medicated feed.

The Discharger shall use the following formula to calculate concentration (C) at the point of discharge:

C = concentration of chemical or drug at the point of discharge,

C = (treatment concentration, mg/L) x (flow rate in treatment area, MGD) / (flow rate at point of discharge, MGD).

Example: Potassium permanganate ($KMnO_4$) concentration at point of discharge for a 2.0 mg/L treatment concentration:

C = 2.0 mg/L ($KMnO_4$) x 0.45 MGD (flow through treatment area) / 5.0 MGD (flow at point of discharge)

C = 2.0 mg/L x 0.09 = 0.18 mg/L potassium permanganate ($KMnO_4$) concentration at the point of discharge.

9.1.8. Of the list of approved drugs and chemicals provided in Attachment G to this Order, submit an affirmative list of those specific drugs and chemicals that were not used during the reporting quarter using the Drug and Chemical Non-Use Table provided in Attachment H to this Order.

9.2. Feeding and Production

The Discharger shall develop an annual report describing the feeding and production for the Facility for the previous calendar year. The annual report shall be submitted by **February 1** of each year and include the following information:

9.2.1. Monthly food usage in pounds for each calendar month, and

9.2.2. Annual production of aquatic animals in pounds per year.

9.3. Priority Pollutant Metal Monitoring

Potential discharge of priority pollutants is based on the probability of the pollutants being present in the surface waters supplied or groundwater pumped from source wells, and from data collected from other concentrated aquatic animal production (CAAP) facilities. Data compiled from CAAP facilities, local drinking water wells, and

the State Water Board's Groundwater Ambient Monitoring Association (GAMA) database were used to determine the potential for metals and other priority pollutants to occur. Accordingly, the Lahontan Water Board requires sampling and analysis of the influent (Monitoring Location INF-001) and effluent (Monitoring Location EFF-001) for the priority pollutant metals listed in Attachment J at least once per permit cycle. The samples shall be analyzed for priority pollutant metals in the year **2027** and reported to the Lahontan Water Board by **February 1, 2028,** in the SMR and included in the Report of Waste Discharge (ROWD). (Refer to Attachment J for the specific monitoring requirements.)

By **September 1, 2024**, the Discharger shall submit a Priority Pollutant Metal Monitoring Plan electronically via California Integrated Water Quality System (CIWQS) submittal outlining reporting levels (RLs), method detection limits (MDLs), and analytical methods for the priority pollutant metals identified in Attachment J. Three months prior to collecting the required Priority Pollutant Metal samples, the Discharger shall notify the Lahontan Water Board of the ELAP-certified laboratory to be used that can conduct the analysis within the holding times specified in the approved methods in 40 C.F.R. part 136. The Discharger must comply with the monitoring and reporting requirements for the priority pollutant metals as outlined in section 2.3 and 2.4 of the SIP. The maximum required reporting levels for the priority pollutant metals shall be based on the Minimum Levels (MLs) contained in Appendix 4 of the SIP, determined in accordance with section 2.4.2 and section 2.4.3 of the SIP. In accordance with section 2.4.2 of the SIP, when there is more than one ML value for a given substance, the Lahontan Water Board must include as RLs, in the Order, all ML values, and their associated analytical methods, listed in Appendix 4 that are below the calculated effluent limitation. The Discharger may select any one of those cited analytical methods for compliance determination. If no ML value is below the effluent limitation, then the Lahontan Water Board must select as the RL, the lowest ML value, and its associated analytical method, listed in Appendix 4 for inclusion in the Order. Table J-1 provides required maximum reporting levels in accordance with the SIP.

9.4. Annual Best Management Practices (BMP) Plan and Storm Water Pollution Prevention Plan (SWPPP) Reporting

The Discharger must annually (by **February 1** of each year) certify that the BMP Plan for Aquaculture Operations and the Facility SWPPP meet the requirements of this Order and are being implemented as written, or discuss the unmet requirements and indicate, if possible, when a return to compliance will occur. The annual report shall include documentation of staff training conducted during the previous calendar year in accordance with Special Provision 6.3.3.1.4 of this Order and the Discharger's BMP Plan. If changes to the BMP Plan or SWPPP are necessary to accurately reflect operations, maintenance, and the management and control of pollutants at the Facility, a revised plan shall be submitted to the Lahontan Water Board along with the above information. The annual report must include a specific section providing this analysis and a summary of changes, if any.

9.5. Visual Observations

Quarterly visual inspections of the Facility shall be made to identify any non-storm water discharge and its sources to ensure that BMPs are being implemented and are effective. Any non-storm water discharges observed, and their sources, must be reported and described in the next quarterly report following the discharge and summarized in the annual report.

10. REPORTING REQUIREMENTS

10.1. General Monitoring and Reporting Requirements

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

10.1.2. The Discharger shall submit a summary annual monitoring report. The report shall contain all data collected for the year in a table, and both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

10.1.3. The Discharger shall calculate and report the result of compliance with average monthly and maximum daily effluent limitations, as necessary. Additional samples may be collected to demonstrate compliance.

10.1.4. The Discharger shall report to the Lahontan Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."

10.1.5. For constituents having an Effluent Limitation with a net allowed effluent increase over influent, the Discharger shall: (1) collect influent (spring) and effluent samples on the same day, (2) calculate and report the limit for each constituent where an increase over influent is allowed using the following formula, and (3) report compliance with respect to the limit as:

Effluent Limit = Influent Concentration + Allowed Net Over Influent Concentration

10.1.6. For each parameter with an effluent limitation listed in this Order, the Discharger shall determine and report compliance with respect to the effluent limitation. The Discharger shall determine and report compliance with respect to each receiving water limitation specified in the Order. For parameters with no monitoring required, the Discharger shall report "Not Determined."

10.1.7. As part of the ROWD submitted in accordance with the cover page of this Order, the Discharger shall provide all reported data in an Excel® tabular format that can be used to evaluate compliance with interim and/or final effluent limitations and conduct a reasonable potential analysis. Electronic submittal of data is required to be uploaded into the State Water Board's CIWQS Program. If the

State Water Board's Permit Entry Tool does not allow data to be submitted, it shall be provided separately.

10.2. Self-Monitoring Reports (SMRs)

10.2.1. The Discharger shall electronically submit SMRs using the State Water Board's 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.

10.2.2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections 3 through 9. The Discharger shall submit quarterly 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 Discharger monitors 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. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-5. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Order Effective Date	All	Submit with Quarterly SMR
1/Event	Order Effective Date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with Quarterly SMR
1/Quarter	Order Effective Date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1 of following year
1/Permit Term	Order Effective Date	In the year 2027	May 1, 2028

10.2.4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable RL and the current MDL, as determined by the procedure in 40 C.F.R. part 136. The Discharger shall report the results of analytical

determinations for the presence of chemical constituents in a sample using the following reporting protocols:

10.2.4.1. 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).

10.2.4.2. 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. 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.

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

10.2.4.4. Dischargers 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 is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

10.2.4.5. Sample collection date and time, sample analysis date and time, the name of individual(s) who collected the sample, the name of individual(s) who analyzed the sample, sample collection method(s) as listed in 40 C.F.R. part 136, sample analysis method(s) as listed in 40 C.F.R. part 136, sample preservation method(s) used between sample collection and analysis, and applicable QA/QC data will be included with reported analytical results.

10.2.5. **Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and in Attachment A. For purposes of reporting and administrative enforcement by the Lahontan Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

10.2.6. **Multiple Sample Data.** When determining compliance with a maximum daily effluent limitation for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

10.2.6.1. 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.

10.2.6.2. 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 values around the middle 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.

10.2.7. The Discharger shall submit SMRs in accordance with the following requirements:

10.2.7.1. The Discharger 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 interim and/or final effluent limitations. The Discharger is 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 Discharger shall electronically submit the data in a tabular format as an attachment.

10.2.7.2. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

10.3. Discharge Monitoring Reports (DMRs)

10.3.1. The Discharger 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. Information about electronic DMR submittal is available at the DMR website at: (http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring).

10.4. Other Reports

10.4.1. **Hazardous Substance Spill Report:**

In addition to any other reporting requirements, pursuant to CWC section 13271, the Discharger shall immediately notify the Governor's Office of Emergency Services (OES) of any hazardous substance discharged into or onto state waters. Pursuant to CWC section 13267, the Discharger must also notify the Lahontan Water Board's Victorville office of any spills reported to OES within 24 hours by telephone. CWC section 13271(a)(3) states that OES will immediately notify the

Lahontan Water Board, local health officer, and administrator of environmental health. Immediately means: (1) as soon as there is knowledge of the discharge, (2) as soon as notification is possible, and (3) when notification can be provided without substantially impeding cleanup or other emergency measures. The reportable quantities for hazardous substances are those developed by the U.S. EPA contained in 40 C.F.R. part 302.

10.5. Summary of Reports

The following table summarizes all reports the Discharger is required to submit.

Table E-6. Summary of Reports

Report Name	Location of Requirement	Monitoring Period	Due Date
Quarterly Influent, Effluent, and Receiving Water Monitoring Report; Quarterly Visual Facility Inspection Findings Report		January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1 of following year
Once per Permit Term Receiving Water Monitoring Report		In the year 2027	May 1, 2028
Certification of Updated BMP Plan	Order section 6.3.3.1	N/A	180 days after the adoption date
Quarterly Drug and Chemical Use Report	MRP section 9.1	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	Submit with quarterly SMR
Annual Feeding and Production Report	MRP section 9.2	January 1 through December 31	February 1 of each year
Priority Pollutant Metal Monitoring Plan	MRP section 9.3	N/A	September 1, 2024
Priority Pollutant Metal Monitoring Report	MRP section 9.3	January 1, 2025 through December 31, 2025	February 1, 2026

Report Name	Location of Requirement	Monitoring Period	Due Date
Annual BMP Plan and SWPP Plan Review and Certification	MRP section 9.4	January 1 through December 31	February 1 of each year
Visual Observations	MRP section 9.5	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	Submit with quarterly SMR
Hazardous Substance Spill Report	MRP section 10.4.1	N/A	Immediately
Report of Waste Discharge (ROWD)	MRP section 10.4.2	N/A	180 days before expiration date
Discharge Monitoring Report Quality Assurance Study	Fact Sheet section 7.5.6	N/A	Upon request of State Water Board

ATTACHMENT F – FACT SHEET

TABLE OF TABLES

ATTACHMENT F – FACT SHEET

As described in section 2.2 of this Order, the Lahontan Water Board incorporates this Fact Sheet as findings of the Lahontan 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 this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

1. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	6B140800002
Discharger	California Department of Fish and Wildlife
Name of Facility	Fish Springs Fish Hatchery
Facility Address	215 Fish Springs Road Big Pine, CA 93513 Inyo County
Facility Contact, Title and Phone	Daniel Tonseth, Hatchery Manager, (760) 938-2242
Authorized Person to Sign and Submit Reports	Daniel Tonseth, Hatchery Manager, (760) 938-2242
Mailing Address	P.O. Box 910, Big Pine, CA 93513
Billing Address	SAME
Type of Facility	Concentrated Aquatic Animal Production/Fish Hatchery (SIC 0921)
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	C

Pretreatment Program	Not Applicable
Recycling Requirements	Not Applicable
Facility Permitted Flow	26 million gallons per day (MGD)
Facility Design Flow	Not Applicable
Watershed	Upper Owens Hydrologic Area
Receiving Water	Fish Springs Creek
Receiving Water Type	Inland surface water dominated by hatchery effluent and flow from man-made channels fed by wells operated by the City of Los Angeles Department of Water and Power

1.1. California Department of Fish and Wildlife (hereinafter Discharger) is the owner and operator of Fish Springs Fish Hatchery (hereinafter Facility), a cold water concentrated aquatic animal production (CAAP) facility. For the purposes of this Order, references to the "Discharger" or "Permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein. The City of Los Angeles Department of Water and Power (LADWP) owns the property at Fish Springs Road, Big Pine, on which the Facility leases the land. LADWP owns and operates the pumps that supply the water for the Facility. As the owner and operator of the Facility but not the land, the California Department of Fish and Wildlife is primarily responsible for the monitoring program and day-to-day operations and LADWP, as the landowner and supplier of the water, is only considered a Discharger for the limited purpose of monitoring the flow (influent) to the Facility.

1.2. The Facility discharges wastewater to the Fish Springs Creek, a water of the United States, and a tributary of the Owens River within the Upper Owens Hydrologic Area of the Owens Hydrologic Unit (CA Department of Water Resources # 603.20). Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

1.3. When applicable, state law requires dischargers to file a petition with the State Water Board, Division of Water Rights and receive approval for any change in the point of discharge, place of use, or purpose of use of treated wastewater that decreases the flow in any portion of a watercourse. The State Water Board retains separate jurisdictional authority to enforce any applicable requirements under Water Code section 1211. This is not a National Pollutant Discharge Elimination System (NPDES) Permit requirement.

1.4. The Facility was previously regulated by Order R6V-2015-0034 and NPDES Permit No. CA0102806 adopted on June 10, 2015 and expired on July 31, 2020. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an

application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on July 3, 2019. The application was deemed complete on October 13, 2021. A site visit was conducted on May 24, 2023, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

1.5. 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 Discharger complies with all federal NPDES requirements for continuation of expired permits.

2. FACILITY DESCRIPTION

The California Department of Fish and Wildlife (Discharger) owns and operates a cold water CAAP facility on 98 acres leased from LADWP. The Facility annually produces around 400,000 pounds (lbs) of Rainbow trout, 20,000 lbs of Brown trout, 15,000 lbs of Eagle Lake trout, 1,000 lbs of Lahontan Cutthroat trout, and 1,000 lbs of Brook trout each year. The Facility includes two groundwater wells, two aeration towers, a hatchery building, six production raceways, two flow-through sedimentation treatment ponds, and miscellaneous operation and maintenance structures.

The groundwater supply wells are operated by LADWP and are released into the contemporary headwaters of Fish Springs Creek. Fish Springs Creek is located within the Upper Owens Hydrologic Area (Hydrologic Unit No. 603.20), and the groundwaters of the Owens Valley Ground Water Basin (Groundwater Basin No. 6-12).

The elevation of groundwater that formerly supplied the historical headwaters to Fish Springs Creek dropped in response to pumping by LADWP. As a result, the former springs converted to depressional wetlands and are no longer functioning as the headwaters of Fish Springs Creek. LADWP has a lease agreement (BL-0413) with CDFW to supply water, as compensatory mitigation for the historical loss of spring habitat, from wells 350, 330, and 332, through the fish hatchery, and to Discharge Point 001. Well 350 is not currently used, due to naturally high concentrations of hydrogen sulfide. Without operation of the fish hatchery, wells 350, 330, and 332 would still serve as the contemporary headwaters of Fish Springs Creek, except in greater than average precipitation years.

The water pumped by the City of Los Angeles groundwater production wells would continue discharging to Fish Springs Creek whether the hatchery utilized it or not. The water pumped by the City of Los Angeles groundwater production wells is regulated under terms of a stipulated legal agreement between the City of Los Angeles and Inyo County. Further agreements exist between the City of Los Angeles and California Department of Fish and Wildlife to satisfy compensatory mitigation measures of the stipulated legal agreement.

Additional flows from one unnamed ditch formed by a LADWP groundwater well and the Big Pine Canal (a section of the Los Angeles Aqueduct) make up the rest of the headwaters of Fish Springs Creek. Water from LADWP well 219 flows intermittently through an unnamed ditch to the confluence with Fish Springs Creek about 50 feet down stream of Discharge Point 001. Water from LADWP well Y flows into the Big Pine Canal just upstream of the confluence with Fish Springs Creek about 900 feet downstream of Discharge Point 001. The flows (which vary seasonally and depending on the operation status of the LADWP groundwater wells) are estimated to range from 0 to 3 MGD (LADWP Well 219) and 5 to 160 MGD (Big Pine Canal plus LADWP Well Y). The direction of flow is south to north for the unnamed ditch from well 219 and north to south for the Big Pine Canal.

2.1. Description of Wastewater and Biosolids Treatment and Controls

The Facility operates as a flow-through system relying on groundwater. The water supply for the raceway ponds and hatchery building is obtained from two onsite LADWP groundwater supply wells 330 and 332 with both being utilized concurrently. Well 330 produces an average water flow of 8.4 MGD (13 cubic feet per second [cfs]) and well 332 produces an average water flow of 12.3 MGD (19 cfs). Both wells produce water at a constant temperature of 60 degrees Fahrenheit. Separate diesel, auto-start standby engines provide back up to each well in the event of electrical power outages.

Facility water is treated before and during use to increase dissolved oxygen and after use to remove settleable solids. Dissolved oxygen is supplemented with two trickle-down aeration towers filled with “coke rings”. Water from the wells is aerated in the gravity-fed main aeration tower. Water from the midpoints of the raceway ponds is pumped at a maximum rate of 22 cfs to a second trickle aeration tower.

Well water is aerated through six packed aeration columns and is then gravity fed into the head flumes of the production raceways and hatchery building. Each 1,000-foot-long raceway consists of ten 100-foot long by 10-foot wide by 36-inch-deep raceway ponds in series, for a total of 60 raceway ponds at the Facility. The hatchery building consists of twenty indoor deep tanks which are utilized for egg incubation, hatching and grow out until fish are large enough to be transferred outside.

The Facility conducts raceway cleaning once per week per raceway by hand and with a mechanical crowder (a gate-like structure also used to herd fish from one side of a raceway to another). Each cleaning cycle requires approximately 4 hours.

Settleable solids are removed from the raceway and hatchery effluent in a single U-Shaped settling basin. The sedimentation ponds are filled with biofiltering vegetation and is estimated to be approximately 2,000 feet long,
10 feet wide, and 6 feet deep each. The flow into the settling ponds is assumed to be identical to the flow pumped into the raceway ponds. The minimum retention

time into the ponds is 0.03 days when the maximum allowed flow of 26 MGD is being pumped into the raceway ponds from the combined flows from the wells. The hydraulic retention time is calculated using the volume of the settling basins divide by the flow. The volume of the settling ponds is calculated in Fact Sheet section 4.3.3.4.2.5 and is estimated to be 897,662 gallons.

Current discharges from the Facility include unused food, fish excrement, and fish health additives to food and water. Up to 90,000 lbs of food are fed to the fish in June, which is the month of maximum feeding. Aquaculture drugs and chemicals that may be used at the Facility to treat various fish disease and parasitic outbreaks include acetic acid, amoxicillin trihydrate, carbon dioxide, Chloramine-T, Chorulon®, Epsom salt, erythromycin, florfenicol, formalin, hydrogen peroxide, Ivermectin, MS-222, Ovaplant®, oxytetracycline dihydrate, oxytetracycline hydrochloride, penicillin G potassium, potassium permanganate, PVP Iodine, SLICE, sodium bicarbonate, sodium chloride, Romet-30, vibrio vaccine (fish are removed via a basket, dipped in vaccine, and then returned to the raceway), and enteric redmouth vaccine (fish are removed via a basket, dipped in vaccine, and then returned to the raceway). These aquaculture drugs and chemicals, prescribed by the Discharger's Fish Health Laboratory, are to be used on an "as needed" basis to treat various fish disease and parasitic outbreaks. See Attachment G for additional information regarding aquaculture drugs and chemical use.

Wastewater from the raceways and hatchery building discharges from the sedimentation ponds, through a concrete weir at Discharge Point 001, into Fish Springs Creek, a tributary of the Owens River within the Owens Hydrologic Unit.

2.2. Discharge Points and Receiving Waters

The Discharge from the facility occurs through Discharge Point 001 (Latitude: 37° 5' 42"; Longitude:118° 15' 15") where effluent from the settling pond discharges directly into the Fish Springs Creek, which feeds the Owens River above Tinemaha Reservoir. Fish Springs Creek is located within the Upper Owens Hydrologic Area (Hydrologic Unit No. 603.20).

Surface and groundwater near the Facility are interconnected, therefore the influent water for the Facility (pumped groundwater) and receiving water (Fish Springs Creek) are considered the same water body for purposes of calculating intake water credits in this permit. Prior to groundwater pumping in this area, groundwater naturally contributed to Fish Springs Creek surface water flows from Fish Springs (above the hatchery). The former Fish Springs converted to depressional wetlands and are no longer functioning as the headwaters of Fish Springs Creek. Hatchery effluent is now the headwaters to Fish Springs Creek.

Water Quality Objectives for surface water and groundwaters in the Upper Owens Hydrologic Unit, contained in the Basin Plan (pages 3-3 and 3-6) have been incorporated into the Order as Receiving Water Limitations in sections 5.1.1 and

5.1.2. The water quality objectives applicable to the Owens Valley Ground Water Basin have been incorporated into the Order as Receiving Water Limitations in section 5.2.1 because the settling ponds are unlined and thus the hatchery discharges to both surface and groundwater. The water quality objectives applicable to the Owens River, downstream from the hatchery, set forth in Table 3-17 of the Basin Plan, have been incorporated into the Order as Receiving Water Limitations in section 5.1.2.20.

The water quality from the supply wells may not be able to meet the site-specific objectives established for the Owens River. The pumped groundwater contains natural constituents (primarily TDS and nitrate) in concentrations that exceed the numerical receiving water limitations set below the hatchery for the Owens River. Order R6V-2015-0034 established a receiving water monitoring station (RSW-002) at the Highway 395 Bridge in order to collect data to help determine the appropriateness of a new, site-specific objectives for Fish Springs Creek. Monitoring for Boron, Chloride, Fluoride, and Sulfate is retained in this permit cycle, as monitoring once per permit term, to confirm no reasonable potential is present to exceed water quality objectives for those constituents.

2.3. Summary of Historical Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in Order R6V-2015-0034 for discharges of effluent from the sedimentation pond through Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of Order R6V-2015-0034 are presented in Table F-2 below.

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
pH	Standard units	--	6.5 (Instantaneous Min)	8.5 (Instantaneous Max)	--	6.67 (Instantaneous Min)	8.02 (Instantaneous Max)
Total Suspended Solids (TSS)	mg/L	6.0	--	15 (Instantaneous Max)	--	--	7.7 (Instantaneous Max)
Flow	MGD	26	--	--	NA	--	NA
Formaldehyde	mg/L	0.65	1.3	--	NA	--	NA
Hydrogen Peroxide	mg/L	--	1.3	--	--	ND	--
Nitrate, Total (as N)	mg/L	--	--	1.0 (Instantaneous Max)	--	--	0.727 (Instantaneous Max)
Nitrogen, Total (as N)	mg/L	--	--	1.8 (Instantaneous Max)	--	--	1.3 (Instantaneous Max)
Potassium Permanganate	mg/L	0.12	0.25	--	0.0791	0.0791	--

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Settleable Solids	mg/L	0.1	--	--	ND	--	--
Total Dissolved Solids (TDS)	mg/L	--	--	265 (Instantaneous Max)	--	--	239 (Instantaneous Max)

Table F-2 Notes:

- NA is Not Available
- ND is Not Detected
- Data in the table is representative of the previous permit term from August 2015 to April 2021.

2.4 Compliance Summary

The Discharger was not subject to any enforcement actions during the term of Order R6V-2015-0034.

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. Environmental Protection Agency (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 Discharger to discharge into waters of the United States at the discharge location described in Table 1 subject to the WDRs in this Order.

3.2. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from CEQA, (commencing with section 21100) of division 13 of the Public Resources Code. This action also involves the re-issuance of WDRs for an existing facility with a discharge to groundwater of the Owens Valley Basin and, as such, is also exempt from CEQA as an existing facility for which no expansion of its existing use is being permitted pursuant to title 14, California Code of Regulations, section 15301.

