



NPDES Compliance Inspection Report

Quinault National Fish Hatchery

**NPDES Permit Tracking Number
WAG130005**

Inspection Date: July 28, 2023

Prepared by:

Vanessa Oquendo
U.S. Environmental Protection Agency, Region 10
Enforcement & Compliance Assurance Division
Water Enforcement & Field Branch
Surface Water Enforcement Section

Inspector Signature/Date:

VANESSA OQUENDO	Digitally signed by VANESSA OQUENDO Date: 2023.09.20 18:46:36 -07'00'
------------------------	--

Supervisor Signature/Date:

Marshalonis, Daniel (Dino)	Digitally signed by Marshalonis, Daniel (Dino) Date: 2023.09.21 11:56:17 -07'00'
-----------------------------------	---

Contents

<u>I.</u>	<u>Facility Information</u>	3
<u>II.</u>	<u>Inspection Information</u>	3
<u>III.</u>	<u>Permit Information</u>	4
<u>IV.</u>	<u>Facility Background</u>	4
<u>V.</u>	<u>Inspection Chronology</u>	5
<u>VI.</u>	<u>Opening Conference</u>	5
<u>VII.</u>	<u>Site Review</u>	5
<u>VIII.</u>	<u>File Review</u>	8
<u>IX.</u>	<u>Areas of Concern</u>	9
<u>A.</u>	<u>Best Management Practices Plan</u>	9
<u>B.</u>	<u>Quality Assurance Plan</u>	9
<u>C.</u>	<u>Annual Reports of Operations Required Information</u>	9
<u>X.</u>	<u>Closing Conference</u>	10

ATTACHMENT A - Aerial Image (Google Earth)

ATTACHMENT B - Site Map

ATTACHMENT C - Photograph Log

[Unless otherwise noted, all details in this inspection report were obtained from conversations with Mr. Dan Fielding and Mr. Sam Van Liew or from observations made during the inspection.]

I. Facility Information

Facility Name:	Quinault National Fish Hatchery
Facility Address:	3 Sockeye Road, Humptulips, WA 98552
Facility Operator:	U.S. Fish and Wildlife Service
Facility Owner:	U.S. Fish and Wildlife Service
Facility Contact(s):	Dan Fielding Hatchery Manager Phone: (360) 288-2508 Email: daniel_fielding@fws.gov Sam Van Liew Assistant Project Leader Phone: (360) 288-2508 Email: samuel_vanliew@fws.gov
Latitude/Longitude:	47.358615°N, -123.99092°W
NPDES Tracking Number:	WAG130005
NAICS Code(s):	112511
SIC Code(s):	0921
Facility Size:	Approximately 80 acres

II. Inspection Information

Inspection Date:	July 28, 2023
Inspector(s):	Vanessa Oquendo EPA Region 10, ECAD / SWES
Arrival Time:	9:05 AM
Departure Time:	2:00 PM
Weather:	Overcast; sun later in the day; warm

Purpose: To evaluate compliance with the requirements of the Clean Water Act and the National Pollutant Discharge Elimination System (NPDES) Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country Within the boundaries of the State of Washington.

III. Permit Information

This facility is permitted under NPDES permit WAG130005. The permit became effective on August 1, 2016. The expiration date of the permit was July 31, 2021 and has been administratively extended.

IV. Facility Background

The Quinault National Fish Hatchery (“Facility”) is a mitigation hatchery that has operated in the Quinault Reservation since 1968. See **Attachment A**, Aerial Photo (Google Earth). The Quinault National Fish Hatchery grew out of the cooperation between U.S. Fish & Wildlife Service (USFWS) and the Quinault Indian Nation to restore and enhance the depleted salmon and steelhead fish runs on the Quinault Reservation and adjacent lands from habitat degradation in support of critical cultural and economic resources in accordance with treaty obligations. Species and quantity reared as well as release times are subject to change based on hatchery evaluation findings, fisheries research, environmental conditions, and consensus between the USFWS managers and the Quinault Indian Nation. Coho and chum salmon, along with winter-run steelhead trout, are currently being reared and released at the Facility.

