Fact Sheet

U.S. Environmental Protection Agency (EPA)

Proposes to Reissue a National Pollutant Discharge Elimination System (NPDES) General Permit to Discharge Pollutants Pursuant to the Provisions of the Clean Water Act (CWA) to:

Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of Washington State

Public Comment Start Date: September 7, 2022

Public Comment Expiration Date: November 7, 2022

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EPA Proposes to Reissue NPDES General Permit

EPA proposes to reissue the NPDES General Permit for federal aquaculture facilities in the State of Washington, and aquaculture facilities located in Indian Country, as defined in 18 USC §1151, in the State of Washington. The General Permit places conditions on the discharge of pollutants from aquaculture facilities to waters of the United States. In order to ensure protection of water quality and human health, the General Permit places limits on the types and amounts of pollutants that can be discharged from the facilities. The General Permit does not provide coverage for net pen operations.

This Fact Sheet includes:

- information on public comment, public hearing, and appeal procedures
- descriptions of the types of facilities and discharges covered under the General Permit
- a listing of proposed effluent limitations and other conditions
- a description of the specific facilities currently covered
- technical material supporting the conditions in the General Permit

Clean Water Act §401 Tribal and State Certification

Since the General Permit covers all Tribal waters in the State, EPA is requesting Section 401 Certification for the General Permit from all Washington tribes with Treatment as a State under the CWA, as well as from the Washington State Department of Ecology (Ecology). The Washington Tribes that EPA has approved for Treatment as a State under the CWA are: Confederated Tribes of Colville Reservation, Confederated Tribes of the Chehalis Reservation, Kalispel Tribe of Indians, Lummi Nation, Makah Indian Tribe, Port Gamble S'Klallam Tribe, Puyallup Tribe of Indians, Quinault Indian Nation, Spokane Tribe of Indians, Swinomish Indian Tribal Community, and the Tulalip Tribes.

Ecology's public notice of EPA's request for certification pursuant to Section 401 of the Clean Water Act will be available at the following link when Ecology initiates their public notice: https://apps.ecology.wa.gov/aquatics/notices/

Comments regarding Ecology's intent to certify the General Permit pursuant to CWA section 401 can be sent to the following link during Ecology's public comment period:

Ecology eComments: https://wq.ecology.commentinput.com/?id=BfGW7

Comments regarding the Confederated Tribes of the Colville Reservation intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Douglas Marconi – Watershed Manager – douglas.marconi.env@colvilletribes.com

Comments regarding the Confederated Tribes of the Chehalis Reservation intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Glen Connelly – Director of Natural Resources – gconnelly@chehalistribe.org

Comments regarding the Jamestown S'Klallam Tribe's intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Robert Knapp – Env. Planning Program Manager – rknapp@jamestowntribe.org

Comments regarding the Kalispel Tribe of Indians intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Ken Merrill – Water Resources Program Manager – kmerrill@knrd.org

Comments regarding the Lummi Nation's intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Merle Jefferson – Natural Resources Executive Director – merlej@lummi-nsn.gov

Kara Kuhlman – Water Resources Division Manager – karak@lummi-nsn.gov

Comments regarding the Makah Nation's intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Ray Colby – Makah Fisheries Assistant Director – ray.colby@makah.com

Comments regarding the Port Gamble S'Klallam Tribe's intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Josh Carter – Environmental Scientist – jcarter@pgst.nsn.us

Comments regarding the Puyallup Tribe of Indians' intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Char Naylor – Water Quality Manager – char.naylor@puyalluptribe-nsn.gov

Comments regarding the Quinault Indian Nation intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Elyse Wulfkuhle – Water Quality Manager – ewulfkuhle@quinault.org

Comments regarding the Spokane Tribe of Indians intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Brian Crossley – Water and Fish Program Manager – crossley@spokanetribe.com

Comments regarding the Swinomish Indian Tribal Community's intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Nicole Casper – Water Resources Manager – ncasper@swinomish.nsn.us

Comments regarding the Tulalip Tribe's intent to certify the General Permit pursuant to CWA section 401 can be sent to:

Kurt Nelson – Environmental Division Manager – knelson@tulaliptribes-nsn.gov

Clean Water Act §401(A)(2) Review

CWA Section 401(a)(2) requires that, upon receipt of an application and 401 certification, EPA as the permitting authority notify a neighboring State or Tribe with TAS when EPA determines that the discharge may affect the quality of the neighboring State/Tribe's waters. As stated above, the State of Washington as well as all Tribes within Washington with TAS are certifying authorities for this General Permit and are accepting comment regarding their intent to certify this permit. After EPA receives these final certifications, EPA will determine whether the discharge may affect the quality of a neighboring jurisdiction's waters (33 U.S.C. § 1341(a)(2)).

Public Comment

Persons wishing to comment on, or request a Public Hearing for, the draft General Permit may do so in writing by the expiration date of the Public Comment period. A request for a Public Hearing must state the nature of the issues to be raised as well as the requester's name, address and telephone number. All comments and requests for Public Hearings must be in writing and should be submitted to EPA as described below.

By the expiration date of the public comment period, all written comments and requests must be submitted to epar10wd-npdes@epa.gov with the subject line: Public Comments on WAG130000

After the Public Notice expires, and all comments have been considered, EPA's regional Director for the Water Division will make a final decision regarding permit issuance. If no substantive comments are received, the tentative conditions in the draft permit will become final, and the permit will become effective upon issuance. If substantive comments are received, EPA will address the comments and issue the permit.

Pursuant to Section 509(b)(1) of the Clean Water Act, 33 U.S.C. §1369(b)(1), any interested person may appeal the permit in the Ninth Circuit Court of Appeals within 120 days following notice of EPA's final decision for the permit.

Documents are Available for Review

The draft NPDES permit, fact sheet and other information can be downloaded from the internet at https://www.epa.gov/npdes-permits/npdes-general-permit-federal-aquaculture-facilities-and-aquaculture-facilities-located

The draft NPDES permit, fact sheet and related documents are also available electronically upon request by contacting Martin Merz.

For technical questions regarding the permit or fact sheet, contact Martin Merz at the 206-553-0205 or merz.martin@epa.gov. Services can be made available to persons with disabilities by contacting Audrey Washington at (206) 553-0523.

I. Facility Information

A. Industry Description

This General Permit would authorize discharges from upland aquaculture facilities to waters of the United States. EPA has already issued a general permit for tribal and federal net pens that discharge to Puget Sound (NPDES No. WAG132000). For the purposes of this permit, an upland aquaculture facility includes:

1. CAAP Facilities. Facilities that meet the definition of a Concentrated Aquatic Animal Production (CAAP) facility or that have been designated by EPA as a CAAP facility.
2. Non-CAAP Facilities. Aquatic animal production facilities that are below the CAAP facility thresholds, but that have point source discharges of pollutants to waters of the United States.
3. Aquaculture Research Facilities. Aquaculture research facilities above or below the CAAP facility threshold that conduct research on aquatic animals.
4. Fish Sampling Programs at Dam Fish Passage Facilities. Fish sampling programs at dam fish passage facilities that result in discharges of water treated with Aqui-S20E, a fish anesthetic.

CAAP Facilities

40 CFR §122.24 defines CAAP facilities as point sources subject to the National Pollutant Discharge Elimination System (NPDES) permit program. The regulations define CAAP facilities as a hatchery, fish farm, or other facility that contains, grows, or holds:

1. Cold water fish species or other cold water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year but does not include:
    a) Facilities which produce less than 20,000 harvest weight pounds of aquatic animals per year, and
    b) Facilities which feed less than 5,000 pounds of food during the calendar month of maximum feeding.
2. Warm water fish species or other warm water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year, but does not include:
    a) Closed ponds which discharge only during periods of excess runoff; or
    b) Facilities which produce less than 100,000 harvest weight pounds of aquatic animals per year.

Cold water aquatic animals include, but are not limited to, the *Salmonidae* family of fish, e.g., trout and salmon. Warm water aquatic animals include, but are not limited to, the *Ameiuride*, *Centrarchidae* and *Cyprinidae* families of fish, e.g., respectively, catfish, sunfish and minnows.

The previous general permit, issued in 2016, covered facilities that met the definition of a cold water CAAP facility or facilities that EPA designated as a significant contributor of pollution to waters of the United States, in accordance with 40 CFR §122.24(c), based on the following considerations:

- The location and quality of the receiving waters of the United States;
- The holding, feeding, and production capacities of the facility;
- The quantity and nature of the pollutants reaching waters of the United States; and
- Any other relevant factors.

The draft General Permit will allow both cold and warm water facilities to obtain coverage under the permit.

Facilities Below the CAAP Thresholds

Facilities below the CAAP thresholds that were not designated CAAPs pursuant to 40 CFR §122.24 had the option to request coverage under the previous general permit; however, these facilities were not required to obtain NPDES permit coverage.

Subsequently, in 2018, the Ninth Circuit issued a decision in *Olympic Forest Coalition v. Coast Seafoods Co.*, 884 F.3d 901 (9th Cir. 2018). In that decision, the Court held that non-CAAP facilities that have "pipes, ditches and channels that discharge pollutants" are point sources that require a NPDES permit. *Id.* at 907. As a result, non-CAAP facilities will need to determine whether they require a NPDES permit. If they do need NPDES permit coverage, this general permit will allow these facilities to apply for permit coverage.

Aquaculture Research Facilities

EPA is aware of a small number of aquaculture related research facilities in Washington that may now require permit coverage as a result of the *Coast Seafoods* decision. These facilities were considered in the development of this General Permit. Research facilities are very similar to production and enhancement facilities, but in some cases have a wider range of species on site at any given time, and in some cases consist of a series of smaller research tanks rather than large raceways or ponds. To accommodate the broader array of species that research facilities may have on site, the General Permit has been expanded to cover facilities that grow, contain, or hold any aquatic animal, as opposed to just facilities that produce cold water finfish as was the case with the 2016 General Permit. Further, if research facilities conduct research on any animal or plant species that is not an aquatic animal, there must be no discharge of pollutants associated with the plant or animal that were not considered in the development of this General Permit, or that are likely to cause or contribute to exceedances of water quality criteria. If pollutants are present that were not considered in the development of this permit, the facility will not be eligible for coverage under this General Permit. Research facilities must disclose species they have on site in their Notice of Intent (NOI). EPA will not cover the facility under this General Permit if EPA determines upon review of the NOI that the permit will not be protective of the water quality risks associated with the discharge. The general processes and pollutants of concern are the same for research facilities and enhancement and production facilities. To account for research and production facility coverage in this General Permit, aquatic animal escape prevention planning is required for any facility that does not intentionally release fish.

Fish Passage Facilities

The General Permit will also cover fish sampling programs at dam fish passage facilities (referred to hereafter as "fish passage facilities") that result in discharges of water treated

with Aqui-S20E, a fish anesthetic. Some of these sampling programs are necessary to satisfy requirements of the U.S.-Canada Pacific Salmon Treaty, U.S. v. Oregon Harvest Management Agreement for the Columbia River Basin, as well as other research needs. Sampling program data are used to generate population estimates, monitor escapement, and develop harvest management approaches. In these research scenarios, adult fish are generally collected from fish ladders located at the dams and diverted to a tank where they are anesthetized with Aqui-S20E, examined, measured, and fin-clipped. Following sampling, the treated water is batch discharged, through a point source (generally, a pipe), towards the dam tailrace. Fish sampling activities can vary based on a number of factors, but at large dams they generally occur daily or every other day during the sampling season (e.g., from mid-April through mid-October).

B. Characterization of Discharge

The majority of facilities covered under the existing general permit, and that EPA expects to apply for coverage under the reissued General Permit, are more traditional enhancement aquaculture facilities which may use one of several types of production systems, including ponds, flow-through systems, and recirculating systems.

Ponds have infrequent discharges that may occur as a result of a storm event or draining for harvest or repairs. Due to decomposition of biological material and settling of solids (feces, uneaten feed, and sediment), ponds are capable of treating and removing pollutants in the water; and when discharges occur, pollutant loads are often relatively low because of the settling that has taken place within the pond. Best management practices (BMPs) are used to minimize the discharge of pollutants from pond systems. The BMPs for ponds focus on minimizing disturbance of sediments, reducing drainage frequency, managing water levels, minimizing erosion in and around pond banks, feed management, and the proper use and storage of chemicals and drugs.

Flow-through production systems provide an environment that imitates the natural environment. In such systems, fresh water, diverted from springs, streams, and/or wells, enters continuously at the top of the system near the source water. Smaller, younger fish are typically held at the top of the system near the water source, which provides the highest quality water. As fish grow, they can tolerate lower quality water, and they are moved to downstream units. Some flow-through systems are full-flow, discharging a single combined effluent stream with large water volumes and dilute pollutant concentrations. Others have two or more discharge streams, with the primary discharge from the flow-through production units, and smaller discharges from off-line settling basins. Most facilities include a quiescent zone at the bottom end of their raceways to allow solids and debris to settle out where they can be vacuumed and removed, thus preventing their release into the receiving water. Quiescent zones include a screen which extends across the entire bottom end of the raceway preventing fish from entering and allowing solids to settle.

Recirculating production systems utilize tanks with continuously flowing water and side stream treatment technologies, which continuously treat a portion of the flow and return it to the production system.

Net pen and open water systems are also used to raise fish. These types of facilities cannot obtain coverage under this General Permit. Instead, these facilities can obtain coverage under

the EPA general permit for Tribal Enhancement and Federal Research Marine Net Pen Facilities Within Puget Sound (WAG132000) or apply for an individual permit.

The most significant pollutants discharged from aquaculture facilities are solids from uneaten feed and feces, which are primarily organic matter with high 5-day biochemical oxygen demand (BOD_5), and nutrients, including organic nitrogen and phosphorus. Residuals of drugs or chemicals used for maintenance or restoration of animal health, and residuals of chemicals used for cleaning equipment or for maintaining or enhancing water quality conditions are additional pollutants associated with aquaculture.

Nutrients have the potential to contribute to a number of negative water quality impacts related to eutrophication - algal blooms, increased turbidity, low dissolved oxygen, and associated stresses to stream biota, increased water treatment requirements for users downstream, changes in benthic fauna, and stimulation of harmful microbial activity. In addition, the potential discharge of chemical and drug residuals raises concerns for deleterious effects on biota and on subsequent human consumers of fish or water.

To identify pollutants of concern for further analysis, EPA evaluated technology-based limits applicable to aquaculture facilities, total maximum daily load (TMDL) wasteload allocations (WLAs), existing effluent limits from the previous general permit, discharge monitoring reports (DMRs), annual reports, and Notices of Intent (NOIs). EPA also reviewed the CAAP effluent limitation guidelines (ELGs) and held meetings with all Permittees to discuss facility practices and characteristics with the goal of ensuring that the permit considers the full range of facilities expected to be covered. Based on EPA's analysis, the pollutants of concern for this General Permit are: BOD_5, total suspended solids (TSS), settleable solids, nutrients, ammonia, chlorine, temperature, dissolved oxygen, aquaculture drugs and chemicals, and PCBs. Aquaculture facilities are not considered to be significant sources of pathogens that affect human health (e.g., *Escherichia coli*).

The U.S. Food and Drug Administration (FDA) Center for Veterinary Medicine regulates animal drugs under the Federal Food, Drug, and Cosmetic Act (FFDCA). Extensive toxicity studies are required prior to drug approval from the FDA; however, limited data on potential environmental effects are available for some medications that are currently authorized for investigational use; and limited data are available characterizing the ecological significance of releases of drugs and chemicals at aquaculture facilities in the United States. EPA recognizes, however, the general concerns with residual antibiotics and pesticides in the environment. Such residual materials may pollute receiving waters and immunize the organisms they are designed to control. These effects can be distributed well outside of the original areas of application. In addition, chemicals can harm aquatic organisms in receiving waters, depending on the rates applied and the rate of breakdown of the product or of the active ingredient. An extensive risk assessment analysis of aquaculture drugs and chemicals used as bath treatments – which are most likely to be discharged to the environment – can be found in the Biological Evaluation conducted by EPA during the 2016 reissuance of this General Permit. Any relevant new information, including information gathered during the previous permit term, will be evaluated when EPA reinitiates ESA consultation during permit reissuance.

C. General Permits

Section 301(a) of the CWA, 33 USC §1311(a), provides that the discharge of pollutants to waters of the United Sates is unlawful except in accordance with terms and conditions of a NPDES permit. 40 CFR §122.28 provides EPA with the authority to issue a general permit to numerous facilities as long as certain factors are met.

In determining whether a general permit is appropriate, the Director must consider whether the facilities:

- Are located within the same geographic area;
- Involve the same or substantially similar types of operations;
- Discharge the same types of waste;
- Require the same effluent limits or operating conditions;
- Require the same or similar treatment technologies or monitoring requirements; and
- In the opinion of EPA, are more appropriately controlled under a general permit rather than an individual permit.

EPA is reissuing the General Permit for federal aquaculture facilities located in the State of Washington and aquaculture facilities located within Indian Country in the State of Washington. The draft General Permit meets the criteria under 40 CFR §122.28 for the following reasons:

Geographic Area

The geographic area of coverage for this General Permit is the State of Washington, including Indian Country located within the boundaries of the State. In Washington, EPA retains permitting authority over federal facilities and facilities located in Indian Country, as defined in 18 USC §1151.

Involves the Same or Substantially Similar Types of Operations

The facilities covered by this General Permit involve the same or substantially similar types of operations. See descriptions in Part I.A, above.

Discharge the Same Types of Waste

The facilities covered by this General Permit discharge the same types of waste. See a characterization of the discharge in section I.B, above.

Same Effluent Limits or Operating Conditions

The General Permit proposes the same or similar effluent limits or action thresholds, and similar monitoring requirements and other operating conditions for all aquaculture dischargers covered by the permit.

