



California Regional Water Quality Control Board Central Valley Region



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31 August 2010

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NOTICE OF APPLICABILITY; GENERAL WASTE DISCHARGE REQUIREMENTS FOR COLD WATER CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY DISCHARGES TO SURFACE WATERS U.S. DEPARTMENT OF INTERIOR, FISH AND WILDLIFE SERVICE AND U.S. BUREAU OF RECLAMATION, LIVINGSTON STONE NATIONAL FISH HATCHERY, SHASTA COUNTY

The U. S. Department of Interior, Fish and Wildlife Service, operates the Livingston Stone National Fish Hatchery, also known as the Winter Run Rearing Facility (hereafter Facility). The property is owned by the U.S. Bureau of Reclamation. The Fish and Wildlife Service, and Bureau of Reclamation are hereafter designated as the Discharger. The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) has reviewed the Report of Waste Discharge (ROWD) dated 24 July 2009 and supplemental information dated 15 September 2009 for renewal of your existing individual Order No. R5-2005-0013 (NPDES No. CA0084298) for the Facility. The ROWD was deemed complete on 15 October 2009.

On 29 January 2010, General Order No. R5-2010-0018, (NPDES No. CAG135001), Waste Discharge Requirements for Cold Water Concentrated Aquatic Animal Production Facility Discharges to Surface Waters (General Order) was adopted by the Central Valley Water Board. The General Order regulates the discharge of pollutants from Cold Water Concentrated Aquatic Animal Production facilities (CAAP facilities) to surface waters in the Central Valley Region. The Facility discharge meets the conditions for coverage under the General Order. The Central Valley Water Board has determined that discharges from your CAAP facility are more appropriately regulated under the General Order than by the existing individual permit. Therefore, the existing Order No. R5-2005-0013 (NPDES No. CA0084298) is scheduled for rescission by a separate action of the Central Valley Water Board at a future regularly scheduled Board meeting.

The Discharger has been assigned an enrollee number of R5-2010-0018-003. Administrative information for the Facility is provided in Attachment A, a part of this Notice of Applicability (NOA).



The CAAP facility operations and discharge shall be managed in accordance with the requirements contained in the General Order, this NOA, and with the information submitted by the Discharger. The General Order (enclosed) may also be viewed at the following web address:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2010-0018_npdes.pdf

You are urged to familiarize yourself with the contents of the entire document. Mandatory monitoring requirements are prescribed Attachment C of the General Order.

FACILITY INFORMATION/DISCHARGE DESCRIPTION

The Facility is located 0.5 miles downstream of the Shasta Dam powerhouse and approximately 3 miles northwest of the City of Shasta Lake in Section 15, T33N, R5W, MDB&M, latitude N 40° 43' 00" and longitude W 122° 25' 26", as shown on Attachment A, a part of this NOA. The property is owned by the U. S. Bureau of Reclamation and is on Assessor's Parcel Nos. 065-510-01-11. The Facility is a salmon spawning/rearing operation that raises endangered winter-run Chinook salmon for release to the Sacramento River. A Delta Smelt rearing facility was added to the hatchery in 2007. Based on information in the ROWD the Discharger reported a total maximum annual harvestable weight of Chinook salmon of 3,400 pounds (lbs), and delta smelt of 200 lbs. The Discharger reported 1,148 lbs of food fed during the month of maximum feeding. This facility does not meet the 20,000 lb harvest weight or 5,000 lb food criteria for a flow-through CAAP facility requiring an NPDES permit; however, the Central Valley Water Board has designated the Facility as a CAAP facility because of the chemical additives that are part of the waste stream.

The Facility consists of two wild salmon brood stock holding tanks, 30 salmon rearing tanks, 10 salmon brood stock tanks, and one hatchery building containing 60 circular 30-inch diameter tanks for early rearing of salmon fry. The smelt rearing facility consists of a food preparation building and a main smelt rearing building. The main smelt rearing building contains thirty 29 gallon tanks and twenty-two 106 gallon tanks. There are five 265 gallon adult holding tanks for smelt outside the main building. All the water for used in the smelt rearing facility passes through the existing water lines that were used for ten 12-ft diameter brood stock tanks that were removed.