The Facility rears and releases approximately three million fish per year equating to approximately 43,000 lbs of steelhead trout and 67,000 lbs of salmon fry and yearlings annually. The Facility consists of a spawning building, incubation building containing twenty-seven nursery tanks, egg isolation building with eleven incubation stacks, thirty raceways, adult holding ponds, maintenance shop and feed building, an in-line settling basin, offline settling basin, a fish ladder and weir, and sludge lagoons.

The fish raising cycle begins with the return of the adults to the Facility in the fall and winter. The adults remain in holding ponds until they are mature enough to spawn. During spawning events between October and first week of January, fish are sorted based on species, maturity, and sex. Eggs are removed, fertilized, cleaned and incubated in trays in the incubation building. Once fish develop to fry, they are moved into large tanks. Fish in the tanks are fed multiple times per day and are sometimes split between different tanks as they grow, develop, and require more space. Chum salmon are released in April while steelhead trout and coho salmon are reared for another year and released the following April.

The Facility’s influent sources include Cook Creek, Hatchery Creek, and the duck pond. General intake source amounts used depends on season, production, and availability. The Facility has a single discharge point (Outfall 001) at the base of the fish ladder and weir that discharges into Cook Creek. The Facility was discharging at the time of inspection. There are no flow meters at the Facility. Flow is measured by hand using

crested weir measurements and direct water flow measurements timed into a known volume. The Facility plans to install a sonar-based flow measurement system in the future.

According to Mr. Fielding, the Facility was previously inspected by EPA in April of 2018 and confirmed by compliance monitoring data in EPA's Enforcement and Compliance History Online (ECHO).

V. Inspection Chronology

This was an announced inspection. On Thursday July 6, 2023, I called the Facility and left a voicemail announcing my intention to conduct a routine inspection during the week of July 24th of 2023. The Facility returned my call on Wednesday July 13, 2023, but I was unable to answer. I called the Facility on Thursday July 14, 2023 and left another voicemail. On Monday July 17, 2023, the Facility's Assistant Project Leader, Mr. Van Liew, called me and we briefly discussed the inspection and agreed to either July 27th or July 28th for the inspection depending on my schedule. On Thursday July 20, 2023, I emailed Mr. Fielding, Hatchery Manager, and Mr. Van Liew announcing the inspection for Friday July 28, 2023 at 9:00am.

Upon arriving on-site, I made my way to the Facility's main office from the main parking area where I met Mr. Fielding and Mr. Van Liew. The inspection consisted of an opening conference that included a cursory records review, a walk-through of the Facility's hatchery operations from influent sources to discharge point and ended with a closing conference. An in-depth review of records was conducted post inspection/offsite. I was accompanied by Mr. Fielding and Mr. Van Liew throughout the inspection.

VI. Opening Conference

Opening conference began at 9:05AM.

The opening conference was held with Mr. Fielding and Mr. Van Liew shortly after my arrival. I held initial introductions and presented my inspector credentials to Mr. Fielding and Mr. Van Liew. Then I discussed the purpose and scope of the inspection. During the opening conference, Mr. Fielding and Mr. Van Liew provided a general background of the Facility operations, current staffing, and general hatchery management responsibilities during which I conducted a cursory review of applicable records relevant to opening conference discussions.

VII. Site Review

I began the site walkthrough with Mr. Fielding and Mr. Van Liew starting at the underground "vault", where a 48-inch and an 18-inch line converge in a mixing zone for all three intake sources for the Facility (**Photo 1**). This vault had a mixing valve that can be opened to allow all intake sources to mix or can be closed to isolate intake sources. Then we drove to the Hatchery Creek and duck pond intake source. See **Attachment B** for a detailed site map and **Attachment C** for a photograph log of pictures taken during

the site walk-through.