Same or Similar Treatment Technologies or Monitoring Requirements

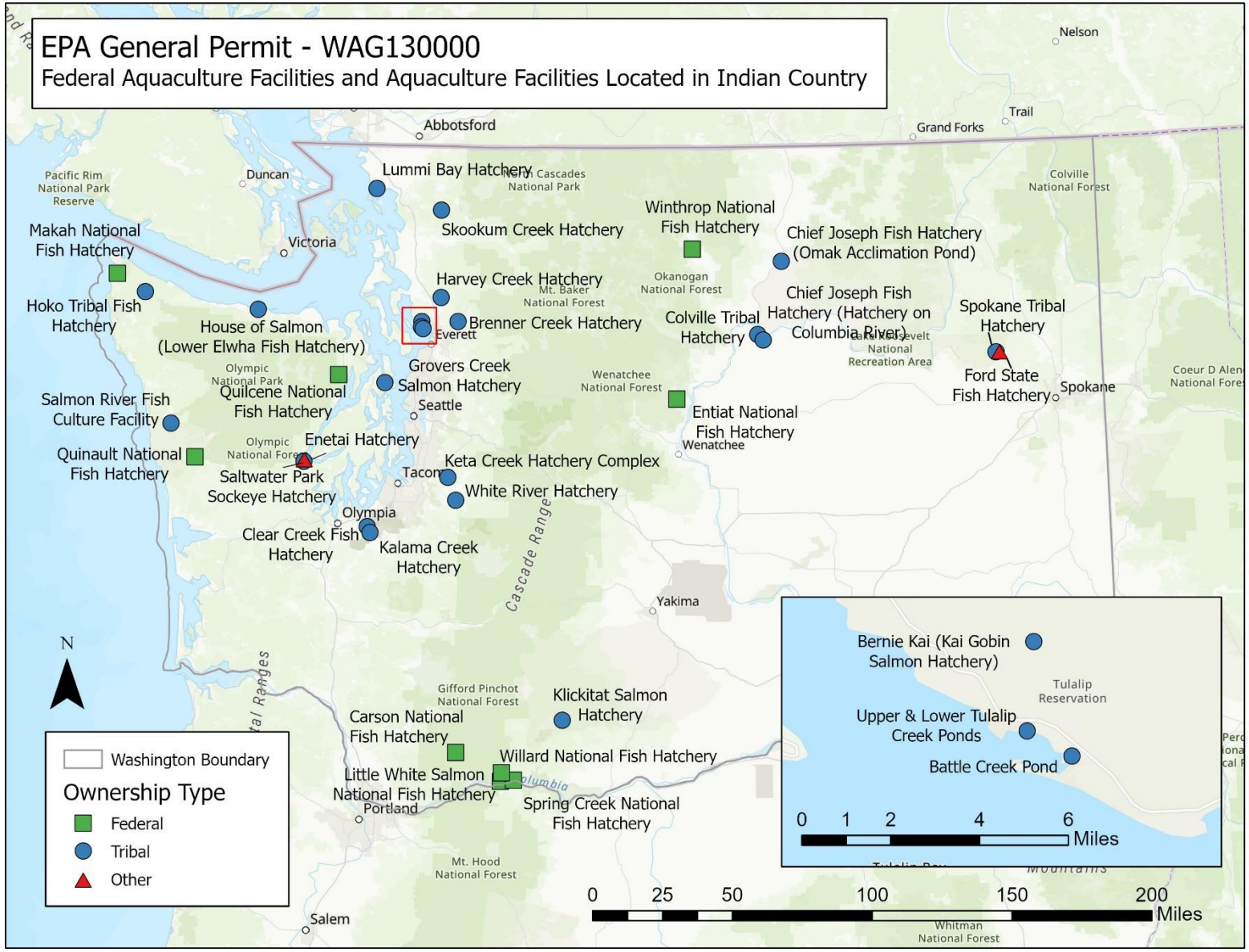
Although the General Permit does not propose the use of specific treatment technologies, aquaculture facilities employ similar treatment technologies and waste management practices, such as settling basins, quiescent zones, and solids disposal. The monitoring requirements are generally the same for all facilities.

Appropriateness

Because of the factors discussed above, EPA has determined that the majority of the federal aquaculture facilities in Washington and aquaculture facilities located in Indian Country within the boundaries of Washington are more appropriately controlled under a general permit than under individual NPDES permits. The similarity of the operations, the technologies used to manage wastes generated by these facilities, and the resulting discharge of similar waste types has prompted EPA to reissue this General Permit.

There are 32 facilities covered under the existing general permit (Figure 1), and EPA expects more facilities to apply for coverage under the reissued General Permit.

Figure 1. Map of All Facilities Covered under WAG130000



D. Permit History

The most recent General NPDES Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of Washington State was issued on **June 9, 2016**, became effective on **August 1, 2016**, and expired on **July 31, 2021**. All of the facilities covered under the existing general permit (WAG130001-WAG130034; except two inactive facilities: WAG130011 and WAG130027) submitted timely and complete NOIs as required by Section VIII.B of the existing general permit. Therefore, permit coverage for these facilities is administratively continued until a new general permit is issued. When this General Permit is issued as final, it will replace the old (2016) general permit. The permit number will remain the same (WAG130000).

To ensure protection of water quality and human health, the existing general permit contains effluent limits for all facilities for TSS and settleable solids, and limits for total residual chlorine for facilities that use chlorine or Chloramine-T. The General Permit also imposed other requirements to minimize the discharge of pollutants. The General Permit required each facility to develop a BMP plan documenting how the facility would address solids control, facility maintenance, record keeping, and chemical storage. The effluent limits, disposal requirements, discharge prohibitions, record keeping, and reporting requirements were designed to reduce discharges of oxygen demanding materials, residual feed, and floating, suspended, and submerged matter, including fish mortalities.

In developing this General Permit, EPA reviewed all available monitoring data submitted for covered facilities between August 2016 and May 2021. There were two exceedances, from different facilities, of the 100 mg/L TSS effluent limit taken during drawdown for fish release. There were no exceedances of the 1.0 ml/L effluent limit established for settleable solids during drawdown for fish release. There were 13 exceedances of the effluent limitation established for TSS in facility effluent, out of a total of 2247 results that were evaluated. There were 19 exceedances of the effluent limitation established for settleable solids in facility effluent, out of a total of 1005 results that were evaluated. Of the reported TSS and settleable solid exceedances, most were determined to be the result of incorrect reporting or to be anomalous with no clear cause for the exceedance. The results were from various facilities and did not indicate a systemic issue at any of the facilities. No exceedances of effluent limits established for discharges from off-line settling basins (OLSBs) or during rearing vessel disinfection were observed.

E. Summary of Major Changes from Previous Permit

EPA proposes several changes in this General Permit. The changes are summarized in Table 1 and discussed in more detail throughout the Fact Sheet.

Table 1. Summary of Major Changes Proposed in General Permit WAG130000

Category	Change Summary
Permit Coverage	• Scope of eligible facilities expanded from upland CAAP facilities (with a provision for small facilities to request coverage if desired) to all upland aquaculture facilities, regardless of size, that contain, grow, or hold aquatic animals and meet the definition of a point source as defined at 33 U.S.C. §1362(14), as well as to fish sampling programs at dam fish passage facilities that result in discharges of water treated with Aqui-S20E. • Distinction between enhancement, production and research facilities (including fish passage facilities) incorporated. • Covered aquaculture species expanded from 'cold water finfish' to 'aquatic animals'. • Coverage applicability for new dischargers discharging to impaired waters clarified.
Water Quality Based Effluent Limits (WQBELs)	• Temperature effluent limit incorporated based on TMDL WLA in South Fork Nooksack TMDL. • Temperature effluent limits not applied to Columbia River facilities in accordance with the Columbia and Snake Rivers Temperature TMDL based on guidance in Appendix J of the TMDL.

Category	Change Summary
Effluent Monitoring	• Effluent limits and monitoring requirements combined into the same tables. • Frequency of TSS and settleable solids monitoring for facility effluent and off-line settling basin (OLSB) discharges reduced from monthly to quarterly for CAAP facilities. • Continuous temperature monitoring included for all facilities discharging to temperature impaired waters (except fish passage facilities) and discontinued for facilities that completed continuous temperature monitoring last permit term and demonstrated no reasonable potential. • Annual nutrient monitoring added for CAAP facilities discharging to waters impaired for dissolved oxygen. • Ammonia, pH and temperature monitoring for OLSB discharges discontinued. • Total residual chlorine monitoring added during drawdown for fish release. • Tiered monitoring based on facility size incorporated. • Monitoring requirements and action thresholds for non-CAAP facilities added. • PCB monitoring in Spokane watershed discontinued.
Receiving Water Monitoring	• Ammonia, pH, and temperature monitoring of upstream receiving water for facilities with OLSB discharges discontinued
Special Conditions	• QAP template included. • BMP Plan template included. • BMP Plan operational requirements for fish passage facilities added. • BMP Plan reduction of PCB requirements included for facilities discharging within the Lower Spokane, Middle Spokane, or within 1 mile upstream of waters impaired for PCBs. • Aquatic Animal Escape Planning requirements added for non-enhancement facilities. • Final compliance schedule for temperature at Skookum Creek Fish Hatchery incorporated.
Notice of Intent	• Electronic NOI filing required unless waiver obtained from EPA. • Modifications applicable to non-CAAP facilities incorporated.

Category	Change Summary
Annual Report	• Annual Report form revised and e-reporting required (via NetDMR attachment for CAAP facilities and via email for non-CAAP facilities). • Modifications applicable to non-CAAP facilities incorporated.
Submitting Reports and Monitoring Results	• Electronic submission of monitoring results required quarterly (previously monthly) via NetDMR for CAAP facilities. • Electronic submission of reports and monitoring results required annually via email for non-CAAP facilities.

II. Facilities Covered by the General Permit

All federal aquaculture facilities that discharge to waters of the United States in Washington and all aquaculture facilities that are located in Indian Country within the boundaries of the State of Washington are eligible for coverage under this General Permit. A map and a list of facilities already covered under the previous general permit are both included in Appendix A of this Fact Sheet. EPA expects that additional facilities will apply for coverage upon the reissuance of this General Permit.

Part I.A provides more detail on the type of aquaculture facilities that are eligible for coverage under this General Permit.

A facility is authorized to discharge to waters of the United States within the State of Washington and tribal waters within the State of Washington under this General Permit (WAG130000) after obtaining written authorization from EPA and being assigned a unique identifier under the General Permit for the facility.

EPA may notify a discharger that it is covered under the General Permit even if the discharger has not submitted a NOI to be covered.

A. New Sources

The CWA requires EPA to establish standards of performance for new sources from which there are or may be discharges of pollutants for specified categories of sources. Section 306 of the CWA requires a new source to meet a standard that reflects the greatest degree of effluent reduction that EPA determines can be achieved by application of the best available demonstrated technology, processes, operating methods, or other alternatives. These standards for *new sources* are referred to as New Source Performance Standards (NSPS). A *new source* is defined at 40 CFR §122.2 as any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

1. After promulgation of standards of performance under Section 306 of the CWA, which are applicable to such source, or

2. After proposal of standards of performance in accordance with Section 306 of the CWA, which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal

NSPS for the CAAP point source category went into effect on September 22, 2004 (40 CFR Part 451). The NSPS apply to any CAAP facility that produces 100,000 pounds or more of aquatic animals per year and was constructed after September 22, 2004. Such facilities are called *new source*s. See 40 CFR §122.2. In addition, existing aquaculture operations may be considered *new source* facilities if planned upgrades or rehabilitation activities occur after September 22, 2004, and: (1) totally replace the process or production equipment that causes the discharge of pollutants at the existing facility; or (2) the new processes or production equipment are substantially independent of an existing facility at the same site. See 40 CFR §122.29(b). See 40 CFR §122.29.

In accordance with Section 511(c)(1) of the CWA and 40 CFR Part 6, EPA must comply with the procedural provisions of the National Environmental Policy Act (NEPA) prior to granting NPDES permit coverage to a *new source.* For additional information on NEPA and new sources refer to Section X.A of this Fact Sheet.

Chief Joseph Fish Hatchery is the only facility covered under the 2016 general permit that produces more than 100,000 pounds of aquatic animals per year that was also constructed after promulgation of the ELGs. This facility is considered a new source and EPA must comply with NEPA prior to granting the hatchery continued coverage under the reissued General Permit. EPA provided initial NPDES permit coverage to the Chief Joseph Hatchery in April 2013 under the 2009 General Permit. EPA issued an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) in April 2013 for coverage of the hatchery under the 2009 GP. A categorical exclusion determination was made for continued coverage of the hatchery under the 2016 reissuance. Pursuant to 40 CFR 6.204(a)(1)(iv), the reissuance of NPDES permits to new sources is a category of action that is eligible for a categorical exclusion determination (CATEX), provided the terms of the renewed permit are as environmentally protective as the current permit and the analysis and conclusions of the original NEPA document are still valid.

The reissued permit will be as environmentally protective as the 2016 General Permit and the original NEPA documents are still valid. EPA has determined the continued coverage of the Chief Joseph Hatchery under the reissued General Permit is an action eligible for categorical exclusion from further NEPA review and has prepared a CATEX.

During permit development, EPA was made aware of a proposed new hatchery facility on the Columbia River at a site known as Cassimer Bar. The proposed facility would produce more than 100,000 pounds of triploid steelhead trout annually and is therefore considered a *new source*. Prior to granting discharge authorization to this new facility, EPA must comply with NEPA. EPA is coordinating with the Confederated Tribes of the Colville Reservation to complete the appropriate level of NEPA analysis for coverage of the facility under this renewed General Permit. An EA has been developed and a FONSI will be issued. Comments will be accepted on the EA and FONSI during the public comment period.

Any unanticipated facility seeking coverage under this General Permit must prepare and submit an Environmental Information Document (EID) to EPA pursuant to 40 CFR §6.301 if they meet the definition of a new source as defined in 40 CFR 122.2 and 122.29. The EID

must describe the proposed project and address the potential environmental effects of the new source discharge to the receiving environment. In accordance with 40 CFR §6.301, the EID must be prepared in consultation with the Region 10 NEPA Compliance Coordinator and be of sufficient scope and content to enable EPA to prepare an EA and FONSI or, if necessary, an Environmental Impact Statement and Record of Decision. New sources may be required to apply for an individual permit. New aquaculture facilities or those considering substantive upgrades or rehabilitation activities should contact the Region 10 NEPA Compliance Coordinator to determine if the new or upgraded facility is considered a new source and will require submission of an EID.

B. Facilities and Discharges Excluded from General Permit Coverage

Net pens are not covered by this General Permit. Additionally, a facility with any of the following types of discharges cannot obtain coverage under this General Permit.

1. Discharges that do not consist solely of effluent from aquaculture facilities as described in Part II.B. If a discharge from an aquaculture facility mixes with other wastewater (e.g., domestic wastewater) prior to being discharged, the combined discharge is not covered.
2. New dischargers (not previously covered by an NPDES permit) discharging within 1 mile of impaired waters, designated pursuant to Section 303(d) of the CWA, which are water-quality limited for a pollutant of concern evaluated in the development of this permit (BOD_5, total suspended solids (TSS), settleable solids, nutrients, ammonia, chlorine, temperature, dissolved oxygen, aquaculture drugs and chemicals, and PCBs), unless:
   a) A TMDL is in place and a WLA has been assigned to the discharge and is applied in this permit; or
   b) The facility demonstrates that there is no reasonable potential to cause or contribute to an exceedance or impairment for the pollutant of concern in accordance with Part V.C of the General Permit.

   If a waterbody to which an existing Permittee discharges becomes impaired during the next permit cycle, then during permit reissuance, EPA will determine 1) whether the discharge would cause or contribute to an exceedance or impairment, and 2) whether the facility may remain covered under this General Permit in future permit cycles or if an individual permit is needed. The Permittee may voluntarily submit information to EPA that demonstrates that the discharge is not expected to cause or contribute to an exceedance of water quality standards in accordance with Part V.C of the General Permit.
3. Research facilities that conduct research on any plant or animal other than aquatic animals as defined in Appendix C of 40 CFR part 122 unless:
   a) There will be no discharge of pollutants associated with the plant or animal that were not considered in the development of this permit, or that are likely to cause or contribute to exceedances of water quality criteria, and;
   b) The plant or animal is disclosed in the NOI.

   This provision is included in the General Permit to provide flexibility to federal aquaculture research facilities that need to be adaptable to evolving aquaculture research

needs and opportunities, which may include aquatic plants (e.g., seaweed, algae) or non-aquatic animals (e.g., insects, beavers).

4. Discharges that include copper sulfate or chelated copper compounds. The general permit prohibits the discharge of copper sulfate and chelated copper compounds because the aquaculture industry has generally shifted away from using chelated copper compounds and copper sulfate, and because of copper's toxicity to aquatic life.
5. Discharges from fish hatchery, fish farm, or aquaculture research processes where EPA determines at the time a discharger seeks coverage that the General Permit does not adequately address the environmental concerns (e.g., aquatic animal escape, water quality risks, etc.) associated with the discharge.
6. Discharges to land or to publicly owned treatment works.
7. Facilities that discharge one mile or less upstream from waters that constitute an outstanding national resource.[1]
8. Facilities that discharge to waters that constitute special resource tribal waters.
9. **[Fish Passage Facilities Only]** Discharges of water treated with Aqui-S20E from a fish passage facility when alternative non-discharge disposal options (e.g., discharge to the ground, discharge to a POTW) are determined to be feasible. Fish passage facilities that do not discharge pollutants to Waters of the United States are not required to seek coverage under this permit.

C. Permit Expiration and Continuation of Permit Coverage

In accordance with 40 CFR §122.46(a), NPDES permits must be effective for a fixed term not to exceed five (5) years. Therefore, this General Permit will expire five years from the effective date of the final permit. If the General Permit is not reissued prior to the expiration date, the General Permit will be administratively continued in accordance with 40 CFR §122.6 and the Administrative Procedures Act (APA).

Any Permittee granted coverage under this General Permit prior to the expiration date will remain covered after the expiration date of the General Permit. Permittees will remain covered by the General Permit until the earlier of:

- Authorization for coverage under the reissued General Permit;
- The Permittee's submittal of a Notice of Termination;
- The issuance of an individual NPDES permit; or,

[1] As part of an antidegradation policy, Tier 3 maintains and protects water quality in outstanding national resource waters. Except for certain temporary changes, water quality cannot be lowered in such waters. States and authorized Indian Tribes decide which water bodies qualify for this type of protection. As of the date of this permit, no outstanding national resource waters have been designated within the boundaries of Washington State.

- A formal permit decision by the Director not to reissue the General Permit, at which time the Permittee must seek coverage under an alternative general or individual permit (Part X.B. of the General Permit, "Duty to Reapply").

III. Obtaining Authorization to Discharge Under this General Permit

A. Requirement to Submit a NOI

All of the facilities covered under the previous general permit that intended to continue operations and discharges submitted NOIs prior to permit expiration and are operating under the administratively continued permit. Because the current permit expired in 2021, and production levels, contact information, and other pertinent facility information may have changed since that time, all eligible aquaculture facilities seeking coverage under the reissued General Permit must submit a NOI to EPA within 90 days of the effective date of the reissued General Permit. Once the NOI is reviewed and deemed timely and complete, EPA will send these facilities a letter that authorizes them to discharge.

A Permittee authorized to discharge under this General Permit must submit an updated and/or amended NOI when there is any material change in the information provided in the original NOI. A material change may include, but is not limited to, changes in the operator/owner of the facility, a modification in the treatment train, the introduction of new pollutants not identified in the original NOI or increases in pollutants above the presently authorized levels. A change in the owner/operator requires a transfer of permit coverage (See Part X.I. of the General Permit). In addition to meeting the transfer requirements, the new Permittee must submit an updated NOI within 60 days of the transfer date.