The Discharger utilizes water diverted from the Shasta Dam penstocks with a current maximum daily flow of 6.24 cubic feet per second [4.03 million gallons per day (mgd)]. The design flow for the Facility is 7.2 mgd. Supply water is aerated by packed towers and routed to a head tank for distribution to the Facility. Overflow water from the supply water head tank is discharged to the Sacramento River at one location. The Facility does not add pollutants to the overflow water which, if not diverted, would normally have passed through the penstocks to the Sacramento River. Wastewater is discharged to the Sacramento River at two locations as shown in the Facility Schematic (Attachment C), a part of this NOA, and as described below:

- **Discharge Point 001** – Wastewater from the salmon hatchery building and the two salmon wild brood stock tanks is discharged to the Sacramento River at Discharge Point 001.
- **Discharge Point 002** – Wastewater from the rectangular salmon rearing, circular salmon brood stock, and delta smelt rearing tanks is discharged to the Sacramento River at Discharge Point 002. Prior to discharge, wastewater from two of the circular salmon brood tanks and several smelt tanks can be directed through a series of ultraviolet (UV) sterilizers.
- **Discharge Point 003** – Overflow water from the supply water head tank is discharged to the Sacramento River at Discharge Point 003. The Facility does not add pollutants to the overflow water which, if not diverted, would normally have passed through the penstocks to the Sacramento River.

Chemicals currently used at the Facility include formalin, (as a 37% formaldehyde, methanol-free solution), malachite green, sodium chloride (salt), providone –iodine (Argentine), chloramine-T, tricaine methanesulfonate (MS-222), carbon dioxide, Pond Poly Aqua, vibrio vaccine, erythromycin (injected), Liquamycin LA-200, and Lutening Hormone-Releasing analogue (LH-RH₃). Chemicals not currently used but may be used in the future include oxytetracycline (Terramycin 100D), SLICE (Emamectin benzoate) and Ivermectin.

Malachite green is used as a fungicide treatment for adult salmon in the wild brood stock tanks. During treatment the wastewater is routed through two 2,000 lb granular activated carbon filters (GAC filters) operated in series to remove malachite green. In addition, wastewater containing formalin used to treat eggs for fungus infections is routed through the GAC filters prior to discharge. GAC filter effluent is routed to Discharge Point 001.

Glucose, dimethyl sulfoxide, chicken egg yolk, sodium chloride trizma base buffer, glycine, and theophylline are used in the cryopreservation of sperm and sperm activators. These chemicals are not discharged to surface waters.

The Facility discharges domestic wastes to a septic tank/leachfield system.

MONITORING REQUIREMENTS

The General Order requires that dischargers comply with the Monitoring and Reporting Program (MRP) that is incorporated as Attachment C to the General Order. Influent, effluent, and receiving water monitoring requirements are based on the pounds of fish produced. This Facility is in the category of production less than 100,000 lbs of fish.

The Discharger conducted priority pollutant metals monitoring on 27 July 2009. The data show that there is no reasonable potential for priority pollutant metals to cause or contribute to an exceedance of water quality objectives. The Discharger reports that the Facility does not use copper sulfate or chelated copper compounds. The receiving waters are not listed under the Clean Water Act 303(d) List of impaired water bodies; therefore, no additional monitoring requirements will be required.

Site specific monitoring locations for influent, effluent and receiving water monitoring are shown in Attachment C to this NOA (Facility schematic) and as described in the following table:

Monitoring Location Descriptions

Point Name	Monitoring Location Name	Monitoring Location Description
Influent	INF-001	Located where a representative sample of the raw water supply can be obtained.
Effluent	EFF-001	Effluent samples shall be collected from Discharge Point 001 downstream of the salmon hatchery building, wild brood stock tanks, and GAC filters after the last point at which wastes are introduced prior to discharge to the Sacramento River.
GAC Filter Effluent	INT-001	Effluent samples shall be collected from the outflow from the GAC filters prior to the point where GAC effluent enters the Discharge Point 001 effluent stream.
Discharge 002	EFF-002A	To address safety concerns, the Discharger may use a sampling location from the rectangular rearing tanks, designated EFF-002A, to characterize the wastewater discharge from Discharge Point 002. However, exceedance of an effluent limitation for EFF-002A shall be considered and exceedance of the effluent limitation for the entire discharge from Discharge Point 002.
Discharge 002	EFF-002B	To address safety concerns, the Discharger may use a sampling location from the brood stock tanks and delta smelt rearing tanks, designated EFF-002B, to characterize the wastewater discharge from Discharge Point 002. However, exceedance of an effluent limitation for EFF-002B, shall be considered and exceedance of the effluent limitation for the entire discharge from Discharge Point 002.
Discharge 003	EFF-003	Effluent samples shall be collected from Discharge Point 003 prior to discharge to the Sacramento River.
Receiving Water Upstream	RSW-001	To address safety concerns with access to the Sacramento River above Discharge Point 001, the upstream receiving water samples shall be collected from the influent water supply at INF-001.
Receiving Water Downstream	RSW-002	Located at the CDEC station, 1/8 mile downstream from the point where Discharge Point 002 flows into the Sacramento River.

