CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

ORDER NO. R6V-2012-0038
NPDES NO. CA0102792

REVISED WASTE DISCHARGE REQUIREMENTS FOR THE CALIFORNIA DEPARTMENT OF FISH AND GAME BLACK ROCK FISH HATCHERY

Inyo County

The following Discharger is subject to Waste Discharge Requirements (WDRs) as set forth in this Order:

Table 1. Discharger Information

WDID	**6B140800003**
Discharger	State of California, Department of Fish and Game
Name of Facility	Black Rock Fish Hatchery
Facility Address	1 Black Rock Springs Road
	Independence, CA 93526
	Inyo County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge from the Black Rock Fish Hatchery from the discharge points identified below is subject to WDRs as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude*	Discharge Point Longitude*	Receiving Water
001	Fish Hatchery Wastewater	36°, 55', 35" N	118°, 13', 42" W	Los Angeles Aqueduct
GW-PERC	Percolation from unlined ponds	Ponds 1, 2 and 3		Groundwater of the Owens H.U. DWR

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**July 11, 2012.**
This Order shall become effective on:	**July 11, 2012.**
This Order shall expire on:	**July 11, 2017**
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations as application for issuance of new waste discharge requirements.	**January 11, 2017 (not later than 180 days in advance of the Order expiration date)**

I, Patty Z. Kouyoumdjian, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on **July 11, 2012.**

Patty Z. Kouyoumdjian, Executive Officer

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I. FACILITY INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Table 4. Facility Information

WDID	6B140800003
Discharger	California Department of Fish and Game
Name of Facility	Black Rock Fish Hatchery
Facility Address	1 Black Rock Springs Road Independence, CA 93526 Inyo County
Facility Contact, Title, and Phone	Matthew Norris, Hatchery Manager, (760) 938-2242
Mailing Address	P.O Box 910, Big Pine, CA 93513
Type of Facility	Concentrated Aquatic Animal Production/ Fish Hatchery
Facility Design Flow	31 MGD, Physical Maximum Capacity; 23 MGD Operational Maximum Capacity

II. FINDINGS

The California Regional Water Quality Control Board, Lahontan Region (hereinafter (Water Board), finds:

A. Background.

The California Department of Fish and Game (hereinafter Discharger) is currently discharging under Order No. R6V-2006-0031, and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0102792. The Discharger submitted a Report of Waste Discharge (ROWD), dated November 2, 2010, and applied for a NPDES permit renewal to discharge up to 27 million gallons per day (MGD) of treated wastewater from the Black Rock Fish Hatchery (hereafter Facility) to the Los Angeles Aqueduct, a water of the United States, tributary to the Haiwee Reservoir. The application was deemed complete on February 15, 2012. 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.

B. Facility Description.

The Discharger owns and operates a cold water concentrated aquatic animal production (CAAP) facility on 40 acres leased from the Los Angeles Department of Water and Power (LADWP). Based on the ROWD, the Facility annually produces 190,000 pounds (lbs.) of rainbow trout, approximately 2,300,000 Kamloop rainbow trout eggs and 2,000,000 Whitney rainbow trout eggs each year. Trout eggs are immediately transferred to the Discharger's Fish Springs Fish Hatchery after collection for incubation and shipment. Up to 70,000 pounds of food are fed to the

fish in May, which is the month of maximum feeding. The Facility includes two groundwater wells, three aeration towers, an egg incubation building, four production raceways, a flow-through brood stock rearing pond (Pond #1), two flow-through sedimentation treatment ponds (Ponds #2 and #3), and miscellaneous operation and maintenance structures.

The Facility operates as a flow-through system relying on both surface water and ground water. The water supply for the raceway ponds and hatchery building is obtained from two onsite LADWP groundwater supply wells numbers 351 and 356, with only one well utilized at a time. Well 351 (primary source) produces an average water flow of 10.7 MGD [16.6 cubic feet per second (cfs)] and Well 356 (secondary source) produces an average water flow of 7.5 MGD (11.6 cfs). Well water is aerated through three packed aeration columns. Aerated well water is then pumped into the head flume of the production raceways. Each 500-foot long raceway consists of five 100-foot long by 10-foot wide by 30-inch deep raceway ponds in series, for a total of 20 raceway ponds at the Facility.

The water supply for the rearing pond (Pond #1) is obtained from Division Creek at a LADWP controlled diversion located approximately 500 yards from the north end of Pond #1. Diverted flow to Pond #1 from Division Creek for the period June 2006 to June 2011 ranged from 1.02 to 8.33 MGD (1.6 to 12.9 cfs), with an average flow of 5.54 MGD (8.57 cfs). During drought years, groundwater from the supply wells can also be used to supplement the surface water supply to Pond #1. Given that only one pump operates at a time, the maximum operational flow rate at the hatchery is 23 MGD. Wastewater from the four raceways and from the rearing pond (Pond #1) is discharged to two wetland settling ponds (Pond #2 and Pond #3) operated in series. The Discharge from the facility occurs through Discharge Point 001 where effluent from Pond #3 discharges directly into the Los Angeles Aqueduct, a tributary of Haiwee Reservoir. The unlined ponds percolate to groundwater of the Owens Valley Ground Water Basin (DWR No. 6-12).. This discharge is identified as GW-PERC. The Los Angeles Aqueduct is located within the Lower Owens Hydrologic Area (Hydrologic Unit No. 603.30).

Attachment B provides a topographic map of the area around the Facility. Attachment C provides a wastewater flow schematic and diagram of the Facility.

C. Legal Authorities.

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (Water Code)(commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

D. Background and Rationale for Requirements.

The 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 Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G through K are also incorporated into this Order.

E. California Environmental Quality Act (CEQA).

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177. This action to adopt Waste Discharge Requirements for potential impacts to groundwater qualifies for an exemption to CEQA for an existing facility under Section 15301 of the Guidelines.

F. Technology-based Effluent Limitations.

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (CFR)[a] 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 Effluent Limitations Guidelines and Standards for the Concentrated Aquatic Animal Production Point Source Category in Part 451 and Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. Water Quality-based Effluent Limitations.

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

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where

[a] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

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 40 CFR 122.44(d)(1)(vi). A detailed discussion of the WQBELs development is included in the Fact Sheet (Attachment F).

H. Water Quality Control Plans.

The Water Board adopted a Water Quality Control Plan for the Lahontan Region (hereinafter Basin Plan) that became effective on March 31, 1995 and has been subsequently amended. 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. 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 the Los Angeles Aqueduct, but does identify present and potential uses for the Haiwee Reservoir, to which the Los Angeles Aqueduct is tributary. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 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 State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

Requirements of this Order specifically implement the applicable Water Quality Control Plans. Beneficial uses applicable to the Los Angeles Aqueduct and to the Owens Valley Ground Water Basin are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Los Angeles Aqueduct /Haiwee Reservoir	Existing: Municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), groundwater recharge (GWR), contact (REC-1) and non-contact (REC-2) water recreation, 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 GW-PERC	Owens Valley Ground Water Basin	Existing: Municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), freshwater replenishment (FRSH), and wildlife habitat (WILD).

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

USEPA 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, USEPA 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 water quality criteria for priority pollutants.

J. 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 USEPA through the NTR and to the priority pollutant objectives established by the Water Board in the Basin Plans. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA 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.

K. Compliance Schedules and Interim Requirements.

This Order does not include compliance schedules and interim effluent limitations.

L. Alaska Rule.

On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. (40 CFR 131.21 and 65 Fed. Reg. 24641 (27 April 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

M. Stringency of Requirements for Individual Pollutants.

This Order contains both technology-based effluent limitations and numeric limitations that constitute WQBELs for individual pollutants. The technology-based effluent limitations consist of the requirements contained in 40 CFR Part 451 and restrictions on total suspended solids (TSS). This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the SIP, California's policy for implementing CTR that was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "*applicable water quality standards for purposes of the [Clean Water] Act*" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

N. Regulations for Use of Aquaculture Drugs and Chemicals.

Drugs and chemicals used in aquaculture are strictly regulated by the U.S. Food and Drug Administration (FDA) through the Federal Food, Drug, and Cosmetic Act (FFDCA; 21 U.S.C 301-392). FFDCA, the basic food and drug law of the United States, includes provisions for regulating the manufacture, distribution, and the use of, among other things, new animal drugs and animal feed. FDA's Center for Veterinary Medicine (CVM) regulates the manufacture, distribution, and use of animal drugs. CVM is responsible for ensuring that drugs used in food-producing animals are safe and effective and that food products derived from treated animals are free from potentially harmful residues. CVM approves the use of new animal drugs based on data provided by a sponsor (usually a drug company). To be approved by CVM, an animal drug must be effective for the claim on the label and safe when used as directed for (1) treated animals; (2) persons administering the treatment; (3) the environment, including non-target organisms; and (4) consumers. CVM establishes tolerances and animal withdrawal periods as needed for all drugs approved for use in food-producing animals. CVM has the authority to grant investigational new animal drug (INAD) exemptions so that data can be generated to support the approval of a new animal drug. The Discharger is responsible for complying with all regulations for drugs and chemicals as discussed in the Fact Sheet in Attachment F.

O. Antidegradation Policy.

40 CFR 131.12 requires that 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 No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact

Sheet (Attachment F) the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution 68-16 because it does not allow increased degradation of water quality over the previous permit. The use of concentration based limits without accompanying flow limits or mass loading limits will not allow increased degradation of water because the operational maximum capacity of the facility is 23 MGD and the maximum intake flow under the improbable conditions of both wells in simultaneous production is 31 MGD.

P. Anti-Backsliding Requirements.

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 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. All effluent limitations and receiving water limitations in this Order are at least as stringent as the effluent and receiving water limitations in the previous Order.

Q. Endangered Species Act.

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 sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 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.

R. Monitoring and Reporting.

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the Water Code authorize the Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

S. Standard and Special Provisions.

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 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 CFR 122.42. The Water Board has also included in this Order special provisions applicable to the Discharger. The rationale for the special provisions contained in this Order is provided in the Fact Sheet.

T. Provisions and Requirements Implementing State Law.

The provisions/requirements in subsections V.B. 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.

U. Notification of Interested Parties.

The 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 notification are provided in the Fact Sheet of this Order.

V. Consideration of Public Comment.

The 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 (Attachment F) of this Order.

IT IS HEREBY ORDERED, that Order No. RV-2006-0031 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, and the provisions of the federal CWA, and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. General Waste Discharge Prohibitions

1. The discharge of waste[b] that causes violation of any narrative water quality objective contained in the Basin Plan, including the Nondegradation Objective, is prohibited.

2. The discharge of waste that causes violation of any numeric water quality objective contained in the Basin Plan is prohibited.

3. 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.

4. The discharge of untreated sewage, garbage, or other solid wastes, or industrial wastes into surface waters of the Region is prohibited.

[b] "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 was defined in the section 13050(d) of the California Water Code.

5. The discharge of hatchery wastewater except to the authorized discharge points (Discharge Points 001 and GW-PERC) is prohibited. The Water Board acknowledges that some discharge occurs to groundwater (GW-PERC). This discharge volume is low relative to the overall discharge from the Facility.

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

7. The discharge shall not cause pollution as defined in Section 13050 of the California Water Code, or a threatened pollution.

8. Neither the treatment nor the discharge of hatchery wastewater shall cause a nuisance as defined in Section 13050 of the California Water Code.

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

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

b. This Permit does not authorize the discharge of any pesticides resulting in detectable concentrations in receiving waters. Unless authorized by a separate permit authorized by the Water Board, the discharge of any pesticides resulting in detectable concentrations in receiving waters is prohibited.

c. The use of any aquaculture drug or chemical not authorized for discharge in Section VI.C.2.a. of this Order that may be potentially discharged to waters of the United States or of the State is prohibited. Modifications to the authorized discharge of aquaculture drugs and chemicals at the Facility may be allowed by the Water Board as specified in Section VI.C.2.a. of this Order.

d. The application of hydrogen peroxide shall be limited to 1 raceway at a time per treatment period.

10. The discharge of hazardous or toxic substances including cleaning chemicals, solvents, oil, grease or other petroleum products, is prohibited.

11. Practices that may allow accumulated sludge, grit, and solid residues to be discharged to surface waters are prohibited.

B. Storm Water Runoff and Storm Water Collection Systems Prohibitions and Requirements

1. This permit does not supersede any obligation to obtain coverage from the General Permit for Discharges of Storm Water Associated with Construction

Activity Construction General Permit Order 2009-0009-DWQ, the Industrial Storm Water General Permit Order 97-03-DWQ (General Industrial Permit) or any other permit when such permits are applicable.

2. Unless otherwise authorized by a separate waste discharge permit or specifically authorized by this permit, discharges of material other than storm water to a separate storm sewer system, or waters of the State are prohibited. Prohibited non-storm water discharges must either be eliminated or permitted by a separate NPDES permit.

3. Non-Storm Water Discharges

a. The following non-storm water discharges are authorized by this Order provided that they satisfy the conditions specified in Paragraph b. 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.

b. The non-storm water discharges as identified in Paragraph a. above are authorized by this Order if all the following conditions are met:

i. The non-storm water discharges are in compliance with the Basin Plan requirements.

ii. The non-storm water discharges are in compliance with local agency ordinances and/or requirements.

iii. BMPs are specifically included in the 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.

iv. 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.

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

4. Unless specifically granted, authorization pursuant to this permit does not constitute an exemption to applicable discharge prohibitions in the Basin Plan.

5. Unless authorized by a separate NPDES permit or WDRs, storage and use of materials not designed for outdoor use must be protected from exposure to storm water.

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

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

The discharge of fish hatchery wastewater shall not exceed the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached Monitoring and Reporting Program (Attachment E):

Table 6. Effluent Limitations – Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	6.5	9.0
Total Suspended Solids	mg/L	6.0	--	--	15.0
Settleable Solids	ml/L	0.1	--	--	--
Formaldehyde	mg/L	0.65	1.3	--	--

2. Interim Effluent Limitations – Not Applicable

B. Reclamation Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

1. This Discharger shall not cause or contribute to a violation of any applicable water quality standard for receiving water adopted by the Water Board or the State Water Board as required by the CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the federal CWA or amendments thereto, the Water Board may revise and modify this Order in accordance with such more stringent standards.

2. The following receiving water limitations are based on water quality objectives contained in the Basin Plan which apply to all surface waters (including wetlands) within the Lahontan Region and are a required part of this Order. The discharge shall not cause or contribute to violation of those objectives in the Los Angeles Aqueduct:

a. Ammonia: 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.

Ammonia concentrations shall not exceed the values listed for the corresponding conditions in Attachment G, Tables G-1 and G-2. For temperature and pH values not explicitly in these tables, the most conservative value neighboring the actual value may be used or criteria can be calculated from numerical formulas available on page 3-4 of the Basin Plan.

b. 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.

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

i. 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 – Table 64431-A (MCLs for Inorganic Chemicals), Table 64444-A (MCLs for Organic Chemicals), Table 64449-A (Secondary MCLs, Consumer Acceptance Limits), and Table 64449-B (Secondary MCLs, Ranges). This incorporation-by-reference is prospective and therefore includes future changes to the incorporated provisions, as changes take effect.

ii. Waters designated as agricultural supply (AGR) shall not contain concentrations of chemical constituents in amounts that adversely affect the water for agricultural use.

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

e. 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. The minimum dissolved oxygen concentration shall not be less than that specified for “COLD” beneficial use class in Table G-3 in Attachment G of this Order.

f. Floating Materials: Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect the water for beneficial uses. The concentrations of floating material shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.

g. Nondegradation of Aquatic Communities and Populations: All wetlands shall be free from substances attributable to wastewater or other discharges that produce adverse physiological responses in humans, animals, or plants; or which 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 hydrological processes.

h. 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. The concentration of oils, greases, or other film or coat generating substances in the receiving waters shall not be altered.

i. Pesticides: According to the Basin Plan, pesticides are defined to include insecticides, herbicides, rodenticides, fungicides, pesticides and all other economic poisons. An economic poison is any substance intended to prevent, repel, destroy, or mitigate the damage from insects, rodents, predatory animals, bacteria, fungi or weeds capable of infesting or harming vegetation, humans, or animals (CA Agricultural Code section 12753). Pesticide concentrations, individually or collectively, shall not exceed the lowest detectable levels, using the most recent detection procedures available. There shall not be an increase in pesticide concentrations found in bottom sediments. There shall be no detectable increase in bioaccumulation of pesticides in aquatic life. Waters designated as MUN shall not contain concentrations of pesticides or herbicides in excess of the limiting concentrations specified in Title 22 of the California Code of Regulations.

j. pH: Changes in normal ambient pH levels shall not exceed 0.5 pH units, nor shall the effluent contribute to the ambient pH exceeding the range between 6.5 and 8.5. The Water 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 sampling event by sampling event basis.

k. Radioactivity: Radionuclides shall not be present in concentrations which are deleterious to human, plant, animal, or aquatic life, nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life. Waters shall not contain concentrations of radionuclides in excess of limits listed in the subsequent table as specified in Title 22 of the California Code of Regulations:

Constituent	Limit

Radioactivity, Gross Alpha	15 pCi/L
Radium-226 + Radium-228	5 pCi/L

l. 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.

m. 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.

n. 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.

o. 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. The taste and odor of waters shall not be altered.

p. Temperature: The natural receiving water temperature shall not be altered.

q. Toxicity: 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 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. 1998).

r. 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.

3. Specific Numeric Surface Water Limitations

Surface Water Limitations Specific to the Haiwee Reservoir Outlet as shown in Table 7 below, are based on Table 3-17 of the Basin Plan (Table G-4, Attachment G). These limitations also apply to the Los Angeles Aqueduct

tributary to the Haiwee Reservoir. Discharges from the Facility shall not cause or contribute to exceedances of the following limitations.

Table 7. Basin Plan Surface Water Limitations – Haiwee Reservoir Outlet

Constituent	Annual Average Limit (mg/L)	90th Percentile Limit (mg/L)
Total Dissolved Solids (TDS)	215	315
Chloride	19.5	38
Sulfate	27	62
Fluoride	0.6	0.9
Boron	0.56	0.91
Nitrate (NO_3)as N	0.5	1.0
Total Nitrogen	0.8	1.5
Orthophosphate Dissolved (as P)	0.23	0.36

B. Groundwater Limitations

The Discharger shall not cause or contribute to groundwater limitations which are based on water quality objectives contained in the Basin Plan (pages 3-11 and 3-12) and are a required part of this Order. Water quality objectives that apply to the Owens Valley Ground Water Basin include the following:

1. Bacteria, Coliform: The median concentration of coliform organisms over any 7-day period shall be less than 1.1 MPN per 100 milliliters.