New dischargers seeking coverage under the General Permit must submit a NOI to be covered by the General Permit. In accordance with 40 CFR §122.28(b)(2)(i), any discharger who fails to submit a timely and complete NOI in accordance with the terms of a general permit is not authorized to discharge under the general permit. A complete and timely NOI fulfills the requirements of a permit application for purposes of 40 CFR §§122.6 and 122.21.

EPA has revised the NOI requirements for the next permit cycle. The revised NOI requirements include differentiation between requirements for CAAP and non-CAAP facilities. The revised NOI requires less detail from non-CAAP facilities related to fish production and feed values and species identification.

Permittees must use EPA's electronic NOI system, which is accessible at https://cdx.epa.gov/, unless a 'Electronic Reporting Waiver' is requested and obtained. A summary of the information required on the e-NOI is contained in Appendix A of the General Permit. It requires information necessary for adequate permit administration and development, including the legal name and address of the owner or operator, the facility name and location, the type of facility or discharge, the receiving water body, and information about drugs and chemicals discharged by the facility. All NOIs must be signed in accordance with the certification requirements at 40 CFR §122.22.

When an aquaculture facility is owned by one person or entity, and is operated by another person or entity, it is the operator's responsibility to apply for and obtain permit coverage [40 CFR §122.21(b)]. For owners or operators of multiple aquaculture facilities, a separate NOI that clearly identifies the operator must be completed for each site or facility.

B. Authorization from EPA to Discharge

EPA will provide written notification to facilities seeking coverage under the General Permit if they are granted coverage under the reissued General Permit. A facility is authorized to discharge under the General Permit after obtaining written authorization from EPA.

C. Requirement to Apply for an Individual Permit

In accordance with 40 CFR §122.28(b)(3)(iii), any owner or operator authorized by a general permit may request to be excluded from the coverage of the general permit by applying for an individual NPDES permit. In such cases, the owner or operator must submit an application to EPA with justification supporting its request for an individual NPDES permit, no later than 90 days after the publication of the General Permit in the Federal Register. The request will be processed in accordance with the procedures set forth in 40 CFR Part 124. EPA will issue an individual permit, if the reasons cited by the owner or operator are adequate to support the request, and if the application is deemed to be timely and complete.

In accordance with 40 CFR §122.28(b)(3)(i), EPA may require a discharger seeking coverage under the General Permit to apply for and obtain an individual permit instead of authorizing a facility to discharge under the General Permit. An individual NPDES permit may be required under the following circumstances:

1. When a Permittee is not in compliance with the conditions of the General Permit;
2. When a change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source, therefore causing limitations of the General Permit to not be appropriate for the control or abatement of pollutants from the point source(s);
3. If a water quality management plan, including a TMDL, containing requirements applicable to the point source(s) is approved after the effective date of the General Permit;
4. If the discharge(s) is a significant contributor of pollution; or
5. If circumstances have changed since the time of NOI submittal, so that a Permittee is no longer appropriately controlled under the General Permit, or either a temporary or permanent reduction or elimination of the discharge is necessary.

D. Termination of Authorization to Discharge

In accordance with 40 CFR §§122.64 and 122.22(d), the Permittee may request termination of coverage under the General Permit. For periods of shutdown or inactivity that are not intended to be permanent, a facility should not submit a Notice of Termination, as this action results in the termination of NPDES coverage. See discussion below regarding Inactive Status. For circumstances where permit termination is requested, the following requirements apply.

1. A Permittee must be covered under the General Permit until it has properly disposed of wastewater or solids that were generated at the facility, collected in a raceway or settling basin, or held in storage, and until the facility is no longer discharging to waters of the United States.

2. The Permittee is required to submit DMRs until the effective date of permit termination. Termination of coverage will become effective 30 days after the written determination is sent to the Permittee by EPA unless the Permittee objects within that time.

3. The Permittee must notify EPA within 30 days of discharge termination.

4. Requests to terminate coverage under the General Permit must be made in writing and signed in accordance with the signatory requirements identified in 40 CFR §122.22. The request must include a certification that the Permittee is not subject to any pending State or Federal enforcement actions including citizen suits brought under State or Federal law. The request must also include the permit number assigned by EPA, indicate the date discharge(s) ceased, and it must be submitted to EPA at the following address:

   U.S. EPA Region 10
   Attn: NPDES Permitting Section, WD-19-C04
   1200 Sixth Avenue, Suite 155
   Seattle, WA 98101-3140

5. Additionally, EPA may terminate coverage under an NPDES permit for the following reasons, and using the procedures provided in 40 CFR §122.64. These reasons include:

   a) Noncompliance by the Permittee with any condition of the permit;

   b) Failure to fully disclose all relevant facts during the application or permit issuance process, or the misrepresentation of any relevant facts at any time;

   c) Determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or

   d) Change in a condition that requires reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit.

E. Inactive Status

During periods of shutdown or inactivity, the Permittee must continue to follow the monitoring and reporting requirements and all other permit conditions, including submitting DMRs in a timely manner. If there is no discharge during the shutdown or inactive period, the Permittee may report "no discharge" on the DMR (i.e., NODI code = "c"). If there is a discharge because of the source water but the facility is not operating, the Permittee may report that conditional monitoring is not required (i.e., NODI code = 9).

IV. Receiving Waters

Receiving waters for Permittees under the General Permit are waters of the United States located in Indian Country within Washington State and waters of the State of Washington (which are also waters of the United States) where federal facilities discharge. States, including eligible Indian Tribes (i.e., those with Treatment as a State [TAS] status under section 518 of the CWA), establish water quality standards (WQS) for receiving waters within their jurisdictions. WQS are composed of designated beneficial water uses to be achieved and protected, as well as water quality criteria necessary to protect designated uses. Under the provisions of 40 CFR §131.10, EPA requires states and eligible Indian Tribes to

specify appropriate water uses to be achieved and protected. In designating uses of a water body and the appropriate criteria for those uses, states and eligible Indian Tribes must take into consideration the WQS of downstream waters and must ensure that their WQS provide for attainment and maintenance of the WQS of downstream waters.

Many of the facilities covered under the General Permit discharge to waters of the State of Washington or upstream of waters of the State. Therefore, discharges from the facilities covered under the General Permit must protect water quality based on Washington State water quality standards and requirements. In addition, the General Permit must be protective of water quality based on any applicable Tribal water quality standards. In development of the draft Permit, EPA reviewed EPA-approved tribal water quality standards and found them to be very similar or identical to the Washington State standards for the parameters relevant to the General Permit. EPA has thus determined that this permit will be protective of all applicable receiving waters.

A. Tribal Water Quality Standards

A number of tribes within the State of Washington have developed WQS. EPA has approved WQS under Clean Water Act section 303(c) for the Confederated Tribes of the Chehalis Reservation, the Kalispel Tribe of Indians, Lummi Nation, the Makah Indian Tribe, the Port Gamble S'Klallam Tribe, the Puyallup Tribe of Indians, the Spokane Tribe of Indians, and the Swinomish Indian Tribal Community. EPA has also promulgated WQS for the Confederated Tribes of the Colville Reservation[2]. These WQS, applicable to waters within the respective reservations, include use designations, water quality criteria to protect those uses, and antidegradation policies. EPA has reviewed all tribal WQS in effect for CWA purposes within Washington State and the conditions in this General Permit are protective of tribal waters. The tribal WQS are either identical or similar to those of Washington State for parameters that are pertinent to the General Permit; therefore, additional permit conditions are not necessary to ensure that the tribal WQS are met.

EPA has also reviewed tribally approved WQS, which are not in effect for CWA purposes. The Tulalip Tribes are authorized by EPA to administer a WQS program. The Tribe has tribally approved WQS; however, since these WQS have not been submitted to EPA for approval, they are not in effect for CWA purposes. The Quinault Tribe is authorized by EPA to administer a WQS program, but has not submitted WQS to EPA for approval, and thus does not have WQS in effect for CWA purposes. The Yakama Nation is not authorized by EPA to administer a WQS program, but does have tribally approved WQS, which are not in effect for CWA purposes. EPA concludes that the General Permit will also be protective of these tribal waters.

[2] The Confederated Tribes of the Colville Reservation have been authorized to administer a WQS program.

B. Washington State Water Quality Standards

In developing the General Permit, EPA must ensure that the water quality standards of the State of Washington, Chapter 173-201A of the Washington Administrative Code are met, because these standards are applicable to the receiving waters for most of the federal facilities and to waters downstream from many of the aquaculture facilities located within Indian Country.

Washington State WQS at Washington Administrative Code (WAC) 173-201A-200 (fresh water) and WAC 173-201A-210 (marine water) establish aquatic life, recreation, water supply, shellfish harvesting, and miscellaneous uses, and those at WAC 173-201A-600 (fresh water) and WAC 173-201A-610 (marine water) designate uses for specific waters in the State. In accordance with WAC 173-201A-600, all fresh waters without specific use designations are to be protected for the designated uses of: salmonid spawning, rearing, and migration; primary contact recreation; domestic, industrial, and agricultural water supply; stock watering; wildlife habitat; harvesting; commerce and navigation; boating; and aesthetic values. EPA has written the General Permit to be protective of these uses.

C. Total Maximum Daily Loads (TMDLs)

Section 303(d) of the CWA requires states and eligible Indian Tribes to identify specific water bodies where water quality standards are not met or not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the State or Tribe, where applicable, must develop and adopt TMDLs that will specify WLAs for specific pollutants for point sources and load allocations for non-point sources of pollutants, as appropriate. WLAs are implemented through effluent limitations in NPDES permits. Effluent limitations for point sources must be consistent with applicable TMDL allocations. No Washington Tribes have 303(d) lists or TMDLs. Washington State's Water Quality Assessment Review Tool, which incorporates the 2016 303(d) List, has been approved by EPA and is available on Ecology's website at: https://apps.ecology.wa.gov/ApprovedWQA/ApprovedPages/ApprovedSearch.aspx
Ecology's Water Quality Atlas, an interactive map with links to approved TMDLs, is also available on Ecology's website, at:
https://apps.ecology.wa.gov/waterqualityatlas/wqa/startpage

The receiving water, 303(d) status, and associated TMDLs for facilities currently covered under WAG130000 are listed below in Table 2. Certain receiving waters in the State that do not fully support beneficial uses have been scheduled for TMDL development. As of the date of this Fact Sheet, there are applicable WLAs for four facilities currently covered by the General Permit, as indicated in Table 2.

Table 2. Receiving water, 303(d) status, and associated TMDLs and WLAs for facilities currently covered and anticipated for coverage under WAG130000

Permit Number	Facility	Receiving Water	WRIA	2016 303(d) Status	TMDL Status	WLA
WAG130001	Carson National Fish Hatchery	Wind River	29	Temperature	Wind River Watershed Temperature TMDL	No
WAG130002	Entiat National Fish Hatchery	Entiat River	46	None	--	--
WAG130003	Little White Salmon National Fish Hatchery	Little White Salmon River	29	Invasive Exotic Species Temperature (*Columbia River downstream of discharge)*	--	--
WAG130004	Makah National Fish Hatchery	Sooes River	20	None	--	--
WAG130005	Quinault National Fish Hatchery	Cook Creek	21	None	--	--
WAG130006	Spring Creek National Fish Hatchery	Columbia River	29	Temperature	TMDL for Temperature in the Columbia and Lower Snake Rivers	Yes
WAG130007	Willard National Fish Hatchery	Little White Salmon River	29	None	--	--

Permit Number	Facility	Receiving Water	WRIA	2016 303(d) Status	TMDL Status	WLA
WAG130008	Winthrop National Fish Hatchery	Methow River	48	Instream Flow	--	--
WAG130009	Ford State Fish Hatchery	Chamokane Creek	54	None	--	--
WAG130010	Salmon River Fish Culture Facility	Salmon River	21	None	--	--
WAG130012	Bernie Kai – Kai Gobin Salmon Hatchery	Tulalip Creek	7	None	--	--
WAG130013	Upper & Lower Tulalip Creek Ponds	Tulalip Bay	7	Bacteria	--	--
WAG130014	Battle Creek Pond	Battle Creek, Tulalip Bay	7	Bacteria	--	--
WAG130015	Clear Creek Fish Hatchery	Nisqually River	11	Temperature, Invasive Exotic Species	--	--

Permit Number	Facility	Receiving Water	WRIA	2016 303(d) Status	TMDL Status	WLA
WAG130016	Colville Tribal Hatchery	Columbia River	50	Temperature, Total Dissolved Gas	TMDL for Temperature in the Columbia and Lower Snake Rivers	Yes
					Mid-Columbia River and Lake Roosevelt Total Dissolved Gas TMDL	No
WAG130017	Skookum Creek Hatchery	South Fork Nooksack River	1	Temperature, DO	South Fork Nooksack TMDL	Yes
WAG130018	Lummi Bay Hatchery	Lummi Bay	1	None	--	--
WAG130019	Spokane Tribal Hatchery	Chamokane Creek	54	None	--	--
WAG130020	Keta Creek Hatchery Complex	Crisp Creek	9	DO, Bioassessment	--	--
WAG130021	Klickitat Salmon Hatchery	Klickitat River	30	None	--	--
WAG130022	Quilcene National Fish Hatchery	Big Quilcene River	17	Temperature, Instream Flow, Fish and Shellfish Habitat	--	--

Permit Number	Facility	Receiving Water	WRIA	2016 303(d) Status	TMDL Status	WLA
WAG130023	House of Salmon – Lower Elwha Fish Hatchery	Elwha River	18	Temperature	--	--
WAG130024	Chief Joseph Fish Hatchery- Omak Acclimation Pond	Okanogan River	49	PCBs, 4,4'-DDE, 4,4'-DDT, 4,4'-DDD	--	--
WAG130025	Chief Joseph Fish Hatchery – Hatchery on Columbia River	Columbia River	50	Temperature, Total Dissolved Gas	TMDL for Temperature in the Columbia and Lower Snake Rivers	Yes
					Mid-Columbia River and Lake Roosevelt Total Dissolved Gas TMDL	No
WAG130026	Saltwater Park Sockeye Hatchery	Hood Canal	16	DO	--	--
WAG130028	Grovers Creek Salmon Hatchery	Grovers Creek	15	DO, Bacteria	Kitsap County Bacteria 4B (straight to implementation)	
WAG130029	Kalama Creek Hatchery	Kalama Creek	13	None	--	--

Permit Number	Facility	Receiving Water	WRIA	2016 303(d) Status	TMDL Status	WLA
WAG130030	Brenner Creek Hatchery	Brenner Creek	5	Temperature	Stillaguamish River Watershed Temperature TMDL	No
WAG130031	Harvey Creek Hatchery	Harvey Creek	5	None	--	--
WAG130032	White River Hatchery	White River	10	Pathogens: Fecal Coliform, Instream Flow	Puyallup River Bacteria TMDL	No
WAG130033	Hoko Tribal Fish Hatchery	Hoko River	19	Temperature	--	--
WAG130034	Enetai Hatchery	Hood Canal	16	None	--	--

The extensive 303(d) list is not presented in this Fact Sheet; however, it must be consulted by applicants discharging to State waters because information about the status of the water quality in the receiving stream and any assigned WLAs must be included in the NOI.

V. Rationale for Prohibitions and Effluent Limitations/Action Thresholds

A. Pollutants of Concern

Pollutants of concern are those that either have technology-based limits or may need water quality-based limits. EPA identified pollutants of concern for the discharge based on those which:

- Have a technology-based limit
- Have an assigned WLA from a TMDL
- Had an effluent limit in the previous permit
- Are present in the effluent monitoring. Monitoring data are reported in the application and DMR and any special studies
- Are expected to be in the discharge based on the nature of the discharge

Pollutants of concern in discharges from aquaculture facilities include: BOD_5, TSS, settleable solids, nutrients, ammonia, chlorine, temperature, dissolved oxygen, aquaculture drugs and chemicals, and PCBs.

B. General Approach to Determining Prohibitions, Effluent Limitations, and Action Thresholds

Section 301(a) of the CWA, 33 USC §1311(a), prohibits the discharge of pollutants to waters of the United States unless the discharger is authorized to discharge pursuant to an NPDES permit. CWA Section 402, 33 USC §1342, authorizes EPA, or an approved state or tribal NPDES program, to issue an NPDES permit authorizing discharges subject to limitations and requirements imposed pursuant to CWA Sections 301, 304, 306, 401 and 403, 33 USC §§1311, 1314, 1316, 1341, and 1343.

In general, the CWA requires that the limits for a particular pollutant be the more stringent of either technology-based effluent limits (TBELs) or water quality-based effluent limits (WQBELs). TBELs are set according to the level of treatment that is achievable using available technology. WQBELs are designed to ensure that EPA-approved (state or tribal) water quality standards are being met, and they may be more stringent than TBELs.

After determining the appropriate TBEL(s), EPA must determine if a WQBEL is necessary. This analysis is based upon an assessment of the pollutants discharged and a review of applicable water quality standards. In some cases, a dilution allowance or mixing zone is permitted. The General Permit does not allow for mixing zones, so the reasonable potential analysis and WQBELs are based on meeting the water quality standard at the discharge location (i.e., end of pipe). Monitoring requirements must be included in the permit to determine compliance with effluent limitations and action thresholds. Effluent and ambient monitoring may also be required to gather data for future effluent limitations and action thresholds or to monitor effluent impacts on receiving water quality.

EPA has evaluated possible discharges from aquaculture facilities with respect to the CWA and relevant NPDES implementing regulations to determine what conditions and requirements to include in the General Permit.

In developing the prohibitions and effluent limitations/action thresholds for the General Permit, EPA considered:

- Effluent Limit Guidelines (ELGs) for CAAP facilities that produce 100,000 pounds, or more, annually (Part V.b.a, below)
- Ecology's technology-based, minimum discharge standards for upland finfish facilities at WAC173-221A-100 (Part V.B.b, below)
- The precedent set by the Upland Fin-Fish Hatching and Rearing NPDES General Permit issued by Ecology (Part V.B.c, below). (see https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Upland-finfish-permit#permit)
- EPA's upland aquaculture general permit for tribal facilities in Idaho (Part V.B.d, below) (see https://www.epa.gov/npdes-permits/2019-npdes-general-permits-aquaculture-facilities-idaho).
- Compliance information developed over the previous five years by facilities covered under the previous general permit (Part V.B.d, below).

Limitations and other requirements from these guidelines, standards, and permits – and how these limitations and requirements are applied in this General Permit – are described below.

1. Effluent Limitations Guidelines and New Source Performance Standards for the Concentrated Aquatic Animal Production Point Source Category (40 CFR Part 451)

On August 23, 2004, EPA promulgated ELGs for the CAAP Point Source Category at 40 CFR Part 451, Subpart A, Flow-through and Recirculating Systems Subcategory for facilities that contain, hold, or produce 100,000 pounds, or more, of aquatic animals per year (69 FR 51906). The ELGs became effective on September 22, 2004.