At the Hatchery Creek and duck pond intake site, I observed the main intake compartment in which Hatchery Creek and gravity-fed duck pond water mix together and then goes into an 18-inch line (**Photo 2**). I also observed the intake area's primary screening for Hatchery Creek to catch large debris (**Photo 3**). Composite influent sampling consisting of four grab samples at half hour intervals is conducted at this intake area using a 1-liter bottle attached to a stick inside the intake compartment only when the "vault" mixing valve is closed.

Then we drove to the duck pond located approximately 1.25 miles Northeast from the hatchery. The duck pond is an old Bureau of Indian Affairs gravel pit that was abandoned to the USFWS and then filled (**Photo 4**). A line was added to use the water as a hatchery influent source. The duck pond slopes down to the Hatchery Creek intake area via a pipe that begins under the foot platform at the duck pond.

We then went to the Cook Creek intake area also located approximately 1.25 miles Southeast from the hatchery. This intake area had a wingwall to divert water for gravel management as well as a bypass mechanism for big debris (**Photo 5**). Cook Creek is the main influent source for the Facility's raceways. No influent sampling is performed at this intake area unless the "vault" mixing valve is closed. Influent samples from here would be flow-proportioned with other intake sources as necessary. Cook Creek influent passes through screen chambers and enters the sand settling basin (**Photo 6**). Solids from the sand settling basin are pumped to the sludge lagoons including during annual settling basin drawdown (**Photo 7 & Photo 8**).

While at the sludge lagoons, I was informed that hatchery cleaning water also is pumped daily to the lagoons. The Facility alternates between the two sludge lagoons to pump solids and cleaning water into. The Facility also disposes of dead fish in the upland area around the sludge lagoons by digging deep holes. Facility trucks are used to bring the dead fish to the area and then the holes are filled. Sometimes a small number of dead fish is disposed in the Facility's trash dumpster which is picked up weekly by local trash services.

We then drove back to the main hatchery where I observed the raceways. Twelve of the raceways were filled with coho salmon and steelhead trout at the time of inspection (**Photo 9**). A 48-inch line supplies water into the raceway headers which "T's off" for each raceway. Representative influent sampling and proportional flow measurements are taken at the raceway headers when multiple intake sources are used via the Facility's "vault" mixing valve in the open position. Each raceway had a small quiescent zone. Raceways are cleaned 3-7 times per week using brushes. Any cleaning water goes into the Facility's inline settling basin.

We then walked to the Facility's incubation building that was not in active use during the inspection due to the time of year it was (**Photo 10**). I observed one of the Facility's chemical storage sheds that had built-in secondary containment and mainly stored formaldehyde and hydrogen peroxide (**Photo 11**). We continued into the Facility's spawning building that is active only in the fall season when spawning occurs (**Photo**

12). The spawning building includes a drain line from the fish ladder to help receive spawning fish.

Next to the spawning building was an area the Facility calls “E Bank” containing six dual purpose ponds that can hold both adult and juvenile fish (**Photo 13**). Cleaning in these ponds is conducted three times per week using a pump, and cleaning water is pumped into the Facility’s inline settling basin located adjacent to “E Bank”. I observed growth in the inline settling basin in which the Facility planned to clean (**Photo 14**). Drawdown effluent of the inline settling basin is pumped to one of the sludge lagoons.

We then walked to the Facility’s main effluent discharge point (Outfall 001) that was actively discharging into Cook Creek (**Photo 15**). Cook Creek immediately downstream of Outfall 001 appeared clean and no turbidity was observed (**Photo 16**). Sampling procedures described by Mr. Fielding for effluent discharge comported with permit requirements. We then followed the fish ladder to where it leads to the Facility’s spawning building (**Photo 17 & Photo 18**).