2. Chemical Constituents: Groundwaters shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in Title 22 of the California Code of Regulations.

3. Groundwaters shall not contain concentrations of chemical constituents in amounts that adversely affect the water for agricultural purposes.

4. Groundwaters shall not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.

5. Radioactivity: Groundwaters shall not contain concentrations of radionuclides in excess of the limits specified below:

Constituent	Limit
Radioactivity, Gross Alpha	15 pCi/L
Radium-226 + Radium-228	5 pCi/L

6. Taste and Odor: Groundwaters shall not contain taste or odor-producing substances in concentrations that cause nuisance or that adversely affect beneficial uses. At a minimum, concentrations shall not exceed adopted secondary maximum contaminant levels specified in title 22 of the California Code of Regulations.

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. **Water Board Standard Provisions for WDRs.**

a. Reporting Requirements

i. Pursuant to Water Code section 13267(b), and Attachment D, the Discharger shall immediately notify the Water Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within 5 days of the time the Discharger becomes aware of the circumstances. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

ii. Pursuant to Water Code section 13260(c), and Attachment D, any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Water Board at least 180 days in advance of implementation of such proposal.

iii. The owner(s) of, and discharge upon, property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with WDRs in the operations or use of the owned property. Pursuant to Water Code section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Water Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Water Board.

iv. If the discharger becomes aware that any information submitted to the Water Board is incorrect, the discharger shall immediately notify the Water Board, in writing, and correct the information.

v. Reports required by the WDRs, and other information requested by the Water Board, must be signed by a duly authorized representative of the discharger. Under section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, of falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1000) for each day of violation.

vi. If the discharger becomes aware that their WDRs are no longer needed (because the discharge will cease), the discharger shall notify the Water Board in writing and request that their WDRs be rescinded.

b. Right to Revise Waste Discharge Requirements

The Water Board reserves the right to revise all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all interested parties.

c. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the Water Code and is grounds for enforcement action or for permit termination, revocation and reissuance, or modification.

d. Waste Discharge Requirements Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for waste discharge requirement modification, revocation, and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDR conditions.

e. Enforcement

The Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

f. Availability

A copy of the WDRs shall be kept and maintained by the discharger and be available at all times to operating personnel, Water Board Staff, or Inspectors designated by Water Boards.

g. Severability

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

h. Definitions

i. “Surface waters” as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of

waters. “Surface waters” does not include artificial water courses or impoundments used exclusively for wastewater disposal.

ii. “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.

i. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency from a storm or flood having a recurrence interval of once in 100 years.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Reopener Provisions

a. 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 Water Board will revise and modify this Order in accordance with such more stringent standards.

b. If toxicity testing, or information specified below in Section VI.C.2 of this Order, or the drug and chemical use reporting required in the Monitoring and Reporting Program (Attachment E) indicates that any 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, 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.

c. Toxicity testing requirements, as specified in Section VI.C.2. 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.

d. If effluent monitoring data for chloride, sulfate, fluoride, boron, nitrate (as N), total nitrogen, or phosphorous indicates the discharge may cause, have the reasonable potential to cause, or contribute to an excursion of the numeric Water Quality Objectives or narrative Water Quality Objectives contained in the Basin Plan for the Haiwee Reservoir Outlet,

then this Order may be reopened to establish effluent limitations for these parameters.

2. Special Studies and Additional Monitoring Requirements

a. Chemical and Aquaculture Drug Use

Attachment H 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 oxytetracycline, penicillin G, florfenicol, amoxycillin trihydrate, erythromycin, vibrio vaccine (fish are removed, dipped in vaccine and returned to the raceway), enteric redmouth bacterin (fish are removed, dipped in vaccine and returned to the raceway), Romet-30, MS-222, PVP Iodine, formaldehyde, hydrogen peroxide, potassium permanganate, sodium chloride, acetic acid, and Chloramine-T to surface waters in accordance with label directions, effluent limitations, best management plan requirements, monitoring and reporting requirements and other conditions of this Order.

Other aquaculture chemicals or drugs that may enter the wastewater discharge can only be authorized if the Discharger notifies the Water Board in writing of the intent to use a new drug or chemical. The notification shall contain the following supplemental information:

i. The common name(s) and active ingredient(s) of the drug or chemical proposed for use and discharge.
ii. The purpose for the proposed use of the drug or chemical (i.e. list the specific disease for treatment and specific species for treatment).
iii. 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.
iv. The location, duration, and frequency of the proposed use or disposal.
v. Material Safety Data Sheets and available toxicity information.
vi. Any related Investigational New Animal Drug (INAD), New Animal Drug Application (NADA) information, extra-label use requirements and/or veterinarian prescriptions.

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 USEPA *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 No Observed Adverse Effect Level (NOAEL) and Lowest Observed Adverse Effect Level (LOAEL).

Where exposure of aquatic life to the 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 EPA/21-R-02-013, *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, October 2002*, using *C. dubia*, to determine the No Observed Effect Concentration (NOEC) or Inhibition Concentration (IC_{25}).

b. Reporting of Unanticipated Discharges

i. The Discharger shall provide to the Water Board an oral report within 24 hours of discovery of the failure in, or damage to 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.

The Discharger must provide a written report within 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.

ii. In the event of a spill of drugs, chemicals, pesticides, or feed occurs 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 Water Board within 24 hours of discovery of its occurrence and a written report within 7 days. The report shall include the identity and quantity of the material spilled.

3. Best Management Practices and Pollution Prevention

a. Best Management Practices (BMP) Plan - Aquaculture Operations

The Discharger shall certify in writing to the Water Board by **October 12, 2012** that a BMP Plan has been updated to include the requirements specified in this Order and is being implemented as required by 40 CFR Part 451.3(d). An existing BMP plan may be modified for use under this section. The Discharger shall develop and implement the BMP Plan to prevent or minimize the generation and discharge of wastes and pollutants to waters of the United States and waters of the State and ensure disposal or land application of wastes is in compliance with applicable solid waste disposal regulations. The Discharger shall review and certify in writing to the Water Board the BMP Plan annually and must amend the BMP Plan whenever there is a change in the Facility or in the operation of the Facility which materially increases the generation of pollutants or their release or potential release to surface waters.

The BMP plan must include, at a minimum, the following BMPs:

i. Solids Management

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.

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

3) Report the final disposition of all other solids and liquids, including aquaculture drugs and chemicals, not discharged to surface waters in the effluent.

4) Fish mortalities must be removed and properly disposed of on a regular basis to prevent discharge to waters of the U.S., except in cases where the discharge to surface waters is determined to benefit the aquatic environment. Procedures must be identified and implemented to collect, store, and dispose of fish and other solid wastes in an environmentally safe manner and in manner so as to minimize discharge to waters of the United States or waters of the State.

ii. Operations and Maintenance

1) Maintain facility and wastewater treatment technologies to prevent the overflow of any floating matter or bypassing of treatment technologies.

2) Inspect the facility and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.

3) Ensure storage and containment of drugs, chemicals, fuel, waste oil, organic wastes, pesticides/biocides, or other materials to prevent spillage or release into the aquatic animal production Facility, waters of the United States, or waters of the State.

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

5) Prevent fish from being released within the U.S. Food and Drug Administration (FDA) required withdrawal time of any drug or chemical with which they have been treated.

6) All drugs and pesticides must be used in accordance with applicable label directions (FIFRA or FDA), except under the following conditions, both of which must be reported in advance to the Executive Officer:

   a) Participation in Investigational New Animal Drug (INAD) studies, using established protocols; or
   b) Extra label drug use, as prescribed by a veterinarian.

7) Limit the number of raceways treated during chemical treatments to insure compliance with effluent limitations and provisions of this Order.

8) Implement protocols to ensure that pesticides stored or used on site will not spill, drift, or transport by storm water into the discharge, into waters of the US, or into waters of the State.

iii. Recordkeeping

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.

2) Maintain records documenting the frequency of cleaning, inspections, maintenance and repairs.

3) Maintain records documenting compliance with training requirements.

iv. Training

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.

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.

3) The Discharger shall ensure that its operations staff are familiar with the BMP Plan and have been adequately trained in the specific procedures it requires.

b. Best Management Practices (BMP) Plan - 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 in the Facility, and 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, vehicle fluids, battery fluids, cleaning solutions, landscaping supplies, landscaping wastes, and storage of other materials with the potential for discharge to surface waters. The Discharger shall develop, and implement in accordance with the requirements in Attachment K, 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 K, and updated to represent current sit conditions.

4. Compliance Schedules – Not Applicable

5. Construction, Operation and Maintenance Specifications

a. Collected screenings, sludges, and other solids, including fish carcasses, shall be disposed of in a manner approved by the Executive Officer and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq.

b. All aquaculture drugs and chemicals not discharged to receiving waters in accordance with the provisions of this Order shall be disposed of in an environmentally safe manner, according to label guidelines, Material Safety Data Sheet guidelines and the Discharger's BMP Plan (see Section VI.C.3. of this Order). Any other form of disposal requires approval from the Executive Officer. For all aquaculture drugs and chemicals not authorized for discharge to receiving waters, 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 III, Discharge Prohibitions).

c. All facilities used for transport and treatment of hatchery wastewater shall 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.

d. The vertical distance between the water surface elevation and the lowest point of a pond dike or the invert of an overflow structure shall not be less than 2 feet (0.46 meters).

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions - Order Continuation After Expiration Date

If this Order is not revised and renewed prior to expiration, then the Order shall be continued until revised and renewed, provided that compliance with the requirements contained herein is maintained and that the Discharger has applied for renewal of the Order at least 180 days prior to the expiration date.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

A. Limitation Bases

1. 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 non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the 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.

2. 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 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that calendar day.

3. Instantaneous Minimum Effluent Limitation.

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

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. Non-compliance 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 minimum effluent limitation would result in two instances of non-compliance 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.

B. Priority Pollutants

The Water Board may consider priority pollutants in intake water on a pollutant-by-pollutant and discharge-by-discharge basis when establishing and enforcing water quality-based effluent limitations, provided that the discharger has demonstrated to the satisfaction of the Water Board that the following conditions are met:

1. The observed maximum ambient background concentration, and the intake water concentration of the pollutant exceeds the most stringent applicable Criterion/ objective for that pollutant;

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

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.

4. The Water Board may also consider other factors when determining whether the intake water is from the same water body as the receiving water body;

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

6. 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.

7. Where the above conditions are met, the 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 found in the facility's intake water. A 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. Where proper operation and maintenance of a facility's treatment system results in the removal of an intake water pollutant, the Water Board may establish limitations that reflect the lower mass and concentration of the pollutant achieved by such treatment.

8. Where intake water for a facility is provided by a municipal water supply system and the supplier provides treatment of the raw water that removes an intake water pollutant, the concentration of the intake water pollutant shall be determined at the point where the water enters the water supplier's distribution system.

9. Where a facility discharges pollutants from multiple sources that originate from the receiving water body and from other water bodies, the Water Board may derive an effluent limitation reflecting the flow-weighted amount of each source of the pollutant provided that adequate monitoring to determine compliance can be established and is included in the permit.

10. When calculating the flow-weighted effluent limitation, the pollutant from the receiving water body shall be assumed to have a concentration that is no greater than the concentration in the facility's intake water; the same pollutant from other sources shall be assumed to have a concentration that is no greater than the most stringent applicable criterion/objective. The permit shall specify how compliance with mass- and concentration-based limitations for the intake water pollutant will be assessed. This may be done by basing the effluent limitation or receiving water limitation on ambient background concentration data. Alternatively, the Water Board may determine compliance by simultaneously monitoring the pollutant concentrations in the intake water and in the effluent. This monitoring may be supplemented by monitoring internal waste streams or by a Water Board evaluation of the use of best management practices.

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ATTACHMENT A – DEFINITIONS

DEFINITIONS

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

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

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

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

Best Management Practices (BMP): 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 leads, and solids or waste disposal.

Best Practicable Treatment or Control (BPTC): BPTC is a requirement of State Water Resources Control Board Resolution 68-16 – "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (referred to as the "Antidegradation Policy"). BPTC is the treatment or control of a discharge necessary to assure that, *"(a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."* Pollution is defined in Water Code Section 13050(l). In general, an exceedance of a water quality objective in the Basin Plan constitutes "pollution".

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.

Bypass: The intentional diversion of waste streams from any portion of a treatment facility [*40 CFR §122.41(m)(1)(i)*].

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): 40 CFR 122.24 defines CAAP facilities as 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 in

facilities which produce less that 9,000 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year and facilities which feed less than 2,275 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 MDL.

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 waste load 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).

Effluent Limitations Guidelines: Regulations published by USEPA pursuant to section 304(b) of the Clean Water Act (CWA).

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

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 CFR 530),

FDA: Federal Food and Drug Administration.

FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act.

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.

Inhibition Concentration (IC_{25}): A point estimate of the toxicant concentration that would cause a 25 percent reduction in a nonlethal biological measurement of the test organisms (e.g., reproduction, growth).

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).

Lowest Observed Adverse Effect Level (LOAEL): The lowest level of a stressor that causes statistically and biologically significant differences in test samples as compared to other samples subjected to no stressor. The term is used in this Order when referring to acute toxicity testing.

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.

No Observed Adverse Effect Level (NOAEL): An exposure level at which there are no statistically or biologically significant increases in the frequency or severity of adverse effects between the exposed population and its appropriate control; some effects may be produced at this level, but they are not considered as adverse. This term is used in this Order when referring to acute toxicity testing.

No Observed Effect Concentration (NOEC): The highest measured concentration of an effluent or a toxicant that causes no statistically significant observed effect on exposed organisms compared with control organisms. The term is used in this Order when referring to chronic toxicity testing.

Method Detection Limit (MDL): MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

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 less than the laboratory's MDL.

Off-line Settling Basin: 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.

Pesticide: For the purposes of this permit pesticides are defined to include insecticides, herbicides, rodenticides, fungicides, piscicides and all other economic poisons. An economic poison is any substance intended to prevent, repel, destroy, or mitigate the damage from insects, rodents, predatory animals, bacteria, fungi or weeds capable of infesting or harming vegetation, humans, or animals (CA Agriculture Code, 12753).

Production: Means the amount of fish grown and fed in a given period of time for harvest, processing or release.

Reporting Level (RL): 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. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the 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.

Severe property damage: 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 CFR §122.41(m)(1)(ii)*].

Solids: Sand, silt, or other debris collected from facility intake or source waters and accumulated waste material from aquaculture raceways and their quiescent zones, offline letting basins, full flow settling basins, ponds or other areas of accumulation.

Upset: 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 CFR §122.41(n)(1)*].

ACRONYMS & ABBREVIATIONS

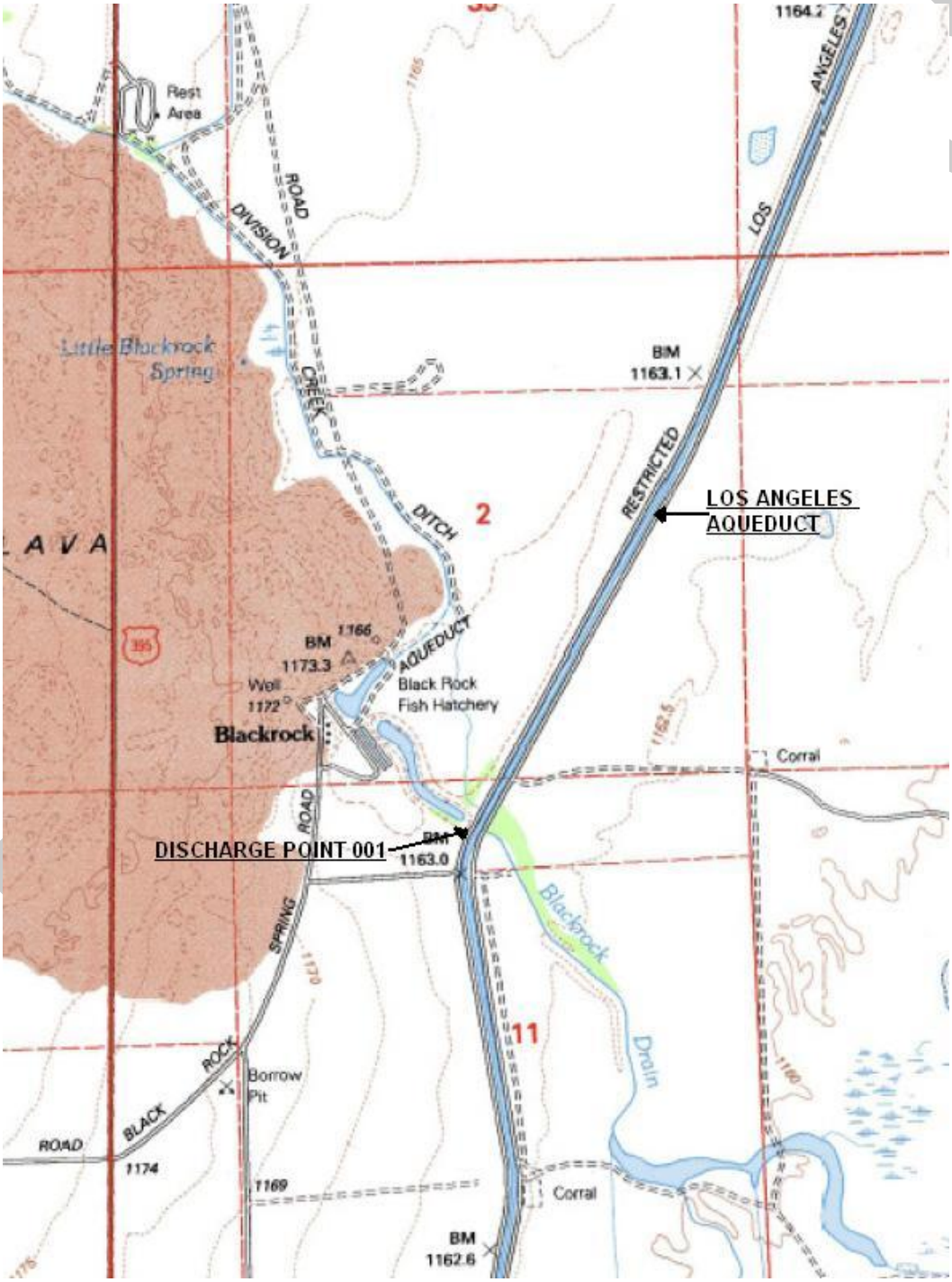
AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BPJ	Best Professional Judgment
BPT	Best practicable treatment control technology
C	Water Quality Objective
CAAP	Concentrated Aquatic Animal Production
CCC	Criterion Continuous Concentration
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CFS	Cubic Feet Per Second
CMC	Criterion Maximum Concentration
CTR	California Toxics Rule
CV	Coefficient of Variation
CVM	Center for Veterinary Medicine
CWA	Clean Water Act
CWC	California Water Code
DFG	Department of Fish and Game
DPH	State of California Department of Public Health
DMR	Discharge Monitoring Report
EC	Electrical conductivity
ECA	Effluent Concentration Allowance
ELAP	California Department of Health Services Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
FDA	United States Food and Drug Administration
GPD	Gallons Per Day
IC_{25}	Inhibition Concentration (25%)
INAD	Investigational New Animal Drug
IRIS	Integrated Risk Information System
LA	Load Allocations
LC_{50}	Lethal Concentration (50%)
LOAEL	Lowest Observed Adverse Effect Level
LOEC	Lowest Observed Effect Concentration
LRP	Low Regulatory Priority
LTA	Long-Term Average
MCL	Maximum Contaminant Level
MDEL	Maximum Daily Effluent Limitation
MDL	Method Detection Limit
MEC	Maximum Observed Effluent Concentration
MGD	Million Gallons Per Day
mg/L	Milligrams Per Liter