Cold water CAAP facilities, as defined at 40 CFR §122.24 (and in Part I.A. of this Fact Sheet), include all facilities which discharge at least 30 days per year, produce at least 20,000 lbs of aquatic animals per year and feed at least 5,000 lbs during the calendar month of maximum feeding. Warm water CAAP facilities, as defined at 40 CFR §122.24 (and in Part I.A. of this Fact Sheet), include all facilities which discharge at least 30 days per year (excluding closed ponds which discharge only during periods of excess runoff), and which produce at least 100,000 harvest weight pounds of aquatic animals per year. Only those CAAP facilities that produce 100,000 pounds or more of aquatic animals in a flow-through or recirculating system during any twelve-month period are subject to the CAAP ELGs.

Under the ELGs at 40 CFR §451.3, all eligible dischargers must report the following events to the permitting authority:

a) The use of an investigational new animal drug (INAD) or any extra-label drug, which may lead to the discharge of the drug to waters of the United States. This reporting is not required for an INAD or an extra-label drug that has been previously approved by the Food and Drug Administration (FDA) for a different species or disease, if it is used at or below the previously approved dose rate and involves similar conditions of use.

b) Failure of or damage to a containment system that results in unanticipated discharges of pollutants to waters of the United States.

c) Spills of drugs, pesticides, or feed that result in discharges to waters of the United States.

Under the ELGs at 40 CFR §§451.3(d) and 451.11(a) through (e), dischargers utilizing flow-through and recirculating systems must develop and maintain a BMP Plan, which addresses the following activities at the facility:

a) *Solids control*. The Permittee must employ efficient feed management and feeding strategies; identify and implement procedures for routine cleaning of rearing units and off-line settling basins, and procedures to minimize any discharge of accumulated solids during the inventorying, grading, and harvesting of aquatic animals in the production system; and remove and properly dispose of aquatic animal mortalities on a regular basis.

b) *Materials storage*. The Permittee must properly store drugs, pesticides, and feed in a manner to prevent spills, and implement procedures for containing, cleaning, and disposing of any spilled material.

c) *Structural maintenance*. The Permittee must inspect, conduct regular maintenance of, and repair the production and wastewater treatment systems on a routine basis.

d) *Recordkeeping*. The Permittee must document feed amounts and numbers and weights of aquatic animals to calculate feed conversion ratios, and document the frequency of cleanings, inspections, maintenance, and repairs.

e) *Training*. The Permittee must train personnel in spill prevention and response and on the proper operation and cleaning of production and wastewater treatment systems.

In the process of developing the ELGs, EPA did not include specific numeric limitations for any pollutant of concern, on the basis that BMPs would provide acceptable control of these pollutants. During the development of the ELGs, EPA concluded that control of suspended solids would also effectively control concentrations of other pollutants of concern, such as BOD_5, because other pollutants are either bound to the solids or are incorporated into them.

In the previous general permit, using BPJ, EPA determined that the ELGs would apply to all facilities covered under the permit, regardless of size. In the reissued General Permit, which explicitly extends coverage to facilities below the CAAP thresholds, EPA has determined using BPJ that the ELGs will continue to be applied to all facilities regardless of size or type of activity because the operations and wastes generated at non-CAAP facilities are similar to those addressed in the ELGs. In addition, EPA has determined that implementation of the ELGs at the non-CAAP facilities is not overly burdensome because the ELGs do not require facilities to meet numeric effluent limits. Instead, the ELGs require implementation of BMPs and certain reporting practices.

2. State of Washington, Wastewater Discharge Standards and Effluent Limitations for Upland Finfish Facilities, Washington Administrative Code (WAC) §173-221A-100

The State of Washington requires wastes to be provided with All Known, Available, and Reasonable Treatment (AKART) methods of treatment prior to their discharge or entry into waters of the State, regardless of the quality of water to which wastes are discharged or proposed for discharge, and regardless of the minimum water quality standards established for those waters (Wash. Rev. Code §90.52.040). To implement this requirement, Ecology established in their regulations the following technology-based effluent limitations for the upland finfish industry (WAC 173-221A-100) and for marine

finfish rearing facilities (WAC 173-221A-110). These regulations apply to facilities that exceed the cold water CAAP thresholds, or that are designated as a significant contributor of pollution by Ecology in accordance with 40 CFR §122.24.

The limits in Tables 3 and 4 apply to upland finfish facilities under Ecology's jurisdiction. Those in Table 3 apply to the total facility discharge from upland facilities except those addressed in Table 4, which covers separate discharges to surface water from off-line settling basins (OLSBs) and discharges from pond systems during harvest or fish release.

Table 3. Washington State Effluent Limitations for Discharges from Upland Facilities (Except Those Discharges with Limits in Table 4)

Pollutant	**Monthly Average**	**Instantaneous Maximum**
Net Suspended Solids (mg/L)	5	15
Net Settleable Solids (ml/L)	0.1	--

Table 4. Washington State Effluent Limits for Off-line Settling Basins and for Pond System Discharges during Harvest or Fish Release

Pollutant	**Removal Efficiency[1]**	**Instantaneous Maximum**
Net Suspended Solids	85 %	100 mg/L
Net Settleable Solids	90 %	1.0 ml/L
Footnotes: 1 - Applies only to off-line settling systems.		

Ecology also requires the following general practices of all upland finfish facilities:

a) Sand, silt, mud, solids, sludges, filter backwash, debris, or other pollutants deposited or removed in the course of treatment must be disposed of in a manner to prevent such materials from entering waters of the State.

b) The discharge of untreated cleaning waste to waters of the State is prohibited.

c) The intentional discharge or sweeping of accumulated solids from raceways or ponds to waters of the State without treatment is prohibited.

d) Practices, such as removing dam boards in raceways or ponds, that allow accumulated solids to discharge to waters of the State, are prohibited.

e) Disease control chemicals and drugs

- must be approved by the Food and Drug Administration and/or EPA for hatchery use, and

- such materials must be used in conformance with label instructions unless they are used under the supervision of a veterinarian after advance approval of Ecology.

f) Fish mortalities, kill spawning, processing wastes, and any leachate from these materials must be disposed of in a manner so as to prevent such materials from entering the waters of the State.

Although WAC 173-221A-100 and WAC 173-221A-110 are directly applicable only to those facilities in Ecology's jurisdiction that exceed the cold water CAAP thresholds, it states that all upland finfish facilities under Ecology's jurisdiction must still comply with the regulations (including effluent standards), regardless of size or whether they require a wastewater discharge permit.

With the exception of the OLSB percent removal requirements, EPA has applied these numeric limits as effluent limits for CAAP facilities and as action thresholds for non-CAAP facilities. In addition, EPA has incorporated most narrative conditions found in WAC 173-221A-100 and WAC 173-221A-110 into the General Permit using BPJ. EPA did not include the OLSB percent removal requirements because, consistent with Ecology's 2021 Upland Finfish Hatching and Rearing General NPDES permit, EPA recognizes that facilities design OLSBs to meet removal efficiency and hydraulic retention standards, and monitoring the quality of effluent being discharged from the settling basins is sufficient to ensure the protection of water quality.

3. State of Washington, Department of Ecology, Upland Finfish Hatching and Rearing General NPDES Permit (2021)

Since the general permit issued by Ecology implements the state's technology-based requirements for the upland finfish industry, it includes the same numeric limitations for suspended and settleable solids as established in WAC 173-221A-100. It also includes:

a) A prohibition on the discharge of Atlantic salmon into surface waters without written permission from the Washington State Department of Fish and Wildlife.

b) A requirement for facilities discharging to dissolved oxygen impaired waterbodies to monitor for a suite of nutrient parameters to determine loading to these systems.

c) PCB removal requirements for facilities that discharge to waters impaired for PCBs.

Using BPJ, EPA has included all of the above provisions in the General Permit. Inclusion of the PCB removal requirement is based on protection of water quality (See Part V.E.)

4. Additional Considerations in Developing Prohibitions and Effluent Limitations

In addition to the ELGs, state technology based standards, and Ecology's general permit, EPA considered the precedent set by the Idaho Aquaculture General Permits (IDG131000 and IDG133000; See https://www.epa.gov/npdes-permits/2019-npdes-general-permits-aquaculture-facilities-idaho). Consistent with the Idaho Aquaculture General Permits, EPA has included a provision regarding the storage, disposal, or accumulation of hazardous and deleterious materials adjacent to or in the immediate vicinity of waters of the United States, unless adequate measures and controls are provided to ensure that those materials will not enter waters of the United States. This provision is included to protect water quality.

Further, in developing the limits for the General Permit, EPA reviewed the DMRs and Annual Reports from all facilities covered by the previous General Permit, which informed which requirements are necessary and effective. Overall, facilities were largely in compliance with technology-based effluent limits for TSS and settleable solids, and most instances of non-compliance were anomalous (i.e., due to unusually high pollutant concentrations in the influent), or due to reporting errors (i.e., reporting non-detects incorrectly). The compliance data suggests that the TBELs in the existing permit are effective at limiting the discharge of pollutants and that there is no need for additional WQBELs to be considered.

Technology Based Numeric Effluent Limits and Action Thresholds are discussed in Parts V.G and V.H below.

C. Final Technology Based Effluent Limitations (TBELs)

TBELs aim to prevent pollution by requiring a minimum level of effluent quality that is attainable using demonstrated technologies for reducing discharges of pollutants into waters of the United States. Accordingly, every individual member of a discharge class or category is required to operate their water pollution control technologies according to industry-wide standards and accepted engineering practices.

As discussed in Part V.B.a, above, 40 CFR Part 451 contains ELGs for CAAP facilities that produce 100,000 pounds, or more, annually. Where EPA has not yet developed guidelines for a particular industry or a particular pollutant, technology-based effluent limits must be established using best professional judgement (BPJ) (40 CFR §§122.43, 122.44, and 125.3).

For the purposes of the General Permit, the cold water CAAP thresholds (discharge at least 30 days per year; produce at least 20,000 lbs of aquatic animals per year; and feed at least 5,000 lbs during the calendar month of maximum feeding) will be applicable to all facilities, regardless of species onsite (cold vs. warm water species), in dictating whether they are subject to CAAP permit conditions or the non-CAAP permit conditions. The cold water CAAP thresholds have been applied to warm water facilities in lieu of the warm water CAAP thresholds, to ensure protection of water quality, as it is the more conservative of the two thresholds.

Numeric Effluent Limitations and Action Thresholds:

Numeric effluent limitations applicable to CAAP facilities and action thresholds applicable to non-CAAP facilities are discussed below in Parts V.F and V.G, respectively.

Narrative Effluent Limitations: BMPs

All facilities covered under the General Permit are required to develop and implement a BMP Plan that addresses the required BMP Plan elements listed in Part VI.B.4. of the General Permit. The majority of the BMP Plan elements are based on the ELGs at 40 CFR 451 and are applied using BPJ. In addition to the required elements that are based on the ELGs, the following is a required BMP Plan element applicable to fish passage facilities covered under the General Permit:

1. **[Fish Passage Facilities Only]** Procedures must be identified and implemented to minimize the concentration of eugenol when water treated with Aqui-S20E is discharged to waters of the United States. In addition to fish passage facilities being required to meet

a numeric action threshold for eugenol, they are required to implement economically and practically feasible actions to provide additional minimization of eugenol concentrations as part of their BMP Plan. EPA is including this provision in the General Permit based on BPJ.

D. Final Prohibitions

The following prohibited discharges and practices apply to all eligible facilities:

Narrative Effluent Limitations: Prohibited Discharges

The Permittee must not discharge to waters of the United States from the aquaculture facility:

1. Any aquatic animal produced, grown, or held at the facility that is not intended for release, including Atlantic salmon (Salmo salar). Consistent with Ecology's Upland Finfish Hatching and Rearing NPDES General Permit, the General Permit continues the prohibition on the discharge of Atlantic salmon (Salmo salar). Ecology based this prohibition in part on the May 1997 Pollution Control Hearings Board ruling declaring Atlantic salmon a biological pollutant. The General Permit further clarifies that the discharge of any species that is not intended for release is a violation under this NPDES permit, so the prohibition has been modified accordingly.
2. Hazardous substances, unless authorized by this permit. Consistent with the previous permit, and with Ecology's 2021 draft Upland Finfish Hatching and Rearing General Permit, this prohibition is included in the General Permit to ensure unauthorized hazardous substances are not discharged to the receiving waters.
3. Untreated cleaning wastewater (e.g., obtained from a vacuum or standpipe bottom drain system or rearing/holding unit disinfection. This prohibition is newly established in the General Permit in accordance with section 5(c) of WAC 173-221A-100.
4. Visible foam or floating, suspended or submerged matter, including fish mortalities, kill spawning, processing wastes, and leachate from these materials, in amounts causing, or contributing to, a nuisance or objectionable condition in the receiving water or that may impair designated beneficial uses in the receiving water. This does not apply to approved nutrient enhancement efforts. Consistent with the previous permit, this prohibition is included in the General Permit in accordance with section 5(g) of WAC 173-221A-100.
5. Disease control chemicals and drugs except those approved by the Food and Drug Administration and/or EPA for hatchery use or those reported to EPA in accordance with Part VII of the General Permit (Aquaculture Specific Reporting Requirements). Consistent with the previous permit, this prohibition is included in the General Permit in accordance with sections 5(f)(i) and (ii) of WAC 173-221A-100.

6. Water treated with Tricane (MS-222)[3]. Newly established in this General Permit, the discharge of MS-222 is prohibited. The 2015 Biological Evaluation assessed the use of MS-222 at facilities covered by the 2016 General Permit and determined that it is used in tanks isolated from hatchery raceways and is not discharged to receiving waters after use. Based on this information, EPA did not evaluate the biological effects of discharging MS-222 from hatcheries, and therefore its discharge to waters of the United States is prohibited under this General Permit.
7. Toxic substances, including drugs, pesticides, or other chemicals, in toxic amounts that will violate water quality standards of the receiving water. Consistent with the previous permit, this prohibition is included in the General Permit in accordance with section 5(e) of WAC 173-221A-100.

Narrative Effluent Limitations: Prohibited Practices

The Permittee is prohibited from engaging in any of the following practices or otherwise facilitating prohibited discharges described in Part IV.A of the General Permit:

1. Practices that allow accumulated solids in excess of permit limits to be discharged to waters of the United States from the permitted facility. These practices include:
   a) sweeping, raking or otherwise intentionally discharging accumulated sludge and grit from raceways, ponds, off-line or full-flow settling basins or in other components of the production facility directly to waters of the United States.
   b) connecting a standpipe bottom drain or vacuum system directly to waters of the United States.
   c) removing dam boards in raceways or ponds, that allow accumulated solids to discharge to waters of the United States.

   These prohibited practices are consistent with the previous general permit and with Ecology's 2021 Upland Finfish Hatching and Rearing General Permit. They are based on Part 5 of WAC 173-221A-100 and are applied in this General Permit to ensure excess solids, which could impact the receiving waters, are not discharged.
2. Using disease control chemicals not in conformance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), product label instructions, approved INAD protocols, or administered by or under the supervision of a licensed veterinarian. This prohibition is newly established in the General Permit consistent with section 5(f)(iii) of WAC 173-221A-100.
3. Containing, growing, or holding fish within an off-line or in-line settling basin. Consistent with the previous permit, this prohibition in included in the General Permit in accordance with section 3(a)(iv) of WAC 173-221A-100.

[3] Note that EPA is not limiting the use of MS-222 at facilities covered under this permit; however, any use of MS-222 must not result in a discharge to waters of the United States.

4. Storage, disposal, or accumulation of hazardous and deleterious materials adjacent to or in the immediate vicinity of waters of the United States, unless adequate measures and controls are provided to ensure that those materials will not enter waters of the United States as a result of high water, precipitation runoff, wind, storage facility failure, accidents in operation, or unauthorized third-party activities. This prohibition is consistent with the Idaho Aquaculture General Permits (IDG131000 and IDG133000) (https://www.epa.gov/npdes-permits/2019-npdes-general-permits-aquaculture-facilities-idaho) and is applied to this permit consistent with the Idaho Aquaculture General Permits, to ensure excess solids, which could impact the receiving waters, are not discharged.

Technology based numeric effluent limits and action thresholds are discussed in Parts V.F and V.G of this Fact Sheet.

E. Final Water Quality-Based Effluent Limitations (WQBELs)

1. Statutory and Regulatory Basis

   CWA §301(b)(1)(C) requires the development of limitations in permits necessary to meet WQSs. Discharges to State or Tribal waters must also comply with conditions imposed by the State or Tribe as part of its certification of NPDES permits under CWA §401. 40 CFR 122.44(d)(1) implementing CWA §301(b)(1)(C) requires that permits include limits for all pollutants or parameters which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State or Tribal WQS, including narrative criteria for water quality. Effluent limits must also meet the applicable water quality requirements of affected States other than the State in which the discharge originates, which may include downstream States (40 CFR 122.4(d), 122.44(d)(4), see also CWA §401(a)(2)).

   The regulations require the permitting authority to make this evaluation using procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant in the effluent, species sensitivity (for toxicity), and where appropriate, dilution in the receiving water. The limits must be stringent enough to ensure that WQSs are met and must be consistent with any available wasteload allocation for the discharge in an approved TMDL. If there are no approved TMDLs that specify wasteload allocations for the discharge, then all of the WQBELs are calculated directly from the applicable WQSs. If the effluent from a facility is expected to cause or contribute to an exceedance of water quality standards, the facility will not be eligible for coverage under this General Permit.

2. Reasonable Potential Analysis and Need for WQBELs

   EPA uses the process described in the Technical Support Document for Water Quality-based Toxics Control (TSD) to determine reasonable potential. To determine if there is reasonable potential for the discharge to cause or contribute to an exceedance of water quality criteria for a given pollutant, EPA compares the maximum projected receiving water concentration to the water quality criteria for that pollutant. If the projected receiving water concentration exceeds the criteria, there is reasonable potential, and a WQBEL must be included in the permit.

In some cases, a dilution allowance or mixing zone is permitted. There are no mixing zones allowed under this general permit.

3. Reasonable Potential and WQBELs

   Receiving water quality criteria for facilities covered by the General Permit are discussed in Part IV of this Fact Sheet. The draft General Permit includes WQBELs for total residual chlorine applicable to all facilities, a WQBEL for temperature from a TMDL that is applicable to one facility, and a water quality-based requirement to reduce PCBs through BMPs. These WQBELs are summarized below, and details on the chlorine WQBELs can be found in Appendix B.

Chlorine

The applicable water quality criteria for total residual chlorine in the waters of the State of Washington are established by the Washington Department of Ecology at WAC 173-201A-240 for the protection of aquatic life. The same criteria have been adopted by many Washington Tribes. Because the Minimum Level (ML) for total residual chlorine is 50 µg/L, the compliance evaluation level in the General Permit has been established at 50 µg/L.