We visited the Facility’s egg isolation building that was not in active use at the time of inspection (**Photo 19**). Next to the egg isolation building was another chemical storage shed with built-in secondary containment that met the permit’s material storage requirements (**Photo 20**). I asked Mr. Fielding about other chemical use at the Facility, and he indicated Virkon© was used to disinfect equipment. Post-inspection correspondence with Mr. Fielding confirmed used Virkon© is taken to a grassy area to drain and is not discharged to surface waters. Chlorine is also used to disinfect trucks and then trucks sit outside under the sun to dry.

We then entered the Facility’s vehicle maintenance and wood shop where minimal maintenance is conducted (**Photo 21**). Any oily rags produced are properly disposed of and any used oil is hauled to the county transfer station once per year.

We continued walking East where I observed the Facility’s trash dumpster where the Facility may dispose of small amounts of dead fish and waste/unused medicated feed along with domestic trash (**Photo 22**). As we continued walking East, I observed the Facility’s gas and diesel station used for small gas-and diesel-powered equipment and vehicles (**Photo 23**) and an additional diesel station (**Photo 24**). Each of these fuel stations were properly labeled. I also observed a general material storage hut (**Photo 25**) and the Facility’s main flammable and chemical storage area (**Photo 26**). At the time of inspection, a strong odor was observed from an unknown source inside this chemical storage area. Mr. Fielding took note to further investigate the odor.

We concluded the site walkthrough going through the Facility’s equipment and storage building that included a vehicle storage area (**Photo 28**) and the Facility’s main spill kit (**Photo 27**). We then proceeded back to the Facility’s main administration building to discuss next steps of the inspection.

VIII. File Review

The following documents were reviewed post-inspection (all documents received electronically on August 8, 2023 – sent by Mr. Fielding):

- Best Management Practices Plan (BMP Plan) – The Facility had a current BMP Plan onsite that was certified on August 8, 2023. According to EPA’s ECHO and EPA’s Integrated Compliance Information System (ICIS), the Facility has submitted timely annual review certification statements. Upon deeper review of the BMP Plan, I observed the following deficiencies:
 - Site map missing from BMP Plan (Site map in **Attachment B** obtained from the Facility’s NOI attachments).
 - Although chlorine disinfection is not used at the Facility, there may be a rare instance in which chlorine may be used to disinfect hauling equipment (trucks), therefore additional detail is needed to describe how any excess or unused disinfectants would be properly disposed so that they don’t enter surface waters.
- Quality Assurance Plan (QAP) – The Facility had a current QAP onsite that was certified on August 8, 2023. The Facility submitted a timely QAP within 90 days of receiving authorization to discharge under the permit. Upon deeper review of the Facility’s QAP, sampling analyses procedures needs to be updated to include parameter limits for analytical detection and quantification, analytical methods used by the lab (Fremont Analytical), complete contact information for the lab, training and qualification of personnel, and a map indicating locations of sampling points.
- Notice of Intent – The Facility’s most recent NOI was certified by Mr. Fielding on 1/22/2021. NOI information aligned with hatchery operations observed during the inspection and during post-inspection records review. The only missing information was listing Virkon© as a chemical used, however it was reported in annual reports.
- Annual Reports –Years reviewed were 2018 - 2022. All reports were timely submitted to EPA and generally aligned with hatchery operations during the inspection and during post-inspection records review except for the 2021 and 2022 annual reports were missing additional chemical/drug use detail for Aquaflo.
- Monthly monitoring results - Discharge Monitoring Reports (DMRs): I reviewed the following random sample of DMRs for Outfall 001 between 2018 and 2023 and compared submitted DMR data for monitored parameters with laboratory sample analysis reports and with internal Facility log sheets:
 - August of 2018
 - September of 2018
 - December of 2019
 - March of 2020
 - April of 2021
 - June of 2022
 - April of 2023
- DMRs were timely submitted except for two corrected/revised DMRs for monitoring periods ending 8/31/18 and 9/30/18 for original DMR reporting errors. This observation also was confirmed by EPA’s ICIS and ECHO.
- I had the following observations from the random sample DMR review:
 - The monthly DMRs for monitoring periods ending on 4/30/2021, 6/30/2022 and on 4/30/2023 for Outfall 001 had effluent TSS values of “< 3”. Lab reports indicated an MDL of 0.875 mg/L with an actual result of

“not detected” for each monitoring period. I reminded Mr. Fielding about Part IV.E. of the General Aquaculture Permit indicating that “for purposes of reporting on the DMR for a single sample, if a value is less than the Method Detection Limit (MDL), the Permittee must report less than {numeric value of the MDL}”.