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

3.3.1. **Water Quality Control Plan.** The Lahontan Water Board adopted a Water Quality Control Plan for the Lahontan Region (hereinafter Basin Plan) on March 31, 1995, with subsequent amendments, 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. The Basin Plan at page 2-3 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Fish Springs Creek but does identify present and potential uses for minor surface waters and for the Owens River (below Pleasant Valley Reservoir to the Tinemaha Reservoir), to which Fish Springs Creek is tributary. 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 (MUN).

The Basin Plan also identifies beneficial uses of groundwater that are applicable to all groundwater in the Lahontan Region. Beneficial uses of specific groundwater basins in the Lahontan Region are designated in Table 2-2 of the Basin Plan. The Facility is located within the Owens Valley Basin. Unless otherwise designated by the Lahontan Water Board, all groundwaters are considered suitable, or potentially suitable, for MUN.

Thus, the beneficial uses applicable to Fish Springs Fish Hatchery in the Upper Owens Hydrologic Area and groundwater in the Owens Valley Basin are as follows.

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Fish Springs Creek / Owens River (below Pleasant Valley Reservoir to the Tinemaha Reservoir)	Municipal and domestic supply (MUN); Agricultural Supply (AGR); Groundwater Recharge (GWR); Freshwater Replenishment (FRSH); Navigation (NAV); Water Contact Recreation (REC-1); Non-Contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Cold Freshwater Habitat (COLD); Wildlife Habitat (WILD); Preservation of Rare, Threatened or Endangered Species (RARE); and Spawning, Reproduction, and Development of Fish and Wildlife (SPWN).
001	Owens Valley Ground Water Basin	Municipal and Domestic Supply (MUN); Agricultural Supply (AGR); Industrial Service Supply (IND); Freshwater Replenishment (FRSH); Wildlife Habitat (WILD).
001	Minor Surface Waters (HU 603.2)	Municipal and domestic supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), Groundwater Recharge (GWR), Water Contact Recreation (REC-1), Non-Contact Water Recreation (REC-2), Commercial and Sport Fishing (COMM), Warm Freshwater Habitat (WAR), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Water Quality Enhancement (WQE).

The Basin Plan at page 3-47 and in Table 3-17 designates the water quality objectives for Fish Springs (above the hatchery) and Owens River (Tinemaha

Reservoir Outlet), but not specifically Fish Springs Creek. Fish Springs Creek is formed primarily from the comingled discharge of various groundwater wells pumped by the City of Los Angeles Department of Water and Power (LADWP). Fish Springs no longer naturally surfaces. Pumped groundwater is released to Fish Springs Creek. The pumped groundwater contains natural constituents (primarily TDS and nitrate) in concentrations that exceed the numerical receiving water limitations set below the hatchery for the Owens River at Tinemaha Reservoir. The Water Board may consider the appropriateness of the water quality objectives and develop future numerical site-specific objectives for Fish Springs Creek based on the data collected at monitoring sites EFF-001 and RSW-002.

The LADWP could continue discharging to Fish Springs Creek whether the hatchery was rearing fish or not. The water pumped by the LADWP groundwater production wells is regulated under terms of a stipulated legal agreement between LADWP and Inyo County. Further agreements exist between the LADWP and California Department of Fish and Wildlife to satisfy compensatory mitigation measures of the stipulated legal agreement.

3.3.2. **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.

3.3.3. **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 Lahontan 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.

Other State Board Plans and Policies: On May 2, 2017, the State Water Resources Control Board adopted Resolution No. 2017-0027, Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions, which was approved by U.S. EPA on July 14,2017. The State Water

Board adopted Resolution No. 2020-0044 and Resolution No. 2021-0044, State Policy for Water Quality Control: Toxicity Provisions ("Toxicity Provisions"). The Provisions were approved by the California Office of Administrative Law pursuant to Government Code section 11353 on April 25, 2022. The Provisions were approved by the U.S. Environmental Protection Agency, consistent with the requirements of section 303(c) of the Clean Water Act and 40 C.F.R. Part 131, on May 1, 2023. The Toxicity Provisions include statewide numeric water quality objectives for both acute and chronic toxicity and a program of implementation to control toxicity.

3.3.4. **Alaska Rule.** On March 30, 2000, U.S. EPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes (65 Fed. Reg. 24641 [April 27, 2000]). New and revised standards submitted to U.S. EPA after May 30, 2000, must be approved by U.S. EPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to U.S. EPA by May 30, 2000, may be used for CWA purposes, whether or not approved by U.S. EPA.

3.3.5. **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 -6 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Lahontan 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 provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

3.3.6. **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.

3.3.7. **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. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

3.3.8. **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.

3.3.9. **Regulation of Aquaculture Drugs and Chemicals**. 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.

Drugs and chemicals used in aquaculture are 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 CAAP facilities 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 approved for use in aquaculture but are considered to be 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., "extra-label" use), under the direction of licensed veterinarians for the treatment of specific fish diseases. 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.

It is the responsibility of the Discharger to know which aquaculture drugs and chemicals may be used in CAAP facilities in the Lahontan Region under all applicable federal, state, and local regulations and which aquaculture drugs and chemicals may be discharged to waters of the waters of the state in accordance with this Order. A summary of regulatory authorities related to aquaculture drugs and chemicals is outlined below.

3.3.9.1. **FDA Approved New Animal Drugs.** Approved new 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 new animal drugs approved by FDA for use in food-producing aquatic species. These ten FDA-approved new animal drugs include the following:

3.3.9.1.1. Chorionic gonadrotropin (Chorulon®), used for spawning;

3.3.9.1.2. Oxytetracycline hydrochloride (Terramycin®), an antibiotic;

3.3.9.1.3. Oxytetracycline dihydrate (Terramycin® 200 for fish), an antibiotic;

3.3.9.1.4. Sulfadimethoxine-ormetoprim (Romet-30®), an antibiotic;

3.3.9.1.5. Tricaine methanesulfonate (MS-222, Finquel® and Tricaine-S), an anesthetic;

3.3.9.1.6. Formalin (Formalin-F®, Paracide F® and PARASITE-S®), used as a fungus and parasite treatment;

3.3.9.1.7. Sulfamerazine, an antibiotic;

3.3.9.1.8. Chloramine-T (HALAMID® Aqua), a disinfectant;

3.3.9.1.9. Florfenicol (Aquaflor®), an antibiotic; and

3.3.9.1.10. 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 a CAAP 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 and wholesome.

FDA-approved new 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 new 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 a 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.

3.3.9.2. **FDA Investigational New Animal Drug.** Aquaculture drugs in this category can only be used under an investigational new animal drug or “INAD" exemption. INAD exemptions are granted by FDA CVM to permit the purchase, shipment and use of an unapproved new animal drug for investigational purposes. INAD exemptions are granted by FDA 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.

3.3.9.3. **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 include the following:

3.3.9.3.1. Acetic acid, used as a dip at a concentration of 1,000-2,000 mg/L for one to ten minutes as a parasiticide.

3.3.9.3.2. Carbon dioxide gas, used for anesthetic purposes.

3.3.9.3.3. 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.

3.3.9.3.4. 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.

3.3.9.3.5. 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.

3.3.9.3.6. Potassium permanganate is a LRP that 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:

a. The aquaculture drugs are used for the prescribed indications, including species and life stages where specified.
b. The aquaculture drugs are used at the prescribed dosages (as listed above).
c. The aquaculture drugs are used according to good management practices
d. The product is of an appropriate grade for use in food animals.
e. 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 CAAP facilities from complying with all other federal, state and local environmental requirements, including compliance with this Order.

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

3.3.9.3.8. The aquaculture drugs are used at the prescribed dosages (as listed above).

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

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

3.3.9.3.11. 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 CAAP facilities from complying with all other federal, state and local environmental requirements, including compliance with this Order.

3.3.9.4. **Extra-label Use of an Approved Animal Drug.** Extra-label drug use is the actual or intended use of an approved 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 FDA 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.

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

Fish Springs Creek is not an impaired water body on the CWA 303(d) list.

3.5. Other Plans, Polices and Regulations

3.5.1. **Title 27**. Title 27 of the California Code of Regulations (hereafter title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. As discussed below, this Order requires compliance with the requirements of title 27 for discharges of wastewater to the settling ponds and disposal of solids.

3.5.1.1. **Settling Ponds.** Discharges of wastewater to land, including but not limited to evaporation ponds or percolation ponds, may be exempt from the requirements of title 27, California Code of Regulations, based on section 20090 et seq. The Facility includes settling ponds that may be exempt from title 27 pursuant to section 20090(b), the “wastewater exemption”. The wastewater exemption has the following preconditions for exemption from title 27:

Wastewater – Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leach fields if the following conditions are met:

(1) the applicable [regional water quality control board] has issued WDRs, or waived such issuance;

(2) the discharge is in compliance with the applicable water quality control plan; and

(3) the wastewater does not need to be managed…as a hazardous waste…"

The settling ponds meet the preconditions for exemption from title 27 because the Lahontan Water Board has issued a WDR, the discharge is in compliance with the Basin Plan and will remain in compliance with the Basin Plan through compliance with the WDR, and the wastewater discharge is not a hazardous waste.

3.5.1.2. **Solids Disposal.** Special Provision 6.3.4.1 of this Order specifies that collected screenings, sludges, and other solids, including fish carcasses, shall be disposed of in a manner approved by the Executive Officer and consistent with California Code of Regulations, title 27. Acceptable methods of solid waste disposal include disposal at permitted sites (e.g., landfill, composting sites, soil amendment sites) that are operated in accordance with valid WDRs issued by a Regional Water Board, or located outside of California, unless the waste disposal is exempted from title 27. This Order seeks to clarify that onsite disposal of solid wastes is not authorized unless approved by the Lahontan Water Board in writing. In accordance with Special Provision 6.3.3.1 of this Order, the Discharger's updated Best Management Practices (BMP) Plan due 180 days after the adoption date shall specify BMPs for solid waste management that ensure disposal or land application of wastes is conducted in a manner approved by the Executive Officer or Designee and consistent with requirements in title 27.

3.5.2. **Storm Water Requirements**. U.S. EPA promulgated federal regulations for storm water on 16 November 1990 in 40 C.F.R. parts 122, 123, and 124. The State Water Board's Water Quality Order 2014-0057-DWQ, General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES General Order No. CAS000001) does not regulate storm water discharges from CAAP facilities/fish hatcheries. Nevertheless, the Lahontan Water Board finds that industrial wastes in storm water runoff from the Facility may impact water quality. Therefore, this Order includes appropriate requirements to address storm water runoff from the Facility, including prohibitions, visual non-storm water monitoring and reporting, and development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

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

- 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. Section 122.45(f)(1) requires that all Permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based Permit limitation on a case-by-case basis limitations based on mass are infeasible because the mass or pollutant cannot be related to a measure of production. The limitations, however, must ensure that dilution will not be used as a substitute for treatment.

The limitations in Order R6V-2015-0034, the CTR criteria, and the water quality objectives in the Basin Plan are expressed in concentration units. Mass-based effluent limitations are not included because the final limitations in this Order are based on the limitations in the previous Order, the CTR criteria, and the water quality objectives in the Basin Plan. Instead, concentration-based limitations for pollutants for each discharge point are included in this Order.

4.1. Discharge Prohibitions

4.1.1. The discharge prohibitions established in this Order are from waste discharge prohibitions in the Basin Plan that apply to the entire Lahontan Region (section 4.1) or based on discharge prohibitions specified in the Water Code.

4.1.2. As stated in section 1.7 of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of a treatment facility.

Federal Regulations, 40 C.F.R. section 122.41(m), defines “bypass” as the intentional diversion of waste streams from any portion of a treatment facility. This section of the Federal Regulations, 40 C.F.R. section 122.41(m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. The State Water Board adopted a precedential decision, Order WQO 2002-0015, which cites the Federal Regulations, 40 C.F.R. section 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

4.1.3. Consistent with the Region-wide prohibition established in section 4.1 of the Basin Plan, this Order prohibits the discharge of pesticides to surface or groundwaters. Exemptions may be granted by the Lahontan Water Board

provided that specific exemption criteria specified in section 4.1 of the Basin Plan are satisfied.

4.1.4. Due to the nature of operations and chemical treatments at the Facility, the effluent generally contains only one known drug or chemical at any given time. Based on a review of the Discharger's quarterly drug and chemical use reports between 2015 and 2021, the Discharger did not apply more than one aquaculture drug or chemical at a time within any calendar quarter, except as follows:

4.1.4.1. In the first quarter of 2016, potassium permanganate and oxytetracycline were applied in A Series on the same day.

4.1.4.2. In the first quarter of 2016, potassium permanganate, oxytetracycline, and florfenicol were applied in one-week intervals over a three-week period.

4.1.4.3. In the first quarter of 2017, oxytetracycline and potassium permanganate were applied within two weeks of each other.

4.1.4.4. In the first quarter of 2018, potassium permanganate and florfenicol were applied within four weeks of each other.

4.1.4.5. In the first quarter of 2019, potassium permanganate and hydrogen peroxide were applied within four weeks of each other.

Therefore, as discussed further in section 4.3.3 and 4.3.5 of this Fact Sheet, this Order uses a chemical-specific approach to determine "reasonable potential" for discharges of aquaculture drugs and chemicals from the Facility. Some information is available to discern whether application of more than one aquaculture drug or chemical would produce toxic effects; however, defining the multitude of chemicals which could be applied concurrently would result in an even more complex Order. Therefore, this Order prohibits the application of more than one aquaculture drug or chemical to the raceways per treatment period (as defined in Attachment A).

4.1.5. This Order includes prohibitions on introduction of any aquaculture drug or chemical not already considered by this Order, or in a manner other than specified in this Order to protect the beneficial uses of the receiving waters and to meet water quality objectives from the Basin Plan.

4.1.6. This Order includes Storm Water Requirements, storm water collection system prohibitions and SWPPP General Requirements (defined in Attachment I). These prohibitions and SWPPP General Requirements establish best management practices for handling stormwater runoff from the site. Such best management practices are necessary to mitigate potential impact of stormwater from the built infrastructure on receiving waters. Attachment I and the Basin Plan section 4.3 contains additional information on the purpose of stormwater control measures and applicable facilities.

Storm water runoff at the Facility, specifically, has the potential to come in contact with pollutants associated with aquaculture activities such as chemicals, fuel, waste oil, vehicle wash water, and other storage of other materials. Therefore, this Order prohibits the discharge of storm water runoff collected onsite of the Facility to be discharged into receiving waters of the Facility..

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 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:

4.2.1.1. 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.

4.2.1.2. 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.

4.2.1.3. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including biochemical oxygen demand (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.

4.2.1.4. 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 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 Lahontan Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

A CAAP facility is defined in 40 C.F.R. section 122.24 as a fish hatchery, fish farm, or other facility that contains, grows, or holds cold water fish species or other cold water aquatic animals including, but not limited to, the Salmonidae family of fish (e.g., trout and salmon) in ponds, raceways, or other similar structures. In addition, the facility must discharge at least 30 calendar days per year, produce at least 20,000 lbs (9,090 kilograms) harvest weight of aquatic animals per year, and feed at least 5,000 lbs (2,272 kilograms) of food during the calendar month of maximum feeding.

A facility that does not meet the preceding criteria may also be designated a cold water CAAP facility upon a determination that the facility is a significant contributor of pollution to waters of the United States [40 C.F.R. § 122.24(c)]. Cold water, flow-through CAAP facilities are designed to allow the continuous flow of fresh water through tanks and raceways used to produce aquatic animals (typically cold water fish species). Flows from CAAP facilities ultimately are discharged to waters of the United States and of the state. 40 C.F.R. section 122.24 specifies that CAAP facilities are point sources subject to the NPDES program.

The operation of CAAP facilities may introduce a variety of pollutants into receiving waters. U.S. EPA identifies three classes of pollutants: (1) conventional pollutants (i.e., TSS, oil and grease, BOD, fecal coliforms, and pH); (2) toxic pollutants (e.g., metals such as copper, lead, nickel, and zinc and other toxic pollutants); and (3) non-conventional pollutants (e.g., ammonia-N, Formalin, and phosphorus). Some of the most significant pollutants discharged from CAAP facilities are solids from uneaten feed and fish feces that settle to the bottom of the raceways. Both of these types of solids are primarily composed of organic matter including BOD, organic nitrogen, and organic phosphorus.

Fish raised in CAAP facilities may become vulnerable to disease and parasite infestations. Various aquaculture drugs and chemicals are used periodically at CAAP facilities to ensure the health and productivity of the confined fish population, as well as to maintain production efficiency. Aquaculture drugs and chemicals are used to clean raceways and to treat fish for parasites, fungal growths and bacterial infections. Aquaculture drugs and chemicals are sometimes used to anesthetize fish prior to spawning or “tagging” processes. As a result of these operations and practices, drugs and chemicals may be present in discharges to waters of the United States or waters of the state.

On August 23, 2004, U.S. EPA published ELGs for the Concentrated Aquatic Animal Production Point Source Category (40 C.F.R. part 451). The ELGs became effective on September 22, 2004. The ELGs establish national technology-based effluent discharge requirements for flow-through and recirculation systems and for net pens 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 a single pollutant –TSS – while controlling the discharge of other pollutants 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 ELGs, 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 numerical 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 suspended solids 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 effluent limitations for other pollutants and WQBELs for pollutants considered in the ELG in order to comply with applicable water quality standards.

4.2.2. **Applicable Technology-Based Effluent Limitations**

Technology-based requirements in this Order are based on a combination of application of ELGs for BMP requirements and case-by-case numeric limitations developed using BPJ and retained from Order R6V-2015-0034.

4.2.2.1. **Total Suspended Solids (TSS).** Effluent limitations for TSS of 6.0 mg/L as an average monthly effluent limitation (AMEL) and 15 mg/L as an instantaneous maximum, were established in Order R6V-2006-0030 as technology-based effluent limitations. Order R6V-2015-0034, retained the AMEL of 6.0 mg/L net over influent concentration, and clarified that the “net over influent” intake allowance applies to the AMEL, but not to the instantaneous maximum limitation. For this Order, the effluent limitations for TSS are established as 6.0 mg/L as an average monthly effluent limitation (AMEL) and 15 mg/L as an instantaneous maximum.

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.. The TSS numeric effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

The previous permit specified an effluent TSS concentration that is 6.0 mg/L net over influent concentrations (supply wells) and established an intake credit for TSS because the Discharger has no control over supply water quality. Existing wastewater treatment technology (such as settling basins and vacuum cleaning) is capable of dependably removing solids (primarily fish feces and uneaten feed) from CAAP facility effluent prior to discharge. This Facility utilizes a series of earthen settling basins prior to discharge. Self-monitoring data from 2015-2021 the Facility did not have intake water with TSS concentrations greater than 0.8 mg/L, and can reliably meet the numeric effluent limitations for TSS using existing wastewater treatment and control technologies and implementation of BMPs.

This Order does not contain mass-based effluent limitations for TSS because there are no standards that specifically require a mass-based effluent limitation, and mass of the pollutant discharged is not specifically related to a measure of operation [40 C.F.R. 122.45(f)(iii)]. This is consistent with Order R6V-2015-0034, which did not include mass effluent limitations.

Table F-4. Technology-Based Effluent Limitations for Discharge Point 001

Parameter	Units	Average Monthly Effluent Limitations	Instantaneous Maximum Effluent Limitations
TSS	mg/L	6.0	15.0

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, 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**

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the 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.

The federal CWA section 101(a)(2), states: *"it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983."* Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 C.F.R. sections 131.2 and 131.10, require that all waters of the state be regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. 40 C.F.R. section 131.3(e) defines existing beneficial uses as those uses actually attained after November 28, 1975, whether or not they are included in the water quality standards. Federal regulation, 40 C.F.R. section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

4.3.2.1. **Receiving Water and Beneficial Uses.** The Facility discharges wastewater to Fish Springs Creek, a water of the United States. The beneficial uses applicable to the Fish Springs Creek are presented in Table F-3.

4.3.2.2. **Water Quality Objectives.** The water quality objectives applicable to the receiving water for this discharge are from the Basin Plan; the CTR, established by U.S. EPA at 40 C.F.R. section 131.38; and the NTR, established by

U.S. EPA at 40 C.F.R. section 131.36, and established by State Board Plans and Policies. Some pollutants have water quality objectives established by more than one of these sources.

4.3.2.2.1 **Basin Plan.** The Basin Plan specifies numeric and narrative water quality objectives for pollutants in order to protect beneficial uses. The narrative toxicity objective 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, animal, or aquatic life*." The narrative chemical constituents objective states, "*Waters shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses.*"

The Basin Plan includes the following site-specific numeric water quality objectives for total dissolved solids (TDS), chloride (Cl), sulfate (SO_4), fluoride (F), boron (B), nitrate as nitrogen (NO_3-N), total nitrogen (Total N) and dissolved orthophosphate (PO_4) applicable to the Owens River (Tinemaha Reservoir Outlet) in the Owens River Hydrologic Unit:

Table F-5. Basin Plan Water Quality Objectives for Owens River (Tinemaha Reservoir Outlet) and Fish Springs Creek

Surface Water	Frequency	TDS	Cl	SO_4	F	B	NO_3-N	Total N	PO_4
Owens River (Tinemaha Reservoir Outlet)	Annual Average[1]	207	17.9	26.8	0.57	0.61	0.6	0.9	0.32
Owens River (Tinemaha Reservoir Outlet)	90th Percentile[2]	343	42.0	59.0	0.90	1.50	1.1	1.5	0.56

Table F-5 Notes:

1. Arithmetic mean of all data collected in a 1-year period.
2. Only 10 percent of data can exceed this value.

4.3.2.2.2 **CTR.** The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to all inland surface waters and enclosed bays and estuaries. Human health criteria are further identified as for "water and organisms" or for "organisms only."

4.3.2.2.3 **NTR.** The NTR establishes numeric aquatic life criteria for selenium and numeric human health criteria for 33 toxic organic pollutants.

4.3.3. **Determining the Need for WQBELs**

Assessing whether a pollutant has reasonable potential to exceed a water quality objective in the water body is the fundamental step in determining whether or not a WQBEL is required.

4.3.3.1. **Reasonable Potential Analysis Methodology**

According to SIP section 1.3, the RPA begins with identifying the observed maximum effluent concentration (MEC) for each pollutant based on effluent concentration data. There are three triggers in determining reasonable potential:

4.3.3.1.1. Trigger 1 is activated if the MEC is greater than or equal to the lowest applicable water quality objective (MEC ≥ water quality objective), which has been adjusted, if appropriate, for pH, hardness, and translator data. If the MEC is greater than or equal to the adjusted water quality objective, then that pollutant has reasonable potential, and a WQBEL is required.

4.3.3.1.2. Trigger 2 is activated if the observed maximum ambient background concentration (B) is greater than the adjusted water quality objective (B > water quality objective) and the pollutant is detected in any of the effluent samples.

4.3.3.1.3. Trigger 3 is activated if a review of other information determines that a WQBEL is required to protect beneficial uses, even though both MEC and B are less than the water quality objective.

To maintain consistency in methodology for permitting discharges of various constituents, the Lahontan Water Board used the same procedures required by the SIP for CTR constituents to evaluate reasonable potential and, where necessary, develop WQBELs for non-CTR constituents. For constituents with no promulgated numeric water quality criteria or objectives, the Lahontan Water Board interpreted narrative objectives from the Basin Plan to establish the basis for reasonable potential and effluent limitation calculations.