ML	Minimum Level
MPN	Most Probable Number
MRP	Monitoring and Reporting Program
NADA	New Animal Drug Application
ND	Not Detected
NOAEL	No Observed Adverse Effect Level
NOEC	No Observable Effect Concentration
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NTR	National Toxics Rule
POTW	Publicly-Owned Treatment Works
PPM	Parts Per Million
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QSD	Qualified SWPPP Developer
RPA	Reasonable Potential Analysis
RWQCB	Regional Water Quality Control Board or Water Board
SIP	State Implementation Policy (*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*)
SMCL	Secondary Maximum Contaminant Level
SMR	Self Monitoring Report
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board or State Water Board
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TSD	Technical Support Document
TSS	Total Suspended Solid
USEPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Waste Load Allocations
WQBEL	Water Quality-Based Effluent Limitation
WQO	Water Quality Objectives
µg/L	Micrograms Per Liter
µmhos/cm	Micromhos Per Centimeter

ATTACHMENT B – TOPOGRAPHIC MAP

Black Rock Fish Hatchery
1 Black Rock Springs Road
Independence, CA 93526
Inyo County

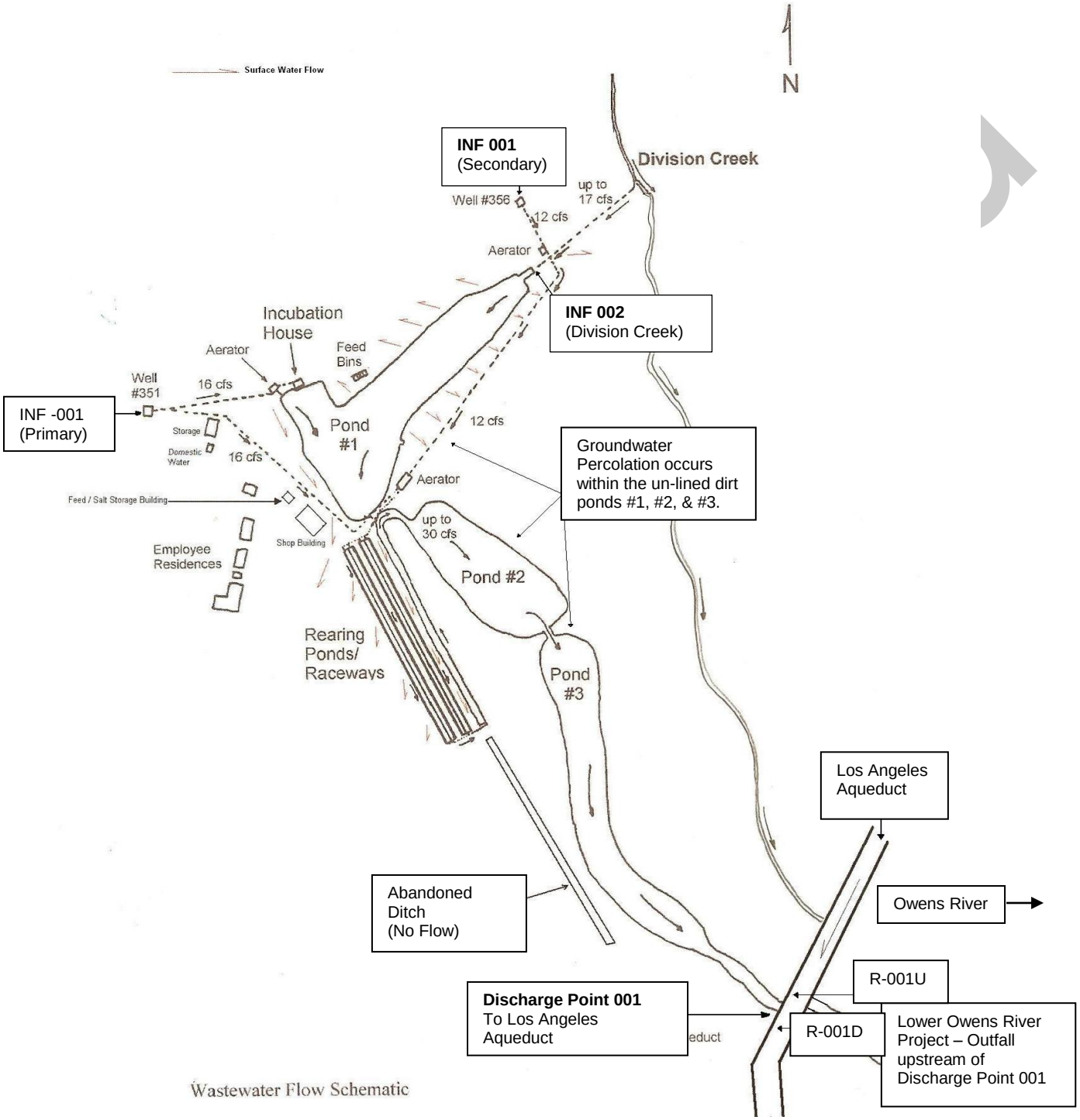
Latitude: 36º 55' 35" N
Longitude: 118º 13' 42" W
Sections 2 and 11, T12S, R24E, MDB&M



USGS Blackrock 7.5 Minute Quadrangle

ATTACHMENT C ¨ FACILITY MAP AND FLOW SCHEMATIC

Facility Map
Flow Schematic



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the CWA and the CWC and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [*40 CFR §122.41(a)*].

2. The Discharger shall 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 Order has not been modified to incorporate the requirement [*40 CFR §122.41(a)(1)*].

B. 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 CFR §122.41(c)*].

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [*40 CFR §122.41(d)*].

D. 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 includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order [*40 CFR §122.41(e)*].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [*40 CFR §122.41(g)*].

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 CFR §122.5(c)*].

F. Inspection and Entry

The Discharger shall allow the Water Board, State Water Resources Control Board SWRCB, United States Environmental Protection Agency (USEPA), 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 [*40 CFR §122.41(i)*] [Water Code *13383(c)*]:

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 [*40 CFR §122.41(i)(1)*];

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [*40 CFR §122.41(i)(2)*];

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [*40 CFR §122.41(i)(3)*];

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 [*40 CFR §122.41(i)(4)*].

G. Bypass

1. Definitions

   a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility [*40 CFR §122.41(m)(1)(i)*].

   b. “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 CFR §122.41(m)(1)(ii)*].

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 I.G.3 and I.G.5 below [*40 CFR §122.41(m)(2)*].

3. Prohibition of bypass – Bypass is prohibited, and the Water Board may take enforcement action against a Discharger for bypass, unless [*40 CFR §122.41(m)(4)(i)*]:

    a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [*40 CFR §122.41(m)(4)(A)*];

    b. 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 CFR §122.41(m)(4)(B)*]; and

    c. The Discharger submitted notice to the Water Board as required under Standard Provision – Permit Compliance I.G.5 below [*40 CFR §122.41(m)(4)(C)*].

4. The Water Board may approve an anticipated bypass, after considering its adverse effects, if the Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [*40 CFR §122.41(m)(4)(ii)*].

5. Notice

    a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [*40 CFR §122.41(m)(3)(i)*].

    b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below [*40 CFR §122.41(m)(3)(ii)*].

H. 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 CFR §122.41(n)(1)*].

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 paragraph H.2 of this section 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 CFR §122.41(n)(2)*].

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 CFR §122.41(n)(3)*]:

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset [*40 CFR §122.41(n)(3)(i)*];

   b. The permitted facility was, at the time, being properly operated [*40 CFR §122.41(n)(3)(i)*];

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [*40 CFR §122.41(n)(3)(iii)*]; and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [*40 CFR §122.41(n)(3)(iv)*].

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [*40 CFR §122.41(n)(4)*].

II. STANDARD PROVISIONS – PERMIT ACTION

A. 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 CFR §122.41(f)*].

B. 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 CFR §122.41(b)*].

C. Transfers

This Order is not transferable to any person except after notice to the Water Board. The 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 CFR §122.41(l)(3)*] [*40 CFR §122.61*].

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [*40 CFR §122.41(j)(1)*].

B. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [*40 CFR §122.41(j)(4)*] [*40 CFR §122.44(i)(1)(iv)*].

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), 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 Water Board Executive Officer at any time [*40 CFR §122.41(j)(2)*].

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements [*40 CFR §122.41(j)(3)(i)*];

2. The individual(s) who performed the sampling or measurements [*40 CFR §122.41(j)(3)(ii)*];

3. The date(s) analyses were performed [*40 CFR §122.41(j)(3)(iii)*];

4. The individual(s) who performed the analyses [*40 CFR §122.41(j)(3)(iv)*];

5. The analytical techniques or methods used [*40 CFR §122.41(j)(3)(v)*]; and

6. The results of such analyses [*40 CFR §122.41(j)(3)(vi)*].

C. Claims of confidentiality for the following information will be denied [*40 CFR §122.7(b)*]:

1. The name and address of any permit applicant or Discharger [*40 CFR §122.7(b)(1)*]; and

2. Permit applications and attachments, permits and effluent data [*40 CFR §122.7(b)(2)*].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Water Board, State Water Board, or USEPA within a reasonable time, any information which the Water Board, SWRCB, or USEPA 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 Water Board, SWRCB, or USEPA copies of records required to be kept by this Order [*40 CFR §122.41(h)*] [Water Code *13267*].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Water Board, SWRCB, and/or USEPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [*40 CFR §122.41(k)*].

2. All permit applications shall be signed as follows:

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

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [*40 CFR §122.22(a)(2)*]; or

   c. For a municipality, State, federal, or other public agency: 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 USEPA) [*40 CFR §122.22(a)(3)*].

3. All reports required by this Order and other information requested by the Water Board, SWRCB, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in paragraph (2.) of this provision [*40 CFR §122.22(b)(1)*];

   b. The authorization specified 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 CFR §122.22(b)(2)*]; and

c. The written authorization is submitted to the Water Board, SWRCB, or USEPA [*40 CFR §122.22(b)(3)*].

4. If an authorization under paragraph (3.) of this provision 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 paragraph (3.) of this provision must be submitted to the Water Board, SWRCB or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22(c)].

5. Any person signing a document under paragraph (2.) or (3.) of this provision 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 CFR §122.22(d)*].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order [*40 CFR §122.41(l)(4)*].

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Water Board or SWRCB for reporting results of monitoring of sludge use or disposal practices [*40 CFR §122.41(l)(4)(i)*].

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Water Board [*40 CFR §122.41(l)(4)(ii)*].

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [*40 CFR §122.41(l)(4)(iii)*].

D. 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 CFR §122.41(l)(5)*].

E. Twenty Four Hour Reporting

1. The Discharger shall report any noncompliance that 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 written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission 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 [*40 CFR §122.41(l)(6)(i)*].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [*40 CFR §122.41(l)(6)(ii)*]:

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(A)*].

   b. Any upset that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(B)*].

   c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [*40 CFR §122.41(l)(6)(ii)(C)*].

3. The Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [*40 CFR §122.41(l)(6)(iii)*].

F. Planned Changes

The Discharger shall give notice to the 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 CFR §122.41(l)(1)*]:

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 40 CFR §122.29(b) [*40 CFR §122.41(l)(1)(i)*]; or

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

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [*40 CFR §122.41(l)(1)(iii)*].

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Water Board or SWRCB of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [*40 CFR §122.41(l)(2)].*

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. [*40 CFR §122.41(l)(7)*].

I. 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 Water Board, SWRCB, or USEPA, the Discharger shall promptly submit such facts or information [*40 CFR §122.41(l)(8)*].

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Water Board as soon as they know or have reason to believe [*40 CFR §122.42(a)*]:

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 CFR §122.42(a)(1)*]:

    a. 100 micrograms per liter (µg/L) [*40 CFR §122.42(a)(1)(i)*];

b. 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 CFR §122.42(a)(1)(ii)*];

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR §122.42(a)(1)(iii)*]; or

d. The level established by the Water Board in accordance with 40 CFR §122.44(f) [*40 CFR §122.42(a)(1)(iv)*].

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 CFR §122.42(a)(2)*]:

a. 500 micrograms per liter (µg/L) [*40 CFR §122.42(a)(2)(i)*];

b. 1 milligram per liter (mg/L) for antimony [*40 CFR §122.42(a)(2)(ii)*];

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR §122.42(a)(2)(iii)*]; or

d. The level established by the Water Board in accordance with 40 CFR §122.44(f) [*40 CFR §122.42(a)(2)(iv)*].

Attachment E – Monitoring and Reporting Program – Table of Contents

List of Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to, and the approval of, the Water Board.

B. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. Calculated flows shall be calculated consistent with accepted engineering practices. The Discharger must provide information on how the flow measurement is obtained at each location where flow monitoring is required. The information must include the instrument used, last calibration date and results and the name of the person who conducted the measurement.

C. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the Department of Public Health (DPH; formerly the Department of Health Services). Laboratories that perform sample analyses shall be identified in all monitoring 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 a Quality Assurance-Quality Control Program (QA/QC) is instituted by the laboratory and approved by the Executive Officer. 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 Water Board staff. The QA/QC Program must conform to USEPA guidelines or to procedures approved by the 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. A QA/QC program approved by the Executive Officer is followed, and
2. Detection limits, accuracy, and precision of the kits and meters meet EPA and Surface Water Ambient Monitoring Program (SWAMP) standards, and
3. All results for field testing must be reported to Water Board in quarterly and annual self monitoring reports with supporting QA/QC data.

D. 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.

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program. The results of all monitoring required by this Order shall be reported to the Water Board and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order.

II. 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
Influent	INF-001	Shall be located where a representative sample of influent water from the groundwater wells can be collected prior to entering the raceways.
	INF-002	Shall be located where a representative sample of influent water from Division Creek can be collected prior to entering Pond #1.
001	EFF-001	Final settling pond outfall, discharge to the Los Angeles Aqueduct.
	R-001U	In the Los Angeles Aqueduct, 50 feet upstream of the location where the discharge enters the Aqueduct.
	R-001D	In the Los Angeles Aqueduct, 50 feet downstream of the location where the discharge enters the Aqueduct.
GW-PERC	NONE	Percolate from unlined ponds to groundwater, not required at this time.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Locations INF-001 and INF-002

1. The influent shall be sampled on the same days that the effluent is sampled for the constituents listed. The Discharger shall monitor the influent to the Facility at Monitoring Locations INF-001 and INF-002 as follows:

Table E-2. Influent Monitoring (INF-001 and INF-002)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Test Method
Flow (average daily (monthly total)	MGD	Meter/ Calculated	1 / month	
pH	standard units	Grab	1 / month	[1](field test)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Test Method
Electrical Conductivity @ 25˚C	µmhos/cm	Grab	1 / month[2;] coinciding with the first sodium chloride treatment of the month. If there are none, then sample once that month.	1 (field test)
Fluoride	mg/L	Grab	1 / quarter[3]	[1]
Total Dissolved Solids (TDS)	mg/L	Grab	1 / quarter[3]	[1]
Nitrate (as N)	mg/L	Grab	1 / quarter[3]	[1]
Nitrogen, Total (as N)	mg/L	Grab	1 / quarter[3]	[1]
Orthophosphate, Dissolved (as P)	mg/L	Grab	1 / quarter[3]	[1]
Boron	mg/L	Grab	1 / quarter[3]	[1]
Sulfate	mg/L	Grab	1 / quarter[3]	[1]
Total Suspended Solids (TSS)[4]	mg/L	Grab	1 / quarter[3]	[1]
Settleable Solids[4]	ml/L	Grab	1 / quarter[3]	[1]

[1] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136. Where no methods are specified for a given pollutant, pollutants shall be analyzed by method proposed by the Discharger and approved by the Executive Officer.

[2] After at least 12 monthly samples, the Executive Officer may reduce influent sample frequency to 1/year for specific constituents if the Discharger requests a reduction and can demonstrate constituent results are less than the method detection limit (MDL), the concentrations indicate no reasonable potential to exceed numeric receiving water limitations or the constituent concentrations have less than statistically significant variation (at a 90% confidence level).

[3] After at least 8 quarterly samples, the Executive Officer may reduce influent sample frequency to 1/year for specific constituents if the Discharger requests a reduction and can demonstrate constituent results are less than the method detection limit (MDL), the concentrations indicate no reasonable potential to exceed numeric receiving water limitations or the constituent concentrations have less than statistically significant variation (at a 90% confidence level).

[4] These constituents shall only be collected from INF-002,, the surface diversion from Division Creek prior to Pond #1. These constituents are not required from INF-001.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

The Discharger shall monitor wastewater discharged from the Facility at Monitoring Location EFF-001 as follows:

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

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Test Method[1]
Flow (average daily) (monthly total)	MGD	Meter	1 / month	
Temperature	ºF	Instantaneous	1 / month	1 Field test
pH	standard units	Grab	1 / month when monitoring for other constituents and during application of: acetic acid, CO2, and/or sodium bicarbonate	[1]
Total Suspended Solids (TSS)	mg/L	Grab	1 / month during cleaning operations (or other operational modes which increases the discharge of TSS	[1]
Settleable Solids	ml/L	Grab	1 / month during cleaning operations (or other operational modes which increases the discharge of settleable solids	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Test Method[1]
Electrical Conductivity @ 25˚C	µmhos/cm	Grab	1 / month coincident with the first application of salt, acetic acid, CO_2, or sodium bicarbonate. If there are no applications during a month, then sample once that month coincident with influent sampling.	[1]
Chloride	mg/L	Grab	1/month and during first salt use of the month.[3]	[1]
Ammonia (as Nitrogen)	mg/L	Grab	1 / month[3]	[1]
Total Dissolved Solids (TDS)	mg/L	Grab	1 / month[3]	[1]
Dissolved Oxygen	mg/L	Grab	1 / quarter[4]	[1]
Nitrate, Total (as N)	mg/L	Grab	1 / quarter[4]	[1]
Nitrogen, Total (as N)	mg/L	Grab	1 / quarter[4]	[1]
Orthophosphate, Dissolved (as P)	mg/L	Grab	1 / quarter[4]	[1]
Sulfate	mg/L	Grab	1 / quarter[4]	[1]
Fluoride	mg/L	Grab	1 / quarter[4]	[1]
Boron	mg/L	Grab	1 / quarter[4]	[1]
Formaldehyde	mg/L	Grab	1 / month during use[2]	[1]
Hydrogen Peroxide	mg/L	Grab	1 / month during use[2, 3]	[1]
Potassium Permanganate	mg/L	Grab	1 / month during use[2, 3]	[1]
PVP Iodine (iodophor)	mg/L	Grab	1 / month during use[2, 3]	[1]
Chloramine-T	mg/L	Grab	1 / month during use[2, 3]	[1]

[1] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136. Where no methods are specified for a given pollutant, pollutants shall be analyzed by method proposed by the Discharger and approved by the Executive Officer.