- Laboratory sampling reports including chain of custody forms and internal log sheets were reviewed and met permit requirements.
- Annual production logs were reviewed and supported annual report information.

IX. Areas of Concern

Observations during the inspection and post-inspection records review identified the following areas of concern:

A. Best Management Practices Plan

Part IV.G.5.a of the General Aquaculture Permit describes the material storage content requirements of the BMP Plan.

Part IV.G.5.e of the General Aquaculture Permit describes the operational content requirements of the BMP Plan.

During the site walkthrough, there was a strong odor in the flammable and chemical storage shed from an unknown chemical source, suggesting possible leak and/or lack of proper chemical containment and storage.

Although chlorine disinfection is not used at the Facility, there may be a rare instance in which chlorine may be used to disinfect hauling equipment (trucks), therefore additional detail is needed to describe how any excess or unused disinfectants would be properly disposed so that they don't enter waters of the U.S.

B. Quality Assurance Plan

Parts IV.F.d.1-5 of the General Aquaculture Permit describes QAP content requirements such as sampling procedures, map illustrating sampling point locations, personnel qualifications and training, and the “name, address and telephone number of the laboratory used by or proposed to be used by the Permittee.”

Sampling analyses procedures described in the Facility's QAP need to be updated to include parameter limits for analytical detection and quantification, analytical methods used by the lab (Fremont Analytical), complete contact information for the lab, qualification and training of personnel, and a map indicating locations of sampling points.

C. Annual Reports of Operations Required Information

Part V.G.5 of the General Aquaculture Permit describes that annual report of operations “must include the information specified in Appendix E”. Appendix E is the

actual annual report of operations form that contains a section to summarize a facility's aquaculture drug and chemical usage.

The Facility's 2021 and 2022 annual reports were missing additional chemical/drug use detail for Aquaflor when it was marked in the reports as having been used.