For CAAP facilities that use chlorine or Chloramine-T that is discharged to waters of the United States, EPA has determined there is reasonable potential to exceed the water quality standard. The maximum daily limit and average monthly limit for chlorine are shown in Table 5. A detailed explanation of the derivation of these chlorine limits can be found in Appendix B.

Table 5. Total Residual Chlorine Effluent Limitations

Type of Water	Long-Term Average	MDL Multiplier	AML Multiplier	MDL (µg/L)	AML (µg/L)
Fresh Water	5.80	3.11	1.55	**18.0**	**9.0**
Marine Water	3.95	3.11	1.55	**12.3**	**6.1**

Temperature

1. **Ecology's 2020 South Fork Nooksack River Temperature TMDL.** The South Fork Nooksack River Temperature TMDL, approved by EPA in 2020, assigns a WLA for temperature to the Skookum Creek Fish Hatchery. This hatchery is currently covered under the existing General Permit and EPA expects that it will seek coverage under the new General Permit. The NPDES regulations state that effluent limits must be consistent with the assumptions and requirements of any EPA-approved WLA in a TMDL. (See 40 CFR 122.44(d)(1)(vii)(A)).

   In most cases, TMDLs establish WLAs for point sources by limiting the temperature to that which would cause the temperature at the edge of the mixing zone to increase by no more than 0.3°C when the receiving water is at the lowest 7-day average flow that occurs (on average) once every 10 years (7Q10). This is accomplished using the following equation.

T_{NPDES} = [16°C (or 13°C) – 0.3] + [chronic dilution factor] x 0.3
Where T_{NPDES} is effluent temperature
Chronic dilution factor = (Q_{eff} + 0.25 X Q7Q10)/Q_{eff}
Where Qeff is effluent flow
Q7Q10 is 7Q10 river flow (cfs) and assumes a 25% by volume mixing allowance.

However, in this case, the hatchery intake water is often above the numeric water quality criteria; this is partly due to the fact that the intake water from Skookum Creek is often above water quality criteria. The hatchery diverts surface water from Skookum Creek and discharges the water into the Nooksack River a few hundred feet downstream from the Skookum Creek confluence. The TMDL notes that even if the hatchery did not divert the warm water from Skookum Creek, that water would still flow into the South Fork Nooksack River. Therefore, instead of using the equation above, the TMDL establishes a net WLA limiting the heat added to the water during hatchery operations. As shown in Table 6 below, the hatchery is restricted to discharging water no warmer than the criteria (16°C between July 1 and September 1, and 13°C between September 1 and July 1) when the intake water is 0.3°C cooler than the numeric criteria, which is consistent with the assumptions of the TMDL. When the intake temperature is warmer than the numeric criteria (minus 0.3°C) the WLA is influent temperature plus 0.3°C. Temperature limits are applied as a 7-day average of the daily maximum temperature (7-DADMax) in the permit.

Table 6. Final Effluent Limitations for Skookum Creek Fish Hatchery

Pollutant	**7-day average of the daily maximum temperatures[1]**	**Basis for Limit**
Temperature (July 1 – Sept 1)	16°C (or influent temperature + 0.3°C when influent is warmer than the numeric criteria (minus 0.3°C))	WLA
Temperature (Sept 1 – July 1)	13°C (or influent temperature + 0.3°C when influent is warmer than the numeric criteria (minus 0.3°C))	WLA
Footnotes: 1 - The 7-DADMax is the average of seven consecutive measures of daily maximum temperatures. The 7-DADMax for any individual day is calculated by averaging that day's daily maximum temperature with the daily maximum temperatures of the three days prior and the three days after that date.		

The 10-year thermal compliance schedule for Skookum Creek Fish Hatchery can be found in Part VI.D of the General Permit. Temperature monitoring requirements for Skookum Creek Hatchery can be found in Part V.A.6 of the General Permit.

2. **EPA's 2021 Columbia and Lower Snake Rivers Temperature TMDL.** The Columbia and Snake River Temperature TMDL assigns WLAs for temperature to the Chief Joseph Fish Hatchery – Hatchery on the Columbia, the Colville Tribal Hatchery, and the Spring

Creek National Fish Hatchery, which are covered under this General Permit. The Columbia and Snake River Temperature TMDL was developed and issued by EPA on August 13, 2021. The NPDES regulations state that effluent limits must be consistent with the assumptions and requirements of any EPA-approved WLA in a TMDL. (See 40 CFR 122.44(d)(1)(vii)(A)). The WLAs for the Chief Joseph Fish Hatchery, the Colville Tribal Hatchery, and the Spring Creek National Fish Hatchery are expressed as heat loads.

Table 7: WLA for Discharges from Hatcheries the Columbia River that are covered by this NPDES permit

Facility Name	**Permit Number**	**Location (RM)**	**Flow (MGD)**	**Temp (°C)**	**WLA (kcal/day)**
Chief Joseph Fish Hatchery – Hatchery on Columbia	WAG130025	580.0	25.38	16.8[1]	1.61E+09
Colville Tribal Hatchery	WAG130016	580.0	4.86	16.8[1]	3.08E+08
Spring Creek National Fish Hatchery	WAG130006	165.0	5.11	16.8[1]	3.24E+08
Footnotes: 1 - Represents an industry average maximum effluent temperature on the Columbia River.					

Appendix J of the Columbia and Lower Snake Rivers Temperature TMDL, "Considerations for Permit Writers on Wasteload Allocations," provides guidance to NPDES permit writers for incorporating the TMDL's WLAs into permits. This guidance notes that some hatcheries, depending on their operations, discharge below water quality standards and therefore may not need a temperature limit. The document also states that "if no or limited effluent temperature data are available, the permit writer may consider requiring temperature monitoring."

EPA conducted a reasonable potential analysis using effluent and upstream receiving water temperature data from Chief Joseph Fish Hatchery and has determined that this facility does not have reasonable potential to cause or contribute to an exceedance of the temperature water quality standard. The 7-DADMax effluent temperature was determined to be 16.5°C, which is below both the Washington State water quality standard of 17.5°C and the Colville Tribal water quality standard of 18°C for the Columbia River in the vicinity of the discharge. This conclusion is bolstered by the hatchery processes, which involve relying on cold groundwater during the critical period of the TMDL. Therefore, consistent with the guidance document that accompanied the TMDL, a temperature limit has not been established. However, in accordance with the guidance in Appendix J to the

Columbia River Temperature TMDL, since limited data are available, the General Permit will include temperature monitoring requirements for the Chief Joseph Fish Hatchery on the Columbia.

The Colville Tribal Hatchery and the Spring Creek National Fish Hatchery are similar to the Chief Joseph Fish Hatchery in that they also rely solely on relatively cold groundwater or spring water as their source water during the TMDL critical period and have relatively similar facility processes. Therefore, it is expected that they share similar characteristics in regard to their facility effluent temperature and their likelihood of causing or contributing to water quality standard exceedances. Appendix J of the TMDL includes hatcheries on the list of general permit covered facilities that are 'not expected to include temperature in their discharges', which includes the hatcheries discussed in this section. The appendix further states that 'these facilities do not require a heat load or temperature limit, unless there are site-specific circumstances that indicate a heat discharge'. Therefore, in accordance with the guidance in Appendix J to the Columbia River Temperature TMDL, temperature effluent limits based upon the WLAs in the TMDL are not applied to Colville Tribal Hatchery or Spring Creek National Fish Hatchery. To confirm that these facilities continue to discharge below WQS, and to confirm the assumption that Chief Joseph Fish Hatchery is representative of the other two facilities, the General Permit includes temperature monitoring requirements for these three facilities (See Part VI.D).

Another facility – Little White Salmon National Fish Hatchery – discharges to the Little White Salmon River immediately upstream from the Columbia River. It does not have a WLA in the Columbia and Lower Snake Rivers Temperature TMDL because it does not discharge to the Columbia or Snake Rivers directly. However, given the facility's use of surface water from the Little White Salmon River (as opposed to groundwater), the proximity of the discharge to the temperature impaired Columbia River, and the importance of the Little White Salmon River as a Cold Water Refuge for migrating Columbia River Salmon (Columbia River Cold Water Refuges Plan, 2021), the General Permit includes temperature monitoring requirements for this facility (See Part VI.D of this Fact Sheet).

Polychlorinated Biphenyls (PCBs)

[For facilities within WRIA 54 (Lower Spokane) and WRIA 57 (Middle Spokane); or discharging within 1 mile upstream of waters impaired for PCBs] Portions of the Spokane River, Little Spokane River, and Lake Spokane, as well as other water bodies throughout Washington, are currently listed as impaired for PCBs on Section 303(d) of the federal Clean Water Act. Consistent with requirements included in Ecology's Upland Finfish Hatching and Rearing General Permit, the General Permit requires facilities discharging to waters impaired for PCBs to implement strategies to eliminate sources of PCBs entering the receiving water. As a requirement of the BMP plan, Facilities within the WRIA 54 (Lower Spokane) and WRIA 57 (Middle Spokane); or discharging within 1 mile upstream of waters impaired for PCBs must implement procedures to eliminate the release of Polychlorinated PCBs from any known sources in the facility that come into contact with water, including pre-1980 paint or caulk. For determining the presence of PCBs, refer to EPA guidance at https://www.epa.gov/pcbs/pcbs-building-materials-determining-presence-manufactured-pcb-products-buildings-or-other. If removing paint or caulk that was applied prior to 1980, refer

to EPA guidance (abatement steps 1-4) at https://www.epa.gov/pcbs/steps-safe-pcb-abatement-activities. Any future application of paint or caulk must be below the allowable TSCA level of 50 ppm. Facilities must use any available product testing data to implement purchasing procedures that give preference for fish food that contains the lowest level of PCBs that is economically and practically feasible. Additional discussion of PCB discharges from hatcheries can be found in Part VI.D.1 of this Fact Sheet. This requirement is included using BPJ.

F. Final Numeric Effluent Limitations Applicable to CAAP Facilities Only

[CAAP FACILITIES ONLY] The following effluent limitations included in the General Permit are carried forward from the previous general permit and apply only to facilities which discharge at least 30 days per year, produce at least 20,000 lbs of aquatic animals per year and feed at least 5,000 lbs during the calendar month of maximum feeding, or that are designated as a significant contributor of pollution by EPA. Effluent limitations for TSS and settleable solids are based on requirements in WAC 173-221A-100 and are included in this permit as BPJ-based technology-based effluent limits. These limits were also established in the previous permit. Effluent limits for total residual chlorine are water quality based effluent limits that were established in the previous permit as described in Part V.E, above.

1. Discharges of Facility Effluent

Table 8. Effluent Limitations for CAAP Facility Discharges of Facility Effluent[1]

Pollutant	Maximum Daily Limit	Average Monthly Limit	Instantaneous Maximum Limit	Basis for Limit
Net Total Suspended Solids[2]	--	5 mg/L	15 mg/L	TBEL based on BPJ
Net Settleable Solids[2]	--	0.1 ml/L	--	TBEL based on BPJ
Total Residual Chlorine[3] – into fresh water	18.0 µg/L	9.0 µg/L	--	WQBEL
Total Residual Chlorine[3] – into marine water	12.3 µg/L	6.1 µg/L	--	WQBEL

Pollutant	Maximum Daily Limit	Average Monthly Limit	Instantaneous Maximum Limit	Basis for Limit
Footnotes: 1 - These effluent limitations do not apply to discharges from raceways or rearing ponds during drawdown, limits for which are included in Table 10. Note, additional effluent limitations applicable to discharges from OLSBs are included in Table 9. 2 - Net concentration = effluent concentration – influent concentration. Net TSS and settleable solids determinations will require influent analysis in addition to effluent analysis unless the Permittee chooses to assume that the pollutant concentration in the influent is zero. Influent samples must be collected prior to collection of effluent samples; and net TSS and settleable solids will be determined by subtracting the influent concentrations from the effluent concentrations: see Appendix C of the General Permit 3 - Chlorine limits only apply when chlorine or Chloramine-T is being used. The Permittee will be in compliance with the effluent limitations for total residual chlorine, provided the total residual chlorine residual levels are at or below the compliance evaluation level of 50 µg/L. This level is the ML for chlorine.				

2. Discharges from Off-line Settling Basins (OLSBs)

   These limits only apply to discharges from OLSBs to waters of the United States and apply to facilities in addition to the limits in Table 8.

Table 9. Effluent Limitations for CAAP Facility Discharges from OLSBs

Pollutant	Maximum Daily Limit	Average Monthly Limit	Basis for Limit
Total Suspended Solids	100 mg/L	--	TBEL based on BPJ
Settleable Solids	1.0 ml/L	--	TBEL based on BPJ
Footnotes: 1 - Effluent limitations apply only to OLSB effluents that discharge directly to waters of the United States. If the discharge combines with other process wastewaters, these additional OLSB limits do not apply.			

3. Discharges from Raceways or Rearing Ponds during Drawdown for Fish Release.

Table 10. Effluent Limitations for CAAP Facility Discharges from Raceways or Rearing Ponds during Drawdown for Fish Release

Pollutant	Maximum Daily Limit	Average Monthly Limit	Basis for Limit
Total Suspended Solids	100 mg/L	--	TBEL based on BPJ
Settleable Solids	1.0 ml/L	--	TBEL based on BPJ
Total Residual Chlorine[1] – into fresh water	18 µg/L	9.0 µg/L	WQBEL

Pollutant	Maximum Daily Limit	Average Monthly Limit	Basis for Limit
Total Residual Chlorine[1] – into	12.3 µg/L	6.1 µg/L	WQBEL
Footnotes: 1 - Chlorine limits only apply when chlorine or Chloramine-T is being used. The Permittee will be in compliance with the effluent limitations for total residual chlorine, provided the total residual chlorine residual levels are at or below the compliance evaluation level of 50 µg/L. This level is the ML for chlorine.			

4. Discharges of Rearing Vessel Disinfection Water

   The limits in Table 11 apply to water from rearing vessels that have been treated with chlorine prior to being discharged to waters of the United States unless vessels are allowed to dry completely and there is no discharge of chlorine.

Table 11. Effluent Limitations for CAAP Facility of Rearing Vessel Disinfection Water

Pollutant	Maximum Daily Limit	Average Monthly Limit	Basis for Limit
Total Residual Chlorine[1] – into fresh water	18 µg/L	9.0 µg/L	WQBEL
Total Residual Chlorine[1] – into marine water	12.3 µg/L	6.1 µg/L	WQBEL
Footnote: 1 - Effluent limitations apply when rearing vessels are disinfected with chlorine. The Permittee will be in compliance with the effluent limitations for total residual chlorine, provided the total residual chlorine residual levels are at or below the compliance evaluation level of 50 µg/L. This level is the ML for chlorine.			

G. Final Numeric Action Thresholds Applicable to Non-CAAP Facilities Only

[Non-CAAP Facilities Only] The following action thresholds apply only to non-CAAP facilities. The action thresholds are not effluent limitations. Instead, they are thresholds where, if exceeded, the facility would need to take corrective action to ensure that the discharges are below the action thresholds. If facilities exceed their action thresholds, they are required to engage in corrective action as follows:

- Notify EPA of the action threshold exceedance in accordance with Part VIII.G of the General Permit
- Investigate the cause of the elevated effluent concentration and implement corrective actions necessary to reduce the effluent concentration below the applicable threshold. The corrective actions shall be implemented as soon as possible but no later than 30 calendar days following the threshold exceedance. If the Permittee will not be able to complete the

corrective actions within this time frame, the Permittee shall document the reasoning and provide an alternative schedule for implementing corrective actions, in writing, to EPA in accordance with Part VIII.G. of the General Permit; and

- Review the BMP Plan to determine if additional control measures or other changes are necessary to maintain effluent concentrations below the applicable action thresholds. If additional control measures or other changes are necessary, the Permittee shall revise the BMP Plan and submit the revised pages to EPA in accordance with section VIII.G of the General Permit, including a schedule for implementing the control measures, within 30 calendar days of the threshold exceedance.

If a facility continues to exceed action thresholds, EPA may determine them to be a significant contributor of pollution under 40 CFR §122.24(c) and cover them as a CAAP facility under this general permit, or may decide that the facility is better covered under an individual permit.

Action thresholds for TSS and settleable solids are set equivalent to the limits established in WAC 173-221A-100, and action thresholds for total residual chlorine are established equivalent to the WQBELs for chlorine established in the previous permit.

In addition to the numeric action thresholds discussed above, the General Permit will authorize discharges of water treated with Aqui-S20E, a fish anesthetic, specifically from fish passage facilities. Based on an analysis of Aqui-S20E use at these facilities, EPA has established an action threshold for eugenol, the active ingredient in Aqui-S20E, to be protective of aquatic life uses.

Aqui-S20E is a fish anesthetic containing 10% eugenol that is applied as an immersion bath treatment. Aqui-S20E is an Investigational New Animal Drug (INAD) and may only be used in accordance with the U.S. Fish and Wildlife Service (USFWS) INAD Study Protocol (INAD #11-741). The INAD Study Protocol specifies that Aqui-S20E should be applied as a static immersion bath at eugenol concentrations ranging from 10 to 100 mg/L, depending on species, water temperature, and level of anesthesia desired. Based on information provided by the U.S. Army Corps of Engineers, the dosage of eugenol used for fish sampling programs at their adult fish passage facilities ranges from 17 to 27 mg/L.

Numeric water quality criteria to protect aquatic life designated uses have not been developed for eugenol. In the absence of numeric criteria, EPA has developed an action threshold of 0.97 mg/L for eugenol to ensure that discharges of water treated with Aqui-S20E are protective of aquatic life uses and threatened and endangered species. To develop the action threshold, EPA evaluated toxicity testing data for eugenol (CAS No. 97-53-0) in EPA's ECOTOX database for freshwater species, including fathead minnows (*Pimephales promelas*), silver salmon (*Oncorhynchus kisutch*), and rainbow trout (*Oncorhynchus mykiss*) and estimated chronic no observed effect concentrations (NOECs) from Interspecies Correlation Estimation (ICE) models for bull trout, chum salmon, Chinook salmon, and sockeye salmon. See the Biological Evaluation Addendum for this NPDES General Permit (WAG130000) for a detailed discussion of the derivation of the action threshold for eugenol. Discharges of eugenol at or below the action threshold are not likely to adversely affect threatened and endangered species.

Permittees operating fish passage facilities will be responsible for implementing BMPs (e.g., denaturing, pulsed release, etc.) to ensure that eugenol concentration in discharges containing water treated with Aqui-S20E are below the action threshold.

The action thresholds for non-CAAP facilities are shown in Table 12, below.