[2] When this chemical is added to waters of the Facility, 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. After the initial sample, if subsequent treatments use the same amount of chemical, the flow rate and final concentration is calculated to be the same, the Discharger may submit a only a calculated final effluent concentration upon approval by the Executive Officer.

[3] After at least 12 monthly samples, the Executive Officer may reduce effluent sample frequency to 1/year for specific constituents if the Discharger requests a reduction and can demonstrate constituent results are less than the method detection limit (MDL), the concentrations indicate no reasonable potential to exceed numeric receiving water limitations or the constituent concentrations have less than statistically insignificant variation (at a 90% confidence level).

[4] After at least 8 quarterly samples, the Executive Officer may reduce effluent sample frequency to 1/year for specific constituents if the Discharger requests a reduction and can demonstrate constituent results are less than the method detection limit (MDL), the concentrations indicate no reasonable potential to exceed numeric receiving water limitations or the constituent concentrations have less than statistically significant variation (at a 90% confidence level).

B. Monitoring Location GW-PERC – Groundwater Monitoring, Not Applicable

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS – NOT APPLICABLE

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Locations R-001U and R-001D (Surface Water)

1. The Discharger shall monitor the Los Angeles Aqueduct at Monitoring Locations R-001U (50 ft. upstream) and R-001D (50 ft. downstream) of the discharge location 001 as follows:

Table E-4. Receiving Water Monitoring (R-001U and R-001D)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Test Method[1]
Temperature	ºF	Instantaneous	1 / quarter[4]	1 Field test
pH	standard units	Grab	1 / quarter[4]	1
Dissolved Oxygen	mg/L	Grab	1 / quarter[4]	1
Electrical Conductivity @ 25˚C	µmhos/cm	Grab	1 / month coincident with the first application of salt, acetic acid, CO2, or sodium bicarbonate. If there are no applications during a month, then sample once that month coincident with influent sampling.	1
Ammonia (as Nitrogen)	mg/L	Grab	1/ quarter [4] coincident with influent sampling	1
Chloride	mg/L	Grab	1/quarter[4] coincident with influent sampling	1
Total Dissolved Solids (TDS)	mg/L	Grab	1/ quarter[4] coincident with influent sampling	1
Nitrate, Total (as N)	mg/L	Grab	1 / quarter[4] coincident with influent sampling	1
Nitrogen, Total (as N)	mg/L	Grab	1 / quarter[4] coincident with influent sampling	1
Orthophosphate, Dissolved (as P)	mg/L	Grab	1 / quarter[4] coincident with influent sampling	1
Sulfate	mg/L	Grab	1 / quarter[4] coincident with influent sampling	1
Fluoride	mg/L	Grab	1 / quarter[4] coincident with influent sampling	1
Boron	mg/L	Grab	1 / quarter[4] coincident with influent sampling	1
Formaldehyde	mg/L	Grab	1 / month during use[2, 3]	1

[1] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136. Where no methods are specified for a given pollutant, pollutants shall be analyzed by method proposed by the Discharger and approved by the Executive Officer.

[2] Monitoring for formaldehyde at Monitoring Location R-001D is required only if formaldehyde is added to waters of the Facility. A sample in the receiving water shall be collected at a time when the concentration of the formaldehyde is expected to be at a maximum

[3] After at least 12 monthly samples, the Executive Officer may reduce receiving water sample frequency to 1/year for specific constituents if the Discharger requests a reduction and can demonstrate constituent results are less than the method detection limit (MDL), the concentrations indicate no reasonable potential to exceed numeric receiving water limitations or the constituent concentrations have less than statistically insignificant variation (at a 90% confidence level).

[4] After at least 8 quarterly samples, the Executive Officer may reduce receiving water sample frequency to 1/year for specific constituents if the Discharger requests a reduction and can demonstrate constituent results are less than the method detection limit (MDL), the concentrations indicate no reasonable potential to exceed numeric receiving water limitations or the constituent concentrations have less than statistically insignificant variation (at a 90% confidence level).

2. In conducting the receiving water sampling, a log shall be kept and a summary of the following reported, of the visual condition of the Los Angeles Aqueduct. The presence or absence of the following shall be recorded:

   a. floating or suspended matter;
   b. discoloration;
   c. visible films, sheens, or coatings;
   d. bottom deposits;
   e. potential nuisance conditions;
   f. aquatic life;
   g. algae, fungi, slimes, or other aquatic vegetation; and
   h. odor.

IX. OTHER MONITORING REQUIREMENTS

A. Quarterly Drug and Chemical Use Report

The information listed below shall be submitted for all aquaculture drugs or chemicals used at the Facility. This information shall be reported at quarterly intervals and submitted with the quarterly self monitoring reports using the drug and chemical usage report table found in Attachment I of this Order. At such time as the Discharger is required to begin submitting self-monitoring reports electronically, it shall continue to submit paper copies of the quarterly drug and chemical use reports to the Water Board:

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

2. The date(s) of application.

3. The purpose(s) for the application.

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

5. The total flow through the Facility measured in CFS to the discharge point after mixing with the treated water.

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

7. For drugs and chemicals applied directly to water (i.e., immersion bath, flush treatment), the estimated concentration in the effluent at the point of discharge.

Calculation of Concentration

For drugs or chemicals used in an immersion bath, "drip" treatment, or in other direct application to waters at the Facility, 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) x (flow in treatment area) ÷ (flow at point of discharge)

Example: Potassium permanganate ($KMNO_4$) concentration

$$C = 2.0 \text{ mg/L } (KMNO_4) \times \frac{0.45 \text{ MGD (flow through treatment area)}}{5.0 \text{ MGD (flow at point of discharge)}}$$

C = 2.0 mg/L x 0.09

C = 0.18 mg/L potassium permanganate at the point of discharge.

This information shall be submitted quarterly. If the analysis of this chemical use compared with any toxicity testing results or other available information for the therapeutic agent, chemical or anesthetic indicates that the discharge may cause, have the reasonable potential to cause, or contribute to an excursion of a numeric or narrative water quality criterion or objective, the Executive Officer may require site-specific whole effluent toxicity (WET) tests using *Ceriodaphnia dubia*.

B. Priority Pollutant Monitoring

Evaluation of the potential to discharge priority pollutants is partially based on the probability of the pollutants being present in the groundwater pumped from source wells, surface water sources and operations of the CAAP facility. Data compiled from CAAP facilities, local drinking water wells and the State Board's Groundwater Ambient Monitoring Association (GAMA) database were used to determine the potential for metals and other priority pollutants to occur in the facility discharge. Accordingly, the Water Board requires sampling and analysis of the influent from both the groundwater wells, the surface water source from Division Creek, and effluent for metals listed in Attachment J at least once per permit cycle. These locations shall be sampled and the samples shall be analyzed for metals in the year 2016. Results of the metals analyses shall be reported with concurrent hardness data to the Water Board no later than 180 days prior to expiration of this permit which is **January 12, 2017** (Refer to Attachment J for the specific monitoring requirements.)

C. Annual BMP and SWPPP Reporting

The Discharger must annually (February 1) certify that the BMP Plan for Aquaculture Operations and the Facility Storm Water Pollution Prevention Plan meet the requirements of this permit and the Plans are being implemented as written. If changes are necessary to accurately reflect operations, maintenance and management and control of pollutants at the Facility, a revised Plan shall be submitted to the Water Board along with the above certification.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

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).

3. The Discharger shall report to the 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."

B. Self Monitoring Reports (SMRs)

1. The Discharger shall continue to electronically submit self-monitoring reports (SMR's), including attaching drug and chemical use reports, using the State Water Resources Control Boards' California Integrated Water Quality System (CIWQS) program website (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS website will provide directions for SMR submittal in the event there will be service interruption for electronic submittal.

   The Discharger shall arrange all reported numerical data in a tabular format. The data shall be accompanied by a summary that clearly illustrates 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 direct entry into a tabular format within the system, the Discharger shall electronically submit the numerical data in a tabular format as an attachment. Narrative data shall be uploaded to CIWQS as an attachment.

2. The Discharger shall submit quarterly SMRs including the results for all monitoring specified in this Monitoring and Reporting Program. The Discharger shall submit SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Quarterly reports shall be due on **May 1, August 1, November 1, and February 1** following each calendar quarter. 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.

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	Reporting Due with SMR on…
1 / First discharge event/reporting period	Calendar day of first discharge event/quarter (Midnight through 11:59 PM)	May 1 August 1 November 1 February 1
1 / day	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	May 1 August 1 November 1 February 1
1 / month	1st day of calendar month through last day of calendar month	May 1 August 1 November 1 February 1
1 / quarter	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
1 / year	January 1 through December 31	February 1
1 / permit cycle	In the year 2016	January 12, 2017

4. **Reporting Protocols.** The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL) for the procedure (as listed in 40 CFR Part 136).

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

      ii. Sample results less than the ML, 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.

iii. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

5. 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 that can be detected using current analytical procedures described in 40 CFR Part 136 . At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

6. The Discharger shall arrange all reported numerical data in a tabular format. The data shall be accompanied by a summary that clearly illustrates 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 direct entry into a tabular format within the system, the Discharger shall electronically submit numerical data in a tabular format as an attachment. Narrative data shall be uploaded to CIWQS as an attachment.

7. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; 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.

8. SMRs must be submitted to the Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

   California Regional Water Quality Control Board
   Lahontan Region
   14440 Civic Drive, Suite 200
   Victorville, CA 92392

C. Discharge Monitoring Reports (DMRs) – Not Applicable

D. Other Reports – Not Applicable

Attachment F – Fact Sheet – Table of Contents

List of Tables

ATTACHMENT F – FACT SHEET

As described in Findings in Section II 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.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	6B140800003
Discharger	California Department of Fish and Game
Name of Facility	Black Rock Fish Hatchery
Facility Address	1 Black Rock Springs Road Independence, CA 93526 Inyo County
Facility Contact, Title and Phone	Mathew Norris, Hatchery Manager, (760) 938-2242
Authorized Person to Sign and Submit Reports	Mathew Norris, Hatchery Manager, (760) 938-2242
Mailing Address	P.O. Box 910 Big Pine, CA 93513
Billing Address	Same as Mailing Address
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
Reclamation Requirements	Not Applicable
Facility Permitted Flow	Maximum Physical Capacity 31 MGD, Maximum Operational Capacity 23 MGD
Facility Design Flow	Not Applicable
Watershed	Lower Owens Hydrologic Area
Receiving Water	Los Angeles Aqueduct
Receiving Water Type	Inland surface water conveyed by a constructed channel operated by the City of Los Angeles, Department of Water and Power. Additionally, percolate from unlined ponds enters groundwater.

A. The California Department of Fish and Game (hereinafter Discharger) is the owner and operator of the Black Rock Fish Hatchery (hereinafter Facility), a cold water concentrated aquatic animal production (CAAP) facility. The City of Los Angeles Department of Water

and Power owns the property at 1 Black Rock Springs Road, Independence on which the Facility is located.

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.

B. The Facility discharges wastewater to the Los Angeles Aqueduct, a water of the United States. The Discharge is currently regulated by Order No. R6V-2006-0031 which was adopted on June 14, 2006. The terms of Order No. R6V-2006-0031 were continued in effect after the permit expiration date of June 15, 2011.

C. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit dated November 2, 2010. Supplemental information was submitted on August 10, 2011.

II. FACILITY DESCRIPTION

The Discharger owns and operates the Facility which is located approximately 12 miles north of the town of Independence, Inyo County, within Sections 2 and 11, Township 12S, Range 24E, MDB&M, as shown in Attachment B. The Facility is located on 40 acres leased from the Los Angeles Department of Water and Power (LADWP).

The Facility consists of a fish egg incubation building, a flow-through brood stock rearing pond (Pond #1), four 500-foot long production raceways, two flow-through settling ponds (Ponds #2 and Pond #3), miscellaneous operation and maintenance structures and three residential housing units. A schematic of the Facility is shown in Attachment C.

The Facility serves a dual role as both a production and broodstock hatchery. The Facility has a capacity to produce up to a maximum of 190,000 pounds (lbs) of Rainbow Trout. In addition, approximately 2,300,000 Kamloop rainbow eggs and 2,000,000 Whitney rainbow trout eggs are taken each year at the site, then immediately transferred to the Discharger's Fish Springs Fish Hatchery for incubation and shipment.

The Facility operates as a flow-through system relying on both surface water and well water. The water supply for the raceway ponds and hatchery building is obtained from two onsite LADWP groundwater supply wells numbers 351 and 356, with only one well utilized at a time. Well 351 (primary source) produces an average water flow of 10.7 MGD [16.6 cubic feet per second (cfs)] and Well 356 (secondary source) produces an average water flow of 7.5 MGD (11.6 cfs). Separate diesel, auto-start standby engines provide electrical back-up to each well in the event of power outages. Well water is aerated through six 45-inch diameter by 6-foot long packed aeration columns, containing clear plastic 2½-inch to 3-inch tall by 2-inch round rings with holes. Aerated well water is then pumped into the head flume of the production raceways. Each 500-foot long raceway consists of five 100-foot long by 10-foot wide by 30-inch deep raceway ponds in series, for a total of 20 raceway ponds at the Facility. The maximum physical capacity of the facility is 31 MGD.

The water supply for Pond #1 is primarily obtained from Division Creek, via a LADWP controlled diversion located about 500 yards from the north end of Pond #1. The water diverted from Division Creek also contains water from Goodale Creek, which is piped underground for 2 miles to Division Creek. Diverted flow to Pond #1 from Division Creek for the period June 2006 to June 2011 ranged from 1.02 to 8.33 MGD (1.6 to 12.9 cfs), with an average flow of 5.54 MGD (8.57 cfs). During drought years, groundwater from the supply wells can also be used to supplement the surface water supply to Pond #1. Pond #1 is approximately 4 feet deep and 3 acres in area.

The Discharger currently uses or has previously used during the last permit term the following chemicals and drugs in the raceways: sodium chloride (salt) as a flush treatment in the raceways as a fish-cleansing agent to control the spread of fish disease, and potassium permanganate to control gill bacteria on fish. In addition, the antibiotics florfenicol and terramyacin are mixed with fish food, as needed, to control disease outbreaks at the Facility.

In addition to the above aquaculture chemicals, the Discharger and the California Department of Fish and Game (DFG) Fish Health Laboratory requested to include in this Order a list of aquaculture drugs and chemicals (see Attachment H) that may be used at all DFG hatcheries in the State. These aquaculture drugs and chemicals, prescribed by the DFG Fish Health Laboratory, are to be used on an “as needed” basis to treat various fish disease and parasitic outbreaks.

The previous Order No. Order No. R6V-2006-0031 contained effluent limitations and provisions for use of aquatic pesticides Reward®, AquaMaster™, Sonar™, and Renovate3® to control aquatic weeds in Pond #1. During the term of Order No. R6V-2006-0031 the Discharger did not use aquatic pesticides and does not intend to use aquatic pesticides in the future for aquatic weed control. The Discharger reported that aquatic weeds are removed by hand from Pond #1 and transferred to an on-site commercial dumpster for disposal.

A. Description of Wastewater and Biosolids Treatment or Controls

Wastewater from the raceways and from the rearing pond (Pond #1) is discharged to two wetland settling ponds (Pond #2 and Pond #3) operated in series. Each settling pond is approximately 3 acres, containing cattails and tulles. The production raceways are cleaned on a weekly basis in order to minimize waste build up and promote fish health. No more than two of the raceway pond series are cleaned concurrently in order to decrease the concentration of solids being discharged into the settling ponds at one time.

B. Discharge Points and Receiving Waters

Discharges from the facility occur through Discharge Point 001 (Latitude 36° 55’ 35” North, Longitude 118° 13’ 42” West), where effluent from Pond #3 discharges directly into the Los Angeles Aqueduct, a tributary of Haiwee Reservoir. The Los Angeles Aqueduct is located within the Lower Owens Hydrologic Area (Hydrologic Unit No. 603.30), and the ground waters of the Owens Valley Ground Water Basin (DWR No. 6-12). An LADWP maintained Accusonic© flow meter is installed at the discharge point.

C. Summary of Existing Requirements and Self Monitoring Report (SMR) Results

1. Discharge Point 001

Effluent limitations contained in Order No. R6V-2006-0031 for discharges from the settling pond (Pond #3) to the Los Angeles Aqueduct (Discharge Point 001) and representative monitoring data (Monitoring Location M-001) from the term of the previous Order are as follows:

Table F-2. Summary of Existing Requirements and SMR Results –Discharge Point 001

Parameter	Units	Effluent Limitation		Monitoring Data (From July 2006 to December 2011)	
		Average Monthly	Instantaneous Maximum	Highest Monthly Average Discharge	Highest Instantaneous Maximum Discharge
pH	standard units	not less than 6.0 nor greater than 9.0		6.6 (min) 8.3 (max)	6.6 8.3 (maximum)
Total Suspended Solids (TSS)[1]	mg/L	6.0[2]	15.0[2]	3.80	4.4
Settleable Solids[1]	ml/L	0.1	--	<0.1	<0.1

[1] Grab pair sampling was conducted twice per quarter for the constituents (two grab samples collected on the same day, not less than 2 hours, or greater than 4 hours apart from each other). Average of the two grab pairs was the monthly average for the month the samples were collected.

[2] Limit is net over levels in influent.

Order No. R6V-2006-0031 also contained effluent limitations for copper and formaldehyde, which may be used to maintain fish health. The Discharger did not use these chemicals during the term of the previous order. In addition, effluent limitations for Diquat, Fluridone and Glyphosate (active ingredients in aquatic pesticides) were included in Order No. R6V-2006-0031. As discussed above, the Discharger did not use aquatic pesticides for weed control.