X. Closing Conference

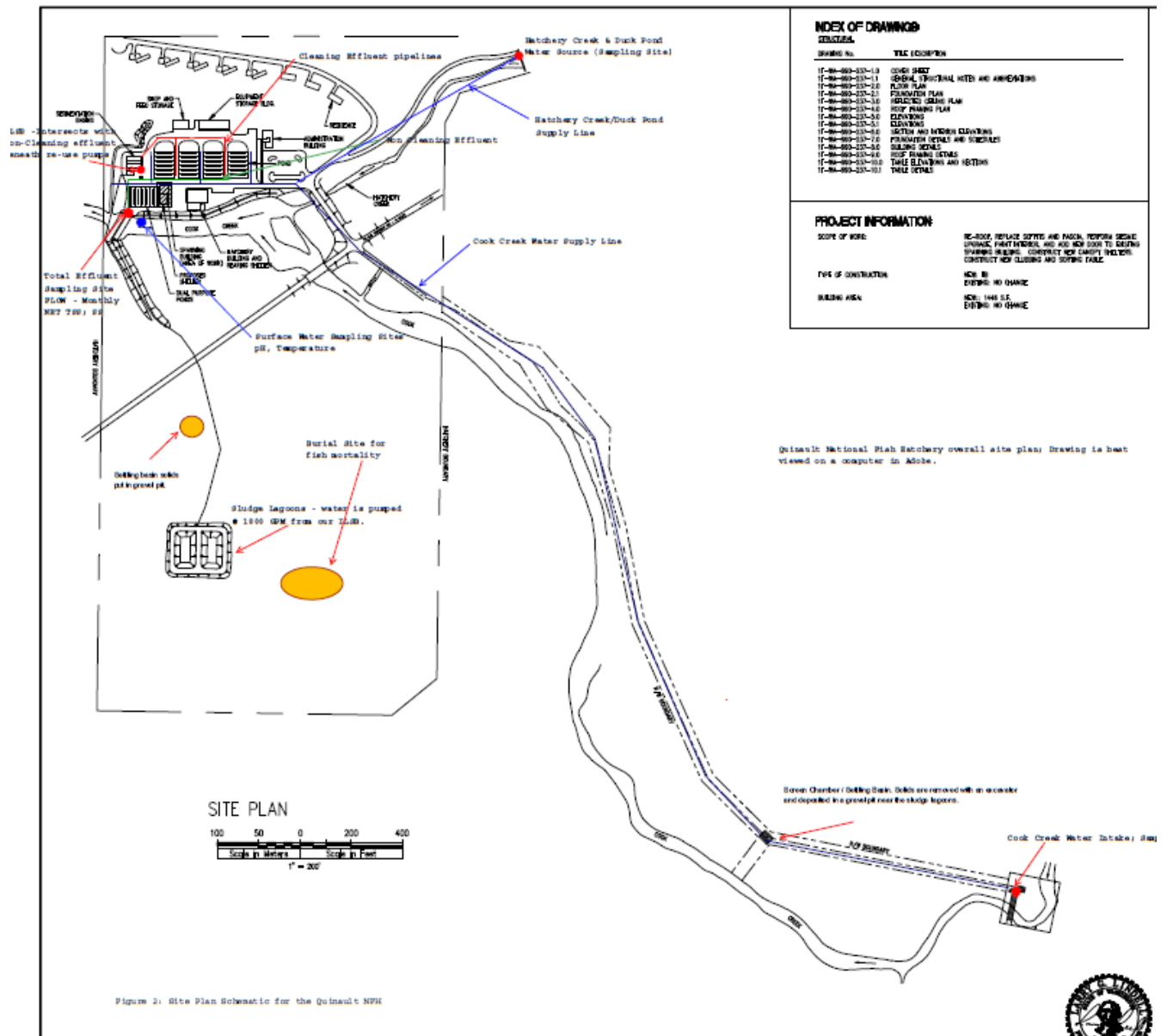
Following the walk-through, a closing conference was held with Mr. Fielding and Mr. Van Liew where I shared my observations, areas of concern, and next steps regarding post-inspection file review and inspection report transmittal. I thanked them for their time and cooperation. Closing conference concluded at 2:00PM.

ATTACHMENT A

Aerial Image (Google Earth)



Site Map



ATTACHMENT C

Photograph Log

All photographs taken by Vanessa Oquendo on July 28, 2023

Olympus Tough TG-6/F2.0 Camera

Photo Log- Quinault National Fish Hatchery



Photo #:01 (P7280210)

Description: Facility's underground "Vault" where each intake source converges in a mixing zone when the mixing valve is open. Vault includes a low water level and flow alarm.



Photo #:02 (P7280213)

Description: Hatchery Creek and duck pond intake site. Both sources mix together and run underground via an 18-inch line.



Photo #:03 (P7280215)

Description: Facing northeast, photo of Hatchery Creek flowing over primary screens to catch big debris at the intake area.



Photo #:04 (P7280223)

Description: Facing northeast, photo of the Facility's duck pond that serves as a hatchery intake source. Duck pond used to be an old Bureau of Indian Affairs gravel pit.

Photo Log- Quinault National Fish Hatchery



Photo #:05 (P7280230)

Description: Facing north, photo of Cook Creek intake area that incorporates a wing wall to help divert water and manage gravel.



Photo #:06 (P7280238)

Description: Facing east, photo of the sand settling basin after Cook Creek intake water passes through screen chambers.