4.3.3.2. **Data and Information Used for the RPA**

The following describes the data used to perform an RPA for discharges from Discharge Point 001.

4.3.3.2.1. **Effluent Data.** The effluent monitoring data collected by the Discharger during the term of Order R6V-2015-0034, and the nature of the discharge from Discharge Point 001 were analyzed to determine if the discharge has

reasonable potential. The RPA was based on effluent monitoring data collected by the Discharger between August 2015 and May 2021 and priority pollutant metals data collected October 31, 2018.

4.3.3.2.2. **Hardness.** Some freshwater metal objectives are hardness dependent. The lower the hardness, the more stringent the resulting criterion is. Hardness was sampled in the receiving water once during the term of Order R6V-2015-0034, concurrent with priority pollutant sampling, on October 31, 2018. The hardness of the receiving water was determined to be 80 mg/L, and this value was used in the RPA to determine water quality objectives for hardness-dependent metals.

4.3.3.2.3. **Ambient Background Data.** Influent water data collected by the Discharger during the term of Order R6V-2015-0034, which are also representative of upstream receiving water conditions, were analyzed to determine if the discharge has reasonable potential. The RPA was based on the influent data collected by the Discharger between August 2015 and May 2021.

4.3.3.2.4. **Assimilative Capacity/Mixing Zone.** A mixing zone has not been granted in this Order. Both effluent and receiving water limitations in the Order are end-of-pipe limits with no allowance for dilution within the receiving water.

4.3.3.3. **Reasonable Potential Analysis for Priority Pollutants.** The MECs and the most stringent applicable water quality objectives used in the RPA are presented in the following table, along with the RPA results for each pollutant. Reasonable potential was not determined for all pollutants because water quality objectives are not available for some pollutants and monitoring data are unavailable for others. Based on a review of the influent and effluent data collected during the term of Order R6V-2015-0034, the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives for any priority pollutants.

Table F-6. Reasonable Potential Analysis Summary for Discharge Point 001

CTR #	Priority Pollutants	Governing Water Quality Objective, µg/L	MEC or Minimum DL, µg/L	Maximum Background or Minimum DL, µg/L[1,2]	RPA Results[3]
1	Antimony	4300	Not Available	Not Available	No Limit
2	Arsenic	150	1.3 (DNQ)	1.6 (DNQ)	No Limit
3	Beryllium	No Criteria	<0.2	<0.2	No Limit
4	Cadmium	2.07	<0.11	<0.11	No Limit
5a	Chromium (III)	172	0.4 (DNQ)	0.4 (DNQ)	No Limit

CTR #	Priority Pollutants	Governing Water Quality Objective, µg/L	MEC or Minimum DL, µg/L	Maximum Background or Minimum DL, µg/L[1,2]	RPA Results[3]
5b	Chromium (VI)	11	0.29 (DNQ)	0.34 (DNQ)	No Limit
6	Copper	7.7	0.41 (DNQ)	0.39 (DNQ)	No Limit
7	Lead	2.4	<0.1	<0.1	No Limit
8	Mercury	0.01	<0.0035	<0.0035	No Limit
9	Nickel	43.19	<0.52	<0.52	No Limit
10	Selenium	5	<0.95	1.2 (DNQ)	No Limit
11	Silver	2.8	<0.3	<0.3	No Limit
12	Thallium	6.3	<0.18	<0.18	No Limit
13	Zinc	99	<15	<15	No Limit
14	Cyanide	5.2	<2.7	<2.7	No Limit
15	Asbestos	No Criteria	Not Available	Not Available	No Limit
16	2,3,7,8 TCDD	0.000000014	Not Available	Not Available	No Limit
17	Acrolein	780	Not Available	Not Available	No Limit
18	Acrylonitrile	0.66	Not Available	Not Available	No Limit
19	Benzene	71	Not Available	Not Available	No Limit
20	Bromoform	360	Not Available	Not Available	No Limit
21	Carbon Tetrachloride	4.4	Not Available	Not Available	No Limit
22	Chlorobenzene	21,000	Not Available	Not Available	No Limit
23	Chlorodibromomethane	34	Not Available	Not Available	No Limit
24	Chloroethane	No Criteria	Not Available	Not Available	No Limit
25	2-Chloroethylvinyl ether	No Criteria	Not Available	Not Available	No Limit
26	Chloroform	No Criteria	Not Available	Not Available	No Limit
27	Dichlorobromomethane	46	Not Available	Not Available	No Limit
28	1,1-Dichloroethane	No Criteria	Not Available	Not Available	No Limit

CTR #	Priority Pollutants	Governing Water Quality Objective, µg/L	MEC or Minimum DL, µg/L	Maximum Background or Minimum DL, µg/L[1,2]	RPA Results[3]
29	1,2-Dichloroethane	99	Not Available	Not Available	No Limit
30	1,1-Dichloroethylene	3.2	Not Available	Not Available	No Limit
31	1,2-Dichloropropane	39	Not Available	Not Available	No Limit
32	1,3-Dichloropropylene	1,700	Not Available	Not Available	No Limit
33	Ethylbenzene	29,000	Not Available	Not Available	No Limit
34	Methyl Bromide	4,000	Not Available	Not Available	No Limit
35	Methyl Chloride	No Criteria	Not Available	Not Available	No Limit
36	Methylene Chloride	1,600	Not Available	Not Available	No Limit
37	1,1,2,2-Tetrachloroethane	11	Not Available	Not Available	No Limit
38	Tetrachloroethylene	8.85	Not Available	Not Available	No Limit
39	Toluene	200,000	Not Available	Not Available	No Limit
40	1,2-Trans-Dichloroethylene	140,000	Not Available	Not Available	No Limit
41	1,1,1-Trichloroethane	No Criteria	Not Available	Not Available	No Limit
42	1,1,2-Trichloroethane	42	Not Available	Not Available	No Limit
43	Trichloroethylene	81	Not Available	Not Available	No Limit
44	Vinyl Chloride	525	Not Available	Not Available	No Limit
45	2-Chlorophenol	400	Not Available	Not Available	No Limit
46	2,4-Dichlorophenol	790	Not Available	Not Available	No Limit
47	2,4-Dimethylphenol	2,300	Not Available	Not Available	No Limit
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	765	Not Available	Not Available	No Limit

CTR #	Priority Pollutants	Governing Water Quality Objective, µg/L	MEC or Minimum DL, µg/L	Maximum Background or Minimum DL, µg/L[1,2]	RPA Results[3]
49	2,4-Dinitrophenol	14,000	Not Available	Not Available	No Limit
50	2-Nitrophenol	No Criteria	Not Available	Not Available	No Limit
51	4-Nitrophenol	No Criteria	Not Available	Not Available	No Limit
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	No Criteria	Not Available	Not Available	No Limit
53	Pentachlorophenol	5.473947392	Not Available	Not Available	No Limit
54	Phenol	4,600,000	Not Available	Not Available	No Limit
55	2,4,6-Trichlorophenol	6.5	Not Available	Not Available	No Limit
56	Acenaphthene	2,700	Not Available	Not Available	No Limit
57	Acenaphthylene	No Criteria	Not Available	Not Available	No Limit
58	Anthracene	110,000	Not Available	Not Available	No Limit
59	Benzidine	0.00054	Not Available	Not Available	No Limit
60	Benzo(a)Anthracene	0.049	Not Available	Not Available	No Limit
61	Benzo(a)Pyrene	0.049	Not Available	Not Available	No Limit
62	Benzo(b)Fluoranthene	0.049	Not Available	Not Available	No Limit
63	Benzo(ghi)Perylene	No Criteria	Not Available	Not Available	No Limit
64	Benzo(k)Fluoranthene	0.049	Not Available	Not Available	No Limit
65	Bis(2-Chloroethoxy)Methane	No Criteria	Not Available	Not Available	No Limit
66	Bis(2-Chloroethyl)Ether	1.4	Not Available	Not Available	No Limit
67	Bis(2-Chloroisopropyl)Ether	170,000	Not Available	Not Available	No Limit
68	Bis(2-Ethylhexyl)Phthalate	5.9	Not Available	Not Available	No Limit

CTR #	Priority Pollutants	Governing Water Quality Objective, µg/L	MEC or Minimum DL, µg/L	Maximum Background or Minimum DL, µg/L[1,2]	RPA Results[3]
69	4-Bromophenyl Phenyl Ether	No Criteria	Not Available	Not Available	No Limit
70	Butylbenzyl Phthalate	5,200	Not Available	Not Available	No Limit
71	2-Chloronaphthalene	4,300	Not Available	Not Available	No Limit
72	4-Chlorophenyl Phenyl Ether	No Criteria	Not Available	Not Available	No Limit
73	Chrysene	0.049	Not Available	Not Available	No Limit
74	Dibenzo(a,h)Anthracene	0.049	Not Available	Not Available	No Limit
75	1,2-Dichlorobenzene	17,000	Not Available	Not Available	No Limit
76	1,3-Dichlorobenzene	2,600	Not Available	Not Available	No Limit
77	1,4-Dichlorobenzene	2,600	Not Available	Not Available	No Limit
78	3,3 Dichlorobenzidine	0.077	Not Available	Not Available	No Limit
79	Diethyl Phthalate	120,000	Not Available	Not Available	No Limit
80	Dimethyl Phthalate	2,900,000	Not Available	Not Available	No Limit
81	Di-n-Butyl Phthalate	12,000	Not Available	Not Available	No Limit
82	2,4-Dinitrotoluene	9.1	Not Available	Not Available	No Limit
83	2,6-Dinitrotoluene	No Criteria	Not Available	Not Available	No Limit
84	Di-n-Octyl Phthalate	No Criteria	Not Available	Not Available	No Limit
85	1,2-Diphenylhydrazine	0.54	Not Available	Not Available	No Limit
86	Fluoranthene	370	Not Available	Not Available	No Limit
87	Fluorene	14,000	Not Available	Not Available	No Limit
88	Hexachlorobenzene	0.00077	Not Available	Not Available	No Limit

CTR #	Priority Pollutants	Governing Water Quality Objective, µg/L	MEC or Minimum DL, µg/L	Maximum Background or Minimum DL, µg/L[1,2]	RPA Results[3]
89	Hexachlorobutadiene	50	Not Available	Not Available	No Limit
90	Hexachlorocyclopentadiene	17,000	Not Available	Not Available	No Limit
91	Hexachloroethane	8.9	Not Available	Not Available	No Limit
92	Indeno(1,2,3-cd)Pyrene	0.049	Not Available	Not Available	No Limit
93	Isophorone	600	Not Available	Not Available	No Limit
94	Naphthalene	No Criteria	Not Available	Not Available	No Limit
95	Nitrobenzene	1,900	Not Available	Not Available	No Limit
96	N-Nitrosodimethylamine	8.1	Not Available	Not Available	No Limit
97	N-Nitrosodi-n-Propylamine	1.4	Not Available	Not Available	No Limit
98	N-Nitrosodiphenylamine	16	Not Available	Not Available	No Limit
99	Phenanthrene	No Criteria	Not Available	Not Available	No Limit
100	Pyrene	11,000	Not Available	Not Available	No Limit
101	1,2,4-Trichlorobenzene	No Criteria	Not Available	Not Available	No Limit
102	Aldrin	0.00014	Not Available	Not Available	No Limit
103	alpha-BHC	0.013	Not Available	Not Available	No Limit
104	beta-BHC	0.046	Not Available	Not Available	No Limit
105	gamma-BHC	0.063	Not Available	Not Available	No Limit
106	delta-BHC	No Criteria	Not Available	Not Available	No Limit
107	Chlordane	0.00059	Not Available	Not Available	No Limit
108	4,4'-DDT	0.00059	Not Available	Not Available	No Limit

CTR #	Priority Pollutants	Governing Water Quality Objective, µg/L	MEC or Minimum DL, µg/L	Maximum Background or Minimum DL, µg/L[1,2]	RPA Results[3]
109	4,4'-DDE (linked to DDT)	0.00059	Not Available	Not Available	No Limit
110	4,4'-DDD	0.00084	Not Available	Not Available	No Limit
111	Dieldrin	0.00014	Not Available	Not Available	No Limit
112	alpha-Endosulfan	0.056	Not Available	Not Available	No Limit
113	beta-Endolsulfan	0.056	Not Available	Not Available	No Limit
114	Endosulfan Sulfate	240	Not Available	Not Available	No Limit
115	Endrin	0.036	Not Available	Not Available	No Limit
116	Endrin Aldehyde	0.81	Not Available	Not Available	No Limit
117	Heptachlor	0.00021	Not Available	Not Available	No Limit
118	Heptachlor Epoxide	0.00011	Not Available	Not Available	No Limit
119-125	PCBs sum (2)	0.00017	Not Available	Not Available	No Limit
126	Toxaphene	0.0002	Not Available	Not Available	No Limit

Table F-6 Notes:

1. The MEC and maximum background concentration are the actual detected concentrations unless preceded by a "<" sign, in which case the value shown is the minimum detection level (DL).
2. The MEC or maximum background concentration is "Not Available" when there are no influent monitoring data for the constituent.
3. RPA Results
   = Limit Required, if MEC > WQO, B > WQO and MEC is detected, or Trigger 3;
   = No Limit, if MEC and B are < WQO or all effluent data are undetected; or
   = Undetermined (Ud), if no criteria have been promulgated or there are insufficient data.

4.3.3.4. **Reasonable Potential Analysis for Non-Conventional Pollutants.**

For drugs and chemicals applied directly to water, the numeric value for the protection of beneficial uses are based on site-specific conditions and evaluations (either No Observable Effect Concentration [NOEC], or the No Adverse Effect Level [NOAEL]), to determine the appropriate constituent threshold necessary to interpret the narrative chemical constituent Basin Plan objective. This numeric value, if available, is specified for each respective drug or chemical applied as listed in the table below:

Table F-7. Concentrations for Drugs and Chemicals Applied Directly to Water

Drug/Chemical	Concentration	Basis
Acetic Acid	Not Available	Not Available
Carbon Dioxide	Not Available	Not Available
Chloramine-T	86.3 mg/L	96-hour NOEC for *C. dubia*
Formalin	1.3 mg/L	96-hour NOAEL for *C. dubia*
Hydrogen Peroxide	1.3 mg/L	96-hour NOAEL for *C. dubia*
MS-222	70 mg/L	96-hour NOEC for *C. dubia*
Oxytetracycline Hydrochloride	40.4 mg/L	96-hour NOAEL for *C. dubia*
Penicillin G Potassium	350 mg/L	7-day NOEC for *P. promelas*
Potassium Permanganate	0.038 mg/L	96-hour NOAEL for *C. dubia*
PVP Iodine	0.86 mg/L	96-hour NOAEL for *C. dubia*
Sodium Bicarbonate	Not Available	Not Available
Sodium Chloride	Not Available	Not Available

4.3.3.4.1. **Constituents with No Reasonable Potential**

4.3.3.4.1.1. **Basin Plan Table 3-17 Parameters.** As described in section 4.3.2.2 of this Fact Sheet, the Basin Plan contains numeric water quality objectives for Owens River (Tinemaha Reservoir Outlet) for TDS, chloride, sulfate, fluoride, boron, nitrate, total nitrogen, and orthophosphate. These objectives are applied as annual average and 90th percentile objectives. To conduct the RPA for these parameters, the Lahontan Water Board evaluated the annual average and 90th percentile values of the effluent and receiving water. Tables F-8 and F-9 below summarize the RPA for these pollutants.

The tables include the annual average and 90th percentile values of the effluent and receiving water for each parameter and the applicable water quality objectives from Basin Plan Table 3-17. As shown in the following tables, the maximum observed effluent 90th percentile results are below the applicable objectives for all parameters and the maximum observed annual average results are below the applicable objectives for all parameters, except TDS, nitrate, and total nitrogen (see section 4.3.3.4.2 of this Fact Sheet for a discussion of the RPA results for TDS, nitrate, and total nitrogen). This Order includes numeric receiving water limitations for TDS, chloride, sulfate, fluoride, boron, nitrate, total nitrogen, and orthophosphate

based on the Basin Plan objectives, which must be met at the point of discharge from the Facility.

This Order also requires monitoring for these parameters at Monitoring Location RSW-002, although total phosphorous is sampled in place of dissolved orthophosphate. Total phosphorus was sampled and compared to the water quality objectives for dissolved orthophosphate. As orthophosphate is a component of total phosphorus, the total phosphorus results provide a conservative estimate of dissolved orthophosphate concentrations.

Table F-8. Summary of RPA for Basin Plan Table 3-17 Parameters (90th Percentile)

Constituent	90th Percentile Objective, mg/L	EFF-001 Maximum Observed 90th Percentile Value, mg/L	INF-001 Maximum Observed 90th Percentile Value, mg/L	RSW-002 Maximum Observed 90th Percentile Value, mg/L	Reasonable Potential?
Total Dissolved Solids (TDS)	343	238	256	236	No
Chloride	42.0	--	--	17	No
Sulfate	59.0	--	--	24.3	No
Fluoride	0.90	--	--	0.44	No
Boron	1.50	--	--	0.10	No
Nitrate (NO_3) as Nitrogen	1.1	0.7	0.7	0.7	No
Total Nitrogen	1.5	1.2	2.3	1.1	No
Orthophosphate, Dissolved	0.56	0.17	0.13	0.14	No

Table F-9. Summary of RPA for Basin Plan Table 3-17 Parameters (Annual Average)

Constituent	Annual Average Objective, mg/L	EFF-001 Maximum Observed Annual Average Value, mg/L	INF-001 Maximum Observed Annual Average Value, mg/L	RSW-002 Maximum Observed Annual Average Value, mg/L	Reasonable Potential?
Total Dissolved Solids (TDS)	207	232	235	210	Yes
Chloride	17.9	--	--	14.6	No
Sulfate	26.8	--	--	21.0	No
Fluoride	0.57	--	--	0.37	No
Boron	0.61	--	--	0.28	No
Nitrate (NO_3) as Nitrogen	0.6	0.7	0.7	0.5	Yes
Total Nitrogen	0.9	1.0	1.2	0.79	Yes
Orthophosphate, Dissolved[1]	0.32	0.14	0.09	0.11	No

Table F-9 Notes:

1. Total phosphorus was sampled and compared to the water quality objectives for dissolved orthophosphate. As orthophosphate is a component of total phosphorus, the total phosphorus results provide a conservative estimate of dissolve orthophosphate concentrations.

4.3.3.4.1.2. **Acetic Acid, Carbon Dioxide, and Sodium Bicarbonate.** The Discharger does not currently use acetic acid at the Facility but may use it in the future for the control of external parasites as flush and/or bath treatments. Carbon dioxide gas may be used in bath treatments to anesthetize fish prior to spawning. Sodium bicarbonate, or baking soda, may also be used in bath treatments as a means of introducing carbon dioxide into the water to anesthetize fish. While the discharge of acetic acid, carbon dioxide, or sodium bicarbonate may affect the pH of the receiving water, current

effluent and receiving water limitations for pH are adequate to ensure that any potential discharges of acetic acid, carbon dioxide, or sodium bicarbonate do not impact water quality. In addition, carbon dioxide gas added to water will quickly equilibrate with atmospheric carbon dioxide with aeration. However, the use of these substances must be reported as specified in the Monitoring and Reporting Program (MRP) (Attachment E).

4.3.3.4.1.3. **Amoxicillin, Erythromycin, Florfenicol, and Romet-30®.** Amoxicillin, erythromycin, florfenicol, and Romet-30® may be used by CAAP facilities. Amoxicillin is injected into fish to control acute disease outbreaks through a veterinarian's prescription for extra-label use. Erythromycin (injected or used in feed formulations) and florfenicol (used in feed formulations) are antibiotics used to control acute disease outbreaks. Erythromycin must be used under an INAD exemption or a veterinarian feed directive. Florfenicol is a NADA approved drug. Romet-30®, also known by the trade name Sulfadimethoxine-oremtroprim, is an antibiotic used in feed formulations and is FDA-approved for use in aquaculture for control of furunculosis in salmonids. Amoxicillin (when injected into fish), erythromycin (when injected into fish or used as a feed additive), florfenicol and Romet-30® (when used as feed additives) are used in a manner that reduces the likelihood of direct discharge of antibiotics to waters of the United States or waters of the state, particularly when CAAP facilities implement BMPs as required by this Order. Accordingly, this Order does not include WQBELs for these substances; however, this Order does require reporting of these substances as specified in the MRP (Attachment E).

4.3.3.4.1.4. **Chloramine-T.** Chloramine-T (sodium p-toluenesulfonchloramide), also known by the brand name HALAMID® Aqua, is approved through FDA's NADA program as a replacement for copper sulfate and formalin. Chloramine-T is not currently used but may be used by the Discharger in the future as a possible replacement for formalin. The Discharger reports Chloramine-T may be used as a flush or bath treatment at a concentration up to 20 mg/L for 1 hour. Chloramine-T breaks down into para-toluene sulfonamide (pTSA) and, unlike other chlorine-based disinfectants, does not break down into chlorine or form harmful chlorinated compounds.

Results of the Discharger's Pesticide Unit *C. dubia* test, where the test animals were exposed to the toxicant for two hours followed by three exchanges of control water to remove residual compounds and then observed for 96 hours, determined the NOEC and Lowest Observed Effect Concentration (LOEC) to be 86.3 mg/L and 187 mg/L, respectively.

Effluent data for Chloramine-T are not available to assess the impact of Chloramine-T use at the Facility. Therefore, the following information and calculations were used to estimate the effluent Chloramine-T concentrations from flush treatments at Discharge Point 001. The

calculations assume the flow from the raceways mixes completely with the volume of water in the settling basin and is discharged with no further concentration, breakdown, or dilution of Chloramine-T.

The hatchery has six raceways, with a total water flow rate through each raceway estimated at 4.45 cfs. Assuming a retention time of 1 hour, the dilution volume of water from one raceway after

1 hour = (4.45 cfs) x (26,930 gallons/hour) x (1 hour) = 119,839 gallons (where 1 cfs = 26,930 gallons/hour). Accordingly, the dilution volume in all 6 raceways = 6 x (119,839 gallons) = 719,031 gallons.

As discussed in section 2.1 of this Fact Sheet, the two settling ponds are each estimated to be approximately 1,000 feet long x 10 feet long x 6 feet deep, or 60,000 cubic feet, or 448,831 gallons (where 1 cubic foot = 7.48052 gallons). The volume of both settling ponds, is therefore estimated to be 897,662 gallons.

The total dilution in the six raceways and two settling ponds = (719,031 gallons) + (897,662 gallons) = 1,616,693 gallons.

Flow and volume calculations use the total dilution volume of a 1-hour treatment at 1,616,693 gallons, or 6,119,849 liters (1 gallon = 3.7854118 liters).

Total mass of Chloramine-T applied in milligrams = (# raceways treated) x (treatment time in hours) x (raceway flow in cfs) x (26,930 gallons/hour) x (3.7854118 liters/gallon) x (Chloramine-T concentration in mg/L). The estimated concentrations, based on the number of raceways treated simultaneously, are summarized in Table F-10. The Discharger has specified to the Lahontan Water Board that the maximum number of raceways treated per day with Chloramine-T will be two, although, up to 6 ponds could be treated and the estimated final effluent concentration is estimated to be below the NOEC and LOEC.