Table 12. Action Thresholds for Non-CAAP Facility Discharges[1]

Pollutant	**Maximum Daily Action Threshold**	**Average Monthly Action Threshold**	**Instantaneous Maximum Action Threshold**
Net Total Suspended Solids[2]	--	5 mg/L	15 mg/L
Net Settleable Solids[2]	--	0.1 ml/L	--
Total Residual Chlorine[3] – into fresh water	18.0 µg/L	9.0 µg/L	--
Total Residual Chlorine[3] – into marine water	12.3 µg/L	6.1 µg/L	--
Eugenol[4] (fish passage facilities only)	0.97 mg/L	--	--

Footnotes:
1 - These action thresholds do not apply to discharges from raceways or rearing pond systems during drawdown; thresholds for which are included in Table 14. Note, additional action thresholds applicable to discharges from OLSBs are included in Table 13.
2 - Net concentration = effluent concentration – influent concentration. Net TSS and settleable solids determinations will require influent analysis in addition to effluent analysis unless the Permittee chooses to assume that the pollutant concentration in the influent is zero. Influent samples must be collected prior to collection of effluent samples; and net TSS and settleable solids will be determined by subtracting the influent concentrations from the effluent concentrations: see Appendix C of the General Permit.
3 - Chlorine action thresholds only apply when chlorine or Chloramine-T is being used. The Permittee will be in compliance with the action thresholds for total residual chlorine, provided the total residual chlorine residual levels are at or below the compliance evaluation level of 50 µg/L. This level is the ML for chlorine. Chlorine monitoring is not required if chlorine is allowed to dry at the location of use.
4 - The eugenol action threshold applies only to fish passage facilities.

1. Discharges from Off-line Settling Basins (OLSBs)

   The action thresholds in Table 13 for discharges from OLSBs apply in addition to the thresholds in Table 12. These thresholds only apply to OLSBs that discharge directly to waters of the United States and are proposed to be equivalent to the effluent limitations

established for CAAP facilities in order to provide for consistent permit requirements among all aquaculture facilities.

Table 13. Action Thresholds for Non-CAAP Facility Discharges from OLSBs

Pollutant	**Maximum Daily Action Threshold**	**Average Monthly Action Threshold**
Total Suspended Solids	100 mg/L	--
Settleable Solids	1.0 ml/L	--
Footnotes: 1 - Action thresholds apply only to OLSB effluents that discharge directly to waters of the United States. If the discharge combines with other process wastewaters, these additional OLSB action thresholds do not apply.		

2. Discharges from Raceways or Rearing Ponds during Drawdown for Fish Release.

   The action thresholds in Table 14 for discharges from OLSBs and raceways or rearing ponds during drawdown are proposed to be equivalent to the effluent limits established for CAAP facilities in order to provide for consistent permit requirements among all aquaculture facilities.

Table 14. Action Thresholds for Non-CAAP Enhancement/Production Facility Discharges from Raceways or Rearing Ponds during Drawdown for Fish Release

Pollutant	**Maximum Daily Action Threshold**	**Average Monthly Action Threshold**
Total Suspended Solids	100 mg/L	--
Settleable Solids	1.0 ml/L	--
Total Residual Chlorine[1] – into fresh water	18 µg/L	9.0 µg/L
Total Residual Chlorine[1] – into marine water	12.3 µg/L	6.1 µg/L
Footnotes: 1 - Action thresholds for chlorine only apply when chlorine or Chloramine-T is being used. The Permittee will be in compliance with the action thresholds for total residual chlorine, provided the total residual chlorine residual levels are at or below the compliance evaluation level of 50 µg/L. This level is the ML for chlorine.		

3. Discharges of Rearing Vessel Disinfection Water

   The action thresholds in Table 15 for water from rearing vessels that has been treated with chlorine prior to being discharged to waters of the United States are proposed to be

equivalent to the effluent limits established for CAAP facilities in order to provide for consistent permit requirements among all aquaculture facilities.

Table 15. Action Thresholds for Non-CAAP Facility Rearing Vessel Disinfection Water

Pollutant	**Maximum Daily Action Threshold**	**Average Monthly Action Threshold**
Total Residual Chlorine[1] – into fresh water	18 µg/L	9.0 µg/L
Total Residual Chlorine[1] – into marine water	12.3 µg/L	6.1 µg/L
Footnote: 1 - Action thresholds apply when rearing vessels are disinfected with chlorine. The Permittee will be in compliance with the action thresholds for total residual chlorine, provided the total residual chlorine residual levels are at or below the compliance evaluation level of 50 µg/L. This level is the ML for chlorine.		

H. Antibacksliding

Section 402(o) of the Clean Water Act and 40 CFR §122.44 (l) generally prohibit the renewal, reissuance or modification of an existing NPDES permit that contains effluent limits, permit conditions or standards that are less stringent than those established in the previous permit (i.e., anti-backsliding) but provides limited exceptions. Section 402(o)(1) of the CWA states that a permit may not be reissued with less stringent limits established based on Sections 301(b)(1)(C), 303(d) or 303(e) (i.e., WQBELs or limits established in accordance with state treatment standards) except in compliance with Section 303(d)(4). Section 402(o)(1) also prohibits backsliding on TBELs established using BPJ (i.e., based on Section 402(a)(1)(B)).

All proposed conditions in the draft General Permit are at least as stringent as the limitations included in the previous permit and, as such, there is no backsliding in the draft General Permit. The previous general permit was written explicitly for facilities that meet the CAAP criteria – all limits and conditions were developed solely in consideration of CAAP facilities. Under the previous permit, some facilities that fell below the CAAP thresholds obtained permit coverage using a voluntary permit provision which allowed facilities below the CAAP thresholds to obtain permit coverage, even though the permit was written for larger facilities. EPA never made a determination that these facilities were significant contributors of pollution in accordance with 40 CFR §122.24(c). Therefore, these facilities continue to be non-CAAP facilities and will be subject to non-CAAP permit provisions in the draft General Permit unless they are determined to be significant contributors of pollution. In contrast with the previous general permit, which never explicitly considered smaller discharges, the draft General Permit includes new provisions explicitly for non-CAAP facilities, with permit conditions written in consideration of the water quality risks associated with discharges from non-CAAP facilities.

As explained in Part V.G. of the Fact Sheet, the draft permit establishes a new tier for non-CAAP facilities, for which EPA is proposing narrative, technology-based effluent limits, in

the form of BMPs, as opposed to numeric effluent limits which are applied to CAAP facilities under the draft General Permit. In addition, EPA has applied the existing effluent limitations as action thresholds to monitor the effectiveness of the BMPs for non-CAAP facilities and requires both the CAAP and non-CAAP facilities to implement the same BMPs. The requirements for non-CAAP facilities are reflective of the overall lower risk level posed by these smaller facilities and serve to reduce the administrative burden associated with more frequent monitoring and reporting.

VI. Rationale for Monitoring Requirements

A. Basis for Effluent and Surface Water Monitoring

Section 308 of the CWA and 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring may also be required to gather effluent and surface water data to determine if additional effluent limitations are required and/or to monitor effluent impacts on receiving water quality.

The Permittee is responsible for conducting the monitoring and for reporting results on DMRs, Annual Reports, or on the application for renewal, as appropriate, to EPA.

B. Monitoring Locations

Discharges authorized by this General Permit must be monitored at each outfall identified in the NOI.

C. Effluent Monitoring

All facilities must monitor flow, TSS, settleable solids, and total residual chlorine when chlorine or Chloramine-T are used. Facilities discharging to waters on the 303(d) list as impaired for temperature must monitor for temperature (if they have not already completed temperature baseline monitoring in a previous permit term), and CAAP facilities discharging to waters on the 303(d) list as impaired for dissolved oxygen must monitor for parameters related to downstream far-field oxygen use. Discharges to 303(d)-listed waters for temperature that result from Aqui-S20E use at fish passage facilities are not subject to these monitoring requirements, as they are not expected to contribute to temperature impairments based on the nature of their operations.

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility's performance. Permittees have the option of taking more frequent samples than are required under the permit. These samples must be used for averaging if they are conducted using EPA-approved test methods (generally found in 40 CFR 136) or as specified in the permit.

D. Monitoring Requirements Applicable to CAAP Facilities Only

[CAAP Facilities Only] EPA proposes the following monitoring requirements for the General Permit. For a description of EPA's process and analysis regarding whether to require monitoring for various therapeutic aquaculture chemicals, see Part X.C. of this Fact Sheet, or EPA's 2016 Biological Evaluation in compliance with Endangered Species Act requirements.

1. Discharges of Effluent from CAAP Facilities

TSS and Settleable Solids

DMR data for the previous five years (i.e., 2016 – 2021) were reviewed for effluent violations, discussed in detail in Part I.D. of this Fact Sheet. Based on the overall compliance of facilities with the effluent limits, EPA has determined that reducing required influent and effluent monitoring for TSS and settleable solids from monthly to quarterly will be sufficient to adequately characterize effluent and monitor facility performance.

Total Residual Chlorine

In order to assess compliance with established effluent limits, the previous general permit included monthly monitoring for total residual chlorine when using chlorine or Chloramine-T, unless chlorine were allowed to dry at the location of use. This requirement is unchanged from the previous permit.

Temperature

In the previous permit, EPA required two years of continuous effluent and upstream receiving water temperature monitoring for all covered facilities discharging to receiving waters impaired for temperature. The goal of this monitoring was to ensure that the Permittees were collecting adequate data to assess compliance with the temperature water quality standards. The proposed permit has the same requirement for all facilities that discharge to waters impaired for temperature, with the exception that monitoring is not required for any facility that has already collected two years of continuous temperature data that show that their effluent does not have reasonable potential to contribute to temperature impairments in the receiving water.

Five facilities covered by the previous general permit discharge to water bodies impaired for temperature and were therefore required to conduct temperature monitoring in the previous permit: Makah National Fish Hatchery (USFWS), Quilcene National Fish Hatchery (USFWS), House of Salmon (Lower Elwha Klallam Tribe), Chief Joseph Hatchery on the Columbia (Confederated Tribes of the Colville Reservation) and Skookum Creek Fish Hatchery on Skookum Creek (Lummi Nation).

Reasonable potential analyses using temperature data from Quilcene National Fish Hatchery and the House of Salmon – Lower Elwha Fish Hatchery demonstrated that the effluent temperature is consistently cooler than ambient temperature, and there is no reasonable potential for the discharge to cause or contribute to an exceedance of water quality standards in the receiving water (See Appendix C of this Fact Sheet). Accordingly, no temperature limits are placed on these facilities and additional temperature monitoring for these two facilities is not required in this General Permit.

Sufficient temperature monitoring was not conducted at the Makah National Fish Hatchery to assess compliance with the temperature water quality standards. Accordingly, additional temperature monitoring for this facility is required in the General Permit. Additionally, temperature monitoring is required for two facilities, Brenner Creek Hatchery and Hoko Tribal Fish Hatchery, which were not originally covered by the previous general permit, and which discharge to receiving waters impaired for temperature.

As discussed in more detail in Part V.E of this Fact Sheet, the Columbia and Snake River Temperature TMDL assigns WLAs for temperature to the Chief Joseph Fish Hatchery – Hatchery on the Columbia, the Colville Tribal Hatchery, and the Spring Creek National Fish Hatchery, which are covered under the General Permit. In accordance with the guidance in the TMDL, discussed in more detail in Part V.E.2 of this Fact Sheet, effluent limits based upon the WLAs are not included in the general permit because of the nature of the discharge. To confirm that the facilities are discharging below water quality standards, 2 years (not necessarily consecutive) of continuous monitoring of effluent and upstream receiving water temperature is required in the General Permit for the Chief Joseph Fish Hatchery on the Columbia, the Colville Tribal Hatchery, and the Spring Creek National Fish Hatchery.

Continuous temperature monitoring of the effluent and upstream receiving water must begin within one year of the effective date of the General Permit. Receiving water monitoring must be conducted in the facility's immediate receiving water upstream of the discharge location. Representative upstream receiving water data from an existing third-party gauge (e.g., USGS) may be used to satisfy the upstream receiving water monitoring requirement, if available. If a facility has more than one outfall, it must perform temperature monitoring on the outfall that is most representative of the facility's flow.

In addition to being used to assess compliance with water quality standards, the data, to be collected via continuous temperature monitoring, may also be used for development of WLAs in an applicable TMDL (if there is not already a TMDL in effect), or for ESA consultation.

Skookum Creek Hatchery has a net temperature WLA assigned in the South Fork Nooksack River Temperature TMDL. This WLA is applied as a net effluent limit in the General Permit, as discussed in more detail in Part V.E.1 of this Fact Sheet. Accordingly, the Permittee is required to conduct continuous temperature monitoring of influent and effluent in order to determine the net change in temperature between the water coming into the facility and the water being discharged. The Permittee will not be required to comply with the net temperature limits until the end of the 10-year compliance schedule in the permit; however, the facility is required to monitor and report the net temperature change while coming into compliance. Skookum Creek Fish Hatchery must begin monitoring influent and effluent within 6 months of the effective date of the General Permit and must continue monitoring year-round for the entire permit term.

For all other facilities requiring continuous temperature monitoring, monitoring must begin within one year of the effective date of this Permit. Permittees must monitor their effluent, as well as the receiving water immediately upstream of the facility, in order to determine whether a facility is affecting the temperature of the receiving water.

Facilities that do not discharge to waters impaired for temperature are not required to conduct temperature monitoring. Fish passage facilities that discharge to temperature impaired waters are not required to conduct temperature monitoring, due to the nature of their operations, which involve holding small amounts of water indoors for less than a day which would not be expected to impact temperature.

Dissolved Oxygen

Three CAAP facilities currently covered by the General Permit were identified as discharging to waterbodies impaired for dissolved oxygen. For these facilities, and any other CAAP facilities that discharge to dissolved oxygen-impaired waters and seek coverage under the General Permit, the permit requires annual monitoring for parameters related to downstream far-field oxygen use – referred to as Nutrient Parameters. This requirement is consistent with monitoring being conducted at aquaculture facilities throughout the state; the goal is to determine the role of nutrient loading to these DO impaired freshwater systems locally, as well as to determine the role of hatchery nutrient inputs to Puget Sound and other downstream waterbodies. The parameters to be monitored include total phosphorous, total kjeldahl nitrogen, nitrate plus nitrite, and biochemical oxygen demand (BOD_5). Each year, monitoring must be conducted once within one month of anticipated peak biomass.

TMDLs must be established to determine the controlling factors leading to the dissolved oxygen impairments and establish wasteload allocations for facilities as needed.

The dissolved oxygen criteria is met at the point of discharge when facilities are meeting their TSS and settleable solids limits. Facilities that do not discharge to waters impaired for dissolved oxygen are not required to conduct nutrient parameter monitoring.

Polychlorinated Biphenyls (PCBs)

Several segments of the Spokane River and Lake Spokane are listed on the State of Washington's 2016 303(d) list of impaired waters due to high concentrations of PCBs in fish tissue. Accordingly, the previous general permit included PCB monitoring for facilities that discharge to waters in WRIA 54 (Lower Spokane) and WRIA 57 (Middle Spokane) in order to determine whether facilities covered by the general permit were contributing to PCB loading and to assist with the future development of a TMDL for PCBs in the watershed. PCB monitoring required of the two facilities within this WRIAs, Ford State Fish Hatchery and Spokane Tribal Hatchery, was not conducted during the previous permit term.

The most relevant information on PCB loading from hatchery facilities in the Spokane River area is the *Evaluation of Fish Hatcheries as Sources of PCBs to the Spokane River*, published in April 2018 (Publication No. 18-03-014). The study involved monitoring for PCBs at a variety of locations in a variety of mediums over time at the Spokane Hatchery (a Washington Department of Fish and Wildlife facility located on the Little Spokane River) and a private hatchery near Soap Lake, neither of which are covered by this permit. The study results identified PCBs in hatchery discharge water and in sediments in the drainage slough of one of the facilities. The study results also showed the presence of PCBs in hatchery fish tissue, but showed even greater continued uptake of PCBs by hatchery fish a number of months following release to the Spokane River system through food web bioaccumulation. Overall, the study recommended continued identification, tracking and monitoring of PCB sources to the Spokane River, but called for a more robust sampling study design than would be reasonable to require as a condition in this permit: "To specifically identify and quantify PCB sources to the hatchery, a mass balance study accounting for all inputs and outputs is recommended."

Based on the low levels of PCBs present in fish feed, and the potential for other sources of PCBs such as exposed paints and caulks, it is likely that PCBs will be present in low levels in hatchery effluent and in hatchery fish. PCB monitoring of effluent is not likely to provide meaningful information about the source of PCBs in a facility, or whether the presence of PCBs is due to facility influent, without more detailed information. Accordingly, the PCB monitoring requirements for facilities in the Spokane watershed have been discontinued in the General Permit, and requirements instead focus on BMPs related to PCB source identification, minimization and removal. Permit conditions related to PCBs are focused on feed best management practices and on qualitative source identification (i.e., pre-1980 paints and caulks) and removal requirements, which EPA expects will be effective in minimizing PCB discharges. Since there are some PCB listings in waterbodies across the rest of Washington, and since more listings may come during the permit term, EPA applied these best management practices to all facilities within WRIA 54 (Lower Spokane) and WRIA 57 (Middle Spokane) and to facilities discharging within 1 mile upstream of waters impaired for PCBs. Discussion of these best management practices can be found in Part V.D of this Fact Sheet and in Part VI.B.4.a.v.m of the General Permit.

Summary of Monitoring Requirements for Effluent Discharges from CAAP Facilities

Table 16 includes the monitoring requirements applicable to CAAP facility discharges.