Photo #:07 (P7280241)

Description: Facing east, photo of one of the Facility's sludge lagoons.



Photo #:08 (P7280243)

Description: Facing west, photo of the other sludge lagoon for the Facility. This lagoon was actively receiving cleaning water from the settling basin at Cook Creek.

Photo Log- Quinault National Fish Hatchery



Photo #:09 (P7280246)

Description: Facing east, photo of the adult pond raceways, some of which had coho salmon and steelhead trout in them.



Photo #:10 (P7280252)

Description: Photo of inside the Facility's egg incubation building.



Photo #:11 (P7280258)

Description: Photo of one of the Facility's chemical storage sheds outside with secondary containment.



Photo #:12 (P7280261)

Description: Photo of inside the Facility's spawning building. This building was not active during the inspection because it was not spawning season.

Photo Log- Quinault National Fish Hatchery



Photo #:13 (P7280265)

Description: Facing south, photo of the Facility's "E Bank" of six dual use holding ponds. At the time of inspection, these ponds contained juvenile fish.



Photo #:14 (P7280270)

Description: Facing west, photo of the Facility's main inline settling basins.



Photo #:15 (P7190272)

Description: Facing south and looking down, photo of the Facility's outfall 001 with active effluent discharge.



Photo #:16 (P7190276)

Description: Facing southwest, photo of Cook Creek immediately downstream of outfall 001 discharge.

Photo Log- Quinault National Fish Hatchery



Photo #:17 (P7280281)

Description: Facing northwest and looking down, photo of the Facility's fish ladder that leads to the spawning building. This fish ladder does not contain any boards.



Photo #:18 (P7280282)

Description: Facing northeast, photo of the continuation of the Facility's fish ladder leading into the spawning building.



Photo #:19 (P7280285)

Description: Photo of inside the Facility's egg isolation building.



Photo #:20 (P7280288)

Description: Photo of another chemical storage shed at the Facility with built-in secondary containment.

Photo Log- Quinault National Fish Hatchery

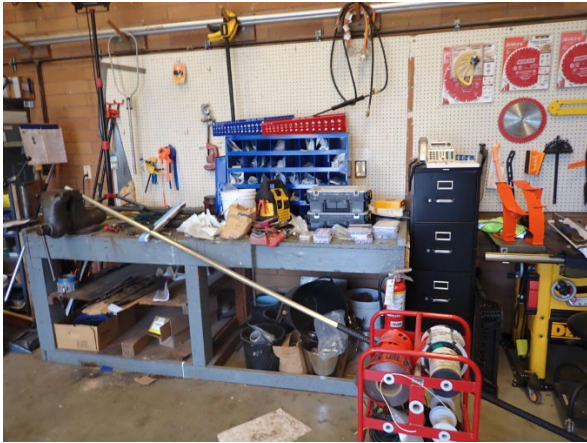


Photo #:21 (P7280290)

Description: Photo of the Facility's vehicle maintenance and wood shop where minimal maintenance is conducted.



Photo #:22 (P7280293)

Description: Facing north, photo of the Facility's trash dumpster that is used to dispose of unused or waste medicated feed and some dead fish along with other domestic trash produced at the Facility. The dumpster is emptied weekly.



Photo #:23 (P7280294)

Description: Facing northwest, photo of the Facility's diesel and gas station used to fuel vehicles and small gas-or diesel-powered equipment.



Photo #:24 (P7280295)

Description: Facing north, photo of the other diesel station at the Facility.

Photo Log- Quinault National Fish Hatchery



Photo #:25 (P7280297)

Description: Photo of inside the Facility's general storage hut.



Photo #:26 (P7280303)

Description: Photo of inside the Facility's main flammable and chemical storage building where a strong odor was observed.



Photo #:27 (P7280307)

Description: Photo of inside the Facility's main spill kit in the equipment storage building.



Photo #:28 (P7280309)

Description: Photo of inside the Facility's vehicle storage area.