NOTICE OF APPLICABILITY REQUIREMENTS

Based on the information provided in the ROWD, the Discharger is hereby authorized to discharge to the Sacramento River under the terms and conditions of General Order R5-2010-0018. In addition to the requirements contained in the General Order, the following shall also apply:

1. The combined maximum daily discharge from Discharge Point 001 and Discharge Point 002 shall not exceed 7.2 mgd during the effective period of the General Order.
2. The by-pass of wastewater containing malachite green around the Granular Activated Carbon (GAC) filters or the overflow of untreated wastewater containing malachite green into Discharge Point 001 is prohibited. The analytical method for determining active malachite green shall be approved by the Executive Officer. The method for

malachite green shall have a reporting limit no greater than 10 µg/L. Samples shall be collected from the outflow from the GAC filters at INT-001 during malachite green treatment. Prior to discharging wastewater generated as a result of backwashing the GAC filters, the Discharger shall contain the wastewater and sample for malachite green and formaldehyde. If malachite green is detected or if formaldehyde exceeds the effluent limitations in Table V.A.1, of the General Order, the wastewater cannot be discharged.

3. The Discharger is required to comply with all the Monitoring and Reporting Requirements contained in Attachment C to the General Order for facilities with production less than 100,000 pounds of fish.
4. The Discharger shall electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS website will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
5. The State Water Resources Control Board (State Water Board) has determined that individual or general permits for aquaculture activities defined in 40 CFR 122.25(b) will be subject to the same annual fee, which currently is \$1,000 (State Water Board Resolution 2002-0150), but may be subject to change.
6. The General Order expires on 1 January 2015, and enrollees will continue to be authorized to discharge until coverage becomes effective under a reissued Order or until Central Valley Water Board staff formally terminates your coverage. Only those CAAP facilities authorized to discharge and who submit a Notice of Intent at least 180 days prior to the expiration date of General Order No. R5-2010-0018 will remain authorized to discharge under administratively continued permit conditions.
7. The U.S. Bureau of Reclamation, as owner of the real property at which the discharge will occur, is ultimately responsible for ensuring compliance with the General Order. The U.S. Fish and Wildlife Service retains primary responsibility for compliance with the General Order, including day to day operations and monitoring. Enforcement actions will be taken against the U.S. Bureau of Reclamation only in the event that enforcement actions against the U.S. Fish and Wildlife Service are ineffective or would be futile.

Failure to comply with the General Order and this NOA may result in enforcement actions, which could include administrative civil liability. Effluent limitation violations and some late reporting violations are subject to a Mandatory Minimum Penalty (MMP) of \$3,000 per violation [California Water Code Sections 13385(h) and (i)]. If you have no discharge during a monitoring period, you must submit a report indicating that no discharge occurred. You must notify the Central Valley Water Board staff within 24 hours of noncompliance or anticipated noncompliance.

Please reference your enrollee number, R5-2010-0018-003, in your correspondence and submitted documents.

If you have any questions regarding this NOA, monitoring reports submittals, discharge notifications, compliance and enforcement; please contact, Kevin Kratzke at (530) 224-4850, or kkratzke@waterboards.ca.gov.

Original Signed by Robert A. Crandall

(for) PAMELA C. CREEDON
Executive Officer

KEK: knr

NOA Attachments: Attachment A - Administrative Information
Attachment B – Location Map
Attachment C – Facility Schematic