2. Other Required Monitoring at Discharge Point 001

Order No. R6V-2006-0031 did not include effluent limitations at Discharge Point 001 for flow, dissolved oxygen, electrical conductivity, total dissolved solids, nitrate, nitrogen, orthophosphate, temperature, and Potassium permanganate ($KMnO_4$) . However, monitoring for these parameters was required at Monitoring Location M-001 and results from the term of the previous Order are as follows:

Table F-3. Other Required Monitoring and SMR Results – Discharge Point 001

Parameter	Units	Monitoring Data (From July 2006 to December 2011)		
		Lowest Instantaneous Minimum	Average	Highest Instantaneous Maximum
Flow[1]	MGD	5.7	11.55	17.27
Electrical Conductivity[1]	µmhos/cm	123.0	173.4	282.2
Dissolved Oxygen[2]	mg/L	4.2	6.1	8.2
Total Dissolved Solids[2]	mg/L	95	130	155
Temperature[2]	˚F	47	55	62
Nitrate, Total (as N)[2]	mg/L	0.009	0.291	0.429
Nitrogen, Total (as N)[2]	mg/L	0.143	0.513	0.798
Orthophosphate Dissolved (as P)[2]	mg/L	0.0535	0.0814	0.1720
Potassium Permanganate(KMnO4)[3]	mg/L	0.0058	0.0294	0.0880

[1] Required monitoring 1/month.
[2] Required monitoring 1/quarter.
[3] Required monitoring 1/discharge event when used. **Potassium permanganate** (KMnO4) was used and discharged for 3 days in June 2008 and for two days in October 2010.

The Discharger reported that 137,850 lbs of salt (sodium chloride) was used between January 2007 and June 2009. The Discharger has reported that no salt has been used since June 2009.

Potassium permanganate (KMnO4) was used in the raceways for 2 days in June 2008 and 2 days in October 2010. The Discharger sampled the effluent at Discharge Point 001 as required during the Potassium permanganate (KMnO4) treatments (Table F-3).

The Discharger reported the use of the antibiotics florfenicol (14.75 mL) and terramycin (5,400 grams). Both antibiotics were mixed in feed.

3. Summary of Receiving Water SMR Results

The previous Order required quarterly receiving water monitoring for pH, dissolved oxygen, temperature and electrical conductivity in the Los Angeles Aqueduct at Monitoring Location R-001U (25 feet upstream of Discharge Point 001) and R-001D (50 feet downstream of Discharge Point 001). Representative receiving monitoring data from the term of the previous Order are as follows:

Table F-4. Summary of Receiving Water Monitoring Results (R-001 and R-002)

Parameter	Units	Monitoring Data (From July 2006 to December 2011)					
		Lowest Instantaneous Minimum		Average		Highest Instantaneous Maximum	
Sample Location		**R-001U**	**R-001D**	**R-001U**	**R-001D**	**R-001U**	**R-001D**
pH	standard units	7.0	7.1	8.1	8.0	8.8	8.5
Dissolved Oxygen	mg/L	2.7	3.7	6.8	6.5	12.0	11.0
Temperature	°F	39.0	42.0	55.9	55.4	71.0	69.0
Electrical Conductivity @ 25 Degrees C	µmhos/cm	111.0	134.0	255.4	230.3	353.5	288.2

Order No. R6V-2006-0031 also required receiving water monitoring at R001U and R001D for copper and formaldehyde during use. The Discharger did not use these chemicals during the term of the previous order.

4. Summary of Water Supply and Effluent Monitoring for Additional Constituents.

Order No. R6V-2006-0031 did not require monitoring of the water supply. The Discharger sampled the water supply on the following dates in the year of 2011: February 7, April 4, July 7, and October 4and conducted analyses for chloride, sulfate, boron, fluoride, TSS, TDS, total nitrogen, nitrate, and dissolved orthophosphate. Results of monitoring data for the two sampling events in comparison with the results from Discharge Point 001 for the same day are as follows:

Table F-5. Summary of Monitoring Results for Additional Constituents – Water Supply (S-001) and Effluent (M-001)

Parameter	Units	Sample Date	Water Supply, S-001	M-001
Chloride	mg/L	February 7, 2011	7.10	8.55
		April 4, 2011	6.47	6.47
		July 7, 2011	8.49	7.31
		October 4, 2011	11.40	8.91
Sulfate	mg/L	February 7, 2011	19.1	26.9
		April 4, 2011	19.1	--
		July 7, 2011	21.8	19.4
		October 4, 2011	20.5	28.4
Boron	mg/L	February 7, 2011	0.12	0.093
		April 4, 2011	0.13	0.100
		July 7, 2011	--	--
		October 4, 2011	0.12	0.095

Parameter	Units	Sample Date	Water Supply, S-001	M-001
Fluoride	mg/L	February 7, 2011	0.41	0.41
		April 4, 2011	0.35	0.36
		July 7, 2011	0.45	0.42
		October 4, 2011	0.37	0.36
TSS	mg/L	February 7, 2011	ND	3.0
				2.1
		April 4, 2011	0.3	3.3
				2.0
		July 7, 2011	0.8	2.2
				2.4
		October 4, 2011	ND	2.0
				1.6
TDS	mg/L	February 7, 2011	154	130
		April 4, 2011	147	134
		July 7, 2011	150	141
		October 4, 2011	144	127
Total Nitrogen	mg/L	February 7, 2011	<0.540	0.575
		April 4, 2011	<0.525	0.798
		July 7, 2011	<0.525	0.710
		October 4, 2011	1.190	0.143
Nitrate	mg/L	February 7, 2011	0.440	0.376
		April 4, 2011	0.425	0.366
		July 7, 2011	0.425	0.323
		October 4, 2011	0.433	0.349
Orthophosphate (Dissolved as P)	mg/L	February 7, 2011	0.0746	0.0777
		April 4, 2011	0.0815	0.1000
		July 7, 2011	0.0746	0.1270
		October 4, 2011	0.0768	0.0765

D. Compliance Summary

1. Discharge Point 001

All available effluent monitoring data were evaluated to review compliance with the effluent limitations contained in Order No. R6V-2006-0031. Results from Self Monitoring Reports indicated the Discharger has complied with effluent limitations.

2. Receiving Water Monitoring at Monitoring Locations R-001U and R-001D

All available effluent receiving water data were evaluated from July 2004 to December 2011 to review compliance with the receiving water limitations contained in Order No. R6V-2006-0031.

The Discharger was in compliance with the receiving water objective for pH that required receiving water to maintain a pH between 6.5 to 8.5 units at R-001D between July 2006 and December 2011. The Discharger was also required to not change the pH of the receiving water more than 0.5 units between R-001 upstream and R-001 downstream. There were two dates during the previous permit cycle when the differential pH values between upstream and downstream receiving water monitoring locations varied by more than 0.5 units. . On July 7, 2008 the pH was of 7.9 pH units at R-001 upstream of the discharge and was 8.5 pH units at R-001 downstream of the discharge, indicating a difference of 0.6 pH units. On August 2, 2010, the pH was 8.7 pH units at R-001 upstream of the discharge and 7.9 pH units at R-001 downstream of the discharge indicating a difference of 0.8 pH units.

Dissolved oxygen was less than 5.0 mg/L upstream and downstream of the discharge point on six samples of the 23 quarterly samples analyzed. On three dates (July 6, 2008, October 9, 2008, July 7, 2011) effluent samples were not collected on the same days as receiving water samples for comparison.

Because of the constant temperature of the groundwater (59˚F) the discharge from the Facility is warmer during the winter months and cooler during the summer months than the temperature upstream in the Los Angeles Aqueduct at R-001U. The maximum change during the warmer season was -2.0˚F and the maximum change during the winter was +6.0˚F from R-001U to R-001D.

E. Planned Changes – Not Applicable

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal CWA and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter

5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Water Board adopted a Water Quality Control Plan for the Lahontan Region (hereinafter Basin Plan) which became effective on March 31, 1995 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. 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 the Los Angeles Aqueduct, but does identify present and potential uses for Haiwee Reservoir, to which the Los Angeles Aqueduct is tributary. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Thus, beneficial uses applicable to the Los Angeles Aqueduct and to the Owens Valley Ground Water Basin are as follows:

Table F-6. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Los Angeles Aqueduct /Haiwee Reservoir	Existing: Municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), groundwater recharge (GWR), contact (REC-1) and non-contact (REC-2) water recreation, 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).
--	Owens Valley Ground Water Basin	Existing: Municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), freshwater replenishment (FRSH), and wildlife habitat (WILD).

2. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About 40 criteria in the NTR applied in California. On May 18, 2000, USEPA 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 water quality criteria for priority pollutants.

4. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA 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.

5. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21 and 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

6. **Antidegradation Policy.** 40 CFR 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 No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16. This permit meets the antidegradation policy because it does not allow additional degradation of water quality beyond what was allowed by the previous permit. The use of concentration based limits without accompanying flow limits or mass loading limits will not allow increased degradation of water because the facility has a physical maximum capacity of 31MGD.

7. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR §122.44(l) prohibit 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. All effluent limitations in the Order are at least as stringent as the effluent limitations in the previous Order. As described in Sections IV.B.2 and IV.C.3.b of this Fact Sheet, effluent limitations for TSS, settleable solids, and formaldehyde are being carried over from Order No. R6V-2006-0031. The Water Board has determined that the numeric effluent limitations from the previous Order continue to be applicable to the Facility and that the Antibacksliding Policy is satisfied. As discussed in detail in the Fact Sheet, effluent limitations for copper and aquatic pesticides have been removed based on certification from the Discharger that these chemicals are no longer used.

8. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the Water Code authorize the Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

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 strictly regulated by the U.S. Food and Drug Administration (FDA) through the Federal Food, Drug, and Cosmetic Act (FFDCA; 21 U.S.C 301-392). FFDCA, the basic food and drug law of the United States, includes provisions for regulating the manufacture, distribution, and the use

of, among other things, new animal drugs and animal feed. FDA's Center for Veterinary Medicine (CVM) regulates the manufacture, distribution, and use of animal drugs. CVM is responsible for ensuring that drugs used in food-producing animals are safe and effective and that food products derived from treated animals are free from potentially harmful residues. CVM approves the use of new animal drugs based on data provided by a sponsor (usually a drug company). To be approved by CVM, an animal drug must be effective for the claim on the label, and safe when used as directed for (1) treated animals; (2) persons administering the treatment; (3) the environment, including non-target organisms; and (4) consumers. CVM establishes tolerances and animal withdrawal periods as needed for all drugs approved for use in food-producing animals. CVM has the authority to grant investigational new animal drug (INAD) exemptions so that data can be generated to support the approval of a new animal drug.

CAAP facilities may legally obtain and use aquaculture drugs in one of several ways. Some aquaculture drugs and chemicals used at CAAP facilities are approved by the U.S. Food and Drug Administration (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 diagnosed by fish pathologists. It is assumed that veterinarian-prescribed aquaculture drugs are used only for short periods of duration during acute disease outbreaks. Each of these methods of obtaining and using aquaculture drugs is discussed in further detail below.

It is the Discharger's responsibility 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 United States and waters of the State in accordance with this permit. A summary of regulatory authorities related to aquaculture drugs and chemicals is outlined below.

a. FDA Approved New Animal Drugs

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

i. Chorionic gonadrotropin (Chlorulun®), used for spawning;
ii. Emamectin benzoate; 0.2% aquaculture premix (SLICE);
iii. Florfenicol (Aquaflor®), an antibiotic;
iv. Formalin (Formalin-F®, Paracide F® and PARASITE-S®), used as a fungus and parasite treatment;
v. Hydrogen peroxide, used to control fungal and bacterial infections.
vi. Oxytetracycline (Terramycin®), an antibiotic;
vii. Sulfadimethoxine-ormetoprim (Romet-30®), an antibiotic;
viii. Sulfamerazine, an antibiotic; and
ix. Tricaine methanesulfonate (MS-222, Finquel® and Tricaine-S), an anesthetic;

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.

b. *FDA Investigational New Animal Drug (INAD)*

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.

c. *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:

i. Acetic acid, used as a dip at a concentration of 1,000-2,000 mg/L for 1-10 minutes as a parasiticide.
ii. Carbon dioxide gas, used for anesthetic purposes.
iii. Povidone iodine (PVP) compounds, used as a fish egg disinfectant at rates of 50 mg/L for 30 minutes during egg hardening and 100 mg/L solution for 10 minutes after water hardening.
iv. Sodium bicarbonate (baking soda), used at 142-642 mg/L for 5 minutes as a means of introducing carbon dioxide into the water to anesthetize fish.
v. 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 10-30 minutes as a parasiticide.
vi. Copper sulfate and potassium permanganate are LRP but regulatory action has been deferred pending further study.

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

i. The aquaculture drugs are used for the prescribed indications, including species and life stages where specified.
ii. The aquaculture drugs are used at the prescribed dosages (as listed above).
iii. The aquaculture drugs are used according to good management practices.
iv. The product is of an appropriate grade for use in food animals.
v. 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.

d. *Extra-label Use of an Approved New Animal Drug*

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

D. Impaired Water Bodies on CWA 303(d) List

The Los Angeles Aqueduct is not an impaired water body on the CWA 303(d) list. However, the Los Angeles Aqueduct is tributary to the Haiwee Reservoir, which is listed as impaired for copper on the CWA 303(d) list for 2002. Copper problems have been identified that are related to algaecide used to prevent taste/odor problems in drinking water supplies. Currently, a copper TMDL is being developed for the Haiwee Reservoir. The use of copper sulfate products has been discontinued at the Facility. Therefore, discharges from the Facility are not expected to contribute copper to the Haiwee Reservoir.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the CWA and amendments thereto are applicable to the discharge.

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 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 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. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs may be established: (1) using USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using 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 40 CFR 122.44(d)(1)(vi).

A. Discharge Prohibitions

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 California Water Code.

2. As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of a treatment facility. Federal Regulations, 40 CFR 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 CFR 122.41 (m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Water Board's prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR 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(s) authorized by this Order must meet minimum federal technology-based requirements based on effluent limitation guidelines and standards (ELGs) for the Concentrated Aquatic Animal Production Point Source Category in 40 CFR Part 451.

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

- Best practicable treatment control technology currently available (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and nonconventional pollutants.

- Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and nonconventional pollutants.

- Best conventional pollutant control technology (BCT) is a standard for the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of

attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

- 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 USEPA to develop ELGs representing application of BPT, BAT, BCT, and NSPS. CWA section 402(a)(1) and 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in 40 CFR 125.3.

A CAAP facility is defined in 40 CFR 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 pounds (9,090 kilograms) harvest weight of aquatic animals per year, and feed at least 5,000 pounds (2,272 kilograms) of food during the calendar month of maximum feeding. A facility that does not meet the above 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 CFR 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 CFR 122.24 specifies that discharges from CAAP facilities are point sources subject to the NPDES program.

The operation of CAAP facilities may introduce a variety of pollutants into receiving waters. USEPA identifies three classes of pollutants: (1) conventional pollutants (i.e., total suspended solids (TSS), oil and grease (O&G), biochemical oxygen demand (BOD), fecal coliforms, and pH); (2) toxic pollutants (e.g., metals 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 USEPA published ELGs for the Concentrated Aquatic Animal Production Point Source Category (40 CFR 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, USEPA proposed to establish numeric limitations for a single constituent – TSS – while controlling the discharge of other pollutants through narrative requirements. In the final rule, however, USEPA determined that, for a nationally applicable regulation, it would be more appropriate to promulgate qualitative TSS limitations in the form of solids control best management practices (BMP) requirements.

In the process of developing the ELGs, USEPA 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. USEPA did not include specific numerical limitations in the ELGs for any pollutants on this list, believing that BMPs would provide acceptable control of these pollutants. USEPA did conclude during the development of the ELGs 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, USEPA concluded that disinfection is not economically achievable. USEPA also allowed permitting authorities to apply technology-based limits for other pollutants and WQBELs for pollutants considered in the ELGs in order to comply with applicable water quality standards.

2. Applicable Technology-Based Effluent Limitations

a. Total Suspended Solids (TSS). Technology-based requirements in this Order are based on a combination of application of the ELGs for BMP requirements and case-by-case numeric limitations developed using BPJ and carried over from Order No. R6V-2006-0031. The effluent limitations for TSS, 6.0 mg/L as an average monthly effluent limitation (AMEL) and 15 mg/L as an instantaneous maximum, are continued in this Order from Order No. R6V-2006-0031. Section 402(o) of the CWA prohibits backsliding of effluent limitations that are based on BPJ to reflect a subsequently promulgated ELG which is less stringent. Removal of the numeric limitations for TSS would constitute backsliding under CWA Section 402(o). These limitations were established prior to the issuance of the ELG and were established as a means of controlling the discharge of solids from algae, silt, fish feces and uneaten feed.

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

two full-flow settling basins prior to discharge. Existing self-monitoring data show the Facility is able to 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 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 CFR 122.45(f)(iii)]. This Order includes a concentration-based limitation for TSS. This is consistent with Order No. R6V-2006-0031, which did not include a flow limit and mass effluent limitations.

b. Flow. This Order does not contain a flow limitation. This is consistent with Order No. R6V-2006-0031 which did not contain a flow limitation. The total flow of fish hatchery wastewater is still required to be measured as described in the attached Monitoring and Reporting Program (Attachment E). Additionally, compliance with effluent limitations for TSS and settleable solids ensures that flows exceeding the treatment capacity of the Facility will not be discharged. Based on these factors there is no need for flow limits in this permit.

3. Final Technology-Based Effluent Limitations

Table F-7. Summary of Technology-based Effluent Limitations - Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Suspended Solids	mg/L	6.0[1]		--	15.0[1]

[1] The Discharger shall minimize the discharge of Total Suspended Solids and Settleable Solids through the implementation of the best management practices established in Special Provisions VI.C.3 of this Order.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

40 CFR 122.44(d)(1)(i) mandates 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) USEPA 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 40 CFR 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.