Table F-10. Estimated Effluent Chloramine-T Concentration

Number of Raceways Treated with Chloramine-T	Chloramine-T Treatment Concentration, mg/L	Treatment Time in Hours	Total Mass of Chloramine-T Applied, kg	Total Dilution Volume in Liters	Estimated Final Effluent Chloramine-T, mg/L
1	20	1	9.072	6,119,849	1.48
2	20	1	18.145	6,119,849	2.97
3	20	1	27.218	6,119,849	4.45
4	20	1	36.291	6,119,849	5.93
5	20	1	45.363	6,119,849	7.41
6	20	1	54.436	6,119,849	8.90

The estimated final effluent concentration of Chloramine-T at Discharge Point 001 is 1.48 mg/L if one raceway is treated and 2.97 mg/L if two raceways are treated.

Based on available information regarding Chloramine-T if used at the reported treatment concentrations, Chloramine-T will not be discharged at levels that cause, have the reasonable potential to cause, or will contribute to an excursion of Basin Plan narrative water quality objectives for toxicity. Accordingly, this Order does not include WQBELs for Chloramine-T. However, use and monitoring of Chloramine-T must be reported as specified in the MRP (Attachment E). The Lahontan Water Board will review this information, and other information as it becomes available, and this Order may be reopened to establish effluent limitations based on additional use and toxicity information in accordance with the reopener provision in section 6.3.1.2 of this Order.

5.3.3.4.1.5. **Chloride and Electrical Conductivity.** Sodium chloride (salt) is used as needed at CAAP facilities as a fish cleansing agent to control parasites, fish disease, and as an osmoregulatory aid to reduce stress amongst the confined fish population. Because dissolved ions in water increase conductivity, the measures of TDS, chloride ion, and conductivity are related. As discussed previously, the Basin Plan contains numeric water quality objectives for TDS and chloride in Owens River at Tinemaha Reservoir Outlet, to which Fish Springs Creek is tributary. In addition, the Basin Plan contains a narrative objective for chemical constituents that states, "*Waters designated as AGR shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e., agricultural purposes).*" *Water Quality for Agriculture, Food and Agriculture Organization of the United Nations-Irrigation and Drainage Paper No. 29, Rev. 1* (R.S. Ayers and D.W. Westcot, Rome, 1985), recommends that the conductivity level in waters used for agricultural irrigation not exceed 700 µmhos/cm (Agricultural Water Quality Goal) because it will reduce crop yield for sensitive plants.

There are no U.S. EPA water quality criteria for the protection of aquatic organisms for electrical conductivity. Effluent monitoring for chloride and electrical conductivity indicates that the discharge of sodium chloride from the Facility will not cause, have reasonable potential to cause, or contribute to an in-stream excursion of applicable water quality criteria or objectives. Effluent monitoring indicates that TDS does exhibit reasonable potential, but as discussed further in section 4.3.3.4.2.7 of this Fact Sheet, natural concentrations of TDS in the influent, and not the discharge, are the cause of TDS exceedances observed in the receiving water. This Order includes effluent limitations for TDS, which should effectively prevent TDS from contributing to

exceedances of electrical conductivity, but does not include WQBELs for electrical conductivity or chloride. This Order does, however, require quarterly monitoring of the influent, effluent and receiving water for electrical conductivity, receiving water monitoring for chloride, and quarterly reporting on the use of sodium chloride. Additionally, because dissolved ions in water increase conductivity, monitoring of electrical conductivity is also required during sodium chloride use as specified in the MRP (Attachment E).

4.3.3.4.1.6. **Chorulon®.** Chorulon® may be used by CAAP facilities. Chorulon® is injected into fish to aid in improving spawning function and is a NADA approved drug. Chorulon® (when injected into fish) is used in a manner that reduces the likelihood of direct discharge of this substance to waters of the United States or waters of the state, particularly when CAAP facilities implement BMPs as required by this Order. Accordingly, this Order does not include WQBELs for Chorulon®. However, this Order does require reporting of Chorulon® as specified in the MRP (Attachment E).

4.3.3.4.1.7. **Epsom salt.** Epsom salt may be used by CAAP facilities. Epsom salt is used in medicated feed or fish pills to control internal parasites. Epsom salt (when used as a medicated feed or fish pills) is used in a manner that reduces the likelihood of direct discharge of this substance to waters of the United States or waters of the state, particularly when CAAP facilities implement BMPs as required by this Order. Accordingly, this Order does not include WQBELs for Epsom salt. However, this Order does require reporting of Epsom salt as specified in the MRP (Attachment E).

4.3.3.4.1.8. **Ivermectin.** Ivermectin may be used by CAAP facilities. Ivermectin is injected into fish to control parasites. Ivermectin (when injected into fish) is used in a manner that reduces the likelihood of direct discharge of this substance to waters of the United States or waters of the state, particularly when CAAP facilities implement BMPs as required by this Order. Accordingly, this Order does not include WQBELs for Ivermectin. However, this Order does require reporting of Ivermectin as specified in the MRP (Attachment E).

4.3.3.4.1.9. **MS-222®.** CAAP facilities use the anesthetic Tricaine methanesulfonate, commonly known as MS-222 (with trade names of Finquel® or Tricaine-S®). MS-222 has been approved by FDA for use as an anesthetic for Salmonidae. Results of toxicity tests using *C. dubia* where the test animals were exposed to MS-222 for two hours, followed by three exchanges of control water to remove residual compound and then observed for 96 hours, determined the NOEC and LOEC to be 70 and 200 mg/L, respectively. MS-222 is generally used as a static treatment bath. The concentration is diluted well below 70 mg/L when discharged at CAAP facilities. Based on available information regarding MS-222 when used

according to the reported treatment, MS-222 is not discharged at levels that cause, have the reasonable potential to cause, or will contribute to an excursion of Basin Plan narrative water quality objectives for toxicity. Accordingly, this Order does not include WQBELs for MS-222. However, use of MS-222 must be reported as specified in the MRP (Attachment E).

4.3.3.4.1.10. **Ovaplant®.** Ovaplant® may be used by CAAP facilities. Ovaplant® is injected into fish to induce gamete maturation and may be used under an INAD exemption. Ovaplant® (when injected into fish) is used in a manner that reduces the likelihood of direct discharge of this substance to waters of the United States or waters of the state, particularly when CAAP facilities implement BMPs as required by this Order. Accordingly, this Order does not include WQBELs for Ovaplant®. However, this Order does require reporting of Ovaplant® as specified in the MRP (Attachment E).

4.3.3.4.1.11. **Oxytetracycline Dihydrate and Oxytetracycline Hydrochloride.** Oxytetracycline dihydrate and oxytetracycline hydrochloride, also known by the brand names Terramycin 200® and Terramycin®, are antibiotics approved through FDA's NADA program for use in controlling ulcer disease, furunculosis, bacterial hemorrhagic septicemia, and pseudomonas disease in salmonids. CAAP facilities use the antibiotics during disease outbreaks. Oxytetracycline dihydrate and oxytetracycline hydrochloride are most commonly used at CAAP facilities as feed additives. However, oxytetracycline hydrochloride may also be used as an extra-label use under a veterinarian's prescription in an immersion bath of approximately six to eight hours in duration. Because oxytetracycline hydrochloride may be applied in an immersion bath for up to eight hours at a time, the Lahontan Water Board considered the results of acute and chronic aquatic life toxicity testing conducted by the Discharger's Pesticide Unit when determining whether WQBELs for oxytetracycline hydrochloride used in an immersion bath treatment were necessary. Results of acute toxicity tests using *C. dubia* showed a 96-hour NOAEL of 40.4 mg/L. Results of chronic toxicity tests using *C. dubia* showed a seven-day NOEC for reproduction of 48 mg/L.

The information available regarding use and discharge of oxytetracycline hydrochloride at CAAP facilities indicates that it is discharged at levels well below the lowest NOEC and NOAEL. The Lahontan Water Board determined that oxytetracycline dihydrate, when used in feed, and oxytetracycline hydrochloride, when used in feed or in an immersion bath treatment, is not discharged at levels that cause, have the reasonable potential to cause, or contribute to an excursion of a narrative water quality objective for toxicity from the Basin Plan. Accordingly, this Order does not include effluent limitations for oxytetracycline dihydrate or oxytetracycline hydrochloride. However, the use of oxytetracycline dihydrate and oxytetracycline hydrochloride must be reported as specified in the MRP

(Attachment E). When used as an immersion bath, the estimated effluent concentrations of oxytetracycline hydrochloride must be reported as specified in the MRP (Attachment E). The Lahontan Water Board will review this information, and other information, as it becomes available, and this Order may be reopened to establish effluent limitations based on additional use and toxicity information in accordance with the reopener provision in section 6.3.1.2 of this Order.

4.3.3.4.1.12. **Penicillin-G.** Penicillin G is an antibiotic used for the control of bacterial infections and is administered as a six to eight hour immersion bath treatment. Penicillin G is not approved under FDA's NADA program and its extra-label use in aquaculture requires a veterinarian's prescription. Due to the length of treatment time, the Lahontan Water Board considered the results of acute and chronic aquatic life toxicity testing conducted by the Discharger's Pesticide Unit when determining whether WQBELs for Penicillin G were necessary in this Order. Results of acute toxicity tests using *C. dubia* showed a 96-hour NOAEL of 890 mg/L. Results of seven-day chronic toxicity testing using *P. promelas* showed seven-day NOEC for survival of 350 mg/L. Based on the information available Penicillin G is discharged at levels well below the lowest NOEC and NOAEL at CAAP facilities. Therefore, the Lahontan Water Board determined that Penicillin G, when used in an immersion bath treatment, is not discharged at levels that cause, have the reasonable potential to cause, or contribute to an excursion of a narrative water quality objective for toxicity from the Basin Plan. Accordingly, this Order does not include effluent limitations for Penicillin G. However, the use and estimated effluent concentrations of Penicillin G must be reported as specified in the MRP (Attachment E). The Lahontan Water Board will review this information, and other information, as it becomes available, and this Order may be reopened to establish effluent limitations based on additional use and toxicity information in accordance with the reopener provision in section 6.3.1.2 of this Order.

4.3.3.4.1.13. **PVP Iodine.** PVP Iodine (Argentyne) is a solution composed of 10 percent PVP Iodine Complex and 90 percent inert ingredients. The FDA considers PVP Iodine an LRP drug for use in aquaculture. PVP Iodine is not currently used but may be used by the Discharger in the future as an egg disinfectant and fungicide. Because PVP Iodine typically is applied in short-term treatments of one hour or less, results of acute aquatic life toxicity testing conducted by the Discharger's Pesticide Unit were considered when determining whether WQBELs for PVP Iodine are necessary in this Order. Results of a single acute toxicity test with *C. dubia* showed a 96- hour NOAEL of 0.86 mg/L. This Order does not include WQBELs for PVP Iodine. However, use and monitoring of PVP Iodine must be reported as specified in the MRP (Attachment E). The Lahontan Water Board will review this information, and other information, as it becomes available, and this Order may be reopened to establish effluent limitations based on additional use

and toxicity information in accordance with the reopener provision in section 6.3.1.2 of this Order.

4.3.3.4.1.14. **SLICE.** The drug SLICE (Emamectin benzoate 0.2 percent Aquaculture premix) may be used by CAAP facilities to treat *Salmincola californiensis* (copepods) in finfish. SLICE must be used under an INAD exemption. SLICE is used in a manner that reduces the likelihood of direct discharge to waters of the United States or waters of the state, particularly when CAAP facilities implement BMPs as required by this Order. Medicated feed is prepared by coating SLICE Premix onto the surface of non-medicated fish feed pellets. Feeding occurs to ensure the food is consumed and then metabolized by the fish. This Order does not include WQBELs for SLICE; however, this Order requires reporting of this substance as specified in the MRP (Attachment E).

4.3.3.4.1.15. **Vibrio Vaccine and Enteric Redmouth Bacterin.** The Discharger has not used Vibrio vaccine or enteric redmouth bacterin but use may be required in the future to treat enteric redmouth disease. Enteric redmouth (or yersiniosis) bacterins are formulated from inactivated *Yersinia ruckeri* bacteria and are used as an immersion to help protect salmonid species from enteric redmouth disease caused by *Yersinia ruckeri*. These bacterins stimulate the fish's immune system to produce protective antibodies. Vibrio vaccine is used as an immersion and helps protect salmonid species from vibriosis disease caused by *Vibrio anguillarum* serotype I and *Vibrio ordalii*. Vibrio vaccine stimulates the fish's immune system to produce protective antibodies, helping the animal defend itself against vibriosis.

Vibrio vaccine and enteric redmouth bacterin are licensed for use by the U.S. Department of Agriculture's (USDA's) Center for Veterinary Biologics. According to USDA, most biologics leave no chemical residues in animals and most disease organisms do not develop resistance to the immune response by a veterinary biologic. Based upon available information regarding the use of these substances at CAAP facilities, the Lahontan Water Board does not believe that vibrio vaccine or enteric redmouth bacterins, when used according to label and veterinarian instructions, are discharged at levels that cause, have the reasonable potential to cause, or contribute to an excursion of Basin Plan narrative water quality objectives for toxicity. Accordingly, this Order does not include WQBELs for these substances. However, use of these substances must be reported as specified in the MRP (Attachment E).

4.3.3.4.2. **Constituents with Reasonable Potential**

4.3.3.4.2.1. **Formaldehyde (Formalin).** Formalin, a solution typically 37 percent by weight formaldehyde, (also known by the trade names FormalinF®, Paracide-F®, PARASITE-S®) is FDA-approved for use in CAAP facilities

for controlling external protozoa and monogenetic trematodes on fish, and for controlling fungi of the family *Saprolegniacae* in food-producing aquatic species. Formalin is used as a treatment for controlling external parasites in raceways where it would be discharged to surface waters. Formalin treatments are usually utilized as a batch or flush treatment which result in discharges between 3 and 8 hours. For control of other fungi, formalin may be used under an INAD exemption. Formalin can also be used as a "drip" treatment to control fungus on fish eggs at a concentration of 2,000 mg/L formalin, or less, for 15 minutes.

The Discharger did not report formalin use at the Facility during the term of Order R6V-2015-0034. Effluent formaldehyde data are not available to assess the impact of formalin use at the Facility. Therefore, the following information and calculations were used to estimate the effluent formaldehyde concentrations from flush treatments at Discharge Point 001, if formalin is used. The calculations assume the flow from the raceways mixes completely with the volume of water in the settling basin and is discharged with no further concentration, breakdown, or dilution of formaldehyde.

The hatchery has six raceways, with a total water flow rate through each raceway estimated at 4.45 cfs. The dilution volume of water from one raceway after 1.5 hours = (4.45 cfs) x (26,930 gallons/hour) x (1.5 hours) = 179,758 gallons (where 1 cfs = 26,930 gallons/hour). Accordingly, the dilution volume in all 6 raceways = 6 x (179,758 gallons) = 1,078,548 gallons.

As discussed in section 2.1 of this Fact Sheet, the two settling ponds are each estimated to be approximately 1,000 feet long x 10 feet long x 6 feet deep, or 60,000 cubic feet, or 448,831 gallons (where 1 cubic foot = 7.48052 gallons). The volume of both settling ponds, is therefore estimated to be 897,662 gallons.

The total dilution in the six raceways and two settling ponds = (1,078,548 gallons) + (897,662 gallons) = 1,976,210 gallons.

Total mass of formaldehyde applied in milligrams = (# raceways treated) x (treatment time in hours) x (raceway flow in cfs) x (26,930 gallons/hour) x (3.7854118 liters/gallon) x (formalin concentration in mg/L). Formalin can be used in a low dose (25 parts per million [ppm] formalin) or high dose (50-250 ppm). As the formalin solution is 37 percent formaldehyde, a 25 ppm dose would have a concentration of 9.25 mg/L formaldehyde, and a 250 ppm dose would have a concentration of 92.5 mg/L formaldehyde. The estimated concentrations for the low dose and high dose treatments, based on the number of raceways treated, are summarized in Tables F-11 and F-12.

Table F-11. Estimated Effluent Formalin Concentration (Low Dose Treatment)

Number of Raceways Treated with Formalin	Formalin Treatment Concentration, mg/L	Treatment Time in Hours	Total Mass of Formalin Applied, mg/L	Total Dilution Volume in Liters	Estimated Final Effluent Formalin, mg/L
1	9.25	1	33,569,217	7,480,763	4.49
2	9.25	1	67,138,435	7,480,763	8.97
3	9.25	1	100,707,652	7,480,763	13.46
4	9.25	1	134,276,869	7,480,763	17.95
5	9.25	1	167,846,087	7,480,763	22.44
6	9.25	1	201,415,304	7,480,763	26.92

Table F-12. Estimated Effluent Formaldehyde Concentration (High Dose Treatment)

Number of Raceways Treated with Formalin	Formalin Treatment Concentration, mg/L	Treatment Time in Hours	Total Mass of Formalin Applied, mg/L	Total Dilution Volume in Liters	Estimated Final Effluent Formalin, mg/L
1	92.5	1	335,692,173	7,480,763	44.87
2	92.5	1	671,384,347	7,480,763	89.75
3	92.5	1	1,007,076,520	7,480,763	134.62
4	92.5	1	1,342,768,693	7,480,763	179.50
5	92.5	1	1,678,460,866	7,480,763	224.37
6	92.5	1	2,014,153,040	7,480,763	269.24

The State Water Board, Division of Drinking Water (DDW) does not have a maximum contaminant level (MCL) for formaldehyde; however, the historic DDW Drinking Water Action Level is listed as 0.1 mg/L based on calculation by standard risk assessment methods, with a Modifying Factor equal to ten. The U.S. EPA Integrated Risk Information System (IRIS) lists a reference

dose of 1.4 mg/L as a drinking water level. There are no recommended criteria for formaldehyde for the protection of aquatic life.

The Discharger's Pesticide Unit conducted biotoxicity studies to determine the aquatic toxicity of formalin using *P. promelas* and *C. dubia*. A summary of the data submitted follows:

Table F-13. Aquatic Toxicity of Formalin[1]

Species	7-day LC50, mg/L	LOEC, mg/L	NOEC, mg/L	LOAEL, mg/L	NOAEL, mg/L
C. dubia	2.43	5.8 (survival) 1.3 (reproduction)	1.3 (survival) <1.3 (reproduction)	5.8	1.3
P. promelas	23.3	9.09	2.28	--	--
S. capricornutum	<5.2	--	--	--	--

Table F-13 Notes:

1. From the Discharger's laboratory report no. P-2251.1, dated June 30, 2001. Results as formaldehyde. Divide by 0.37 to obtain equivalent formalin concentration.

Since formalin treatments are usually utilized as a batch of flush treatment which result in discharges from three to eight hours, short term tests were conducted with *C. dubia*, exposing the organisms for 2-hour and 8-hour periods, removing them from the chemical, and continuing the observation period for seven days in clean water. The results were as follows:

Table F-14. Short-Term Aquatic Toxicity of Formalin[1]

Species	7-day LC50, mg/L	LOAEL, mg/L	NOAEL, mg/L
C. dubia – 2-hour exposure	73.65	46.3	20.7
C. dubia – 8-hour exposure	13.99	15.3	6.7

Table F-14 Notes:

1. From the Discharger's laboratory report no. P-2251.1, dated June 30, 2001. Results as formaldehyde. Divide by 0.37 to obtain equivalent formalin concentration.

Results of both acute and chronic aquatic life toxicity testing conducted by the Discharger's Pesticide Unit and the Basin Plan narrative toxicity objective were considered when determining whether WQBELs for formalin as formaldehyde were necessary. Results of seven-day chronic toxicity tests indicated *C. dubia* was the most sensitive species, with a seven-day NOEC value of 1.3 mg/L formaldehyde for survival and less than 1.3 mg/L for reproduction (the Lahontan Water Board used an NOEC of 1.3 mg/L). Acute toxicity tests conducted using *C. dubia* showed a 96- hour NOAEL of 1.3 mg/L formaldehyde. The additional acute toxicity tests with *C. dubia*, conducted using only an eight-hour exposure, resulted in a 96-hour NOAEL concentration of 6.7 mg/L formaldehyde.

The Lahontan Water Board has determined that if formalin is used, formaldehyde may be discharged at levels that cause, have the reasonable potential to cause, or contribute to an excursion of the Basin Plan narrative water quality objective. Accordingly, this Order includes WQBELs for formaldehyde. Although formaldehyde treatments are short in duration, exposure to formaldehyde in the receiving water as a result of discharges from the Facility may be long-term due to retention time in the settling pond and potential application procedures (e.g., successive raceway treatments, drip treatments for eggs). Therefore, an AMEL of 0.65 mg/L and a maximum daily effluent limitation (MDEL) of 1.3 mg/L are calculated based on the 96-hour NOAEL value and using the procedure in U.S. EPA's March 1991 Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) (TSD) for calculating WQBELs as described in section 4.3.4 of this Fact Sheet. These effluent limitations have been retained from Order R6V-2015-0034. Use and monitoring of formaldehyde must be reported as specified in the MRP (Attachment E).

4.3.3.4.2.2. **Hydrogen Peroxide.** Hydrogen peroxide (35 percent H_2O_2) is used at the Facility for the control of external parasites as a raceway flush treatment at a concentration of 100 mg/L or less, for one hour. FDA approved hydrogen peroxide to control fungi on fish at all life stages, including eggs. Hydrogen peroxide may also be used to control bacterial gill disease in salmonids, and, through an INAD, external parasites. Hydrogen peroxide is a strong oxidizer that rapidly breaks down into water and oxygen; however, it exhibits toxicity to aquatic life during the oxidation process.

The Lahontan Water Board considered the results of acute aquatic life toxicity testing conducted by the Discharger's Pesticide Unit when determining whether WQBELs for hydrogen peroxide were necessary in this Order. Results of an acute toxicity test using *C. dubia* showed a

96-hour NOAEL of 1.3 mg/L based on continual constant exposure to hydrogen peroxide. When exposed to hydrogen peroxide for two hours followed by a triple lab water flush and normal test completion, *C. dubia* showed a 96-hour NOEC of 2 mg/L.

Effluent hydrogen peroxide data are not available to assess the impact of hydrogen peroxide used at the Facility. Therefore, the following information and calculations were used to estimate the effluent hydrogen peroxide concentrations from flush treatments at Discharge Point 001. The calculations assume the flow from the raceways mixes completely with the volume of water in the settling basin and is discharged with no further concentration, breakdown, or dilution of hydrogen peroxide.

The hatchery has six raceways, with a total water flow rate through each raceway estimated at 4.45 cfs. Assuming a retention time of 1 hour, the dilution volume of water from one raceway after 1 hour = (4.45 cfs) x (26,930 gallons/hour) x (1 hour) = 119,839 gallons (where 1 cfs = 26,930 gallons/hour). Accordingly, the dilution volume in all 6 raceways = 6 x (119,839 gallons) = 719,031 gallons.

As discussed in section 2.1 of this Fact Sheet, the two settling ponds are each estimated to be approximately 1,000 feet long x 10 feet long x 6 feet deep, or 60,000 cubic feet, or 448,831 gallons (where 1 cubic foot = 7.48052 gallons). The volume of both settling ponds, is therefore estimated to be 897,662 gallons.

The total dilution in the six raceways and two settling ponds = (719,031 gallons) + (897,662 gallons) = 1,616,693 gallons.

Flow and volume calculations use the total dilution volume of a 1-hour treatment at 1,616,693 gallons, or 6,119,849 liters (1 gallon = 3.7854118 liters).