Table 16. Monitoring Requirements for CAAP Facility Discharges[1]

Parameter	**Units**	**Sample Frequency**	**Sample Type**	**Sample Location**
Effluent Flow[2]	Gallons per Day	Monthly[3]	Flow meter, calibrated weir, or other approved method	Effluent[3, 4]
Net Total Suspended Solids (TSS)[2, 5]	mg/L	Quarterly[3]	Composite[6]	Influent & Effluent[3]
Net Settleable Solids[2, 5]	mL/L	Quarterly[3]	Grab	Influent & Effluent[3]
Total Residual Chlorine[7] – into fresh water	µg/L	Monthly[3]	Grab	Effluent[3]
Total Residual Chlorine[7] – into marine water	µg/L	Monthly[3]	Grab	Effluent[3]

Parameter	Units	Sample Frequency	Sample Type	Sample Location
Temperature[8] (temperature impaired receiving waters only)	°C	Continuous (2 Years)	Meter	Upstream and Effluent[3]
Nutrient Parameters[9, 10] (DO impaired receiving waters only)	[9]	Annually	Composite[6]	Effluent[3]

Footnotes:
1 - These monitoring requirements do not apply to discharges from raceways or rearing pond systems during drawdown; monitoring requirements for which are included in Table 18. Note, additional monitoring requirements applicable to discharges from OLSBs are included in Table 17.
2 - All influent and effluent samples and flow measurements must be taken on the same day.
3 - Effluent samples must be collected from the effluent stream after the last unit prior to discharge into the receiving waters or to subsequent mixing with other water flows. If OLSB effluent combines with raceway flows, at least one quarter of the grab samples that go into a composite sample must be collected when the OLSB is discharging.
4 - If the facility is operating in a steady state (no drawdown nor filling up), the flow may be monitored at the influent or the effluent.
5 - Net concentration = effluent concentration – influent concentration. Net TSS and settleable solids determinations will require influent analysis in addition to effluent analysis unless the Permittee chooses to assume that the pollutant concentration in the influent is zero. Influent samples must be collected prior to collection of effluent samples; and net TSS and settleable solids will be determined by subtracting the influent concentrations from the effluent concentrations: see Appendix C of the General Permit. EPA may require additional sampling to prove substantial similarity between influent and effluent solids, where indicated.
6 - Composite samples must consist of four or more discrete samples taken at one-half hour intervals or greater over a 24-hour period; for facilities that clean raceways periodically, at least one fourth of the samples must be taken during quiescent zone or raceway cleaning. Facilities with multiple effluent discharge points and/or influent points must composite samples from all points proportionally to their respective flows. Only the composite sample must be analyzed.
7 - Chlorine monitoring requirements only apply when chlorine or Chloramine-T is being used. Monitoring for chlorine must be conducted during each calendar month if chlorine or Chloramine-T is used at any time during the month, but sampling does not need to occur more than once per month. Chlorine monitoring is not required if chlorine is allowed to dry at the location of use.
8 - Monitoring requirements apply only to certain facilities that discharge to waters impaired for temperature (see Part V.C of the General Permit). The Permittee may use representative

Parameter	Units	Sample Frequency	Sample Type	Sample Location
upstream receiving water data from an existing third-party gauge (e.g., United States Geological Survey [USGS]), if available, to satisfy the upstream receiving water monitoring requirement. 9 - Monitoring requirements apply only to certain facilities that discharge to waters impaired for dissolved oxygen (see Part V.C of the General Permit). 10 - Nutrient parameter monitoring includes the following parameters and sample units: Phosphorous, Total (as P) (µg/L); Total Kjeldahl Nitrogen (mg/L); Nitrate + Nitrite Nitrogen (as N) (µg/L); and BOD_5 (mg/L).11 - Nutrient monitoring must be conducted once per year within 1 month prior to anticipated peak biomass. Reporting of nutrient monitoring results is only required once per year on or before January 20th.				

2. Discharges from OLSBs at CAAP Facilities

   TSS and Settleable Solids

   In order to assess compliance with established effluent limits, the previous general permit included monthly monitoring for TSS and settleable solids when discharging from OLSBs. This requirement is unchanged from the previous permit.

   Ammonia

   Washington's ammonia standard is pH- and temperature-dependent. Thus, in order to assess reasonable potential for this permit term, the previous general permit required quarterly ammonia and corresponding pH and temperature monitoring for OLSB effluent and upstream receiving water. Data collected over the previous permit term for the four facilities with OLSBs that discharge directly to surface waters (Quilcene National Fish Hatchery, Entiat National Fish Hatchery, Klickitat Salmon Hatchery, and Little White Salmon National Fish Hatchery) was used to assess reasonable potential for discharges from OLSBs to exceed water quality standards in the receiving water, based on the Washington freshwater ammonia criteria. The reasonable potential analyses indicated that none of the four aquaculture facilities with OLSBs have the reasonable potential to exceed Washington water quality standards for ammonia (See Appendix C of this Fact Sheet).

   As such, effluent and receiving water monitoring for ammonia, pH, and temperature from OLSBs has been discontinued in this General Permit.

   Summary of Additional Monitoring Requirements for Effluent Discharges from OLSBs at CAAP Facilities

   Table 17 includes the monitoring requirements applicable to CAAP facility discharges from OLSBs. These monitoring requirements apply <u>in addition to</u> those outlined in Table 16 above.

Table 17. Monitoring Requirements for CAAP Facility Discharges from OLSBs[1]

Parameter	Units	Sample Frequency	Sample Type	Sample Location
Effluent Flow[2]	Gallons per Day	Monthly	Flow meter, calibrated weir, or other approved method	Effluent[3]
Total Suspended Solids (TSS)	mg/L	Monthly	Grab[4]	Effluent[3]
Settleable Solids	mL/L	Monthly	Grab[4]	Effluent[3]

Footnotes:
1 - Monitoring requirements apply only to OLSB effluents that discharge directly to waters of the United States. If the discharge combines with other process wastewaters, these additional OLSB monitoring requirements do not apply.
2 - All effluent samples and flow measurements must be taken on the same day.
3 - Effluent samples must be collected from the effluent stream after the last unit prior to discharge into the receiving waters.
4 - Facilities with multiple effluent discharge points must composite grab samples from all points proportionally to their respective flows. Only the composite sample must be analyzed.

3. Discharges from Raceways or Rearing Ponds during Drawdown for Fish Release at CAAP Facilities

   TSS and Settleable Solids

   In order to assess compliance with established effluent limits, the previous general permit included once per drawdown monitoring for TSS and settleable solids when discharging from raceways or rearing ponds during drawdown for fish release. This requirement is unchanged from the previous permit.

   Total Residual Chlorine

   In order to assess compliance with established effluent limits, the previous general permit included once per drawdown monitoring for total residual chlorine when discharging from raceways or rearing ponds during drawdown for fish release. This requirement is unchanged from the previous permit.

   Summary of Monitoring Requirements for Effluent Discharges from Raceways or Rearing Ponds during Drawdown for Fish Release at CAAP facilities

   Table 18 includes the monitoring requirements applicable to CAAP facility discharges from raceways or rearing ponds during drawdown for fish release.

Table 18. Monitoring Requirements for CAAP Facility Discharges from Raceways or Rearing Ponds during Drawdown for Fish Release

Parameter	Units	Sample Frequency	Sample Type	Sample Location
Total Suspended Solids (TSS)	mg/L	Once per Drawdown	Grab[1]	Effluent
Settleable Solids	mL/L	Once per Drawdown	Grab[1]	Effluent
Total Residual Chlorine[2] – into fresh water	µg/L	Once per Drawdown	Grab[1]	Effluent
Total Residual Chlorine[2] – into marine water	µg/L	Once per Drawdown	Grab[1]	Effluent

Footnotes:
1 - Drawdown samples must be collected during the last quarter of each drawdown event. If the drawdown is a continuous event that involves more than one rearing pond or raceway discharging directly to waters of the United States, the Permittee may composite grab samples from each rearing pond or raceway proportionally to their respective flows, each taken in the last quarter of its drawdown; the combined sample may be analyzed instead of separately analyzing grab samples from each of the rearing ponds or raceways. If the discharge is to a settling pond, the facility must estimate when the final quarter of the discharge is being released to the settling pond, delay the monitoring by the residence time calculated for the pond, and then monitor as the effluent discharges from the pond to the receiving water. If multiple drawdown events are sequential or on different days, a separate grab sample must be analyzed for each event.
2 - Chlorine monitoring requirements only apply when chlorine or Chloramine-T is being used. Chlorine monitoring is not required if chlorine is allowed to dry at the location of use.

4. Discharges of Rearing Vessel Disinfection Water

Total Residual Chlorine

In order to assess compliance with established effluent limits, the previous general permit included once per discharge monitoring for total residual chlorine when discharging rearing vessel disinfection water. This requirement is unchanged from the previous permit.

Table 19 includes the monitoring requirements applicable to CAAP facility discharges of rearing vessel disinfection water. This monitoring only applies to the use of chlorine for disinfection purposes and does not apply to the use of Chloramine-T.

Table 19. Monitoring Requirements for CAAP Facility Rearing Vessel Disinfection Water

Parameter	Units	Sample Frequency	Sample Type	Sample Location
Total Residual Chlorine[1] – into fresh water	µg/L	Once per Discharge	Grab	Effluent
Total Residual Chlorine[1] – into marine water	µg/L	Once per Discharge	Grab	Effluent
Footnotes: 1 - Monitoring requirements apply when rearing vessels are disinfected with chlorine. Chlorine monitoring is not required if rearing vessels are allowed to dry completely and there is no discharge of chlorine.				

E. Monitoring Requirements Applicable to Non-CAAP Facilities Only [Non-CAAP Facilities Only]

Separate monitoring requirements have been incorporated into the General Permit for non-CAAP facilities. Non-CAAP facilities are required to comply with the same monitoring requirements for flow, total residual chlorine, and temperature (for facilities discharging to waters impaired for temperature) established for CAAP facilities (See Part VI.D.1 above). Discharges from non-CAAP facilities, however, do not have effluent limits for TSS and settleable solids in the General Permit; they have action thresholds meant to assess the effectiveness of BMPs. Accordingly, the minimum annual monitoring frequency required for parameters with effluent limits does not apply to non-CAAP facilities. EPA has established a lower tier of monitoring requirements for non-CAAP facilities that requires non-CAAP facilities to monitor twice per permit term for TSS and settleable solids, when the facility is near peak biomass. These requirements are sufficient to assess the effectiveness of BMPs and the impact of the discharge on the receiving water.

The General Permit includes an action threshold for eugenol, the active ingredient in Aqui-S20E, which is used as a fish anesthetic in fish passage facilities. Since approved analytical methods for eugenol are not available, in lieu of monitoring, the General Permit requires Permittees to calculate their Environmental Introduction Concentration (EIC) once per day when discharges of water treated with Aqui-S20E occurs. The Permittee must compare the calculated EIC with the action threshold to determine if corrective actions and/or updates to the BMP Plan are necessary to reduce the effluent concentrations below the threshold. The calculated EIC should be derived in accordance with the procedures in the Treatment Use Reporting Log Sheet in Appendix F. The Permittee is required to document and maintain records of Aqui-S20E use, including the calculated EIC for eugenol, in the Treatment Use Reporting Log Sheet, as required by Part VII.B.1.d.

1. Discharges of Effluent from Non-CAAP Facilities

Summary of Monitoring Requirements for Effluent Discharges from non-CAAP Facilities

Table 20 includes the monitoring requirements applicable to non-CAAP facility discharges.

Table 20. Monitoring Requirements for Non-CAAP Facility Discharges[1]

Parameter	**Units**	**Sample Frequency**	**Sample Type**	**Sample Location**
Effluent Flow[2]	Gallons per Day	Monthly	Flow meter, calibrated weir, or other approved method	Effluent[3, 4]
Net Total Suspended Solids (TSS)[2, 5]	mg/L	Twice per Permit Term[6]	Composite[7]	Influent & Effluent[3]
Net Settleable Solids[2, 5]	mL/L	Twice per Permit Term[6]	Grab	Influent & Effluent[3]
Total Residual Chlorine[8] – into fresh water	µg/L	Monthly	Grab	Effluent[3]
Total Residual Chlorine[8] – into marine water	µg/l	Monthly	Grab	Effluent[3]
Eugenol[9] (fish passage facilities only)	mg/L	Daily	Calculate[10]	Effluent
Temperature[11] (temperature impaired receiving waters only)	°C	Continuous (2 Years)	Meter	Upstream and Effluent[3]

Footnotes:
1 - These monitoring requirements do not apply to discharges from raceways or rearing pond systems during drawdown; monitoring requirements for which are included in Table 22. Note, additional monitoring requirements applicable to discharges from OLSBs are included in Table 21.
2 - All influent and effluent samples and flow measurements must be taken on the same day.
3 - Effluent samples must be collected from the effluent stream after the last unit prior to discharge into the receiving waters or to subsequent mixing with other water flows. If OLSB effluent combines with raceway flows, at least one quarter of the grab samples that go into a composite sample must be collected when the OLSB is discharging.

Parameter	Units	Sample Frequency	Sample Type	Sample Location
4 - If the facility is operating in a steady state (no drawdown nor filling up), the flow may be monitored at the influent or the effluent. 5 - Net concentration = effluent concentration – influent concentration. Net TSS and settleable solids determinations will require influent analysis in addition to effluent analysis unless the Permittee chooses to assume that the pollutant concentration in the influent is zero. Influent samples must be collected prior to collection of effluent samples; and net TSS and settleable solids will be determined by subtracting the influent concentrations from the effluent concentrations: see Appendix C of the General Permit. EPA may require additional sampling to prove substantial similarity between influent and effluent solids, where indicated. 6 - Monitoring shall be conducted twice within the first four years of permit coverage, when the facility is near peak biomass. Results shall be reported in the corresponding Annual Reports. 7 - Composite samples must consist of four or more discrete samples taken at one-half hour intervals or greater over a 24-hour period; for facilities that clean raceways periodically, at least one fourth of the samples must be taken during quiescent zone or raceway cleaning. Facilities with multiple effluent discharge points and/or influent points must composite samples from all points proportionally to their respective flows. Only the composite sample must be analyzed. 8 - Chlorine monitoring requirements only apply when chlorine or Chloramine-T is being used. Monitoring for chlorine must be conducted during each calendar month if chlorine or Chloramine-T are used at any time during the month, but sampling does not need to occur more than once per month. Chlorine monitoring is not required if chlorine is allowed to dry at the location of use. 9 - The eugenol monitoring requirements apply only to fish passage facilities. 10 - The Environmental Introduction Concentration (EIC) shall be calculated on each day that water treated with Aqui-S20E is discharged to waters of the United States. The EIC should be calculated following the procedures in the Treatment Use Reporting Log Sheet in Appendix F. 11 - Monitoring requirements apply only to certain facilities that discharge to waters impaired for temperature (see Part V.C of the General Permit). The Permittee may use representative upstream receiving water data from an existing third-party gauge (e.g., USGS), if available, to satisfy the upstream receiving water monitoring requirement. These requirements do not apply to discharges to waters impaired for temperature from fish passage facilities.				

2. Discharges from OLSBs at non-CAAP Facilities

   Summary of Additional Monitoring Requirements for Effluent Discharges from OLSBs at non-CAAP Facilities

   Table 21 includes the monitoring requirements applicable to non-CAAP facility discharges from OLSBs. These monitoring requirements apply in addition to those outlined in Table 20 above.

Table 21. Monitoring Requirements for Non-CAAP Facility Discharges from OLSBs[1]

Parameter	Units	Sample Frequency	Sample Type	Sample Location
Effluent Flow[2]	Gallons per Day	Monthly	Flow meter, calibrated weir, or other approved method	Effluent[3]
Total Suspended Solids (TSS)	mg/L	Twice per Permit Term[4]	Grab[5]	Effluent[3]
Settleable Solids	mL/L	Twice per Permit Term[4]	Grab[5]	Effluent[3]

Footnotes:
1 - Monitoring requirements apply only to OLSB effluents that discharge directly to waters of the United States. If the discharge combines with other process wastewaters, these additional OLSB monitoring requirements do not apply.
2 - All effluent samples and flow measurements must be taken on the same day.
3 - Effluent samples must be collected from the effluent stream after the last unit prior to discharge into the receiving waters.
4 - Monitoring shall be conducted twice within the first four years of permit coverage, when the facility is near peak biomass. Results shall be reported in the corresponding Annual Reports.
5 - Facilities with multiple effluent discharge points must composite grab samples from all points proportionally to their respective flows. Only the composite sample must be analyzed.

3. Discharges from Raceways or Rearing Ponds during Drawdown for Fish Release at non-CAAP Facilities

   Monitoring Not Required for Research Facilities

   [Enhancement and/or Production Facilities Only] For enhancement and/or production facilities, monitoring of raceway and rearing pond discharges during drawdown for fish release must be conducted, as required in Table 22, regardless of amount of fish in the facility. This monitoring is not required for research facilities during drawdown from small research tanks.

   Table 22 includes the monitoring requirements applicable to non-CAAP enhancement and/or production facility discharges from raceways or rearing ponds during drawdown for fish release.

Table 22. Monitoring Requirements for Non-CAAP Enhancement/Production Facility Discharges from Raceways or Rearing Ponds during Drawdown for Fish Release

Parameter	Units	Sample Frequency	Sample Type	Sample Location
Total Suspended Solids (TSS)	mg/L	Once per Drawdown	Grab[1]	Effluent

Parameter	Units	Sample Frequency	Sample Type	Sample Location
Settleable Solids	mL/L	Once per Drawdown	Grab[1]	Effluent
Total Residual Chlorine[2] – into fresh water	µg/L	Once per Drawdown	Grab[1]	Effluent
Total Residual Chlorine[2] – into marine water	µg/L	Once per Drawdown	Grab[1]	Effluent
Footnotes: 1 - Drawdown samples must be collected during the last quarter of each drawdown event. If the drawdown is a continuous event that involves more than one rearing pond or raceway discharging directly to waters of the United States, the Permittee may composite grab samples from each rearing pond or raceway proportionally to their respective flows, each taken in the last quarter of its drawdown; the combined sample may be analyzed instead of separately analyzing grab samples from each of the rearing ponds or raceways. If the discharge is to a settling pond, the facility must estimate when the final quarter of the discharge is being released to the settling pond, delay the monitoring by the residence time calculated for the pond, and then monitor as the effluent discharges from the pond to the receiving water. If multiple drawdown events are sequential or on different days, a separate grab sample must be analyzed for each event. 2 - Chlorine monitoring requirements only apply when chlorine or Chloramine-T is being used. Chlorine monitoring is not required if chlorine is allowed to dry at the location of use.				

4. Discharges of Rearing Vessel Disinfection Water

   Table 23 includes the monitoring requirements applicable to non-CAAP facility discharges of rearing vessel disinfection water. This monitoring only applies to the use of chlorine for disinfection purposes and does not apply to the use of Chloramine-T.

Table 23. Monitoring Requirements for Non-CAAP Facility Rearing Vessel Disinfection Water

Parameter	Units	Sample Frequency	Sample Type	Sample Location
Total Residual Chlorine[1] – into fresh water	µg/L	Once per Discharge	Grab	Effluent
Total Residual Chlorine[1] – into marine water	µg/l	Once per Discharge	Grab	Effluent
Footnotes:				

Parameter	Units	Sample Frequency	Sample Type	Sample Location
1 - Monitoring requirements apply when rearing vessels are disinfected with chlorine. Chlorine monitoring is not required if rearing vessels are allowed to dry completely and there is no discharge of chlorine.				

F. Surface Water Monitoring

In general, surface water monitoring may be required for pollutants of concern to assess the assimilative capacity of the receiving water for the pollutant. In addition, surface water monitoring may be required for pollutants for which the water quality criteria are dependent and to collect data for TMDL development if the facility discharges to an impaired water body.

The previous general permit required quarterly upstream receiving water monitoring for ammonia at facilities discharging from OLSBs. Because Washington's ammonia standard is pH- and temperature-dependent, quarterly upstream monitoring was also required for pH and temperature. Data collected over the previous permit term indicated that none of the facilities with OLSBs have reasonable potential for ammonia, so receiving water monitoring for pH, temperature, and ammonia has been discontinued in the General Permit.