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. In addition, the Basin Plan implements State Water Board Resolution No. 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 CFR sections 131.2 and 131.10, require that all waters of the States regulated to protect the beneficial uses of: public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. 40 CFR 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 CFR 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.

a. Receiving Water and Beneficial Uses

As described previously in this Fact Sheet, existing beneficial uses of the Los Angeles Aqueduct include municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND), groundwater recharge (GWR), contact (REC-1) and non-contact (REC-2) water recreation, 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).

b. Water Quality Criteria and Objectives

The Basin Plan contains both narrative and numeric water quality objectives (WQOs) applicable to all water bodies in the Lahontan Region. The Basin Plan contains downstream numeric WQOs for Owens River (at the Haiwee Reservoir

Outlet) and the Water Board applies the tributary rule to site-specific numeric WQOs and therefore the receiving water objectives at the discharge from the Facility to the Los Angeles Aqueduct must meet the Owens River objectives. The numeric water quality objectives are as follows:

Table F-8. Applicable Numeric Basin Plan Objectives

Surface Water		Objective (mg/L)							
		TDS	Cl	SO_4	F	B	NO_3-N	Total N	PO_4
Owens River (Haiwee Reservoir Outlet)	Annual Average	215.00	19.50	27.00	0.60	0.56	0.60	0.80	0.23
	90th Percentile	315.00	38.00	62.00	0.90	0.91	1.00	1.50	0.36

In addition, WQOs that apply to all surface waters (including wetlands) within the Lahontan Region are described in Pages 3-3 through 3-7 of the Basin Plan. The WQOs applicable to the Los Angeles Aqueduct have been incorporated in to the Order as Receiving Water Limitations V.A.1 through V.A.3.

WQOs that apply to all groundwaters within the Lahontan Region are described in pages 3-12 through 3-13 of the Basin Plan. The WQOs applicable to the Owens Valley Ground Water Basin have been incorporated into the Order as Receiving Water Limitations V.B.1 through V.B.6.

c. Assimilative Capacity/Mixing Zone

The Basin Plan does not contain provisions for calculating dilution credits. Therefore, the worst-case dilution is assumed to be zero to provide protection for the receiving water beneficial uses. The impact of assuming zero assimilative capacity within the receiving water is that both effluent and receiving water limitations in the Order are end-of-pipe limits with no allowance for dilution within the receiving water.

3. Determining the Need for WQBELs

The Water Board conducted the reasonable potential analysis (RPA) in accordance with section 1.3 of the SIP in the development of Order No. R6V-2006-0031. However, there are not enough data to establish RPA for most constituents listed in Table 7 and Table F-8. . Additional monitoring is required in this Order. The Water Board analyzed effluent and receiving water data to determine if a pollutant in a discharge has the reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that have the reasonable potential to cause or contribute to an excursion above a water quality standard, numeric WQBELs are required. The RPA considered criteria from the CTR, NTR, and water quality objectives specified in the Basin Plan. To conduct the RPA, the Water Board identified the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete a RPA:

- Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limit is needed.

- Trigger 2 – If background water quality (B) > C and pollutant is detected in effluent, a limit is needed.

- Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

Sufficient effluent and ambient data are needed to conduct a complete RPA. If data are not sufficient, the Discharger is required to gather the appropriate data for the Water Board to conduct the RPA. However, there are not enough data to establish RPA for most constituents (per Table 7 and Table F-8) Black Rock is expected to meet. Therefore additional monitoring is required in this Order. Upon review of the data, and if the Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The RPA was performed for the priority pollutants for which effluent data were available. The Discharger collected samples for priority pollutants analyses at the Facility influent ("headbox" of raceways, consisting of influent water from the two groundwater supply wells) and effluent on May 26, 2004. The Discharger also performed an additional effluent sampling for dioxins on September 16, 2004. The RPA for the priority pollutants did not demonstrate reasonable potential to exceed applicable water quality criteria based on these two sampling events.

a. **Constituents with No Reasonable Potential.** WQBELs are not included in this Order for constituents that do not demonstrate reasonable potential; however, numeric receiving water limitations have been established using the Basin Plan water quality objectives. These limitations apply to the receiving water at the discharge point. Monitoring for some of those pollutants is established in this Order as required by the SIP and/or to verify compliance with the numeric receiving water limitations.

   The procedures in the SIP for determining reasonable potential and calculating WQBELs specifically apply only to priority pollutant criteria promulgated through the NTR and CTR and to priority pollutant objectives established by Regional Water Boards in their Basin Plans. For other constituents, the Water Board must determine what procedures it will use to evaluate reasonable potential and calculate effluent limitations.

   For constituents with no promulgated numeric water quality criteria or objectives, the Water Board also must interpret narrative objectives from the Basin Plan to establish the basis for reasonable potential and effluent limitation calculations. In

addition to USEPA National Recommended Water Quality Criteria, the Central Valley Regional Water Board has developed *A Compilation of Water Quality Goals* that it uses to help select the appropriate basis for interpreting narrative criteria in NPDES calculations. These goals include USEPA-recommended criteria for protection of aquatic life, drinking water Maximum Contaminant Levels (MCLs), agricultural water quality goals, and other water quality goals designed to protect various beneficial uses. Appropriate selection of criteria or goals to interpret narrative criteria depends on the specific beneficial uses of the receiving water. For example, drinking water MCLs and secondary MCLs (or SMCLs) are used to interpret narrative criteria if the receiving water is a source of municipal drinking water (MUN). The Water Board proposes to use *A Compilation of Water Quality Goals* in selecting numerical water quality goals to interpret narrative water quality objectives from the Basin Plan.

i. Electrical Conductivity, Total Dissolved Solids, and Chloride.

Monitoring for electrical conductivity (EC) was specified in the Monitoring and Reporting Program during salt treatments as part of Order No. R6V-2006-0031. 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. 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 USEPA water quality criteria for the protection of aquatic organisms for EC.

The Basin Plan contains a numeric water quality objective for TDS for the Haiwee Reservoir below the Facility to which the Los Angeles Aqueduct is tributary of an annual average of 215 mg/L and a 90th percentile value of 315 mg/L. This limit applies to the receiving water at the discharge point. Effluent monitoring during the term of the previous permit for TDS indicated the average effluent concentration for 42 samples collected from February 2007 to April 2011 was 126 mg/L and maximum effluent concentration was 155 mg/L. Based on the available information, TDS during salt treatments will not be discharged at levels that cause, have the reasonable potential to cause, or will contribute to an excursion of the Basin Plan water quality objective for TDS. Therefore, this Order does not include WQBELs for TDS or EC. However, to provide protection for the receiving water beneficial uses and to meet the receiving water limitations (Basin Plan Objective), this order establishes as numeric limitations for TDS those limits set out in the Basin Plan that apply to the Owens River for the Haiwee Reservoir. These limits apply as receiving

water limitations, which are measured at the discharge point. The use of sodium chloride and monitoring of the effluent and receiving water during the use of sodium chloride must be reported as specified in the attached Monitoring and Reporting Program (Attachment E).

ii. Nitrate (as N), Total Nitrogen (as N) and Orthophosphate, Dissolved (as P)

Monitoring for nitrate, total nitrogen and orthophosphate was specified in the Monitoring and Reporting Program as part of Order No. R6V-2006-0031. The Basin Plan contains a numeric water quality objectives for nitrate (as N), total nitrogen (as N), and dissolved orthophosphate (as P) that apply to the Owens River for the Haiwee Reservoir below the Facility to which the Los Angeles Aqueduct is tributary. These limits apply to the receiving water at the discharge point. Effluent monitoring (40 samples) during the term of the previous permit for nitrate indicated the average concentration for nitrate (as N) was 0.266 mg/L, with a maximum concentration of 0.429 mg/L. The results were less than the Basin Plan receiving water objective of 0.6 mg/L as an annual average. Effluent monitoring for total nitrogen (as N) for the same period indicated an average concentration of 0.481 mg/L with a maximum concentration of 0.798 mg/L. The results were less than the Basin Plan receiving water objective of 0.8 mg/L as an annual average. Effluent monitoring for orthophosphate dissolved (as P) for the same period indicated an average concentration of 0.076 mg/L with a maximum concentration of 0.172 mg/L. The results were less than the Basin Plan receiving water objective of 0.23 mg/L as an annual average. Based on the available information, nitrate, total nitrogen and orthophosphate will not be discharged at levels that cause, have the reasonable potential to cause, or will contribute to an excursion of the Basin Plan water quality objectives. Therefore, this Order does not include WQBELs for nitrate, total nitrogen, or orthophosphate. However, to provide protection for the receiving water beneficial uses and to meet the receiving water limitations (Basin Plan Objective), this order establishes as numeric limitations for nitrate (as N), total nitrogen (as N) and orthophosphate dissolved (as P), those limits set out in the Basin Plan that apply to the Owens River for the Haiwee Reservoir. These limits apply as receiving water limitations, which are measured at the discharge point. Monitoring of the effluent must be reported as specified in the attached Monitoring and Reporting Program (Attachment E)

iii. Copper

A potential source of copper discharge (copper is identified as a priority pollutant in the NTR and CTR) at fish hatcheries is from the use of copper sulfate and chelated copper compounds, which are used to control the growth of external parasites and bacteria on fish. Order No. R6V-2006-0031 contained effluent limitations for copper. On January 11, 2010, the Director of DFG certified “the use of copper sulfate products has been discontinued at all DFG hatcheries”. Based on the certification from DFG, the use of copper sulfate products is not authorized under Section VI.C.2.a of this Order and effluent

limits and monitoring requirements for copper have been removed from this Order.

iv. Aquatic Pesticides (Reward®, AquaMaster™, Sonar™, and Renovate3®)

Order No. R6V-2006-0031 authorized the use and discharge through Discharge Point 001 of the aquatic pesticides Reward® (37% diquat dibromide), AquaMaster™ (53.8% glyphosate), Sonar™ (41.7 % fluridone), and Renovate3® (44.4% triclopyr) in accordance with the effluent limitations and conditions contained in the order. The Discharger intended to use the aquatic pesticides to control aquatic weeds and algae in Pond #1. The Discharger did not use aquatic pesticides during the term of Order No. R6V-2006-0031 and does not intend to use the aquatic pesticides in the future. Based on certification from DFG, the use of Reward®, AquaMaster™, Sonar™, and Renovate3® is not authorized under this Order and effluent limits and monitoring requirements for diquat, fluridone, and glyphosate have been removed from this Order.

v. Hydrogen Peroxide

Hydrogen peroxide may be 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 1 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 Discharger did not report hydrogen peroxide use at the Facility during the term of Order No. RV6-2006-0031. Effluent hydrogen peroxide data are not available to assess the impact of hydrogen peroxide use at the Facility. Therefore, the following information and calculations were used to determine the estimated effluent hydrogen peroxide 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 hydrogen peroxide.

The facility has one brood stock rearing pond and four rearing raceways. Water from the brood stock pond discharges to the settling pond at a rate of 3 cfs. Each of the four raceways discharge to the settling pond at a rate of 4 cfs. The final dilution of the treatment includes the discharge from the brood stock pond and all of the production race ways which adds up to 19 cfs. 1 cfs equals 26,930 gallons per hour. Therefore 19 cfs equals 511670 gallons/hour. One US Gallon equals 3.78541178 Liters. 511670 gallons/hour multiplied by 3.78541178 Liters/gallon equals 1,936,670.95 liters of final dilution water.

The Discharger estimates the chemical retention time to run through an entire raceway to be 1 hour. The dilution volume of water from one rearing raceway after 1 hour is 107,720 gallons (1 cfs = 26,930 gallons per hour). 107720 gallons multiplied by 3.78541178 Liters/gallon equals 407764.56 Liters.

The estimated dilution volume of water from the two settling ponds (Pond #2 and Pond #3) were calculated as follows:

Pond #2: Nine feet deep and an area of 3 acres.

1 acre = 43,560 square feet, 3 acres = 130,680 square feet
To simplify calculations, the shape of the pond was made into a square. With an area of 130,680 square feet, each side of the square is about 362 feet long. Volume of Pond #2 at 362 feet x 362 feet x 9 feet is 1,179,396 cubic feet, or 8,822,495 gallons (1 cubic foot = 7.48052 gallons).

Pond #3: 80% is 4 feet deep, 20% is 9 feet deep, with a total area of 3 acres.

Shape of pond is a square again, calculate 4 and 9 feet deep sections separately.
Volume of 4 feet deep section = (0.80 x 362) feet x 362 feet x 4 feet = 419,341 cubic feet = 3,136,887 gallons.
Volume of 9 feet deep section = (0.20 x 362) feet x 362 feet x 4 feet = 235,879 cubic feet = 1,764,499 gallons.
Volume of Pond #3 = 3,136,887 + 1,764,499 gallons = 4,901,386 gallons

Total estimated volume of Pond #2 and Pond #3 = 13,723,881 gallons.

The total dilution volume from the four rearing raceways and Pond #1 during 1 hour of flow, plus the volume of the settling ponds, is 14,235,551 gallons. Flow and volume estimates use the total dilution volume from a 1-hour treatment at 14,235,551 gallons, or 53,887,422 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).

Estimated final effluent concentration of hydrogen peroxide (in mg/L) =
Total mass of hydrogen peroxide applied in milligrams / total dilution volume in liters. The results were as follows:

Table F-9. Estimated Hydrogen Peroxide Concentrations at Discharge Point 001

Number of Raceways Treated with H_2O_2	H_2O_2 Treatment Conc. (mg/L)	Treatment Time in Hours	Total Mass of H_2O_2 Applied (mg)	Total Dilution Volume in Liters	Estimated Final Effluent H_2O_2 Conc. (mg/L)
1	100	1	40,776,456	53,887,422	0.76
4	100	1	163,105,820	53,887,422	3.02

As show in Table F-9 above, the estimated effluent hydrogen peroxide concentrations ranged from 0.76 mg/L (1 raceway application at a time) to 3.02 mg/L (4 raceways application at a time). The actual effluent concentrations are likely to be lower as the calculations assume no breakdown of hydrogen peroxide. Since hydrogen peroxide is a strong oxidizer concentrations are unlikely to persist for long periods.

The Water Board considered the results of acute aquatic life toxicity testing conducted by the DFG 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 2 hours followed by a triple lab water flush and normal test completion, *C. dubia* showed a 96-hour NOEC of 2 mg/L. Based on the 96-hour NOAEL value and using the procedure in USEPA's TSD for calculating WQBELs, the Water Board calculated the MDEL for hydrogen peroxide.

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

Effluent Concentration Allowance based on NOAEL (acute toxicity) 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% occurrence probability and 99% confidence)

Maximum Daily Effluent Limitation

MDEL = LTA x 3.11

(where 3.11 = MDEL multiplier at 99% occurrence probability and 99% confidence)
MDEL = 0.08025 mg/l x 3.11 = 1.3 mg/L

The Water Board has determined that, based on available toxicity testing data and the estimated concentrations, hydrogen peroxide will not cause, have the reasonable potential to cause, or contribute to an excursion of the Basin Plan narrative water quality objective if only 1 raceway at a time is treated. Accordingly, this Order does not include WQBELs for hydrogen peroxide but does limit hydrogen peroxide use to 1 raceway at a time. However, use and monitoring of hydrogen peroxide must be reported as specified in the attached Monitoring and Reporting Program (Attachment E). The 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. The DFG plans to conduct actual effluent sampling during hydrogen peroxide application and collect empirical data. DFG may then request additional changes for the next permit.

vi. Chloramine-T

Chloramine-T (sodium p-toluenesulfonchloramide) is currently not used at the Facility, but may be used in the future in accordance with an INAD exemption by FDA as a possible replacement for copper sulfate and formalin. The Discharger reports Chloramine-T may be used as a flush or bath treatment at a concentration of 10 mg/L for 1 hour. Chloramine-T breaks down into para-toluenesulfonamide (p-TSA) and, unlike other chlorine-based disinfectants, does not break down into chlorine or form harmful chlorinated compounds.

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.

Flow and volume calculations use the total dilution volume of a 1-hour treatment at 14,235,551 gallons, or 52,877,422 liters (1 gallon = 3.7854118 liters). The Discharger has specified to the Water Board that the maximum number of raceways treated per day with Chloramine-T will be two.

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 final effluent concentration of Chloramine-T at Discharge Point 001 is 0.08 mg/L if one raceway is treated and 0.15 mg/L if two raceways are treated.

Results of the DFG Pesticide Unit *C. dubia* test where the test animals were exposed to the toxicant for 2 hours followed by three exchanges of control water to remove residual compound and then observed for 96 hours determined the No Observed Effect Concentration (NOEC) and Lowest Observed Effect Concentration (LOEC) to be 86.3 and 187 mg/L, respectively. 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 attached Monitoring and Reporting Program (Attachment E). The 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.

vii. Potassium Permanganate

Potassium permanganate (also known by the trade name of Cairox™) is used at the Facility as a flush treatment to control gill disease. Potassium permanganate has a low estimated lifetime in the environment, being readily converted by oxidizable materials to insoluble manganese dioxide (MnO_2). In non-reducing and non-acidic 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”.

Potassium permanganate is used at the Facility as a flush treatment at a rate of 2 ounces per CFS of raceway flow (1 ounce = 0.0625 lbs), for a total of three treatments spaced 10 to 15 minutes apart, or used in bath treatments of 2 mg/L or less for 1 hour. The Discharger used potassium permanganate on June 13 and 14, 2008 and on October 29 and 31, 2010. The Discharger monitored effluent potassium permanganate concentrations at Discharge Point 001 during the two treatments. Measured effluent concentrations ranged from 0.0058 mg/L to 0.0331 mg/L.

Results of a single acute toxicity test conducted by the DFG Pesticide Unit using *C. dubia* showed a 96-hour NOAEL of 0.038 mg/L for potassium permanganate under continuous exposure. The DFG’s 2-hour exposure test showed a 0.1975 mg/L NOEC. Based on the 96-hour NOAEL value and using the procedure in USEPA’s TSD for calculating WQBELs the Water Board calculated the AMEL and MDEL for potassium permanganate.

Assuming:

- No in-stream dilution allowance.

- Coefficient of Variation (CV) = 0.6 for the lognormal distribution of pollutant concentrations in effluent.