Total mass of hydrogen peroxide applied in milligrams = (# raceways treated) x (treatment time in hours) x (raceway flow in cfs) x (26,930 gallons/hour) x (3.7854118 liters/gallon) x (hydrogen peroxide concentration in mg/L). The estimated concentrations, based on the number of raceways treated, are summarized in Table F-15.

Table F-15. Estimated Effluent Hydrogen Peroxide Concentration

Number of Raceways Treated with H_2O_2	H_2O_2 Treatment Concentration, mg/L	Treatment Time in Hours	Total Mass of H_2O_2 Applied, mg/L	Total Dilution Volume in Liters	Estimated Final Effluent H_2O_2, mg/L
1	100	1	15,877,333	6,119,849	2.59
2	100	1	31,754,665	6,119,849	5.19
3	100	1	47,631,998	6,119,849	7.78
4	100	1	63,509,330	6,119,849	10.38
5	100	1	79,386,663	6,119,849	12.97
6	100	1	95,263,995	6,119,849	15.57

The Lahontan Water Board has determined, based on the available toxicity testing data and the estimated concentrations, that hydrogen peroxide may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion of the Basin Plan narrative water quality objective. Accordingly, this Order includes WQBELs for hydrogen peroxide. The actual effluent concentrations are likely to be lower, as the calculations assume no breakdown of hydrogen peroxide. Because hydrogen peroxide is a strong oxidizer, concentrations are unlikely to persist for long periods, therefore, a MDEL of 1.3 mg/L is calculated based on the 96-hour NOAEL value and using the procedure in U.S. EPA's TSD for calculating WQBELs as described in section 4.3.4 of this Fact Sheet. This effluent limit is consistent with the limit established in Order R6V-2015-0034. Use and monitoring of hydrogen peroxide must be reported, as specified, in the MRP (Attachment E).

4.3.3.4.2.3. **Nitrate (as N) and Total Nitrogen (as N).** As discussed in section 4.3.3.4.1.1 of this Fact Sheet, the maximum annual average concentration for nitrate (as N) was 0.7 mg/L based on 23 samples collected between August 2015 and April 2021, which exceeds the Basin Plan objective from Table 3-21 of 0.6 mg/L as an annual average. Annual average influent concentrations, representative of upstream conditions in Fish Springs Creek, ranged from 0.5 mg/L to 0.7 mg/L based on 23 samples collected over the same time period. The maximum annual average concentration for total nitrogen (as N) was 1.0 mg/L based on 23 samples collected between August 2015 and April 2021, which exceeds

the Basin Plan objective from Table 3-21 of 0.9 mg/L as an annual average. Annual average influent concentrations, representative of upstream conditions in Fish Springs Creek, ranged from 0.5 mg/L to 1.2 mg/L based on 23 samples collected over the same dates. Based on the effluent nitrate and total nitrogen concentrations, the Lahontan Water Board finds that the discharge has reasonable potential to cause or contribute to exceedances of the water quality objectives and effluent limitations are required. As discussed further in section 4.3.4.2.1 of this Fact Sheet, this Order retains effluent limits from Order R6V-2015-0034 for nitrate and total nitrogen, which allow for intake credits, because the discharger has no control over the influent supply water.

4.3.3.4.2.4. **pH.** The Basin Plan includes a water quality objective for pH, which states:

> *"In fresh waters with designated beneficial uses of COLD or WARM, changes in ambient pH levels shall not exceed 0.5 pH units. For all other waters of the Region, the pH shall not be depressed below 6.5 nor raised above 8.5. The Regional Board recognizes that some waters of the Region may have natural pH levels outside of the 6.5 to 8.5 range. Compliance with the pH objective for these waters will be determined on a case-by-case basis."*

Order R6V-2015-0034 contained effluent limitations for pH, requiring the discharge to have a pH of not less than 6.5 pH units nor greater than 8.5 pH units. The Basin Plan's pH objective is an antidegradation-based objective which requires that there be no change greater than 0.5 pH standard units in waters designated for the COLD and WARM beneficial uses. In the 24 influent measurements collected by the Discharger between August 2015 and April 2021, the pH of the influent groundwater (representative of the upstream receiving water quality) naturally ranged from 6.7 to 8.0 standard units. Based on the Basin Plan objective, this Order establishes effluent limitations for pH not to be depressed below 6.5 standard units nor raised above 8.5 standard units. Additionally, requiring the effluent pH to be substantially less than naturally occurring background levels may result in adverse impacts to local fauna. Therefore, this Order includes effluent limitations for pH based on the site-specific water quality objectives established in the Basin Plan. The case-by-case basis in the Basin Plan is stated as a sampling event by sampling event basis in this Order. In instances where the pH of the influent groundwater exceeds 8.5, this Order specifies that the pH of the effluent at the discharge point shall not exceed the pH of the groundwater by more than 0.5 standard units. Similarly, when the pH of the groundwater is less than 6.5, then the pH of the effluent at the corresponding discharge point shall not be less than the pH of the groundwater by more than 0.5 standard units.

4.3.3.4.2.5. **Potassium Permanganate.** Potassium permanganate (also known by the trade name of Cairox™) is used at the Facility to control gill disease, bacteria, and parasites. Potassium permanganate has a low estimated lifetime in the environment, being readily converted by oxidizable materials to insoluble manganese dioxide (MnO_2). In nonreducing and nonacidic environments, MnO_2 is insoluble and has a very low bioaccumulative potential. In addition, potassium permanganate is rapidly converted to insoluble manganese dioxide under hatchery conditions. Potassium permanganate is a special category drug the FDA calls "regulatory action deferred."

Results of acute toxicity tests conducted by the Discharger's Pesticide Unit using *C. dubia* showed a 96-hour NOEC of 0.038 mg/L and a two-hour NOEC of 0.1975 mg/L, respectively, for potassium permanganate.

Potassium permanganate is used at the Facility as a flush or bath treatment of 2 mg/L or less for one hour. The following information and calculations were used to determine the estimated effluent potassium permanganate concentration from flush treatments at Discharge Point 001. The calculations assume the flow from the raceways mixes completely with the volume of water in the settling basin and is discharged with no further concentration, breakdown, or dilution of potassium permanganate.

Estimated Concentration When Applied in Raceways

The hatchery has six raceways, with a total water flow rate through each raceway estimated at 4.45 cfs. A pilot test to determine chemical retention time was conducted at the Facility and found it required approximately 1.5 hours for sodium chloride to run through an entire raceway. Assuming a retention time for potassium permanganate is similar to sodium chloride, the dilution volume of water from one raceway after 1.5 hours = (4.45 cfs) x (26,930 gallons/hour) x (1.5 hours) = 179,758 gallons (where 1 cfs = 26,930 gallons/hour). Accordingly, the dilution volume in all 6 raceways = 6 x (179,758 gallons) = 1,078,548 gallons.

As discussed in section 2.1 of this Fact Sheet, the two settling ponds are each estimated to be approximately 1,000 feet long x 10 feet long x 6 feet deep, or 60,000 cubic feet, or 448,831 gallons (where 1 cubic foot = 7.48052 gallons). The volume of both settling ponds, is therefore estimated to be 897,662 gallons.

The total dilution in the six raceways and two settling ponds = (1,078,548 gallons) + (897,662 gallons) = 1,976,210 gallons.

Total mass of potassium permanganate applied in milligrams = (# raceways treated) x (treatment time in hours) x (raceway flow in cfs) x

(26,930 gallons/hour) x (3.7854118 liters/gallon) x (potassium permanganate concentration in mg/L). The estimated concentrations, based on the number of raceways treated, and an assumed treatment time of 1 hour, are summarized in Table F-16.

Table F-16. Estimated Effluent Potassium Permanganate Concentration

Number of Raceways Treated with $KMnO_4$	$KMnO_4$ Treatment Concentration, mg/L	Treatment Time in Hours	Total Mass of $KMnO_4$ Applied, mg	Total Dilution Volume in Liters	Estimated Final Effluent $KMnO_4$, mg/L
1	2	1	907,276	7,480,763	0.121
2	2	1	1,814,552	7,480,763	0.243
3	2	1	2,721,828	7,480,763	0.364
4	2	1	3,629,105	7,480,763	0.485
5	2	1	4,536,381	7,480,763	0.606
6	2	1	5,443,657	7,480,763	0.728

The estimated final effluent concentration of potassium permanganate at Discharge Point 001 is 0.121 mg/L if one raceway is treated and 0.728 mg/L if six raceways are treated. As shown in the table above, the use of potassium permanganate could lead to an exceedance of the maximum daily water quality objective of 0.197 mg/L. Actual concentrations are likely to be lower as the calculations assumed no breakdown of potassium permanganate.

The Lahontan Water Board has determined, based on the available toxicity testing data and the estimated concentrations, that potassium permanganate may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion of the Basin Plan narrative water quality objective. Accordingly, this Order includes WQBELs for potassium permanganate. An AMEL of 0.098 mg/L and a MDEL of 0.197 mg/L are calculated based on the 2-hour NOEC value for *C. dubia* and using the procedure in U.S. EPA's TSD for calculating WQBELs as described in section 4.3.4 of this Fact Sheet. The Lahontan Water Board has determined that it is appropriate to use the 2-hour NOEC instead of the 96-hour NOAEL to calculate appropriate effluent limitations because the Discharger applies potassium permanganate for a one-hour period with a peristaltic pump.

These effluent limitations are more stringent than those established in Order R6V-2015-0034. Previously the AMEL was 0.12 mg/L and the MDEL was 0.25 mg/L. Use and monitoring of potassium permanganate must be reported, as specified, in the MRP (Attachment E).

4.3.3.4.2.6. **Settleable Solids.** The Basin Plan includes a water quality objective for surface waters that "*waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or that adversely affects the water for beneficial uses. For natural high quality waters, the concentration of settleable materials shall not be raised by more than 0.1 milliliter per liter*." Order R6V-2015-0034 contained an effluent limitation for settleable solids of 0.1 ml/L as an AMEL. The Lahontan Water Board has retained the numeric effluent limitation for settleable solids for the Facility in order to prevent an in-stream excursion above the water quality standard.

4.3.3.4.2.7. **Total Dissolved Solids (TDS).** Sodium chloride (salt) is used at the Facility raceways as a fish-cleansing agent to control the spread of fish disease and to reduce stress among the confined fish population. The relationship of TDS, chloride ion, and conductivity is discussed in section 4.3.3.4.1.5 of this Fact Sheet. As discussed in section 4.3.3.4.1.1 of this Fact Sheet, the maximum annual average concentration for TDS was 232 mg/L based on 23 samples collected between August 2015 and May 2021, which exceeds the Basin Plan objective from Table 3-21 of 207 mg/L as an annual average. Annual average influent concentrations, representative of

upstream conditions in Fish Springs Creek, ranged from 183 mg/L to 235 mg/L based on 23 samples collected over the same time period. Based on the effluent TDS concentration, the Lahontan Water Board finds that the discharge has reasonable potential to cause or contribute to an exceedance of the water quality objective and an effluent limitation is required. As discussed further in section 4.3.4.2.1 of this Fact Sheet, this Order retains the effluent limit from Order R6V-2015-0034 for TDS, which allows for intake credits, because the discharger has no control over the influent supply water TDS.

4.3.4. **WQBEL Calculations**

4.3.4.1. **Pollutants That Did Not Demonstrate Reasonable Potential**

WQBELs are not included in this Order for constituents that do not demonstrate reasonable potential or where it was undetermined whether WQBELs were necessary (e.g., where the reported detection levels are higher than the applicable criteria/objectives). However, monitoring during the term of this Order for those pollutants is required in accordance with section 1.3 of the SIP. If concentrations of these constituents are found to have increased significantly, the Discharger will be required to investigate the sources of the increases. Remedial measures are required if the increases pose a threat to receiving water quality.

4.3.4.2. **Pollutants with Reasonable Potential**

This Order includes WQBELs for nitrate, total nitrogen, formaldehyde, hydrogen peroxide, pH, potassium permanganate, settleable solids, and TDS for discharges from Discharge Point 001. WQBELs for nitrate, total nitrogen, TDS, formaldehyde, hydrogen peroxide, and potassium permanganate were calculated based on the water quality objectives and procedures described below. For WQBELs based on Basin Plan objectives, (i.e., pH and settleable solids), the objectives are applied directly as effluent limitations.

4.3.4.2.1. **Nitrate and TDS**

4.3.4.2.1.1. **SIP Intake Water Credit Requirements.** SIP section 1.4.4 provides for intake water credits under specific circumstances. When met, a discharger may discharge a mass or concentration of a pollutant that is no greater than the mass or concentration found in its intake water (e.g., the discharger may add a mass of the pollutant to its waste stream if it also removes an equal or greater mass prior to discharge, resulting in no net addition of the pollutant). This Order provides intake water credits for nitrate, total nitrogen, and TDS discharges from Discharge Point 001, which comply with the SIP requirements.

In accordance with section 1.4.4 of the SIP, the Lahontan Water Board may consider pollutants in intake water on a pollutant-by-pollutant and discharge by-discharge basis when establishing WQBELs provided that the Discharger has demonstrated to the satisfaction of the Lahontan Water Board that five specified conditions are met.

The Discharger submitted information as detailed in section 1.4.4 of the SIP demonstrating that the required conditions are met for intake water credits. As the SIP conditions were met, the Lahontan Water Board evaluated effluent limitations based on the 99th percentile value representing the upper range of the variability between intake and effluent pollutant concentrations, not to exceed the maximum observed intake concentration, due to sampling and analysis variability. Existing instantaneous maximum limitations from Order R6V-2015-0034 for TDS, nitrate, and total nitrogen, which establish numeric effluent limitations not to exceed influent supply water concentrations, were determined to be more stringent than those calculated, and so have been retained in this Order.

Condition 1. The observed maximum ambient background concentration, as determined in section 1.4.3.1 of the SIP, and the intake water concentration of the pollutant exceeds the most stringent applicable criterion/objective for that pollutant.

Table F-17 summarizes self-monitoring report data describing the influent and effluent supply water quality. The table includes influent data for TDS collected at the Facility between June 1996 and May 2021, effluent data for TDS collected at the Facility between February 2000 and May 2021, and influent and effluent data for nitrate and total nitrogen collected at the Facility between February 2000 and April 2021.

Table F-17. Comparison of Influent and Effluent Pollutant Concentrations to Applicable Water Quality Objectives

Parameter	Sample Date	Reported Influent Concentration (µg/L)	Reported Effluent Concentration (µg/L)	Most Stringent Objective (µg/L)
Total Dissolved Solids (TDS)	6/30/1996	268	--	207
TDS	9/30/1996	262	--	207
TDS	12/2/1996	291	--	207
TDS	3/10/1997	236	--	207
TDS	6/2/1997	271	--	207
TDS	9/8/1997	275	--	207
TDS	12/1/1997	267	--	207
TDS	3/31/1998	268	--	207

Parameter	Sample Date	Reported Influent Concentration (µg/L)	Reported Effluent Concentration (µg/L)	Most Stringent Objective (µg/L)
TDS	5/18/1998	280	--	207
TDS	9/14/1998	246	--	207
TDS	12/7/1998	248	--	207
TDS	3/22/1999	248	--	207
TDS	5/3/1999	230	--	207
TDS	9/13/1999	210	--	207
TDS	12/27/1999	244	--	207
TDS	2/16/2000	225	226	207
TDS	2/16/2000	232	224	207
TDS	5/22/2000	224	226	207
TDS	5/22/2000	230	221	207
TDS	8/8/2000	236	234	207
TDS	8/8/2000	238	219	207
TDS	10/13/2000	198	190	207
TDS	10/13/2000	198	190	207
TDS	2/20/2001	216	208	207
TDS	2/20/2001	211	207	207
TDS	5/21/2001	233	189	207
TDS	5/21/2001	232	188	207
TDS	8/13/2001	219	210	207
TDS	8/13/2001	217	207	207
TDS	10/1/2001	210	214	207
TDS	10/1/2001	213	209	207
TDS	1/7/2002	229	231	207
TDS	1/7/2002	232	224	207
TDS	4/29/2002	220	215	207
TDS	4/29/2002	218	211	207
TDS	7/15/2002	230	209	207
TDS	7/15/2002	211	202	207
TDS	11/4/2002	225	216	207
TDS	11/4/2002	218	208	207
TDS	2/3/2003	216	209	207
TDS	2/3/2003	215	208	207
TDS	5/12/2003	234	214	207
TDS	5/12/2003	224	212	207
TDS	9/22/2003	240	231	207
TDS	9/22/2003	241	227	207
TDS	12/8/2003	236	229	207
TDS	12/8/2003	237	226	207
TDS	2/23/2004	223	223	207

Parameter	Sample Date	Reported Influent Concentration (µg/L)	Reported Effluent Concentration (µg/L)	Most Stringent Objective (µg/L)
TDS	2/23/2004	222	222	207
TDS	6/28/2004	250	230	207
TDS	6/28/2004	236	230	207
TDS	8/30/2004	234	226	207
TDS	8/30/2004	236	220	207
TDS	12/6/2004	234	230	207
TDS	12/6/2004	238	228	207
TDS	2/22/2005	240	230	207
TDS	2/22/2005	242	230	207
TDS	5/16/2005	243	240	207
TDS	5/16/2005	240	233	207
TDS	8/29/2005	238	221	207
TDS	8/29/2005	226	217	207
TDS	11/14/2005	255	241	207
TDS	11/14/2005	262	222	207
TDS	2/27/2006	251	236	207
TDS	2/27/2006	256	234	207
TDS	6/11/2006	189	257	207
TDS	6/11/2006	242	230	207
TDS	8/2/2006	--	211	207
TDS	8/14/2006*	--	192	207
TDS	10/1/2006	--	201	207
TDS	1/22/2007	--	207	207
TDS	6/4/2007	--	204	207
TDS	7/9/2007	--	200	207
TDS	10/15/2007	--	203	207
TDS	1/14/2008	--	199	207
TDS	4/7/2008	--	236	207
TDS	7/7/2008	--	203	207
TDS	10/6/2008	--	201	207
TDS	1/5/2009	--	202	207
TDS	4/6/2009	--	195	207
TDS	7/6/2009	--	212	207
TDS	10/5/2009	--	202	207
TDS	2/1/2010	--	207	207
TDS	5/3/2010	--	199	207
TDS	11/1/2010	--	213	207
TDS	2/7/2011	224	214	207
TDS	4/4/2011	221	211	207
TDS	7/11/2011	--	211	207

Parameter	Sample Date	Reported Influent Concentration (µg/L)	Reported Effluent Concentration (µg/L)	Most Stringent Objective (µg/L)
TDS	10/4/2011	--	203	207
TDS	1/9/2012	--	201	207
TDS	4/2/2012	--	208	207
TDS	7/9/2012	--	220	207
TDS	10/1/2012	220	223	207
TDS	1/7/2013	230	219	207
TDS	4/8/2013	--	219	207
TDS	7/8/2013	196	236	207
TDS	10/7/2013	--	482	207
TDS	11/4/2013	233	--	207
TDS	1/6/2014	227	--	207
TDS	8/10/2015	208	229	207
TDS	10/5/2015	236	234	207
TDS	1/4/2016	223	228	207
TDS	4/4/2016	227	219	207
TDS	7/11/2016	219	67	207
TDS	10/3/2016	269	205	207
TDS	2/13/2017	240	235	207
TDS	4/3/2017	247.5	239	207
TDS	7/10/2017	222	212	207
TDS	10/2/2017	207	220	207
TDS	1/8/2018	200	212	207
TDS	4/2/2018	226	213	207
TDS	7/9/2018	205.5	191	207
TDS	10/1/2018	190.5	208	207
TDS	1/7/2019	225.5	213	207
TDS	4/8/2019	178.5	208	207
TDS	7/8/2019	184	208	207
TDS	10/7/2019	194.5	194	207
TDS	1/6/2020	182	209	207
TDS	6/1/2020	174	179	207
TDS	7/6/2020	206	197	207
TDS	2/16/2021	186.5	183	207
TDS	5/3/2021	179	185	207
Nitrate, Total (as N)	2/16/2000	0.600	0.6	0.6
Nitrate, Total (as N)	2/16/2000	0.600	0.6	0.6
Nitrate, Total (as N)	5/22/2000	0.630	0.6	0.6
Nitrate, Total (as N)	5/22/2000	0.630	0.6	0.6
Nitrate, Total (as N)	8/8/2000	0.650	0.6	0.6
Nitrate, Total (as N)	8/8/2000	0.650	0.6	0.6

Parameter	Sample Date	Reported Influent Concentration (µg/L)	Reported Effluent Concentration (µg/L)	Most Stringent Objective (µg/L)
Nitrate, Total (as N)	10/13/2000	0.620	0.6	0.6
Nitrate, Total (as N)	10/13/2000	0.620	0.6	0.6
Nitrate, Total (as N)	2/20/2001	0.620	0.6	0.6
Nitrate, Total (as N)	2/20/2001	0.640	0.6	0.6
Nitrate, Total (as N)	5/21/2001	0.630	0.6	0.6
Nitrate, Total (as N)	5/21/2001	0.630	0.6	0.6
Nitrate, Total (as N)	8/13/2001	0.640	0.7	0.6
Nitrate, Total (as N)	8/13/2001	0.660	0.7	0.6
Nitrate, Total (as N)	10/1/2001	0.670	0.7	0.6
Nitrate, Total (as N)	10/1/2001	0.670	0.7	0.6
Nitrate, Total (as N)	1/7/2002	0.720	0.7	0.6
Nitrate, Total (as N)	1/7/2002	0.720	0.7	0.6
Nitrate, Total (as N)	4/29/2002	0.860	0.9	0.6
Nitrate, Total (as N)	4/29/2002	0.930	0.9	0.6
Nitrate, Total (as N)	7/15/2002	0.590	0.7	0.6
Nitrate, Total (as N)	7/15/2002	0.600	0.7	0.6
Nitrate, Total (as N)	11/4/2002	0.778	0.8	0.6
Nitrate, Total (as N)	11/4/2002	0.791	0.8	0.6
Nitrate, Total (as N)	2/3/2003	0.730	0.8	0.6
Nitrate, Total (as N)	2/3/2003	0.750	0.8	0.6
Nitrate, Total (as N)	5/12/2003	0.780	0.8	0.6
Nitrate, Total (as N)	5/12/2003	0.756	0.8	0.6
Nitrate, Total (as N)	9/22/2003	0.770	0.8	0.6
Nitrate, Total (as N)	9/22/2003	0.740	0.8	0.6
Nitrate, Total (as N)	12/8/2003	0.760	0.8	0.6
Nitrate, Total (as N)	12/8/2003	0.730	0.8	0.6
Nitrate, Total (as N)	2/23/2004	0.874	0.8	0.6
Nitrate, Total (as N)	2/23/2004	0.888	0.8	0.6
Nitrate, Total (as N)	6/28/2004	0.740	0.7	0.6
Nitrate, Total (as N)	6/28/2004	0.758	0.7	0.6
Nitrate, Total (as N)	8/30/2004	0.740	0.7	0.6
Nitrate, Total (as N)	8/30/2004	0.740	0.7	0.6
Nitrate, Total (as N)	12/6/2004	0.746	0.8	0.6
Nitrate, Total (as N)	12/6/2004	0.743	0.7	0.6
Nitrate, Total (as N)	2/22/2005	0.798	0.8	0.6
Nitrate, Total (as N)	2/22/2005	0.79	0.8	0.6
Nitrate, Total (as N)	5/16/2005	0.856	0.8	0.6
Nitrate, Total (as N)	5/16/2005	0.864	0.8	0.6
Nitrate, Total (as N)	8/29/2005	0.852	0.8	0.6
Nitrate, Total (as N)	8/29/2005	0.904	0.8	0.6