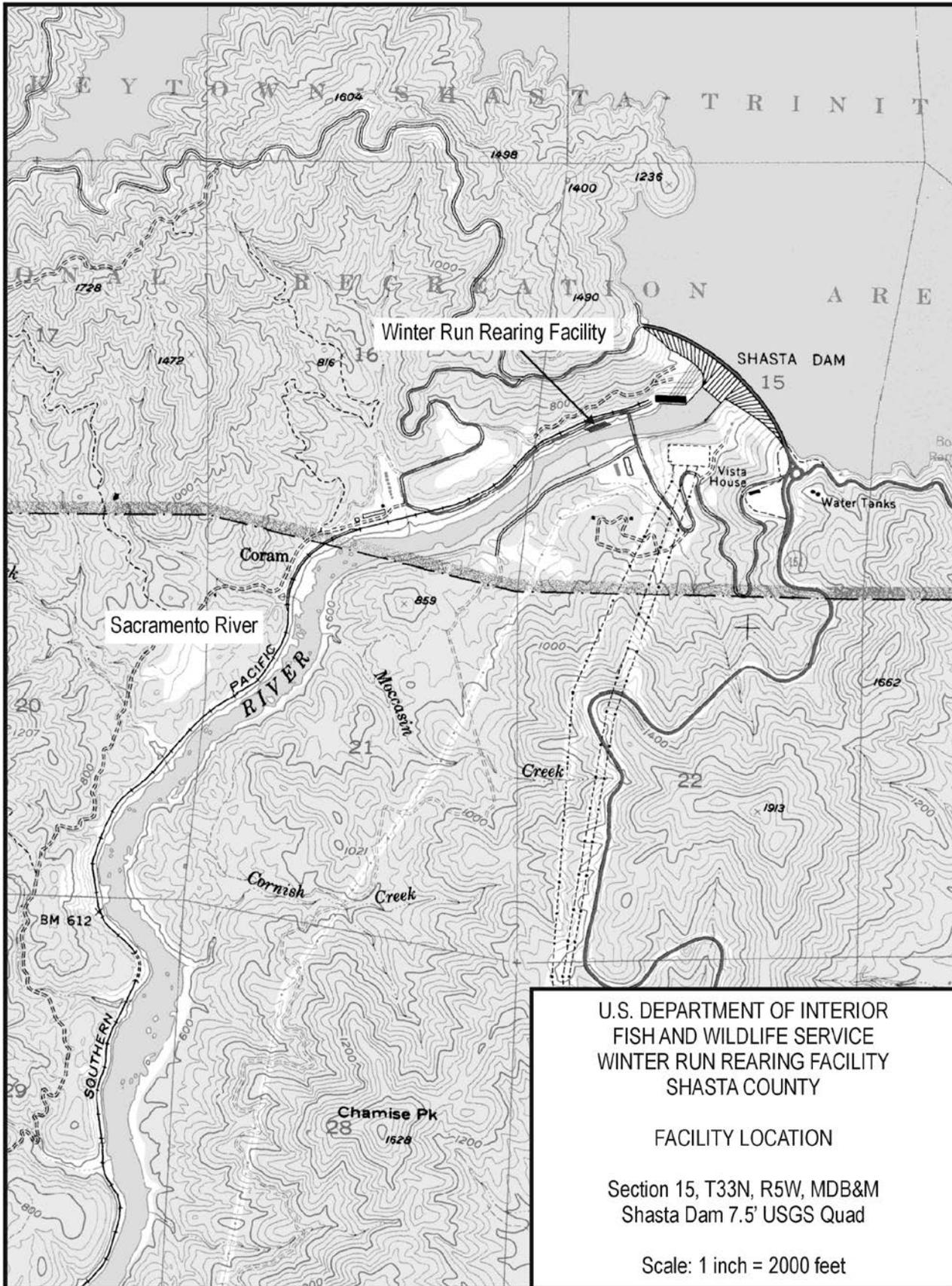
Enclosure: General Order No. R5-2010-0018 (Discharger only)

Distribution List: Mr. David Smith, U.S. EPA, Region IX, San Francisco
Mr. Phil Isorena, State Water Resources Control Board, Sacramento
Mr. John Reuth, U.S. Fish and Wildlife Service, Shasta Lake