Effluent Concentration Allowance based on NOAEL (acute toxicity) with no dilution allowance

ECA_{acute} = 0.25 mg/L

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

LTA = 0.25 mg/l x 0.321 = 0.08025 mg/L
(where 0.321 = acute ECA multiplier at 99% occurrence probability and 99% confidence)
Average Monthly Effluent Limitation

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

AMEL = 0.08025 mg/l x 1.55 = 0.12 mg/L

Maximum Daily Effluent Limitation

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

MDEL = 0.08025 mg/l x 3.11 = 0.25 mg/L

Based on the measured effluent concentrations and the toxicity information available at this time, the discharge of potassium permanganate at the Facility will not cause, have a reasonable potential to cause, or contribute to an in-stream excursion of applicable water quality criteria or objectives. Accordingly, this Order does not include WQBELs for potassium permanganate. However, use and monitoring of potassium permanganate must be reported as specified in the attached Monitoring and Reporting Program (Attachment E). The 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.

viii. PVP Iodine

PVP Iodine (Argentyne), is a solution composed of 10% PVP Iodine Complex and 90% inert ingredients. PVP Iodine is currently not used at the Facility as an egg disinfectant and fungicide since eggs are transported to other DFG facilities for hatching. FDA considers PVP Iodine an LRP drug for use in

aquaculture. Results of a single acute toxicity test with *C. dubia* showed a 96-hour No Observed Adverse Effect Level (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 attached Monitoring and Reporting Program (Attachment E). The 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.

ix. Acetic Acid, Carbon Dioxide and Sodium Bicarbonate

The Discharger does not currently use but may use acetic acid in the future at the Facility 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 (Attachment E).

x. Oxytetracycline

Oxytetracycline, also known by the brand name Terramycin®, is an antibiotic approved through FDA's NADA program for use in controlling ulcer disease, furunculosis, bacterial hemorrhagic septicemia, and pseudomonas disease in salmonids. The Discharger did not use oxytetracycline during the term of the previous permit, but oxytetracycline may be used in the future during disease outbreaks as a feed additive. However, oxytetracycline may also be used as an extra-label use under a veterinarian's prescription in an immersion bath of approximately 6 to 8 hours in duration. Because oxytetracycline may be applied in an immersion bath for up to 8 hours at a time, the Water Board considered the results of acute and chronic aquatic life toxicity testing conducted by the DFG Pesticide Unit when determining whether WQBELs for oxytetracycline 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 7-day NOEC for reproduction of 48 mg/L.

The information available regarding use and discharge of oxytetracycline at CAAP facilities indicates that it is discharged at levels well below the lowest NOEC and NOAEL. The Water Board determined that oxytetracycline, 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. Therefore, this Order does not include an effluent limitation for oxytetracycline. However, monthly use of oxytetracycline must be reported as specified in the attached Monitoring and Reporting Program (Attachment E).

xi. Penicillin-G

Penicillin G is an antibiotic used for the control of bacterial infections and is administered as a 6 to 8 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 Water Board considered the results of acute and chronic aquatic life toxicity testing conducted by the DFG 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 7-day chronic toxicity testing using *Pimephales promelas* showed 7-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 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, monthly use and estimated effluent concentrations of Penicillin G must be reported as specified in the attached Monitoring and Reporting Program (Attachment E).

xii. Amoxycillin, Erythromycin, Florfenicol, and Romet-30®

Amoxycillin, erythromycin, florfenicol, and Romet-30® may be used by CAAP facilities. Amoxycillin 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. Amoxycillin (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 attached Monitoring and Reporting Program (Attachment E).

xiii. 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 2 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 attached Monitoring and Reporting Program (Attachment E).

xiv. 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) bacertins are formulated from inactivated Yersinia ruckeri bacteria and is used as an immersion or vaccine to help protect salmonid species from enteric redmouth disease caused by Yersinia ruckeri. These bacertins 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 Water Board does not believe that vibrio vaccine or enteric redmouth bacertins, 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 when used according to label and veterinarian instructions,. Accordingly, this Order does not include WQBELs for these substances; however, use of these substances must be reported as specified in the attached Monitoring and Reporting Program (Attachment E).

b. **Constituents with Reasonable Potential.** The Water Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for pH, settleable matter, and

formaldehyde. WQBELs for these constituents are included in this Order. A detailed discussion of the RPA for each constituent is provided below.

i. pH

The Basin Plan states: "*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 Water 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"*. The case-by-case basis in the Basin Plan is stated as sampling event by sampling event basis in the permit. Order No. R6V-2006-0031 contained effluent limitations for pH, requiring the discharge to have a pH of not less than 6.0 pH units nor greater than 9.0 pH units. The worst-case dilution in this Order is assumed to be zero. To provide protection for the receiving water beneficial uses, discharge limitations are end-of-pipe limits with no allowance for dilution within the receiving water. After reviewing site specific monitoring data, the instantaneous maximum effluent limit for pH was set to 9.0.

ii. 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 No. R6V-2006-0031 contained an effluent limitation for settleable solids of 0.1 ml/L as an AMEL. The Water Board has retained the numeric effluent limitation for settleable solids for the Facility in order to prevent an in-stream excursion above the Basin Plan objective.

iii. Formaldehyde (Formalin)

Formalin, a solution typically 37 percent by weight formaldehyde, (also known by the trade names Formalin-F®, 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 from one to 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.

The Discharger did not report formalin use at the Facility during the term of the previous permit Order No. RV6-2006-0031. 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 determine the estimated effluent formaldehyde 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 formaldehyde.

According to the Discharger, if formalin is used in flush treatments it would be applied at either low or high dosage treatment. Low dose treatment is applied for 8 hours at 25 ppm of formalin (9.25 ppm formaldehyde), while high dose treatment is applied for 1 hour at 167 to 250 ppm of formalin (61.79 to 92.5 ppm formaldehyde).

Flow and volume calculations are the same as used for estimating hydrogen peroxide concentrations and use of the total dilution volume from 1 hour of flow at 14,235,551 gallons, or 53,887,422 liters (1 gallon =3.7854118 liters). The total dilution volume for an 8-hour treatment was calculated as the sum of the following (1 cfs = 26,930 gallons per hour):

Estimated final effluent concentration of formaldehyde (in mg/L) = [(Total gallons formalin applied) x (3.7854118 liters/gallon) x (370,000 mg formaldehyde / liter formalin)] / (Total dilution volume in liters).

Table F-10. Estimated Formaldehyde Concentrations- Discharge Point 001

Treatment Type	Number of Rearing Raceways Treated with Formalin	Formaldehyde Concentration (mg/L)	Treatment Time in Hours	Total Mass of Formaldehyde Applied (mg)	Total Dilution Volume in Liters	Estimated Final Effluent Formaldehyde Concentration (mg/L)
Low Dose	1	9.25	8	30,174,577	67,445,593	0.447
	4	9.25	8	120,698,309	67,445,593	1.789
High Dose	1	92.5	1	37,718,222	53,887,422	0.700
	4	92.5	1	150,872,887	53,887,422	2.800

The State of California Department of Health Services (DHS) does not have an MCL for formaldehyde; however the DHS historic 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 10. The USEPA 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 DFG Pesticide Unit conducted biotoxicity studies to determine the aquatic toxicity of formalin using *Pimephales promelas* and *C. dubia.* A summary of the data submitted follows:

Species	7-day LC50 (mg/L)	LOEC (mg/L)	NOEC (mg/L)	LOAEL (mg/L)	NOAEL (mg/L)
Ceriodaphnia dubia	2.43	5.8[1] 1.3[2]	1.3[1] <1.3[2]	5.8	1.3
Pimephales promelas	23.3	9.09	2.28	--	--
Selanastrum capricornutum	<5.2	--	--	--	--

[1] Survival
[2] Reproduction
Notes: DFG lab report no. P-2251.1 dated 6/30/2001. Results as formaldehyde. Divide by 0.37 to obtain the equivalent formalin concentration.

Since formalin treatments are usually utilized as a batch or flush treatment which result in discharges from 3 to 8 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 7 days in clean water. The results were as follows:

Species	7-day LC50 (mg/L)	LOAEL (mg/L)	NOAEL (mg/L)
Ceriodaphnia dubia – 2-hour exposure	73.65	46.3	20.7
Ceriodaphnia dubia – 8-hour exposure	13.99	15.3	6.7

Notes: DFG lab report no. P-2294.1 dated 1/30/2002. Results as formaldehyde. Divide by 0.37 to obtain the equivalent Formalin concentration.

Results of both acute and chronic aquatic life toxicity testing conducted by the DFG Pesticide Unit and the Basin Plan narrative toxicity objective were considered when determining whether WQBELs for formalin as formaldehyde were necessary. Results of 7-day chronic toxicity tests indicated *C. dubia* was the most sensitive species, with a 7-day NOEC value of 1.3 mg/L formaldehyde for survival and less than 1.3 mg/L for reproduction (the 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 8-hour exposure, resulted in a 96-hour NOAEL concentration of 6.7 mg/L formaldehyde.

The Water Board has determined that if formalin is used at the Facility, 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 because of retention time in the settling basin and potential application procedures (e.g., successive raceway treatments, drip treatments for eggs). Therefore, an AMEL of 0.65 mg/L and a MDEL of 1.3 mg/L are calculated based on the 96-hour NOAEL value and using the procedure in USEPA's TSD for calculating WQBELs as described in the Section IV.C.4 of this Fact Sheet. These effluent limitations are carried over from the previous Order No. R6V-2006-0031. Use and monitoring of formaldehyde must be reported as specified in the attached Monitoring and Reporting Program (Attachment E).

4. WQBEL Calculations

Formaldehyde

Effluent concentrations of formaldehyde may persist because of potential application procedures (e.g., successive raceway treatments), also due to retention of effluent in the settling basin and the recirculation of settling basin wastewater back to the raceways.

The Water Board calculated the AMEL and MDEL for formaldehyde, using the calculations and methods described previously for deriving the effluent limitations for copper.

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

Calculation of Aquatic Life AMEL and MDEL:

ECA based on NOAEL (acute toxicity) and NOEC (chronic 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 = 0.4173 mg/L
(where 0.321 = acute ECA multiplier at 99% occurrence probability and 99% confidence)

Long-Term Average concentration based on chronic ECA

$LTA_{chronic}$ = 1.3 mg/l x 0.527 = 0.6851 mg/L
(where 0.527 = chronic ECA multiplier at 99% occurrence probability and 99% confidence)

Most Limiting LTA concentration based on acute LTA

LTA = 0.4173 mg/L

Average Monthly Effluent Limitation

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

$AMEL_{aquatic\ life}$ = 0.4173 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% occurrence probability and 99% confidence)

$MDEL_{aquatic\ life}$ = 0.4173 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.

5. Final Water Quality-Based Effluent Limitations

Table F-11. Summary of Water Quality-based Effluent Limitations, Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	6.5	9.0
Settleable Solids	ml/L	0.1	--	--	--
Formaldehyde	mg/L	0.65	1.3	--	--

6. Whole Effluent Toxicity (WET)

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 will 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 Water Board. 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).

In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters.

Numeric water quality criteria or Basin Plan numeric objectives currently are not available for most of the aquaculture drugs and chemicals used by the Discharger or proposed for use at this Facility. Therefore, the Water Board used the narrative water quality objective for toxicity from the Basin Plan as a basis for determining "reasonable potential" for discharges of these drugs and chemicals. USEPA's TSD specifies two toxicity measurement techniques that can be employed in effluent characterization; the first is Whole Effluent Toxicity (WET) testing, and the second is chemical-specific toxicity analyses. WET requirements protect the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative "no toxics in toxic amounts" criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and generally measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction,

growth, or other sub-lethal effects. WET testing is used most appropriately when the toxic constituents in an effluent are not completely known; whereas chemical-specific analysis is more appropriately used when an effluent contains only one, or very few, well-known constituents.

Due to the nature of operations and chemical treatments at this Facility, its effluent generally contains only one or two known chemicals at any given a time. Therefore, the Water Board is using a chemical-specific approach to determine "reasonable potential" for discharges of aquaculture drugs and chemicals. As such it is not necessary to include an acute toxicity effluent limitation or require acute or chronic WET testing.

D. Final Effluent Limitations

1. Mass-based Effluent Limitations

40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of concentration, as mass limitations are not necessary to protect the beneficial uses of the receiving water.

2. Satisfaction of Anti-Backsliding Requirements.

Section 402(o) of the CWA and 40 CFR 122.44(l) require that, with some exceptions, effluent limitations or conditions in reissued Orders be at least as stringent as those in the existing Order. As described in Sections IV.B.2 and IV.C.3.b of this Fact Sheet, the last permit carried over effluent limitations that were developed using best professional judgment prior to the promulgation of ELGs for aquaculture, noting that Section 402(o) of the CWA prohibits backsliding of effluent limitations that are based on BPJ to reflect a subsequently promulgated ELG that are less stringent. This Order carries over effluent limitations for TSS, settleable solids, and formaldehyde from Order No. R6V-2006-0031. All effluent limitations in this Order are at least as stringent as the effluent limitations in the existing Order.

The effluent limitations for copper and the effluent limitations for the aquatic herbicides Reward®, AquaMaster™, and Sonar™ have been removed because the Discharger has certified that these chemicals will no longer be used at the Facility. The Water Board has determined that the Anti-backsliding Policy is satisfied.

3. Satisfaction of Anti-degradation Policy

As described in Sections IV.B.2 and IV.C.3.b of this Fact Sheet, effluent limitations for TSS, settleable solids, and formaldehyde, are being carried over from Order No. R6V-2006-0031. The effluent limitations for pH are more stringent. The effluent limitations for copper and the effluent limitations for the aquatic herbicides Reward®, AquaMaster™, and Sonar™ have been removed because the Discharger has

certified that these chemicals will no longer be used at the Facility. The use of concentration based limits without accompanying flow limits or mass loading limits will not allow increased degradation of water because the facility has a physical maximum capacity of 31 MGD. The Water Board has determined that the Antidegradation Policy is satisfied.

4. Stringency of Requirements for Individual Pollutants

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

Table F-12. Summary of Final Effluent Limitations – Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	6.5	9.0
Total Suspended Solids	mg/L	6[1]	--	--	15
Settleable Solids	ml/L	0.1	--	--	--
Formaldehyde	mg/L	0.65	1.3	--	--

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications

The Discharger is allowed to use wastewater from this Facility for onsite irrigation as long as the discharge is not found to cause a pollution or nuisance.

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Black Rock Fish Hatchery is provided groundwater pumped by the Los Angeles Department of Water and Power in addition to surface water diverted from Division Creek. The Facility uses the water for fish hatchery operations and discharges it to the Los Angeles Aqueduct. The discharge includes constituents contained in groundwater and surface water, and wastes from fish hatchery operations. During storm events, constituents in storm water may also be present in the discharge. The Discharger is responsible for constituents contributed by groundwater pumping, surface water diversion, hatchery operations and hatchery property management.

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 (40 CFR 131.12) and State Water Board Resolution No. 68-16. Numeric receiving water limitations for pH, TDS, chloride, sulfate, fluoride, boron, nitrate, total nitrogen, and orthophosphate have been included in this permit, and will be measured at the discharge point and receiving water. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water (see Order section V).

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 waters collectively have the following beneficial uses: Municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), groundwater recharge (GWR), contact (REC-1) and non-contact (REC-2) water recreation, 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).

B. Groundwater

The Basin Plan contains numeric and narrative water quality objectives applicable to all groundwaters within the Lahontan Region. The narrative objective for chemical constituents in the Basin Plan states that “Waters shall not contain concentrations of chemicals that adversely affect the groundwater beneficial uses.” 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). The prohibitions and special provisions incorporated into this Order are sufficient to ensure and protect beneficial uses of the receiving water (groundwater).

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires that all NPDES permits specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for this Facility.

A. Influent Monitoring

Order No. R6V-2006-0031 did not require routine Facility supply water monitoring (influent monitoring). This Order requires influent monitoring of constituents for which numeric water quality objectives are listed in the Basin Plan. Influent monitoring is required to establish influent quality so that it can be compared to effluent quality to determine impacts specific to the Facility's operation. A portion of the influent water originates from pumped groundwater and may contribute to constituent concentrations in the receiving water. Monitoring of both the influent groundwater and surface water will aid the Water Board in determining the sources of impacts. Division Creek supply (S-002) could be strictly surface water, or a mixture of surface/groundwater depending on DWP's activities. This is very complex and out of the Discharger's control. Since the Basin Plan objectives (surface water limitations) are set as average annual concentrations, a minimum of 10 samples per year is necessary to accurately assess compliance with the objectives. However, since the primary source water for the Facility is ground water and is not expected to vary significantly, quarterly monitoring for these constituents is specified in this Order.

B. Effluent Monitoring (Discharge Point 001)

Pursuant to the requirements of 40 CFR 122.44(i)(2) effluent monitoring is required for all constituents with established effluent limitations. To demonstrate compliance with effluent limitations established in this Order effluent monitoring for pH, TSS, settleable solids, and formaldehyde required in Order No. R6V-2006-0031 are being carried over to this Order as effluent monitoring. There were no flow data available for the receiving water to determine the dilution, but it is likely the effluent volume is insignificant to the volume of the receiving water. In addition, to assess the impact of the discharge on the beneficial uses of the receiving water and surface water limitations established in this Order effluent monitoring for flow, temperature, dissolved oxygen, electrical conductivity, total dissolved solids, nitrate, nitrogen, dissolved orthophosphate, and potassium permanganate required in Order No. R6V-2006-0031 are being carried over to this Order as effluent monitoring. Based on the available data, the effluent has little if any effect on the receiving water.

Comparison of numeric objectives applicable to Los Angeles Aqueduct listed in the Basin Plan to monitoring requirements listed in R6V-2006-0031 revealed that the former permit did not require monitoring for the following constituents: chloride, sulfate, fluoride, and boron. Net or Intake Credit may be appropriate regarding S-002. Black Rock does not

have control of the Water supplied by the LADWP. Monitoring for these constituents and ammonia will be required in order to evaluate the potential for discharges from the Facility to contribute to a violation of the objectives for Owens River (Haiwee Reservoir Outlet).

The requirement to collect samples during cleaning operations (or other operational modes which increase the discharge of TSS or settleable solids), are being carried over to this Order. However, the requirement to collect two grab samples (grab pairs collected not less than 2 hours, nor greater than 4 hours apart) for settleable solids and TSS was not carried over to this Order. The grab pairs were required in Order No. R6V-2006-0031 to assess the range of TSS and settleable solids concentrations during cleaning operations, as well as to determine compliance with monthly average effluent limitations. Based on evaluation of the results there was little variation in concentrations between the grab pair samples for TSS and settleable solids. Therefore, continued grab pair sampling was considered unnecessary for these parameters as the data did not provide any additional information. However, the monitoring frequency for TSS and settleable solids was increased from two per quarter to three per quarter (one per month).

As discussed in detail in Section IV.C.6 of this Fact Sheet, the Water Board has determined that a chemical-specific approach to be the most appropriate measurement technique for effluent toxicity characterization at the Facility. Therefore, effluent monitoring of aquaculture chemicals used by the Facility, determined to have reasonable potential, and for which effluent limits have been established (formaldehyde) is required to determine compliance with effluent limitations. In addition, monitoring for aquaculture chemicals that do not have effluent limitations (hydrogen peroxide, potassium permanganate, PVP iodine, and Chloramine-T) is required to confirm that these chemicals, if used, will not be discharged at levels that cause, or have a reasonable potential to cause an excursion above the water quality objectives for toxicity. Monitoring for pH and electrical conductivity is required during the use of aquaculture chemicals that affect these parameters (pH during acetic acid and sodium bicarbonate use, and electrical conductivity during sodium bicarbonate and sodium chloride use).