Parameter	Sample Date	Reported Influent Concentration (µg/L)	Reported Effluent Concentration (µg/L)	Most Stringent Objective (µg/L)
Nitrate, Total (as N)	11/14/2005	0.864	0.0	0.6
Nitrate, Total (as N)	11/14/2005	0.862	0.9	0.6
Nitrate, Total (as N)	2/27/2006	0.892	0.9	0.6
Nitrate, Total (as N)	2/27/2006	0.892	0.9	0.6
Nitrate, Total (as N)	6/11/2006	0.986	0.9	0.6
Nitrate, Total (as N)	6/11/2006	0.802	0.9	0.6
Nitrate, Total (as N)	8/2/2006	--	0.9	0.6
Nitrate, Total (as N)	8/14/2006*	--	0.8	0.6
Nitrate, Total (as N)	10/1/2006	--	0.7	0.6
Nitrate, Total (as N)	1/22/2007	--	0.8	0.6
Nitrate, Total (as N)	6/4/2007	--	0.0	0.6
Nitrate, Total (as N)	7/9/2007	--	0.0	0.6
Nitrate, Total (as N)	10/15/2007	--	0.7	0.6
Nitrate, Total (as N)	1/14/2008	--	0.7	0.6
Nitrate, Total (as N)	4/7/2008	--	0.7	0.6
Nitrate, Total (as N)	7/7/2008	--	0.7	0.6
Nitrate, Total (as N)	10/6/2008	--	0.7	0.6
Nitrate, Total (as N)	1/5/2009	--	0.8	0.6
Nitrate, Total (as N)	4/6/2009	--	0.9	0.6
Nitrate, Total (as N)	7/6/2009	--	0.9	0.6
Nitrate, Total (as N)	10/5/2009	--	0.9	0.6
Nitrate, Total (as N)	2/1/2010	--	0.9	0.6
Nitrate, Total (as N)	4/5/2010	--	0.9	0.6
Nitrate, Total (as N)	11/1/2010	--	0.9	0.6
Nitrate, Total (as N)	2/7/2011	0.961	0.9	0.6
Nitrate, Total (as N)	4/4/2011	0.832	0.8	0.6
Nitrate, Total (as N)	7/11/2011	--	0.9	0.6
Nitrate, Total (as N)	10/4/2011	--	0.8	0.6
Nitrate, Total (as N)	1/9/2012	--	0.9	0.6
Nitrate, Total (as N)	4/2/2012	--	0.8	0.6
Nitrate, Total (as N)	7/9/2012	--	0.7	0.6
Nitrate, Total (as N)	10/1/2012	0.747	0.7	0.6
Nitrate, Total (as N)	1/7/2013	0.688	0.7	0.6
Nitrate, Total (as N)	4/8/2013	--	0.7	0.6
Nitrate, Total (as N)	7/8/2013	0.922	0.7	0.6
Nitrate, Total (as N)	10/7/2013	--	0.8	0.6
Nitrate, Total (as N)	11/4/2013	0.685	--	0.6
Nitrate, Total (as N)	1/6/2014	0.758	--	0.6
Nitrate, Total (as N)	8/10/2015	0.664	0.643	0.6
Nitrate, Total (as N)	10/5/2015	0.642	0.678	0.6

Parameter	Sample Date	Reported Influent Concentration (µg/L)	Reported Effluent Concentration (µg/L)	Most Stringent Objective (µg/L)
Nitrate, Total (as N)	1/4/2016	0.739	0.727	0.6
Nitrate, Total (as N)	4/4/2016	0.732	0.649	0.6
Nitrate, Total (as N)	7/11/2016	0.65	0.641	0.6
Nitrate, Total (as N)	10/3/2016	0.466	0.708	0.6
Nitrate, Total (as N)	2/13/2017	0.642	0.663	0.6
Nitrate, Total (as N)	4/3/2017	0.572	0.61	0.6
Nitrate, Total (as N)	7/10/2017	0.539	0.553	0.6
Nitrate, Total (as N)	10/2/2017	0.623	0.519	0.6
Nitrate, Total (as N)	1/8/2018	0.66	0.707	0.6
Nitrate, Total (as N)	4/2/2018	0.5115	0.648	0.6
Nitrate, Total (as N)	7/9/2018	0.419	0.577	0.6
Nitrate, Total (as N)	10/1/2018	0.523	0.402	0.6
Nitrate, Total (as N)	1/7/2019	0.4855	0.462	0.6
Nitrate, Total (as N)	4/8/2019	0.5115	0.45	0.6
Nitrate, Total (as N)	7/8/2019	0.5765	0.487	0.6
Nitrate, Total (as N)	10/7/2019	0.5085	0.509	0.6
Nitrate, Total (as N)	1/6/2020	0.642	0.572	0.6
Nitrate, Total (as N)	6/15/2020	0.57	0.494	0.6
Nitrate, Total (as N)	7/6/2020	0.5045	0.492	0.6
Nitrate, Total (as N)	2/16/2021	0.5215	0.662	0.6
Nitrate, Total (as N)	4/12/2021	0.4895	0.619	0.6
Nitrogen, Total (as N)	2/16/2000	<RL	<RL	0.9
Nitrogen, Total (as N)	2/16/2000	<RL	<RL	0.9
Nitrogen, Total (as N)	5/22/2000	<RL	<RL	0.9
Nitrogen, Total (as N)	5/22/2000	<RL	<RL	0.9
Nitrogen, Total (as N)	8/8/2000	<RL	<RL	0.9
Nitrogen, Total (as N)	8/8/2000	<RL	<RL	0.9
Nitrogen, Total (as N)	10/13/2000	<RL	<RL	0.9
Nitrogen, Total (as N)	10/13/2000	<RL	<RL	0.9
Nitrogen, Total (as N)	2/20/2001	<RL	<RL	0.9
Nitrogen, Total (as N)	2/20/2001	<RL	<RL	0.9
Nitrogen, Total (as N)	5/21/2001	<RL	<RL	0.9
Nitrogen, Total (as N)	5/21/2001	<RL	<RL	0.9
Nitrogen, Total (as N)	8/13/2001	<RL	<RL	0.9
Nitrogen, Total (as N)	8/13/2001	<RL	<RL	0.9
Nitrogen, Total (as N)	10/1/2001	<RL	<RL	0.9
Nitrogen, Total (as N)	10/1/2001	<RL	<RL	0.9
Nitrogen, Total (as N)	1/7/2002	<RL	<RL	0.9
Nitrogen, Total (as N)	1/7/2002	<RL	<RL	0.9
Nitrogen, Total (as N)	4/29/2002	<RL	<RL	0.9

Parameter	Sample Date	Reported Influent Concentration (µg/L)	Reported Effluent Concentration (µg/L)	Most Stringent Objective (µg/L)
Nitrogen, Total (as N)	4/29/2002	<RL	0.6	0.9
Nitrogen, Total (as N)	7/15/2002	0.62	<RL	0.9
Nitrogen, Total (as N)	7/15/2002	<RL	<RL	0.9
Nitrogen, Total (as N)	11/4/2002	<RL	<RL	0.9
Nitrogen, Total (as N)	11/4/2002	<RL	<RL	0.9
Nitrogen, Total (as N)	2/3/2003	<RL	<RL	0.9
Nitrogen, Total (as N)	2/3/2003	<RL	<RL	0.9
Nitrogen, Total (as N)	5/12/2003	<RL	<RL	0.9
Nitrogen, Total (as N)	5/12/2003	<RL	<RL	0.9
Nitrogen, Total (as N)	9/22/2003	<RL	<RL	0.9
Nitrogen, Total (as N)	9/22/2003	<RL	0.2	0.9
Nitrogen, Total (as N)	12/8/2003	<RL	<RL	0.9
Nitrogen, Total (as N)	12/8/2003	<RL	0.3	0.9
Nitrogen, Total (as N)	2/23/2004	<RL	<RL	0.9
Nitrogen, Total (as N)	2/23/2004	<RL	<RL	0.9
Nitrogen, Total (as N)	6/28/2004	<RL	0.5	0.9
Nitrogen, Total (as N)	6/28/2004	<RL	0.4	0.9
Nitrogen, Total (as N)	8/30/2004	<RL	<RL	0.9
Nitrogen, Total (as N)	8/30/2004	<RL	<RL	0.9
Nitrogen, Total (as N)	12/6/2004	<RL	0.4	0.9
Nitrogen, Total (as N)	12/6/2004	<RL	0.3	0.9
Nitrogen, Total (as N)	2/22/2005	<RL	0.6	0.9
Nitrogen, Total (as N)	2/22/2005	0.29	0.5	0.9
Nitrogen, Total (as N)	5/16/2005	<RL	0.3	0.9
Nitrogen, Total (as N)	5/16/2005	<RL	0.4	0.9
Nitrogen, Total (as N)	8/29/2005	<RL	<RL	0.9
Nitrogen, Total (as N)	8/29/2005	<RL	<RL	0.9
Nitrogen, Total (as N)	11/14/2005	<RL	<RL	0.9
Nitrogen, Total (as N)	11/14/2005	<RL	<RL	0.9
Nitrogen, Total (as N)	2/27/2006	0.15	0.4	0.9
Nitrogen, Total (as N)	2/27/2006	ND	0.3	0.9
Nitrogen, Total (as N)	6/11/2006	ND	1.2	0.9
Nitrogen, Total (as N)	6/11/2006	ND	0.9	0.9
Nitrogen, Total (as N)	8/2/2006	--	0.4	0.9
Nitrogen, Total (as N)	8/14/2006*	--	0.8	0.9
Nitrogen, Total (as N)	10/1/2006	--	0.7	0.9
Nitrogen, Total (as N)	1/22/2007	--	0.8	0.9
Nitrogen, Total (as N)	6/4/2007	--	1.3	0.9
Nitrogen, Total (as N)	7/9/2007	--	1.2	0.9
Nitrogen, Total (as N)	10/15/2007	--	0.8	0.9

Parameter	Sample Date	Reported Influent Concentration (µg/L)	Reported Effluent Concentration (µg/L)	Most Stringent Objective (µg/L)
Nitrogen, Total (as N)	1/14/2008	--	0.7	0.9
Nitrogen, Total (as N)	4/7/2008	--	1.1	0.9
Nitrogen, Total (as N)	7/7/2008	--	1.2	0.9
Nitrogen, Total (as N)	10/6/2008	--	1.1	0.9
Nitrogen, Total (as N)	1/5/2009	--	1.0	0.9
Nitrogen, Total (as N)	4/6/2009	--	0.9	0.9
Nitrogen, Total (as N)	7/6/2009	--	1.4	0.9
Nitrogen, Total (as N)	10/5/2009	--	0.9	0.9
Nitrogen, Total (as N)	2/1/2010	--	<1.40	0.9
Nitrogen, Total (as N)	4/5/2010	--	1.5	0.9
Nitrogen, Total (as N)	11/1/2010	--	<0.814	0.9
Nitrogen, Total (as N)	2/7/2011	<1.06	1.2	0.9
Nitrogen, Total (as N)	4/4/2011	<0.932	1.3	0.9
Nitrogen, Total (as N)	7/11/2011	--	1.3	0.9
Nitrogen, Total (as N)	10/4/2011	--	0.6	0.9
Nitrogen, Total (as N)	1/9/2012	--	<0.966	0.9
Nitrogen, Total (as N)	4/2/2012	--	1.1	0.9
Nitrogen, Total (as N)	7/9/2012	--	1.6	0.9
Nitrogen, Total (as N)	10/1/2012	<0.847	1.0	0.9
Nitrogen, Total (as N)	1/7/2013	<0.788	1.1	0.9
Nitrogen, Total (as N)	4/8/2013	--	1.2	0.9
Nitrogen, Total (as N)	7/8/2013	<1.02	1.5	0.9
Nitrogen, Total (as N)	10/7/2013	--	1.3	0.9
Nitrogen, Total (as N)	11/4/2013	0.785	--	0.9
Nitrogen, Total (as N)	1/6/2014	<0.858	--	0.9
Nitrogen, Total (as N)	8/10/2015	0.717	0.778	0.9
Nitrogen, Total (as N)	10/5/2015	0.71	0.851	0.9
Nitrogen, Total (as N)	1/4/2016	2.87	1.02	0.9
Nitrogen, Total (as N)	4/4/2016	0.817	0.998	0.9
Nitrogen, Total (as N)	7/11/2016	0.709	0.932	0.9
Nitrogen, Total (as N)	10/3/2016	0.536	1.05	0.9
Nitrogen, Total (as N)	2/13/2017	0.703	0.813	0.9
Nitrogen, Total (as N)	4/3/2017	0.678	0.831	0.9
Nitrogen, Total (as N)	7/10/2017	0.598	0.767	0.9
Nitrogen, Total (as N)	10/2/2017	0.623	0.582	0.9
Nitrogen, Total (as N)	1/8/2018	0.694	0.922	0.9
Nitrogen, Total (as N)	4/2/2018	0.58	1.3	0.9
Nitrogen, Total (as N)	7/9/2018	0.419	0.666	0.9
Nitrogen, Total (as N)	10/1/2018	0.5645	0.53	0.9
Nitrogen, Total (as N)	1/7/2019	0.4855	0.54	0.9

Parameter	Sample Date	Reported Influent Concentration (µg/L)	Reported Effluent Concentration (µg/L)	Most Stringent Objective (µg/L)
Nitrogen, Total (as N)	4/8/2019	0.5115	0.62	0.9
Nitrogen, Total (as N)	7/8/2019	0.476	0.567	0.9
Nitrogen, Total (as N)	10/7/2019	0.5085	0.509	0.9
Nitrogen, Total (as N)	1/6/2020	0.642	0.572	0.9
Nitrogen, Total (as N)	6/1/2020	0.5775	0.65	0.9
Nitrogen, Total (as N)	7/6/2020	0.5485	0.632	0.9
Nitrogen, Total (as N)	2/16/2021	0.5215	0.662	0.9
Nitrogen, Total (as N)	4/12/2021	0.6105	0.755	0.9

The observed maximum intake water concentration for TDS is 291 mg/L, which exceeds the most stringent water quality objective of 207 mg/L. The observed maximum intake water concentration for nitrate is 0.986 mg/L which exceeds the most stringent water quality objective of 0.6 mg/L. The observed maximum intake water concentration for total nitrogen is 2.87 mg/L, which exceeds the most stringent water quality objective of 0.9 mg/L. Based on influent data collected at the Facility between 1996 and 2021, this condition is satisfied because the observed maximum intake water concentration for each pollutant exceeds the most stringent water quality criterion/objective.

Condition 2. The intake water credits provided are consistent with any TMDL applicable to the discharge that has been approved by the Regional Water Board, State Water Board, and U.S. EPA.

Fish Springs Creek is not currently considered a water quality-limited segment requiring a TMDL.

Condition 3. The intake water is from the same water body as the receiving water body. The discharger may demonstrate this condition by showing that: a) the ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility's discharge, is similar to that of the intake water; b) there is a direct hydrological connection between the intake and discharge points; c) the water quality characteristics are similar in the intake and receiving waters; and d) the intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been diverted by the discharger.

As discussed in section 2.2 of this Fact Sheet, surface and groundwater near the Facility are interconnected and the intake water (pumped groundwater) and receiving water (Fish Springs Creek) are the same water body because only pumped groundwater forms the headwaters of the creek, as Fish Springs no longer surfaces naturally. Prior to groundwater pumping in this area,

historically, groundwater naturally contributed to Fish Springs Creek surface water flows from a naturally occurring spring north of the hatchery. Evidence of the historical location of the springs naturally surfacing includes a dried depressed area with abandoned weirs and is visible from satellite imagery.

Currently, the intake supply water flows through the hatchery and forms the headwaters of Fish Springs Creek, as hatchery effluent. Other pumped or diverted water enters and alters Fish Springs Creek just downstream of the hatchery discharge point. In Order R6V-2006-0030, effluent data were used to represent receiving water quality, and in other historical permits, receiving water data were collected immediately below the effluent discharge point. Accordingly, ambient receiving water data, in the absence of pollutants contributed by the facility's discharge, is not available for comparison. However, Table F-18 summarizes all available intake, effluent, and receiving water data collected for TDS, nitrate, and total nitrogen between December 1994 and May 2021 and illustrates that the water quality characteristics and concentrations of the pollutants in the receiving water are similar to those of the intake water.

Table F-18. Comparison of Average Intake, Effluent, and Receiving Water Concentrations Between December 1994 and May 2021.

Parameter	Average Intake Water Concentration, mg/L	Average Effluent Concentration, mg/L	Average Receiving Water Concentration, mg/L
Total Dissolved Solids (TDS)	228	216	218
Nitrate (as N)	0.70	0.70	0.68
Nitrogen, Total (as N)	0.66	0.83	0.63

Historically, Fish Springs formed the headwaters of Fish Springs Creek. The hatchery operates under terms of a court agreement requiring LADWP to support California Department of Fish and Wildlife hatcheries in the Owens River Valley; however, whether the hatchery existed or not, LADWP would likely continue pumping groundwater to be discharged into Fish Springs Creek at this location. Therefore, the intake water pollutants would have reached the receiving water in the vicinity of the discharge point within a reasonable period of time and with the same effect had it not been diverted through the hatchery.

Condition 4. The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses.

There is no evidence that the water quality and beneficial uses in the receiving water have been impaired. The discharger uses best practicable

treatment or control (settling ponds) for solids removal and the hatchery does not increase concentrations of the constituents of concern. Tables F-8 and F-9 in section 4.3.3.4.1.1 of this Fact Sheet illustrate that over the term of Order R6V-2015-0035, the annual concentrations of TDS, nitrate, and total nitrogen in the receiving water did not exceed the annual concentrations of the pollutants in the influent. In one instance in 2017, the annual average receiving water TDS concentration was calculated to be 210 mg/L, which exceeds the Basin Plan water quality objective of 207 mg/L. That year, the annual average effluent concentration of TDS was calculated at 227 mg/L, exceeding the water quality objective; however, the annual average influent concentration of TDS, calculated at 229 mg/L, also exceeded the objective. This suggests that the discharge was not the cause of the water quality objective exceedance in the receiving water and signifies that the Facility does not alter the intake water in a manner that adversely affects the water quality and beneficial uses.

Condition 5. The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body.

The timing and location of the discharge from the Facility does not cause adverse effects on water quality and beneficial uses that would not occur if the pollutants in the intake water had been left in the intake water body because the discharge is the result of pumped groundwater flowing through the hatchery operations to the same point the former Fish Springs discharged to form the headwaters of Fish Springs Creek. The detention time for water flowing through the hatchery is insignificant.

Therefore, the Lahontan Water Board allows intake water credits for TDS, nitrate, and total nitrogen. This credit is to offset elevated levels of these pollutants found in the intake water. As stated in section 1.4.4 of the SIP, the Lahontan Water Board "*may establish effluent limitations allowing the facility to discharge a mass and concentration of the intake water pollutant that is no greater than the mass and concentration in the facility's intake water ... so there is no net addition of the pollutant in the discharge compared to the intake water*."

4.3.4.2.1.2. **Calculation of Intake Water Credits.** To qualify for an intake water credit, the effluent pollutant concentration must be less than or equal to the intake pollutant concentration. However, intake and effluent data collected on the same day may differ due to factors unrelated to Facility operations, such as sampling and laboratory analytical variability. Since the residence time of groundwater from intake to discharge is of relatively short duration, samples taken on the same day should be representative of the same water (assuming the samples are collected within a reasonably short time from each other). Though concurrent influent and effluent samples were not consistently

collected for TDS, nitrate, and total nitrogen prior to the term of Order R6V-2015-0034, Table F-17 summarizes all available influent and effluent data between 2014 and 2021. As shown, there is variability between the influent and effluent throughout the data set. For the nitrate, total nitrogen and total dissolved solids the effluent concentrations and influent concentrations were found to be similar.

To account for the variability among the influent and effluent samples collected by the Discharger, the methodology for developing effluent limitations was revised. Since the residence time of groundwater from intake to discharge is of relatively short duration and the Discharger does not significantly alter the waste stream with respect to TDS, nitrate, and total nitrogen, the Lahontan Water Board has assumed the influent and effluent pollutant concentration are drawn from the same distribution. Thus, the 99th percentile concentration of the available data from both the influent and effluent monitoring locations was calculated. The resulting 99th percentile value represents the upper range of the variability between intake and effluent pollutant concentrations due to sampling and analysis variability. When used as the basis for the effluent limitation, it results in an intake credit that captures the variability between influent and effluent data and prevents the discharge of additional pollutant mass. The 99th percentile effluent limit also implies that one percent of the time a value could occur that will exceed the 99th percentile, but a higher percentile might include extreme and possibly false values, which might mask a legitimate violation; a lower percentile might result in violations due to sample variability instead of the addition of pollutants. For consistency with Order R6V-2015-0034, which evaluated the implementation of intake credits based on all available data between 1994 and 2014, influent and effluent data collected at the Facility between 2014 and 2021 was considered in determining the 99th percentile effluent limits.

Consistent with SIP section 1.4.4, which requires the Facility to discharge a mass and concentration of the intake water pollutant that is no greater than the mass and concentration found in the Facility's intake water, where the 99th percentile value for a pollutant exceeds the maximum observed influent concentration, the maximum observed influent concentration is established as the effluent limitation. Table F-19 compares the 99th percentile values, the maximum influent concentrations, and the existing instantaneous maximum effluent limitations from Order R6V-2015-0034 for TDS, nitrate, and total nitrogen.

Table F-19. Final Effluent Limitations for Discharge Point 001

Parameter	Units	99th Percentile Value	Maximum Influent Concentration	Instantaneous Maximum Effluent Limitation
Total Dissolved Solids (TDS)	mg/L	302	291	265 [See Note 1 following table F-19]
Nitrate, Total (as N)	mg/L	1.9	1.0	1.0 [See Note 1 following table F-19]
Nitrogen, Total (as N)	mg/L	2.0	2.9	1.8 [See Note 1 following table F-19]

Table F-19 Notes:

1. Effluent Limit = Instantaneous Maximum; Not to exceed influent supply water concentration. Report compliance with respect to the limit by providing both influent concentration and the discharge concentration.

   For TDS and nitrate, the maximum influent concentrations were lower than the calculated 99th percentile values. For total nitrogen, the calculated 99th percentile value was lower than the maximum influent concentration. However, the existing instantaneous maximum effluent limits of 265 mg/L, 1.0 mg/L, and 1.8 mg/L for TDS, nitrate, and total nitrogen, respectively, not to exceed the influent supply water concentration, were more stringent than the calculated 99th percentile or observed maximum influent concentration. Therefore, the instantaneous maximum effluent limits for TDS, nitrate, and total nitrogen have been retained in this Order.