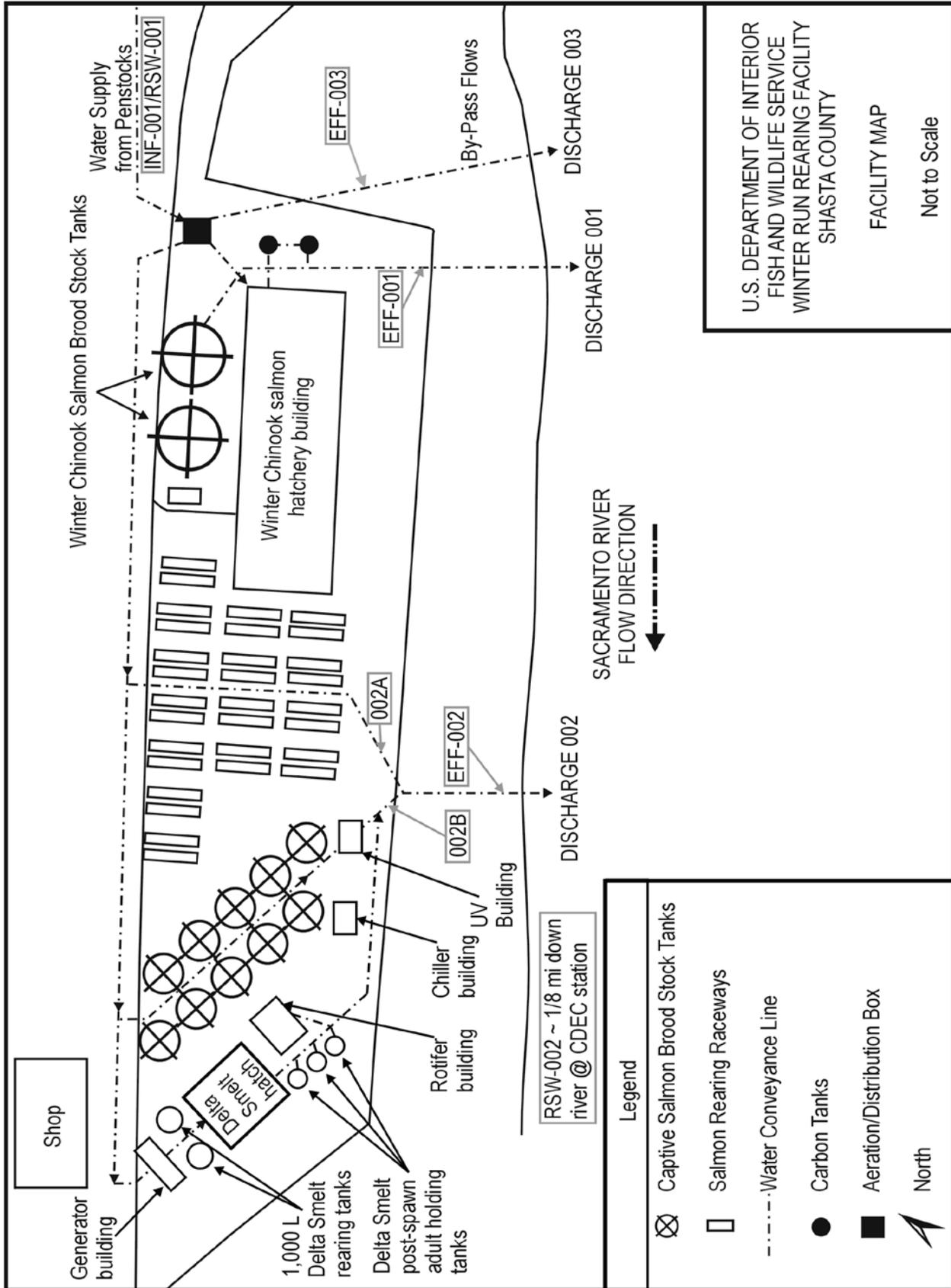
ATTACHMENT A – FACILITY ADMINISTRATIVE INFORMATION

Name of Facility	Livingston Stone National Fish Hatchery
Type of Facility	Cold Water Aquaculture Facility, SIC Code 0921
WDID	5A450704010
General Order NOA Enrollee Number	R5-2010-0018-003
Discharger	U.S. Fish and Wildlife Service (Operator) and U.S. Bureau of Reclamation (Site Owner)
Facility Address	16349 Shasta Dam Blvd. Shasta Lake, CA 96019
Land Owner (Address)	U.S. Bureau of Reclamation 16349 Shasta Dam Blvd. Shasta Lake, CA 96019
Facility Contact, Title and Phone	John Rueth, (530) 275-0549
Authorized Person to Sign and Submit Reports	Scott Hamelberg, Project Leader (530) 365-8622
Mailing Address	Livingston Stone National Fish Hatchery 16349 Shasta Dam Blvd. Shasta Lake, CA 96019
Billing Address	U.S. Fish and Wildlife Service 24411 Coleman Fish Hatchery Road Anderson, CA 96007
Total Weight Produced (Annual)	3600 lbs
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Facility Permitted Flow	7.2 mgd
Facility Design Flow	7.2 mgd
Watershed	Sacramento River Basin
Receiving Water	Sacramento River
Receiving Water Type	Inland surface water

ATTACHMENT B – LOCATION MAP



ATTACHMENT C – FACILITY SCHEMATIC



Legend

- ⊗ Captive Salmon Brood Stock Tanks
- Salmon Rearing Raceways
- - - - Water Conveyance Line
- Carbon Tanks
- Aeration/Distribution Box
- North

U.S. DEPARTMENT OF INTERIOR
 FISH AND WILDLIFE SERVICE
 WINTER RUN REARING FACILITY
 SHASTA COUNTY

FACILITY MAP
 Not to Scale