Periodic monitoring ensures that the Water Board has sufficient data to conduct a complete reasonable potential analysis prior to establishing discharge limits for the next permit cycle.

C. Whole Effluent Toxicity Testing Requirements – Not Applicable

D. Receiving Water Monitoring

1. Surface Water

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 ground waters, specific receiving surface waters, and specific ground waters. 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 the Los Angeles Aqueduct include numeric objectives that are common to all

waters in the Lahontan Region and numeric objectives that are applicable to the section of the Owens River at the Haiwee 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, receiving water monitoring for dissolved oxygen, electrical conductivity, pH, temperature, and formaldehyde required in Order No. R6V-2006-0031 are being carried over to this Order. In addition, comparison of numeric objectives applicable to Los Angeles Aqueduct listed in the Basin Plan to monitoring requirements listed in Order No. R6V-2006-0031 revealed that the former permit did not require monitoring for the following constituents: chloride, sulfate, fluoride, and boron. Monitoring data for these constituents will be required in order to evaluate the potential for discharges from the Facility to contribute to a violation of the objectives for the Owens River.

2. Groundwater – Not Applicable

E. Other Monitoring Requirements

1. Drug and Chemical Use

Quarterly reporting of drug and chemical use is required in this Order. The ELGs at 40 CFR Part 451 requires reporting on the use of drugs, disinfectants, and other chemicals in discharges authorized by NPDES permits.

2. Priority Pollutant Metals Monitoring

Evaluation of the potential to discharge priority pollutants is based on the probability of the pollutants being present in the groundwater pumped from source wells, the probability of the pollutants being present in surface water sources and the probability of the pollutants being added to water as it passes through the CAAP facility. Data compiled from the CAAP facility, local drinking water wells and the State Board's Groundwater Ambient Monitoring Association (GAMA) database were used to determine the potential for metals and other priority pollutants to occur in the Facility discharge. Accordingly, the Water Board requires sampling and analysis of the following for the metals listed in Attachment J at least once per permit cycle: influent from both the groundwater wells, surface source water from Division Creek and effluent for metals. These locations shall be sampled and the samples shall be analyzed for metals and concurrent hardness in the year 2016. Results of the metals and hardness analyses shall be reported to the Water Board no later than 180 days prior to expiration of this permit which is **January 12, 2017** (Refer to Attachment J for the specific monitoring requirements.)

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 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 CFR 122.42.

40 CFR 122.41(a)(1) and (b) through (n) 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. 40 CFR 123.25(a)(12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 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).

B. Monitoring and Reporting Requirements

The Discharger is required to comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Reopener Provisions

Conditions that necessitate a major modification of a permit are described in 40 CFR 122.62, which include the following:

a. *When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision.* Therefore, if 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 Water Board will revise and modify this Order in accordance with such more stringent standards.

b. *When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.* The Discharger is required to report on usage of drugs and chemicals for which discharge is authorized by this Order. New information on usage or toxicity of drugs or chemicals used at the Facility may justify reopening and modifying this Order.

c. *When facility alterations or changes in operations justify new conditions that are different from the existing permit.* The discharge of a new drug or chemical that is

found to have 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, would be considered a change in facility operations that requires reopening this Order to establish new effluent limitations.

2. Special Studies and Additional Monitoring Requirements

Prior to using any new chemical or aquaculture drug at the Facility, the Discharger is required to submit to the 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 VI.C.2 of this Order. These reporting and toxicity testing requirements are needed for the 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.

3. Best Management Practices and Pollution Prevention

a. Best Management Practices (BMP) 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 CFR 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 Water Board upon request, and submit certification that the BMP plan has been developed.

b. Best Management Practices - Storm Water Pollution Prevention Plan (SWPPP). This Order requires the Discharger to develop and implement a SWPPP, in accordance with Attachment K 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.

4. Compliance Schedules – Not Applicable

5. Construction, Operation, and Maintenance Specifications

Solid waste disposal provisions in this Order are based on the requirements of CCR 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. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions

Order Continuation after Expiration Date. This provision is common in California NPDES permits and is authorized under 40 CFR 122.6(d).

VIII. PUBLIC PARTICIPATION

The Water Board is considering the issuance of WDRs that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Black Rock Fish Hatchery. As a step in the WDR adoption process, the Water Board staff developed tentative WDRs that were circulated for a thirty day comment period. The Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The 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. Notification was provided through publication in the Inyo Register on April 5, 2012 and June 14, 2012.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these proposed WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Water Board, written comments must be received at the Water Board offices by 5:00 p.m. on **July 2, 2012.**

C. Public Hearing

The Water Board will hold a public hearing on the proposed WDRs during its regular Board meeting on the following date and time and at the following location:

Date: July 12, 2012
Time: To be determined
Location: South Lake Tahoe

Interested persons are invited to attend. At the public hearing, the Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

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

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Water Board's action to the following address:

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

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address below at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Water Board by calling (760) 241-6583.

California Regional Water Quality Control Board
Lahontan Region
14440 Civic Drive, Suite 200
Victorville, CA 92392

F. 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 Water Board, reference this Facility and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Mary Dellavalle at (760) 241-6583.

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ATTACHMENT G – BASIN PLAN WATER QUALITY OBJECTIVE TABLES

Table G-1: One-Hour Concentration for Ammonia

Waters Designated as COLD, COLD with SPWN, COLD with MIGR (Salmonids or other sensitive coldwater species present

	Temperature, °C						
pH	0	5	10	15	20	25	30
Un-ionized Ammonia (mg/liter NH_3)							
6.50	0.0091	0.0129	0.0182	0.026	0.036	0.036	0.036
6.75	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
7.00	0.023	0.033	0.046	0.066	0.093	0.093	0.093
7.25	0.034	0.048	0.068	0.095	0.135	0.135	0.135
7.50	0.045	0.064	0.091	0.128	0.181	0.181	0.181
7.75	0.056	0.080	0.113	0.159	0.22	0.22	0.22
8.00	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.25	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.50	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.75	0.065	0.092	0.130	0.184	0.26	0.26	0.26
9.00	0.065	0.092	0.130	0.184	0.26	0.26	0.26
Total Ammonia (mg/liter NH_3)							
6.50	35	33	31	30	29	20	14.3
6.75	32	30	28	27	27	18.6	13.2
7.00	28	26	25	24	23	16.4	11.6
7.25	23	22	20	19.7	19.2	13.4	9.5
7.50	17.4	16.3	15.5	14.9	14.6	10.2	7.3
7.75	12.2	11.4	10.9	10.5	10.3	7.2	5.2
8.00	8.0	7.5	7.1	6.9	6.8	4.8	3.5
8.25	4.5	4.2	4.1	4.0	3.9	2.8	2.1
8.50	2.6	2.4	2.3	2.3	2.3	1.71	1.28
8.75	1.47	1.40	1.37	1.38	1.42	1.07	0.83
9.00	0.86	0.83	0.83	0.86	0.91	0.72	0.58

1 To convert these values to mg/liter N, multiply by 0.822
2 Source: U. S. Environmental Protection Agency. 1986. Quality criteria for water, 1986. EPA 440/5-86-001.

Table G-2: Four Day Average Concentration for Ammonia

Waters Designated as COLD, COLD with SPWN, COLD with MIGR (Salmonids or other sensitive coldwater species present)

	Temperature, °C						
pH	0	5	10	15	20	25	30
Un-ionized Ammonia (mg/liter NH_3)							
6.50	0.0008	0.0011	0.0016	0.0022	0.0022	0.0022	0.0022
6.75	0.0014	0.0020	0.0028	0.0039	0.0039	0.0039	0.0039
7.00	0.0025	0.0035	0.0049	0.0070	0.0070	0.0070	0.0070
7.25	0.0044	0.0062	0.0088	0.0124	0.0124	0.0124	0.0124
7.50	0.0078	0.0111	0.0156	0.022	0.022	0.022	0.022
7.75	0.0129	0.0182	0.026	0.036	0.036	0.036	0.036
8.00	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.25	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.50	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.75	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
9.00	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
Total Ammonia (mg/liter NH_3)							
6.50	3.0	2.8	2.7	2.5	1.76	1.23	0.87
6.75	3.0	2.8	2.7	2.6	1.76	1.23	0.87
7.00	3.0	2.8	2.7	2.6	1.76	1.23	0.87
7.25	3.0	2.8	2.7	2.6	1.77	1.24	0.88
7.50	3.0	2.8	2.7	2.6	1.78	1.25	0.89
7.75	2.8	2.6	2.5	2.4	1.66	1.17	0.84
8.00	1.82	1.70	1.62	1.57	1.10	0.78	0.56
8.25	1.03	0.97	0.93	0.90	0.64	0.46	0.33
8.50	0.58	0.55	0.53	0.53	0.38	0.28	0.21
8.75	0.34	0.32	0.31	0.31	0.23	0.173	0.135
9.00	0.195	0.189	0.189	0.195	0.148	0.116	0.094

1 To convert these values to mg/liter N, multiply by 0.822.
2 Source: U. S. Environmental Protection Agency. 1992. Revised tables for determining average freshwater ammonia concentrations. USEPA Office of Water Memorandum, July 30, 1992.

Table G-3: Water Quality Criteria for Ambient Dissolved Oxygen Concentration

AMBIENT DISSOLVED OXYGEN CONCENTRATION[1,2]

	Beneficial Use Class			
	COLD & SPWN[3]	COLD	WARM & SPWN[3]	WARM
30 Day Mean	NA[4]	6.5	NA	5.5
7 Day Mean	9.5 (6.5)	NA	6.0	NA
7 Day Mean Minimum	NA	5.0	NA	4.0
1 Day Minimum[5,6]	8.0 (5.0)	4.0	5.0	3.0

1 From: USEPA. 1986. Ambient water quality criteria for dissolved oxygen. Values are in mg/L.

2 These are water column concentrations recommended to achieve the required intergravel dissolved oxygen concentrations shown in parentheses. For species that have early life stages exposed directly to the water column (SPWN), the figures in parentheses apply.

3 Includes all embryonic and larval stages and all juvenile forms to 30-days following hatching (SPWN).

4 NA (Not Applicable).

5 For highly manipulatable discharges, further restrictions apply.

6 All minima should be considered as instantaneous concentrations to be achieved at all times.

The table above was generated for standardized concentrations. Natural conditions, such as elevation, may alter dissolved oxygen concentrations. Where natural conditions alone create dissolved oxygen concentrations less than 110 percent of the applicable criteria means or minima or both, the minimum acceptable concentration is 90 percent of the natural concentration. (page 35: USEPA. 1986. Ambient Water Quality Criteria for Dissolved Oxygen.)

Table G-4: Numeric objectives in the Basin Plan that are Applicable to the Los Angeles Aqueduct by Application of the Tributary Rule

Surface Water		Objective (mg/L)							
		TDS	Cl	SO_4	F	B	NO_3-N	Total N	PO_4
Owens River (Haiwee Reservoir Outlet)	Annual average	215.00	19.50	27.00	0.60	0.56	0.60	0.80	0.23
	90th Percentile	315.00	38.00	62.00	0.90	0.91	1.00	1.50	0.36

ATTACHMENT H –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.	(1) *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. (2) *Bath:* used at a rate of 500 to 2,000 ppm for 1 to 10 minutes.
Amoxicillin trihydrate.	Control and prevention of external and systemic bacterial infections.	*Injected intraperitoneally:* into broodstock twice a week, prior to spawning, at a rate of 40 milligrams amoxicillin per kilogram of fish.
Carbon Dioxide.	Anesthetic.	*Bath:* bubbled in water. Usually used in small volumes of water.
Chloramine-T.	Control of external gill bacteria.	(1) *Flush:* used at a concentration of 10 ppm for one hour. (2) *Bath:* used at a concentration of 10 ppm for one hour.
Emamectin benzoate; 0.2% aquaculture premix (SLICE)	Control parasitic copepods	*Coat feed with treatment at a rate of 50ug/Kg of fish biomass/day over 7 consecutive days.*
Erythromycin.	Control and prevention of external and systemic bacterial infections.	(1) *Injected intraperitoneally:* at a rate of 40 milligrams erythromycin per kilogram of fish, at 30 day intervals. (2) *Feed:* used in medicated feed or fish pills at a rate of 100 milligrams or less of erythromycin per kilogram of fish.
Florfenicol (Nuflor®).	Control and prevention of external and systemic bacterial infections.	*Feed:* mixed with vegetable oil and sprayed onto fish pills. Fish pills are fed to fish as feed at a rate of 15 milligrams of florfenicol per kilogram of fish per day, split into morning and afternoon feedings.
Formalin (37% formaldehyde solution).	(1) Control of external parasites. (2) Fungus control on fish eggs.	(1) *Flush:* Low dose - used at a concentration of 25 ppm of formalin for 8 hours. High dose - used at a concentration of 167 to 250 ppm formalin for one hour. (2) *Bath:* used at a concentration of 2,000 ppm formalin, or less, for 15 minutes.
Hydrogen peroxide.	Control of external parasites.	*Flush:* used at a rate of 100 ppm, or less, for 45 minutes to 1 hour.
MS-222 / tricaine methanesulfonate (Finquel®, Tricaine-S®).	Anesthetic.	*Bath:* used at a rate of 50 to 250 mg/L, usually in a small volume of water.
Oxytetracycline HCl (Terramycin®).	Control and prevention of external and systemic bacterial infections.	(1) *Bath:* used in tanks for six to eight hours at a concentration of 100 ppm or less. (2) *Feed:* fed at a rate of 3.75 grams of oxytetracycline per 100 pounds of fish per day.
Penicillin G potassium.	Control and prevention of external and systemic bacterial infections.	*Bath:* used in tanks for six to eight hours at a concentration of 150 IU/ml (500,000,000 IU/311.8 gm. Packet).

Drug or Chemical	Purpose of Application	Expected Method(s) of Application or Treatment
Potassium permanganate (Cairox™).	Control of external parasites and bacteria.	(1) *Flush:* used at a rate of 2 ounces per CFS of raceway flow, poured in all at once, for a total of 3 treatments, spaced 10 to 15 minutes apart (2.32 ppm for a 45 minute treatment, 3.48 ppm for a 30 minute treatment). (2) *Bath:* used at a rate of 2 ppm, or less, for one hour.
PVP Iodine	Disinfect and control diseases on fish eggs.	*Bath:* used at a concentration of 100 mg/L for 10 to 30 minutes.
Sodium bicarbonate.	Anesthetic.	*Bath:* used at a rate of 142 to 642 mg/L, usually in a small volume of water.
Sodium chloride (salt).	Fish cleansing, disease control, and stress reduction.	*Flush:* used at a rate of 150 to 700 pounds of salt per CFS of raceway flow.
Sulfadimethoxine-ormetoprim (Romet-30®).	Control and prevention of external and systemic bacterial infections.	*Feed:* used at a rate of 50 milligrams of drug per kilogram of fish per day.
Vibrio vaccine enteric redmouth bacterin	Vaccinate against	*Bath: Fish are dipped into solution and then placed back into the production line.*

ATTACHMENT I – DRUG AND CHEMICAL USAGE REPORT TABLE

Chemical Name	Date	Purpose	Amount Applied	Units	Duration of Treatment	Treatment Type (Immersion, feed, injected)	Flow Treated (CFS)	Total Effluent Flow (CFS)	Effluent Conc. (mg/L)	Person Reporting

ATTACHMENT J – MONITORING REQUIREMENTS

I. Background. The Water Board has determined that, based on priority pollutant data collected from CAAP facilities, discharge of priority pollutants, other than metals, is unlikely. Accordingly, the Water Board is requiring, as part of the Monitoring and Reporting Program that the Discharger sample the effluent and the influent and analyze the samples for priority pollutant metals. Sections 2.4.1 through 2.4.4 of the 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://www.waterboards.ca.gov/iswp/index.html.) Effluent and receiving water hardness are required to evaluate the toxicity of metals where the toxicity of the constituents varies with hardness.

II. Monitoring Requirements. Priority pollutant metals and other metals samples shall be collected for the effluent (EFF-001) and the influent (INF-001) and analyzed for the metals listed in Table J-1**, one time at least 180 days but no more than 365 days, prior to expiration of this Order.**

Table J-1 – List of Required Pollutant Metals

Constituent	Criterion Quantitation Limit ug/L	Suggested Test Method
Hardness (as $CaCO_3$)		EPA 130.2
Antimony	5	EPA 6020/200.8
Arsenic	0.01	EPA 1632
Beryllium	1	EPA 6020/200.8
Cadmium	0.25	EPA 1638/200.8
Chromium (III)	2	EPA 6020/200.8
Chromium (VI)	0.5	EPA 7199/1636
Copper	0.5	EPA 6020/200.8
Lead	0.5	EPA 1638
Mercury	0.0002	EPA 1669/1631
Nickel	5	EPA 6020/200.8
Selenium	5	EPA 6020/200.8
Silver	1	EPA 6020/200.8
Thallium	1	EPA 6020/200.8
Zinc	10	EPA-6020/200.8

ATTACHMENT K – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

I. Objectives

The 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, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table K-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 and shall be readily available for review by facility employees or Water Board inspectors.

II. Planning and Organization

The SWPPP shall identify a specific individual or individuals and their positions within the facility 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. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

III. Site Map

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch but no larger than 11 x 17inches 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.

TABLE K-1
FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

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

The following information shall be included on the site map:

A. 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.

B. 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.

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

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

E. 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.

IV. List of Significant Materials

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

V. Description of Potential Pollutant Sources

A. 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 Facilities activities shall be considered:

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 Facilities operation. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

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.

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.

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.

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

VI. Assessment of Potential Pollutant Sources

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

1. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

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.

B. 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.

VII. Storm Water Best Management Practices

The SWPPP shall 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.

TABLE K-2
ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES
SUMMARY

Example

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.

The description of the BMPs shall 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 K-2.

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

A. 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. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs. Below is a list of non-structural BMPs that should be considered:

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

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.

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.

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.

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.

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

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.

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 SWPPPs are made.

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

B. 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 of structural BMPs that should be considered:

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.
2. **Retention Ponds.** This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.
3. **Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.
4. **Secondary Containment Structures.** This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.
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.

VIII. SWPPP General Requirements

A. The SWPPP shall be retained on site and made available upon request of a representative of the Water Board.

B. The 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 Water Board, the facility operator shall submit a SWPPP revision and implementation schedule.

C. 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.

D. When any part of the SWPPP is infeasible to implement due to proposed significant structural changes, the facility operator shall submit a report to the Water Board that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (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.

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

IX. Annual Comprehensive Site Compliance Evaluation

The facility operator 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:

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

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

C. 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.

D. 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 non-compliance and the corrective actions taken. The evaluation report shall be submitted as part of the site's annual report, retained for at least five years

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