4.3.4.2.2. **Formaldehyde**

Effluent limitations for formaldehyde were calculated based on the 96-hour NOAEL value for *C. dubia* (1.3 mg/L) using the procedure in U.S. EPA's TSD assuming the following:

- No in-stream dilution allowance
- Coefficient of variation (CV) = 0.6 for the lognormal distribution of pollutant concentrations in effluent

Calculation of Aquatic Life AMEL and MDEL:

Effluent Characterization Allowance (ECA) based on NOAEL (acute toxicity) for *C. dubia*, with no dilution allowance:

ECA_{acute} = 1.3 mg/L

$ECA_{chronic}$ = 1.3 mg/L

Long-Term Average concentration based on acute ECA:

LTA_{acute} = 1.3 mg/L x 0.321 = 0.417 mg/L (where 0.321 = acute ECA multiplier at 99 percent occurrence probability and 99 percent confidence)

Long-Term Average concentration based on chronic ECA:

$LTA_{chronic}$ = 1.3 mg/L x 0.527 = 0.685 mg/L (where 0.527 = chronic ECA multiplier at 99 percent occurrence probability and 99 percent confidence)

Most Limiting LTA concentration based on acute LTA:

LTA = 0.417 mg/L

Average Monthly Effluent Limitation:

AMEL = LTA x 1.55 (where 1.55 = AMEL multiplier at 95 percent occurrence probability, 99 percent confidence, and n = 4)

$AMEL_{aquatic\ life}$ = 0.417 mg/L x 1.55 = 0.65 mg/L

Maximum Daily Effluent Limitation:

MDEL = LTA x 3.11 (where 3.11 = MDEL multiplier at 99 percent occurrence probability and 99 percent confidence)

$MDEL_{aquatic\ life}$ = 0.417 mg/L x 3.11 = 1.3 mg/L

Calculation of Human Health AMEL and MDEL:

This section is not applicable as the formaldehyde limits are based on aquatic life criteria.

Determination of Final WQBELs:

The lower AMEL and MDEL based on aquatic life and human health is selected as the WQBEL.

$AMEL_{aquatic\ life}$	**$MDEL_{aquatic\ life}$**	**$AMEL_{human\ health}$**	**$MDEL_{human\ health}$**
0.65 mg/L	1.3 mg/L	Not Applicable	Not Applicable

The final AMEL of 0.65 mg/L and MDEL of 1.3 mg/L for formaldehyde are based on limitations protective of aquatic life.

4.3.4.2.3. **Hydrogen Peroxide**

As hydrogen peroxide is a strong oxidizer, effluent concentrations are unlikely to persist for long periods. Therefore, only a MDEL was calculated based on the 96-hour NOAEL value for *C. dubia* and using the procedure in U.S. EPA's TSD assuming the following:

- No in-stream dilution allowance.
- CV = 0.6 for the lognormal distribution of pollutant concentrations in effluent.

Effluent Concentration Allowances based on NOAEL with no dilution allowance:

ECA_{acute} = 1.3 mg/L

No chronic toxicity data, Long-Term Average concentration based on acute ECA:

LTA = 1.3 mg/L x 0.321 = 0.4173 mg/L (where 0.321 = acute ECA multiplier at 99 percent occurrence probability and 99 percent confidence)

Maximum Daily Effluent Limitation:

MDEL = LTA x 3.11 (where 3.11 = MDEL multiplier at 99 percent occurrence probability and 99 percent confidence)

MDEL = 0.4173 mg/L x 3.11 = 1.3 mg/L

This effluent limitation has been established for protection of aquatic life against toxic effects from exposure to hydrogen peroxide in the discharge.

4.3.4.2.4. **Potassium Permanganate**

Effluent limitations for potassium permanganate were calculated based on the 2-hour NOEC value for *C. dubia* (0.1975 mg/L) using the procedure in U.S. EPA's TSD assuming the following:

- No in-stream dilution allowance
- CV = 0.6 for the lognormal distribution of pollutant concentrations in effluent

Calculation of Aquatic Life AMEL and MDEL:

Effluent Characterization Allowance (ECA) based on NOAEL (acute toxicity) for *C. dubia*, with no dilution allowance:

ECA_{acute} = 0.1975 mg/L

Long-Term Average concentration based on acute ECA:

LTA_{acute} = 0.1975 mg/L x 0.321 = 0.0633975 mg/L (where 0.321 = acute ECA multiplier at 99 percent occurrence probability and 99 percent confidence)

Average Monthly Effluent Limitation:

AMEL = LTA x 1.55 (where 1.55 = AMEL multiplier at 95 percent occurrence probability, 99 percent confidence, and n = 4)

$AMEL_{aquatic\ life}$ = 0.0633975 mg/L x 1.55 = 0.098266 mg/L

Maximum Daily Effluent Limitation:

MDEL = LTA x 3.11 (where 3.11 = MDEL multiplier at 99 percent occurrence probability and 99 percent confidence)

$MDEL_{aquatic\ life}$ = 0.0633975 mg/L x 3.11 = 0.197 mg/L

Calculation of Human Health AMEL and MDEL:

This section is not applicable as the potassium permanganate limits are based on aquatic life criteria.

Determination of Final WQBELs:

The lower AMEL and MDEL based on aquatic life and human health is selected as the WQBEL.

$AMEL_{aquatic\ life}$	**$MDEL_{aquatic\ life}$**	**$AMEL_{human\ health}$**	**$MDEL_{human\ health}$**
0.098 mg/L	0.197 mg/L	Not Applicable	Not Applicable

The final AMEL of 0.098 mg/L and MDEL of 0.197 mg/L for potassium permanganate are based on limitations protective of aquatic life.

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

Numeric Water Quality Objectives

State Policy for Water Quality Control: Toxicity Provisions (Toxicity Provisions) established numeric aquatic toxicity water quality objectives to protect Aquatic Life beneficial uses and a program of implementation. The Regional Board must include the requirements specified in the Toxicity Provisions for NPDES permits issued, reissued, renewed, or reopened after the effective dates of the Toxicity Provisions for Non-Stormwater NPDES Dischargers. The Regional Board is authorized to exempt certain Non-Stormwater NPDES Dischargers from some or all of Section III.C of the Toxicity Provisions if the Regional Board 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 III.C.3 of the Toxicity Provisions.

The authorized discharge from the Facility is an insignificant discharge. The quality of effluent supports the propagation and growth of fish within the hatchery. The facility is inherently a large-scale biological indicator of the health of the water leaving the fish hatchery. In some historical instances, high mortality rates of fish were caused by an infectious disease or parasite, not from a chemical water quality issue. There is a specific acute toxicity test for rainbow trout which is one of the fish species raised at the facility. The facility produces large quantities of fish, beginning with eggs and raising them until they are 2–6 months of age. If there were any signs of acute toxicity, then there would be an investigation into the cause by fishery biologist. To date, the only signs of significant die off have been associated with infectious diseases or parasites and the hatchery has been shut down and sterilized before there is wide spread infection. The infectious diseases and/or parasites are not the result of water quality, but a growth that may rapidly occur with a dense population in a limited area.

Likewise, the hatchery observes its fish population for chronic effects (e.g. death and slower growth rate) prior to releasing the raised trout. If the fish production decreases an investigation would be done by fishery biologist to evaluate the cause. No investigation has been reported about reduced fish growth rates or death at the Facility.

Based on the features of the Facility and the nature of the discharge, the discharge does not exhibit any signs of reasonable potential to cause an exceedance of the numeric water quality objectives. Thus, the Regional Board authorizes the exemption of the discharger from all of the requirements in Section III.C.1- Section III.C.10 of the Toxicity Provisions.

Narrative Objective

The Basin Plan specifies a narrative objective for toxicity, requiring that "*All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" Compliance with this objective may be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration and/or other appropriate methods as specified by the Lahontan Water Board. (Bioassays, or biotoxicity testing, involves measuring the toxic effects of an effluent on specified organisms according to nationally approved protocols.) The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary, for other control water that is consistent with the requirements for "experimental water" as defined in *Standard Methods for the Examination of Water and Wastewater* (American Public Health Association, et al. 1992).

The Facility effluent is pumped groundwater used in raising fish. The fish are actively monitored for health and if the fish appear to be stressed or many fish start to die, then fishery biologists investigate the cause and prescribe aquaculture drugs. No regular aquaculture drug or chemicals are applied to the system to raise the freshwater trout, except for treatment for a variety of sicknesses. The drugs or chemicals are only used for a limited duration, have limits on the frequency of treatment, and typically only used once at any given time to eliminate potential compounded effect of a mixture. For drugs and chemicals with known aquatic impacts, sampling and effluent limits for those drugs are established in this permit (see Table 2, page 7 of this permit). The discharge from the Facility is insignificant as described in a previous section. The effluent from the fish hatchery has no reasonable potential to exceed the narrative objective for toxicity.

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. The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

4.4.1.1. **Flow.** Order R6V-2015-0034 included flow as an effluent limit based on the Facility design flow. Compliance with the effluent limits for flow in Order R6V-2015-0034 was calculated based on the average monthly effluent

flow. Flow is not a pollutant and therefore has been changed from an effluent limit to a discharge prohibition in this Order, which is an equivalent level of regulation. This Order is not less stringent because compliance with flow as a discharge prohibition will be calculated the same way as the previous Order. Flow as a discharge prohibition adequately regulates the Facility, does not allow for an increase in the discharge of pollutants, and does not constitute backsliding.

4.4.2. **Antidegradation Policies**

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. Resolution 68-16 incorporates 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 Lahontan Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies.

This Order does not provide for an increase in the permitted design flow or allow for an increase in mass or concentration of any pollutant. Therefore, the issuance of this permit is consistent with the antidegradation policy.

4.4.3. **Stringency of Requirements for Individual Pollutants**

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on TSS. Technology-based restrictions are discussed in section 4.2 of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

This Order includes WQBELs for nitrate, total nitrogen, formaldehyde, hydrogen peroxide, pH, potassium permanganate, settleable solids, and TDS at Discharge Point 001. WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

4.5. Interim Effluent Limitations – Not Applicable

4.6. Land Discharge Specifications – Not Applicable

4.7. Recycling Specifications – Not Applicable

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limitations in this Order are based upon the water quality objectives contained in the Basin Plan and State Board Plans and Policies.

5.1. Surface Water

The Discharger is responsible for constituents contributed to Fish Springs Creek by groundwater pumping, hatchery operations, and hatchery property management. The Facility uses the pumped groundwater for hatchery operations and discharges it at the headwaters of Fish Springs Creek. The discharge may include constituents contained in groundwater and wastes from fish hatchery operations. During storm events, constituents in storm water may also be present in the discharge. the Facility's effluent is the main source of water for Fish Springs Creek at the discharge location.

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Lahontan Region. Water quality objectives include an objective to maintain the high-quality waters pursuant to federal regulations (section 131.12) and State Water Board Resolution 68-16. Additionally, *Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Bacteria Provisions and a Water Quality Standards Variance Policy* (Statewide Bacteria Provisions) contains numeric water quality objectives for bacteria in waters with the Water Contact Recreation (REC-1) beneficial use. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water (see section 5 of this Order).

Consistent with the Toxicity Provisions, the Regional Board has included the water quality objectives in Section II.C of the Toxicity Provisions as receiving water limitations in the NPDES permit.

Consistent with the Toxicity Provisions, the Regional Board may rely solely on the numeric aquatic toxicity water quality in Section II.C to address non-chemical specific aquatic toxicity unless there is information to suggest that the numeric aquatic toxicity water quality objective would not protect all aquatic species in the relevant water body. There is no information to suggest that the numeric aquatic toxicity water quality objectives would not protect all aquatic species in the relevant water body. Therefore, aquatic toxicity receiving water limitations derived from the narrative toxicity water quality objective are not included in the permit.

The narrative objective for chemical constituents in the Basin Plan states that "*Waters shall not contain concentrations of chemicals that adversely affect the water beneficial uses*." The receiving water collectively has the following beneficial uses: Municipal and domestic supply (MUN); Agricultural Supply (AGR); Groundwater Recharge (GWR); Freshwater Replenishment (FRSH); Navigation (NAV); Water Contact Recreation (REC-1); Non-Contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Cold Freshwater Habitat (COLD); Wildlife Habitat (WILD); Preservation of Biological Habitats of Special Significance (BIOL); Preservation of Rare, Threatened or Endangered Species (RARE); and Spawning, Reproduction, and Development of Fish and Wildlife (SPWN).

Numeric receiving water limitations, based on water quality objectives for Owens River (Tinemaha Reservoir Outlet) in the Basin Plan (Table 3-17), are included in this order for TDS chloride, sulfate, fluoride, boron, nitrate, total nitrogen, and orthophosphate. Sampling frequency for Boron, Chloride, Fluoride, Phosphorous, and Sulfate were reduced from quarterly to once per permit term, because the receiving water does not exhibit reasonable potential for those parameters. Additionally, quarterly monitoring for these parameters at the receiving water was established in Order R6V-2015-0034 to help collect data for possible development of site-specific objectives and was intended for one permit cycle.

5.2. Groundwater

The Basin Plan contains numeric and narrative water quality objectives applicable to all groundwaters within the Lahontan Region. Groundwater quality objectives include an objective to maintain the high-quality waters pursuant to State Water Board Resolution 68-16. The Owens Valley Ground Water Basin has the beneficial use of Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), Freshwater Replenishment (FRSH), and Wildlife Habitat (WILD). This Order prohibits the discharge of hatchery wastewater, except to Discharge Point 001. Prohibitions and special provisions incorporated into this Order are sufficient to ensure and protect beneficial uses of groundwater

6. RATIONALE FOR PROVISIONS

6.1. 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 Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 C.F.R. section 122.42.

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).

6.1.1 Requirements pursuant to Water Code Section 13267.

The Water Code section 13267 authorizes the Water Board to require technical or monitoring reports from the Discharger. The burden of the cost of these reports are the Discharger's to bear. The Water Board requires these reports to determine compliance with the permit requirements. The cost of compliance with requirements can be challenged throughout the public process prior to permit adoption by the Water Board.

Special reports are necessary when there is a change in activity, such as required under Standard Provision 6.1.2.12. The activity may result in an unauthorized discharge that the permit requirements may not protect. Thus, the Discharger must provide the Water Board staff with a technical report on the changes. The information should be sufficient to determine whether the permit continues to protect water quality. Since this is a contingency requirement for unforeseen circumstances, an explanation for the need for the report and support for report cannot be provided other than the permit may no longer be valid or protective of water quality.

6.2. Special Provisions

6.2.1. **Reopener Provisions**

These provisions are based on 40 C.F.R. section 122.62 and allow modification of this Order and its effluent limitations as necessary in response to updated water quality objectives, regulations, or other new relevant information that may be established in the future and other circumstances as allowed by law.

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

6.2.2.1. **Chemical and Aquaculture Drug Use.** Prior to using any new chemical or aquaculture drug at the Facility, the Discharger is required to submit to the Lahontan Water Board supplemental information (e.g., name, purpose, amount to be used) and toxicity testing data for 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 Lahontan 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.

6.2.2.2. **Reporting of Unanticipated Discharges.** This Order requires the Discharger to provide an oral report within 24 hours and a written report within seven days of: (1) discovery of the failure in, or damage to, the settling pond or an aquatic animal containment system resulting in an unanticipated material discharge of pollutants to waters of the United States or state; and (2) a spill of drugs, chemicals, pesticides, or feed that results in a discharge to waters of the United States or state.

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

6.2.3.1. **Best Management Practices Plan – Aquaculture Operations.** BMP plan requirements are established based on requirements in the ELGs for the Concentrated Aquatic Animal Production Point Source Category at 40 C.F.R. partn 451. CAAP facilities that are subject to the federal ELGs are required to develop and maintain a BMP plan that addresses the following requirements: solids control, material storage, structural maintenance, recordkeeping, and training. The Discharger must make the BMP plan available to the Lahontan Water Board upon request and submit certification that the BMP plan has been updated to include the requirements specified in this Order.

6.2.3.2. **Storm Water Pollution Prevention Plan.** This Order requires the Discharger to develop and implement a SWPPP, in accordance with Attachment I to the Order, that describes site-specific BMPs for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff from being discharged directly to waters of the state. Storm water runoff at the Facility has the potential to come in contact with pollutants associated with aquaculture activities such as chemicals, fuel, waste oil, vehicle wash water, and other storage of other materials.

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

6.2.4.1. Solid waste disposal provisions in this Order are based on the requirements of California Code of Regulations, title 27 and prevention of unauthorized discharge of solid wastes into waters of the United States or waters of the state. Other construction, operation, and maintenance specifications are required to prevent other unauthorized discharges to waters of the United States or waters of the state.

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

6.2.6. **Other Special Provisions – Not Applicable**

6.2.7. **Compliance Schedules – Not Applicable**

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Lahontan Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP, Attachment E of this Order establishes monitoring, reporting, and recordkeeping 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 to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (i.e., use for calculating intake credits).

7.1.1. **Monitoring Location INF-001**

7.1.1.1. Influent monitoring frequencies and sample types for electrical conductivity, flow, nitrate, total nitrogen, pH, TDS, total kjeldahl nitrogen, and TSS have been retained from Order R6V-2015-0034 to assess the levels of pollutants in the extracted groundwater for these parameters.

Monitoring for these parameters in the influent was established in Order R6V-2015-0034 to help determine whether pollutants present in the pumped groundwater supply contribute to constituent violations in the effluent. This Order includes effluent limits for nitrate, total nitrogen, and TDS that allow for intake credits based on concentrations of the pollutants in the influent.

7.1.1.2. Influent monitoring for flow has been retained from Order R6V-2015-0034 to assess compliance with the discharge prohibition for flow established in this Order.

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 is necessary to assess compliance with effluent limitations, and to assess the impacts of the discharge on the receiving stream and groundwater.

7.2.1. **Monitoring Location EFF-001**

7.2.1.1. Effluent monitoring frequencies and sample types for formaldehyde, hydrogen peroxide, nitrate, total kjeldhal nitrogen, total nitrogen, pH, potassium

permanganate, settleable solids, TDS, and TSS have been retained from Order R6V-2015-0034 to determine compliance with effluent limitations for these parameters.

7.2.1.2. Effluent monitoring frequencies and sample types for Chloramine-T and PVP iodine have been retained from Order R6V-2015-0034 to evaluate effluent quality during drug and chemical use.

7.2.1.3. The effluent monitoring frequency and sample type for electrical conductivity has been retained from Order R6V-2015-0034 to assess the quality of the effluent for this pollutant, specifically because electrical conductivity is a field parameter related to TDS concentrations and salt use at the Facility, as dissolved ions increase the conductivity of the effluent.

7.2.1.4. Effluent flow monitoring, which was discontinued in Order R6V-2015-0034, has been re-established in this Order, as required for quarterly drug and chemical use reporting in section 9.1.5.

7.2.1.5. The Discharger uses potassium permanganate to control gill disease, bacteria, and parasites. Total recoverable manganese data is required for potassium permanganate analyses and calculations, and total hardness data is necessary to determine the solubility of manganese. Therefore, this Order requires monitoring for total recoverable manganese and hardness on a quarterly basis when potassium permanganate is used. This monitoring data will help to establish a correlation between potassium permanganate use, total recoverable manganese, and hardness effluent concentrations.

7.2.1.6. Monitoring data collected over the previous term for total phosphorous indicates that discharges from the Facility do not exhibit reasonable potential to cause or contribute to an exceedance of the applicable water quality objectives for dissolved orthophosphate. Accordingly, effluent monitoring requirements for total phosphorus are discontinued in this Order.

7.2.1.7. Monitoring data collected for Total Kjehldahl Nitrogen, Total Nitrate as Nitrogen (NOx), and Nitrite from the previous permit term indicate that monitoring for Nitrite is redundant because Total Nitrate as Nitrogen is comprised of nitrate plus nitrite. Total Nitrogen calculations include Total Nitrate (NOx) + TKN (and ammonia) are required as part of this Order. In addition, holding times would be more assured as the holding time for Total Nitrate (NOx) is longer than for NO3 and NO2 individually. Monitoring for nitrite in the discharge from the Facility does not exhibit reasonable potential to cause or contribute to an exceedance of the applicable water quality objectives. Accordingly, effluent monitoring for nitrite are discontinued in this Order.

7.3. Whole Effluent Toxicity Testing Requirements – Not Applicable

7.4. Receiving Water Monitoring

7.4.1. Surface Water

Consistent with Order R6V-2015-0034, this Order requires monitoring upstream of the discharge at Monitoring Location INF-001 and downstream of the discharge at Monitoring Location RSW-002. Since the receiving water, Fish Springs Creek, is formed primarily from pumped groundwater, and there is no flow in Fish Springs Creek above the discharge, pumped groundwater influent at Monitoring Location INF-001 is representative of the upstream water quality.

Receiving water monitoring locations are located at the Hwy 395 Bridge downstream of the inputs from the hatchery, LADWP Well #219 and the Big Pine Canal. The LADWP Well #219 enters Fish Springs Creek almost immediately after the discharge from the weir and, when Well #219 is running, the flow can cause a backup and increase the height of the creek. This increase in surface water depth due to the inflow from the LADWP well #219 prevents the collection of representative samples of the receiving water because the effluent from the facility and the discharge from the LADWP well become a single sampling point. Monitoring receiving water downstream of the Big Pine Canal is preferred because it will be consistent with the receiving water data collected during the permit term of Order R6V-2015-0034. The continuation of data collection at this site will be helpful in development of site-specific objectives for the Fish Springs Creek. Since the influent water quality entering the hatchery is above the Water Quality Objectives for Fish Springs Creek, the data collection can be used to identify if potential downstream water quality issues are resultant from the hatchery or from other sources.

This Order does not allow for a mixing zone and all effluent limitations must be met at Discharge Point 001, whether or not wells downstream of the discharge are operating. To ensure that beneficial uses of waters of the state are protected, the Basin Plan lists numeric objectives that are applicable to all surface waters, all groundwaters, specific receiving surface waters, and specific groundwaters. Water body specific objectives apply upstream to waters that are tributary to the water body specified for the numeric objective. This is called the “tributary rule.” Numeric objectives that apply to Fish Springs Creek include numeric objectives that are common to all waters in the Lahontan Region and numeric objectives that are applicable to the Owens River at and above the Tinemaha Reservoir Outlet. These receiving water limitations serve to protect the beneficial uses designated for the receiving waters that will be impacted by the discharge.

To demonstrate compliance with receiving water limitations established in this Order and to assess the impact of the discharge on the beneficial uses of the receiving water and receiving water objectives, downstream receiving water

monitoring requirements and frequencies for unionized ammonia, total ammonia, dissolved oxygen, electrical conductivity nitrate, total kjeldhal nitrogen, total nitrogen, pH, settleable solids, temperature, turbidity, TDS, and TSS required in Order R6V-2015-0034 are retained in this Order. Additionally, Order R6V-2015-0034 required receiving water monitoring for settleable solids and TSS in order to assess compliance with water quality objectives established in the Basin Plan for settleable and suspended materials. The monitoring at RSW-002 is done quarterly for settleable solids and TSS to ensure compliance is met.

Monitoring requirements for boron, chloride, fluoride, total phosphorous, and sulfate, have been reduced to once per permit term since these parameter did not exhibit reasonable potential to exceed water quality objectives in the receiving water and because sampling for these parameters were established in Order R6V-2015-0034, for one permit term, to collect data for establishing site-specific objectives.

Monitoring requirements for boron, chloride, fluoride, and sulfate have been changed to once per permit term since these parameters did not exhibit reasonable potential to exceed water quality objectives in the receiving water and because sampling for these parameters was established in Order R6V-2015-0034, to collect data for establishing site-specific objectives and to ensure there is no reasonable potential.

7.4.2. Sediment – Not Applicable

7.4.3. Groundwater – Not Applicable

7.5. Other Monitoring Requirements

7.5.1. Quarterly Drug and Chemical Use Report

Quarterly reporting of drug and chemical use is required in this Order. The ELGs at 40 C.F.R. part 451 require reporting on the use of drugs, disinfectants, and other chemicals in discharges authorized by NPDES permits. To verify that aquaculture drugs and chemicals are applied at levels that will not cause or contribute to an exceedance of water quality objectives, this Order requires the Discharger to calculate and report the estimated effluent concentrations of drugs and chemicals applied directly to water. Reporting of the estimated effluent concentration is required whenever the drug or chemical is used, even if an effluent sample has been collected.

7.5.2. Feeding and Production Reporting

This Order requires annual reporting of monthly food usage and annual production of aquatic animals.

7.5.3. Priority Pollutant Metal Monitoring

Potential discharge of priority pollutants is based on the probability of the pollutants being present in the natural springs and from data collected from CAAP facilities. Data compiled from CAAP facilities, local drinking water wells and the State Water Board's Groundwater Ambient Monitoring Association (GAMA) database were used to determine the potential for metals and other priority pollutants to occur. Accordingly, the Lahontan Water Board requires sampling and analysis of the influent (Monitoring Location INF-001) and effluent (Monitoring Location EFF-001) for priority pollutants listed in Attachment J at least once per permit cycle. The samples shall be analyzed for priority pollutants in the year **2027** and reported to the Water Board no later than **June1, 2027** (refer to Attachment J for the specific monitoring requirements). In order to ensure that the priority pollutant metal monitoring meet the specifications of this Order, this Order requires the Discharger to submit a Priority Pollutant Metal Monitoring Plan that outlines reporting levels (RLs), method detection limits (MDLs), and analytical methods. The Priority Pollutant Metal Monitoring Plan shall also identify the contract laboratory or laboratories selected to conduct the monitoring and demonstrate that they are Environmental Laboratory Accreditation Program (ELAP) certified and can conduct the analysis within the holding times specified in the approved methods in 40 C.F.R. part 136.

7.5.4. Annual Best Management Practices (BMP) Plan and Storm Water Pollution Prevention Plan (SWPPP) Reporting

This Order requires annual certification that the BMP Plan and SWPPP meet the requirements of this Order and are being implemented as written.

7.5.5. Visual Observations

Consistent with Order R6V-2015-0034, this Order requires quarterly visual observations of all non-storm water discharges to ensure that BMPs are being implemented and are effective.

7.5.6. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), U.S. EPA requires all dischargers under the NPDES Program to participate in the annual DMR-QA Study Program, including all minor dischargers beginning in 2017. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S. EPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze

wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

8. PUBLIC PARTICIPATION

The Lahontan Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Fish Springs Fish Hatchery. As a step in the WDR adoption process, the Lahontan Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

8.1. Notification of Interested Parties

The Lahontan Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification to comment on the proposed Order was provided on the Lahontan Water Board Website and to all known interested parties on **<DATE>**. Notification was also provided though publications in the Inyo Register on **<Date>.** The public had access to the agenda and any changes in dates and locations through the Lahontan Water Board's website at https://www.waterboards.ca.gov/lahontan/

8.2. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Lahontan Water Board at the address on the cover page of this Order.

To be fully responded to by staff and considered by the Lahontan Water Board, the written comments were due at the Lahontan Water Board office by 5:00 p.m. on <**DATE**>.

8.3. Public Hearing

The Lahontan 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: **December 6, 2023**
Time: **<time>**
Location: **<location>**

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

8.4. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Lahontan 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 water quality petition for review, see: (http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

8.5. Information and Copying

The ROWD, 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 Lahontan Water Board by calling (530) 542-5400.

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 Lahontan 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 Tiffany Barulich at (530)543-5424 or at tiffany.barulich@waterboards.ca.gov.

ATTACHMENT G – AQUACULTURE DRUGS AND CHEMICALS APPROVED FOR USE

Drug or Chemical	Purpose of Application	Expected Method(s) of Application or Treatment
Acetic acid	Control of external parasites.	**Flush:** 1.5 to 2.2 gallons of glacial acetic acid added as a bolus to top of raceway. Gives a treatment of level of approximately 335 to 500 ppm acetic acid. **Bath:** used at a rate of 500 to 2,000 ppm for 1 to 10 minutes.
Amoxicillin trihydrate	Antibiotic (for control and prevention of external and systemic bacterial infections).	**Injected intraperitoneally:** into broodstock twice a week, prior to spawning, at a dose of 40 mg/kg.
Carbon Dioxide	Anesthetic.	**Bath:** bubbled in water. Usually used in small volumes of water.
Chloramine-T. (Halamide Aqua)	Control of external gill bacteria.	**Flush or bath:** concentration of 12-20 mg/L for 60 min daily or every other day for 3 treatments or as prescribed.
Chorulon® - Chorionic Gonadotropin	Aid in improving spawning function.	**Intramuscular injection: Males: 50-510 IU/lb, Females: 67-1,816 IU/lb, inject up to three doses; not to exceed 25,000 IU in fish for human consumption.**
Epsom Salt (Magnesium Sulfate)	Control internal parasites.	**Feed:** used in "medicated" feed or fish pills at a rate of 100 mg/kg of fish or top coated onto feed at 3% (30 g/kg) for 3 days.
Erythromycin	Antibiotic (for control and prevention of external and systemic bacterial infections).	**Injected intraperitoneally:** at a rate of 40 mg/kg, at 30-day intervals or as prescribed. **Feed:** used in medicated feed or fish pills at a rate of 100 mg/kg or as prescribed.
Enteric Redmouth (ERM) Vaccine	Prevent Redmouth disease.	**Dip: (Vaccine dumped after use. Not surface discharged).**
Florfenicol (Aquaflor®)	Antibiotic (for control and prevention of external and systemic bacterial infections).	**Medicated Feed:** 10-15 mg/kg for 10 consecutive days.
Formalin (37% formaldehyde solution)	Control of external parasites. Fungus control on fish eggs.	**Bath:** Low dose - used at a concentration of 25 ppm of formalin up to 8 hours. High dose - used at a concentration of 50 to 250 ppm formalin for one hour and repeat in 5 to 10 days if needed, or as prescribed. **Eggs:** used at a concentration of 2,000 ppm formalin, or less, for 15 minutes, or as prescribed.
Hydrogen peroxide	Control of external parasites and fungus.	**Flush or bath: used at a concentration of 100 ppm or less, for 30 minutes to 1 hour every other day for up to 3 treatments, or as prescribed.** **Eggs: 500-1,000 mg/L in continuous flow system once daily on consecutive or alternative days until hatch or as prescribed.**

Drug or Chemical	Purpose of Application	Expected Method(s) of Application or Treatment
Ivermectin	Control of parasites.	**Injected intramuscularly: (0.1 mg/kg) once a week up to 2 injections, or as prescribed.**
MS-222 / tricaine methanesulfonate (Finquel®, Tricaine-S®)	Anesthetic or euthanasia.	**Bath:** used at a concentration of 10-1,000 mg/L, usually in a small volume of water and timed to effect.
Ovaplant® Salmon Gonadotropin-releasing hormone analogue (sGnRHa)	Induce gamete maturation.	**Dorsal injection pellet-implant:** 10 - 75 µg/kg. Maximum 150 µg/kg (in certain situations involving very small brood fish (e.g., fish <1 kg bw), or as prescribed.
Oxytetracycline dihydrate (Terramycin® 200)	Antibiotic (for control and prevention of external and systemic bacterial infections).	**Additive to feed:** 3.75 g/100 lbs of fish/day for 10 consecutive days.
Oxytetracycline HCl	Antibiotic (for control and prevention of external and systemic bacterial infections).	**Bath:** used at a concentration of 100 ppm or less for up to 8 hr and up to 3 treatment days, or as prescribed.
Penicillin G potassium	Antibiotic (for control and prevention of external and systemic bacterial infections).	**Bath:** used in tanks for 6-8 hours at a concentration of up to 150 IU/ml for up to 3 treatment days, or as prescribed.
Potassium Permanganate (Cairox™)	Control of external parasites and bacteria.	**Flush or Bath:** up to 2 ppm for one hour and up to 3 consecutive daily treatments.
PVP Iodine	Disinfect and control pathogens on fish eggs.	**Bath:** used at a concentration of 100 mg/L iodine for 10 to 30 minutes.
SLICE (emamectin benzoate;0.2% aquaculture premix)	Control of copepods.	**Medicated feed:** 50 µg/kg for 7 consecutive days.
Sodium bicarbonate	Anesthetic.	**Bath:** used at a rate of 142-642 mg/L, usually in a small volume of water.
Sodium chloride (salt)	Fish cleansing, disease control, and stress reduction.	**Flush or Bath:** up to 3% for 1 hour daily, if needed, or at a lesser concentration during transport.
Sulfadimethoxine-ormetoprim (Romet-30®)	Antibiotic (for control and prevention of external and systemic bacterial infections).	**Feed:** used at a dose of 50 mg/kg for 5 consecutive days.
Vibrio vaccine	Prevention of Vibrio infections	**Dip: Vaccine dumped after use. Not discharged.**

ATTACHMENT H – DRUG AND CHEMICAL USAGE REPORT TABLE

The Discharger shall provide the information required in section 9.1 of the Monitoring and Reporting Program (Attachment E) using the table below for all aquaculture drugs or chemicals used at the Facility, including those administered by injection or in medicated feed. See the Monitoring and Reporting Program for additional information for completing the table.

Table H-1. Drug and Chemical Usage Report Table

Drug or Chemical Name	Date & Time	Purpose	Amount Applied	Units	Location Where Applied	Treatment Type (immersion, feed, injected)	Flow Treated (MGD)	Total Effluent Flow (MGD)	Effluent Concentration (mg/L)[1]	Water Quality Objective (mg/L)[1]	Person Reporting

Table H-1 Notes:

1. Completion of this column is only required for drugs and chemicals applied directly in water. See section 9.1 of the Monitoring and Reporting Program (Attachment E) for additional information for completing this column.

Table H-2. Drug and Chemical Non-Use Table

Drug or Chemical Name	Reporting Quarter	Used or Not Used
Acetic acid		
Amoxicillin trihydrate		
Carbon Dioxide		
Chloramine-T. Halamide Aqua		
Chorulon® - Chorionic Gonadotropin		
Epsom Salt (Magnesium Sulfate)		
Erythromycin		
Enteric Redmouth (ERM) Vaccine		
Florfenicol (Aquaflor®)		
Formalin (37% formaldehyde solution)		
Hydrogen peroxide		
Ivermectin		
MS-222 / tricaine methanesulfonate (Finquel®, Tricaine-S®)		
Ovaplant® Salmon Gonadotropin-releasing hormone analogue (sGnRHa)		
Oxytetracycline dihydrate (Terramycin® 200)		
Oxytetracycline HCl		
Penicillin G potassium		
Potassium Permanganate (Cairox™)		
PVP Iodine		
SLICE (emamectin benzoate;0.2% aquaculture premix)		
Sodium bicarbonate		
Sodium chloride (salt)		
Sulfadimethoxine-ormetoprim (Romet-30®)		
Vibrio vaccine		
List Other Chemical and Drugs used		

ATTACHMENT I – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. Objectives

The Storm Water Pollution Prevention Plan (SWPPP) has two major objectives: (a) to identify and evaluate sources of pollutants associated with Facility activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the Facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with Facility activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage.) To achieve these objectives, the Discharger shall consider the five-phase process for SWPPP development and implementation as shown in Table I-1.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of the Facility. SWPPP requirements that are not applicable to the Facility should not be included in the SWPPP.

A SWPPP is a written document that shall contain a compliance activity schedule, a description of Facility activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate, at least annually, and shall be readily available for review by facility employees or Lahontan Water Board inspectors.

Table I-1. Five Phases for Developing and Implementing Industrial SWPPPs

PLANNING AND ORGANIZATION
Form Pollution Prevention Team
Review other plans

ASSESSMENT PHASE
Develop a site map
Identify potential pollutant sources
Inventory of materials and chemicals
List significant spills and leaks
Identify non-storm water discharges
Assess pollutant risks

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE
Non-structural BMPs Structural BMPs Select activity and site-specific BMPs

IMPLEMENTATION PHASE
Train employees Implement BMPs Conduct recordkeeping and reporting

EVALUATION / MONITORING
Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP

2. Planning and Organization

The SWPPP shall identify a specific individual or individuals and their positions within the Discharger's organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the Facility manager in SWPPP implementation and revision, and conducting all monitoring program activities. The SWPPP shall clearly identify the Permit-related responsibilities, duties, and activities of each team member. Storm water pollution prevention teams may consist of one individual where appropriate.

3. Site Map

The SWPPP shall include a site map. The site map size shall be at least 8.5 x 11 inches but no larger than 11 X 17 inches and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

The following information shall be included on the site map:

3.1. The Facility boundaries; the outline of all storm water drainage areas within the Facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies and storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

3.2 The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm

water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

3.3 An outline of all impervious areas of the Facility, including paved areas, buildings, covered storage areas, or other roofed structures.

3.4 Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified have occurred.

3.5 Locations of all chemical storage areas and storage tanks, fueling areas, vehicle and equipment storage/maintenance areas, cleaning and rinsing areas, and other areas of activity which are potential pollutant sources.

4. List of Significant Materials

The SWPPP shall include a list of significant materials handled and stored at the Facility. For each material on the list, describe the locations where the material is being stored, as well as the typical quantities.

5. Description of Potential Pollutant Sources

5.1. The SWPPP shall include a narrative description of the Facility activities, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to the Facility's activities shall be considered:

5.1.1. Describe the type, characteristics, and quantity of significant materials used in or stored on site and a description of the cleaning, rinsing, disposal, or other activities related to Facility's operation. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

5.1.2. **Material Handling and Storage Areas.** Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

5.1.3. Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges. The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur.

5.1.4. **Non-Storm Water Discharges.** Investigate the Facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets)

shall be evaluated to identify whether they connect to a storm drain system. (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, rinse water, wash water, etc.). The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

5.2 The SWPPP shall include a summary of all areas' potential pollutant sources, and potential pollutants. This information should be summarized similar to Table I-2.

Table I-2. Example Assessment of Potential Pollutant Sources and Corresponding BMP Summary

Area	Activity	Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery. Spills caused by topping off fuel tanks. Hosing or washing down fuel oil fuel area. Leaking storage tanks. Rainfall running off fuel oil, and rainfall running onto and off fueling area.	fuel oil	Use spill and overflow protection. Minimize run-on of storm water into the fueling area. Cover fueling area. Use dry cleanup methods rather than hosing down area. Implement proper spill prevention control program. Implement adequate preventative maintenance program to preventive tank and line leaks. Inspect fueling areas regularly to detect problems before they occur. Train employees on proper fueling, cleanup, and spill response techniques.

6. Assessment of Potential Pollutant Sources

6.1. The SWPPP shall include a narrative assessment of all Facility activities and potential pollutant sources to determine:

6.1.1. Which areas of the Facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges; and

6.1.2. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials stored or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

6.2. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source.

7. Storm Water Best Management Practices

The SWPPP must include a narrative description of the storm water BMPs to be implemented at the Facility for each potential pollutant and its source identified in the site assessment phase. The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

The description of the BMPs must identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented along with a schedule for implementation. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table I-2.

Facility operators shall consider the following BMPs for implementation at the Facility:

7.1. **Non-Structural BMPs**

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. The Discharger and its Facility operator may consider possible non-structural BMPs options before considering additional structural BMPs. Below is a list of non-structural BMPs that should be considered:

7.1.1. **Good Housekeeping.** Good housekeeping generally consists of practical procedures to maintain a clean and orderly facility.

7.1.2. **Preventive Maintenance.** Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

7.1.3. **Spill Response.** This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

7.1.4. **Material Handling and Storage.** This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

7.1.5. **Employee Training.** This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

7.1.6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

7.1.7. **Recordkeeping and Internal Reporting.** This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

7.1.8. **Inspections.** This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and necessary modifications to the site SWPPP are made.

7.1.9. **Quality Assurance.** This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

7.2. **Structural BMPs**

Where non-structural BMPs as identified above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list including, but not limited, to these structural BMPs that should be considered:

7.2.1. **Overhead Coverage.** This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

7.2.2. **Retention Ponds.** This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

7.2.3. **Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

7.2.4. **Secondary Containment Structures.** This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

7.2.5. **Treatment.** This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc., that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

8. SWPPP General Requirements

8.1. The SWPPP must be retained on site and made available upon request of a representative of the Lahontan Water Board.

8.2. The Lahontan Water Board may notify the Facility operator when the SWPPP does not meet one or more of the minimum requirements of this section. As requested by the Lahontan Water Board, the Discharger shall submit a SWPPP revision and implementation schedule.

8.3. The SWPPP shall be revised, as appropriate, and implemented prior to changes which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an activity which would introduce a new pollutant source at the facility.

8.4. When any part of the SWPPP is infeasible to implement due to proposed significant structural changes, the Discharger shall submit a report to the Lahontan Water Board that (i) describes the portion of the SWPPP that is infeasible to implement, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Water Board approval and/or modifications.

8.5. The SWPPP is considered a report that shall be available to the public by the Lahontan Water Board under section 308(b) of the CWA.

9. Annual Comprehensive Site Compliance Evaluation

The Discharger shall conduct one annual comprehensive site compliance evaluation in the period January 1-December 31. Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

9.1. A review of all visual observation records, inspection records, and sampling and analysis results.

9.2. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

9.3. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

9.4. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, and (v) any incidents of noncompliance and the corrective actions taken. The evaluation report shall be submitted as part of the site's annual report and retained for at least five years.

ATTACHMENT J – PRIORITY POLLUTANT METAL MONITORING REQUIREMENTS

1. **Background.** The Lahontan Water Board has determined that, based on priority pollutant data collected from concentrated aquatic animal production (CAAP) facilities, discharge of priority pollutants other than metals is unlikely. Accordingly, the Lahontan Water Board is requiring, as part of the Monitoring and Reporting Program, that the Discharger sample the effluent and analyze the samples for priority pollutant metals. Sections 2.4.1 through 2.4.4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) provide minimum standards for analyses and reporting. (Copies of the SIP may be obtained from the State Water Resources Control Board or downloaded from http://waterboards.ca.gov/water_issues/programs/state_implementation_policy/docs/final.pdf.) Upstream receiving water pH and hardness are required to evaluate the toxicity of metals where the toxicity of the constituents varies with pH and/or hardness.

   On May 2, 2017, the State Water Resources Control Board adopted Resolution 2017-0027, which approved "Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions." Resolution 2017-0027 provides a consistent regulatory approach throughout the state by setting mercury limits to protect the beneficial uses associated with the consumption of fish by both people and wildlife.

2. **Minimum Level (ML) and Analytical Method Selection:** U.S. EPA published regulations for the Sufficiently Sensitive Methods Rule (SSM Rule) which became effective September 18, 2015. 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). Both 40 C.F.R sections 122.21(e)(3) and 122.44(i)(1)(iv) apply to the selection of a sufficiently sensitive analytical method for the purposes of monitoring and reporting under NPDES permits, including review of permit applications. A U.S. EPA-approved analytical method is sufficiently sensitive where:

   a) 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

   b) 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

   c) 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.

The MLs in SIP Appendix 4 remain applicable. 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 SIP. 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.

3. **Monitoring Requirements.** Priority pollutant metal samples shall be collected for the influent at Monitoring Location INF-001 and effluent at Monitoring Location EFF-001 and analyzed for the metals listed in Table J-1 **one time in the year 2025 and reported to the Lahontan Water Board no later than February 1, 2026 in the SMR, and included in the ROWD.**

4. **Monitoring Plan.** By **September 1, 2024**, the Discharger shall submit a Priority Pollutant Metal Monitoring Plan electronically via California Integrated Water Quality System (CIWQS) submittal outlining reporting levels (RLs), method detection limits (MDLs), and analytical methods for the priority pollutant metals identified in Attachment J. Three months prior to collecting the required Priority Pollutant Metal samples, the Discharger shall notify the Water Board of the Environmental Laboratory Accreditation Program (ELAP) certified laboratory to be used that can conduct the analysis within the holding times specified in the approved methods in 40 C.F.R. part 136. The Discharger shall comply with the monitoring and reporting requirements for the priority pollutant metals as outlined in section 2.3 and 2.4 of the SIP. The maximum required reporting levels for the priority pollutant metals shall be based on the Minimum Levels (MLs) contained in Appendix 4 of the SIP, determined in accordance with section 2.4.2 and section 2.4.3 of the SIP. In accordance with section 2.4.2 of the SIP, when there is more than one ML value for a given substance, the Lahontan Water Board shall include as RLs, in the permit, all ML values, and their associated analytical methods, listed in Appendix 4 that are below the calculated effluent limitation. The Discharger may select any one of those cited analytical methods for compliance determination. If no ML value is below the effluent limitation, then the Lahontan Water Board shall select as the RL, the lowest ML value, and its associated analytical method, listed in Appendix 4 for inclusion in the permit. Table J-1 provides required maximum reporting levels in accordance with the SIP.

Table J-1. List of Required Priority Pollutant Metals[1,5]

Constituent	Controlling Water Quality Criterion for Surface Waters		Maximum Reporting Level[2] µg/L
	Basis	Criterion Concentration µg/L	
Antimony	Primary MCL	6.0	5
Arsenic	Primary MCL	10	10
Barium	Primary MCL	1000	100
Beryllium	Primary MCL	4	2
Cadmium	CTR Aquatic Life	2.9	0.5

Chromium (III)	CTR Aquatic Life	240	50
Chromium (VI)	CTR Aquatic Life	11	10
Copper	CTR Aquatic Life	11	10
Cyanide	CTR Aquatic Life	5.2	5
Lead	CTR Aquatic Life	4.1	2
Mercury	Statewide Mercury Provisions[3]	0.012	0.0005[4]
Nickel	CTR Aquatic Life	62	50
Selenium	CTR Aquatic Life	5	5
Silver	CTR Aquatic Life	5.6	2
Thallium	CTR Human Health	1.7	1
Zinc	CTR Aquatic Life	140	20

Table J-1 Notes:

1. Monitoring shall be conducted according to test procedures approved under 40 C.F.R. part 136

2. The reporting levels required in this table for priority pollutant constituents are established based on section 2.4.2 and Appendix 4 of the SIP, except Chromium (VI).

3. *Final Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions.*

4. Total mercury samples collected as part of the CTR priority pollutant metals sampling requirement shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2). The analysis of total mercury shall be by U.S. EPA method 1631 (Revision E) with a reporting limit of 0.5 ng/L (0.0005 µg/L).

5. The Discharger must sample for Hardness of the effluent and Receiving Water during priority pollutant metal sampling and include in the priority pollutant metal sampling report represented as [mg/L as CaCO3].

ATTACHMENT K – FEED CONVERSION RATIOS LOG

The Discharger shall utilize the following form to keep track of feeding and to calculate/track feed conversion ratios. The first row is an example row. Feed conversion ratios shall be calculated using the following equation:

$$Feed\ Conversion\ Ratio = \frac{Dry\ weight\ of\ feed\ applied}{Wet\ weight\ of\ fish\ gained}$$

Table K-1. Feed Conversion Ratios Log

Date (start date end date)	Description of Group	Total Feed Amounts (Estimate)	Weight of Animals (start weight end weight)	Weight Gained	Calculated Feed Conversion Ratio
3/20/22	Brook trout stockers for Potomac River	5,275 lbs	100 lbs	4,700 lbs	1.12
10/21/23			4,800		