The previous general permit required two years of continuous temperature monitoring in the upstream receiving water at facilities discharging to temperature-impaired waters. As discussed above, monitoring for Quilcene National Fish Hatchery and the House of Salmon – Lower Elwha Fish Hatchery was completed in the previous permit term and the facility discharges were determined to not impact the temperature in the receiving water, so receiving water monitoring for temperature at these two facilities has been discontinued in the General Permit.

As discussed in more detail above (Fact Sheet Part VI.D.1.), two years of continuous receiving water temperature monitoring is required for discharges from other facilities covered under the General Permit that discharge to temperature impaired waters.

G. Electronic Submission of Discharge Monitoring Reports

[CAAP Facilities] The General Permit requires CAAP facilities to submit DMR data electronically using NetDMR on quarterly basis. Monitoring data collected on a monthly basis or conditionally (i.e., once per drawdown and once per discharge), is, likewise, only required to be entered into NetDMR on a quarterly basis. NetDMR is a national web-based tool that allows DMR data to be submitted electronically via a secure Internet application.

EPA currently conducts free training on the use of NetDMR. Further information about NetDMR, including upcoming trainings and contacts, is provided on the following website: https://netdmr.epa.gov. The Permittee may use NetDMR after requesting and receiving permission from EPA Region 10.

[Non-CAAP Facilities] The General Permit requires non-CAAP facilities to submit DMR data electronically via email, in accordance with Part VIII.B. of the General Permit, on an annual basis when monitoring has taken place that year.

H. Annual Reporting

All Permittees are required to submit an Annual Report that describes the previous year's production, feed rates, use of aquaculture drugs and chemicals, and the facility's efforts to adhere to the required operating practices. Non-CAAP facilities are required to submit their monitoring data and any other required reports with their Annual Report. The information required for the Annual Report is included in Appendix G of the permit. EPA has made slight adjustments to the annual reporting requirements (See Appendix G of the permit), and the submittal of annual reports is via NetDMR (CAAP Facilities) or via email (Non-CAAP Facilities). Permittees are not required to use EPA's fillable annual report form, but submittals will be deemed incomplete if any of the required information is missing.

I. Other Reporting

Based on the reporting requirements at 40 CFR §451.3, all Permittees are required to report certain events to EPA before or when they happen, including the use of an Investigational New Animal Drug (INAD) or the extra-label use of an aquaculture drug, failures in containment systems that result in unanticipated releases of pollutants, and spills of drugs and pesticides that result in their release to receiving waters. EPA has clarified the reporting requirements for INAD and extra-label drug use (See Part VII.B. of the General Permit, and Chapter 6 of the EPA *Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category* at https://www.epa.gov/sites/production/files/2015-11/documents/caap-aquaculture_compliance-guide_2006.pdf).

VII. Special Conditions

A. Quality Assurance Plan (QAP)

Within 90 days after receiving authorization to discharge under the General Permit, new Permittees must submit written notice to EPA that the QAP has been developed and implemented. Within 90 days after receiving authorization to discharge under the General Permit, existing Permittees must submit written notice to EPA that the QAP has been reviewed and updated and is being implemented. The QAP must consist of standard operating procedures the Permittee must follow for collecting, handling, storing and shipping samples, laboratory analysis, and data reporting. The plan must be retained on site and made available to EPA upon request.

In order to minimize the administrative burden for facilities and to facilitate comprehensive QAP development for all Permittees, EPA has included a QAP template as an attachment to the General Permit. Permittees are not required to use the template when developing QAPs and should be sure to consider and document all relevant procedures applicable to the individual facility. The Permittee must either certify in the eNOI form that the QAP has been developed/updated and is being implemented or sign the QAP certification form found in Appendix D of the General Permit and include it as an electronic attachment to their DMR (CAAP Facilities) or submit it via email (non-CAAP facilities) in accordance with Section VIII.B. of the General Permit.

B. Best Management Practices (BMP) Plan

Within 90 days after receiving authorization to discharge under the General Permit, new Permittees must certify to EPA that the BMP Plan has been developed and implemented.

Within 90 days after receiving authorization to discharge under the General Permit, existing Permittees must certify to EPA that the BMP Plan has been reviewed and updated and is being implemented. The plan must be retained on site and made available to EPA upon request.

In order to minimize the administrative burden to Permittees and to facilitate comprehensive BMP Plan development for all Permittees, EPA has included a BMP Plan template as an attachment to the General Permit. Permittees are not required to use the template when developing BMP Plans and should be sure to include all relevant management practices applicable the individual facility. The Permittee must either certify in the eNOI form that the BMP Plan has been developed/updated and is being implemented or sign the BMP certification form found in Appendix E of the General Permit and include it as an electronic attachment to their DMR (CAAP Facilities) or submit it via email (non-CAAP facilities) in accordance with Section VIII.B. of the General Permit.

C. Aquatic Animal Escape Planning for Research and Production Facilities

1. **[Research and Production Facilities Only]** Permittees engaged in research and production of aquatic animals (i.e., not enhancement facilities that intentionally release aquatic animals) must have a plan in place to prevent escape of aquatic animals and to react in the event of escape. The plan must be developed within 180 days of the effective date of this permit, kept onsite and made available to EPA upon request. The plan must include the following:

    a) Routine procedures to minimize escape during day-to-day operations;
    b) Procedures to minimize escape during cleaning, repair, or other maintenance;
    c) Training procedures on escape prevention for employees;
    d) Procedures for reporting aquatic animal escape within 24 hours of knowledge of escape in accordance with Part VI.C of this permit;
    e) Procedures to recapture escaped aquatic animals;
    f) Procedures to minimize the number of escaped aquatic animals; and
    g) Procedures for monitoring aquatic animal mortality, predation, and escape.

This requirement is included to ensure that species that are not intended for release are prevented from escaping their facility. Species that are intentionally released from enhancement facilities are generally considered in Hatchery Genetic Management Plans (HGMPs), Future Brood documents, or other such documents which describe the genetic impact and appropriate scope of enhancement operations. The impact of fish escapes for species which are not intended for release can in some cases be harmful. It is therefore important that plans are in place to prevent escapes, and to react in the event of escapes. The Fish Escape Planning Requirement is based off of WAC 220-370-110 and WAC 220-370-120, which is applicable to marine net pen facilities, and is applied in this permit using professional judgement to protect endangered species and critical habitats in Washington State.

D. Compliance Schedules

Compliance schedules are authorized by federal NPDES regulations at 40 CFR §122.47. Compliance schedules allow a discharger to phase in, over time, compliance with water

quality-based effluent limitations when limitations are in the permit for the first time. The water quality based effluent limit for Skookum Creek Fish Hatchery is a net limit as described in more detail in section V.G., meaning compliance with the limit depends on whether the hatchery can either keep their effluent below the water quality standard, or avoid impacts greater than 0.3°C relative to the facility influent when the influent is already above the water quality standard (minus 0.3°C). Continuous influent and effluent temperature data gathered by the permittee from July through November 2017 demonstrates that the facility is currently not able to meet their net temperature limits. There are instances where the facility raises influent temperatures by 0.6°C, well above the alloted 0.3°C. Accordingly, EPA has found that a compliance schedule is appropriate for effluent temperature in discharges from Skookum Creek Fish Hatchery because the facility cannot immediately comply with the new effluent limit on the effective date of the permit. Refer to Section 9.1.3 Compliance Schedules in the Permit Writers Manual.

The General Permit includes a 10-year compliance schedule to allow Skookum Creek Fish Hatchery time to assess operations in order to comply with the new permit limits for temperature, included based on the 2020 *South Fork Nooksack River Temperature Total Maximum Daily Load: Water Quality Improvement Report and Implementation Plan*. Skookum Creek Fish Hatchery is required to complete the tasks and reports described below:

No later than December 31, 2024: complete an alternatives evaluation of methods the Permittee may use to achieve the final effluent limits in Table 13 of the General Permit. The alternatives evaluation should consider facility improvements, shading, re-use of effluent, and possible trading mechanisms such as offsite mitigation, including wetland and habitat restoration. Starting in 2022 and continuing through 2024, the Permittee must include an attachment to its Annual Report to EPA that details the evaluation of each available option.

No later than December 31, 2026: provide a preliminary schedule of design upgrades and/or a preliminary construction schedule that will be used to achieve compliance with the final limits. By December 31 of each year thereafter, the Permittee must include information in its Annual Report to EPA which details the progress made toward achieving the final effluent limitations, and the series of actions that will be taken in the coming year.

No later than 10 years from the effective date of the permit: the Permittee must be in compliance with the final effluent limits for temperature. The Permittee must notify EPA in writing when the final effluent limits are achieved.

VIII. Environmental Justice Considerations

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, directs each federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities.” EPA strives to enhance the ability of overburdened communities to participate fully and meaningfully in the permitting process for EPA-issued permits, including NPDES permits. “Overburdened” communities can include minority, low-income, tribal, and indigenous populations or communities that potentially experience disproportionate environmental harms and risks. As part of an agency-wide effort, EPA Region 10 has considered implementing enhanced public involvement opportunities for EPA-issued permits where facilities’ discharge to waters in overburdened communities. For more information, please visit

https://www.epa.gov/environmentaljustice and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*.

As part of the permit development process, EPA Region 10 conducted a screening analysis to determine whether this permit action could affect overburdened communities. "Overburdened" communities can include minority, low-income, tribal, and indigenous populations or communities that potentially experience disproportionate environmental harms and risks. EPA used a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify permits for which enhanced outreach may be warranted.

The EJScreen tool was used to determine if each facility was discharging into an overburdened community. An overburdened community was defined to have at least one EJ Index equal or exceed the 80th percentile at the national level. Eight of the 33 facilities currently covered by the previous administratively continued general permit exceeded the 80th percentile, indicating that they are located within or near a Census block group that is potentially overburdened. Most of these facilities are located on tribal reservations.

Region 10 Environmental Justice and NPDES permits staff conducted a more in-depth review of those facilities, including such factors as fishing/shellfish/subsistence activities nearby, proximity to overly burdened communities, and whether the facility poses a threat to public health. In short, EPA does not believe that these hatcheries present an environmental justice concern. WAG130000 facilities tend to be located in fairly remote areas, and far enough from neighboring communities that they would not pose a health threat. Hatcheries are not considered to be sources of pathogens that threaten human health. All therapeutic drugs and chemicals must be applied according to label instructions, or with permission of an INAD or veterinarian prescription. The facilities covered by this permit are not commercial enterprises; they are research facilities and mitigation hatcheries aiming to recover endangered or threatened salmonids, or to supplement fish stocks so that tribal members and others can carry out fishing and subsistence activities. For tribal communities, the hatcheries covered by this permit are largely considered to provide an environmental justice service to overburdened communities because they supply them with a healthy and high protein food source that is culturally significant.

Because EPA's screening assessments may not have identified specific environmental justice or equity concerns, the agency specifically requests input from affected communities on whether and how there are relevant concerns about the discharges being authorized under this permit.

Regardless of whether a facility is located near a potentially overburdened community, EPA encourages Permittees to review (and to consider adopting, where appropriate) Promising Practices for Permit Applicants Seeking EPA-Issued Permits: Ways To Engage Neighboring Communities (see https://www.federalregister.gov/d/2013-10945). Examples of promising practices include: thinking ahead about community's characteristics and the effects of the permit on the community, engaging the right community leaders, providing progress or status reports, inviting members of the community for tours of the facility, providing informational materials translated into different languages, setting up a hotline for community members to voice concerns or request information, follow up, etc.

For more information, please visit https://www.epa.gov/environmentaljustice and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*.

IX. Tribal Coordination and Consultation

The majority of the facilities covered by this General Permit are located in Indian Country and many are owned and/or operated by tribal governments. Accordingly, EPA made every effort to engage interested tribes in the permitting process. EPA NPDES permitting staff spoke with every current Permittee and many potential Permittees about their respective operations, and solicited feedback on the permit during those conversations. On March 24, 2021 EPA hosted a 3-hour webinar with the Northwest Indian Fisheries Commission to discuss proposed permit conditions and solicit feedback from the tribes. 36 people attended the meeting, including facility personnel from small tribal facilities considering coverage under the General Permit. The meetings provided an overview of permit conditions in the previous permit and discussion about conditions to incorporate into the General Permit, which was under development at that time, to reflect the operations at facilities anticipated to be covered. On April 21, 2021 EPA hosed a similar 30-minute meeting with the Eastern Washington tribes. Five people attended this meeting. EPA considered the feedback received from both meetings when developing the General Permit. On June 2, 2021, EPA met again with tribal representatives to discuss proposed permit conditions. As the general permit was sent to the state and tribes for preliminary draft state and tribal review, EPA engaged in a 3-hour meeting with Washington tribes on May 10, 2022. The goal of the meeting was for EPA to explain the conditions in the pre-draft permit and answer questions to inform comments that may be submitted.

During permit development, NPDES permitting staff followed EPA Region 10 Tribal Consultation and Coordination Procedures, available online at https://www.epa.gov/sites/production/files/2013-08/documents/cons-and-coord-with-indian-tribes-policy.pdf. In addition, at the beginning of the public comment period, EPA invited all of the federally recognized tribes in Washington to engage in government-to-government consultation.

X. Other Legal Requirements

A. National Environmental Policy Act (NEPA)

At 42 U.S.C. §4322, NEPA requires federal agencies to conduct an environmental review of their actions (including permitting activity) that may significantly affect the quality of the human environment. Pursuant to Section 511(c) of the CWA, EPA must comply with the procedural provisions of NEPA prior to issuance NPDES permit coverage to a *new source.* See Section II.A of the fact sheet.

EPA will prepare an appropriate NEPA document and comply with the procedural provisions of NEPA outlined in 40 CFR Part 6 prior to authorizing the discharge of pollutants from any new source facility under the reissued GP.

B. Endangered Species Act

The Endangered Species Act requires federal agencies to consult with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) – referred to collectively as "the Services" – if their actions could beneficially or adversely affect any threatened or endangered species.

EPA worked closely with the Services during the 2016 reissuance process to develop a very comprehensive BE, involving detailed original risk assessment analysis for aquaculture drugs and chemicals expected to be discharged to receiving waters, for which water quality criteria do not exist. This BE is available at: https://www.epa.gov/npdes-permits/npdes-general-permit-federal-aquaculture-facilities-and-aquaculture-facilities-located.

For the 2016 BE, a list was developed of drugs and chemicals that were a) used with some frequency at the facilities covered by the previous general permit, and b) that have the potential to be released to receiving waters where threatened and endangered species are present. These drugs and chemicals are:

- Chloramine-T
- Chlorine
- Formalin
- Hydrogen peroxide
- Potassium permanganate
- Povidone-iodine
- Sodium chloride

For each drug or chemical, EPA compared the estimated environmental concentration (i.e., the calculated concentration of a chemical in a receiving body of water after its release from a hatchery) with either the measured or calculated chronic (long-term) no effect concentration (NOEC) for a threatened or endangered species. In general, the chemicals released to surface waters by Washington hatcheries are disinfectants or prescribed treatments for controlling bacterial pathogens with short residence times in the environment, and are unlikely to bioaccumulate into aquatic species serving as prey for any avian or mammalian species.

After extensive risk assessment work, EPA determined that each of these drugs and chemicals are not likely to adversely affect (NLAA) threatened and endangered species or their critical habitat in the action area. Following the Biological Evaluation, a follow up study was conducted on formalin use at hatcheries, which confirmed that formalin was not likely to adversely affect endangered species. Results of the study were published in the 2017 Water Sampling and Testing for Formaldehyde at Northwest Fish Hatcheries final report, available on EPA Region 10's website at: https://www.epa.gov/npdes-permits/npdes-general-permit-federal-aquaculture-facilities-and-aquaculture-facilities-located. Based on data collected at the hatcheries that participated in this study, as well as the available toxicological data for threatened and endangered salmonids and an EPA risk assessment for formalin in Washington hatcheries, EPA confirmed that current levels of formalin use are generally protective of aquatic life and ESA listed salmonids in Pacific Northwest waters.

For the current reissuance of the General Permit, EPA coordinated early with the Services and conveyed its conclusion that the 2016 BE still largely reflects the best available

information related to the impacts of these drugs and chemicals on threatened and endangered species. However, given that there are some changes to the scope and structure of this General Permit (as summarized in Part I.E, Table 1 of this Fact Sheet), it was mutually agreed upon that EPA would reinitiate consultation with the Services, focused on the added scope and structure of the General Permit as it relates to new potential threats to threatened and endangered species.

One change in scope is that the reissued General Permit has a lower tier for smaller facilities, with action thresholds and monitoring requirements scaled to the water quality risks associated with facilities below the CAAP threshold. These lower tier requirements provide the same level of protection as the higher tier, and small facilities are not brand new to this permit in that they were eligible for coverage under the previous general permit, but they are nonetheless a consideration in the reinitiated consultation.

Further, EPA has extended coverage to the use of anesthetics for fish passage facilities at dam fish passage facilities – specifically Aqui-S20E, with the active ingredient of eugenol. The use of these fish anesthetics is also not brand new in that facilities were allowed to use it under the previous general permit, but the use of these fish anesthetics is nonetheless a consideration in the reinitiated consultation.

EPA has also broadened the permit to provide coverage to facilities growing any aquatic animal as opposed to only providing coverage to facilities growing cold-water finfish. There are other legal frameworks that dictate the movement of aquatic animals between watersheds, such as fish stocking and transport permits through the Washington Department of Fish and Wildlife, and water quality risks are not expected to change resulting from this shift, but nonetheless this is a change that will be considered in the reinitiated consultation.

An additional focus of this re initiation will be confirming that data collected during the previous permit cycle regarding fish drug and chemical discharge concentrations does not exceed the conservative assumptions used in the risk assessments conducted in the development of the 2016 BE.

EPA will reinitiate a focused consultation in coordination with the Services and intends to complete ESA consultation with the Services prior to issuance of this General Permit.

Preliminary ESA Determination

Based on the 2016 Biological Evaluation and updated assessments, EPA has tentatively determined that the reissued General Permit is *not likely to adversely affect threatened or endangered species or their critical habitat.*

C. Essential Fish Habitat

Essential fish habitat (EFH) is the waters and substrate (sediments, etc.) necessary for fish to spawn, breed, feed, or grow to maturity. The Magnuson-Stevens Fishery Conservation and Management Act (January 21, 1999) requires EPA to consult with NOAA Fisheries when a proposed discharge has the potential to adversely affect EFH (i.e., reduce quality and/or quantity of EFH).

The EFH regulations define an adverse effect as any impact which reduces quality and/or quantity of EFH and may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site specific, or habitat-wide impacts,

including individual, cumulative, or synergistic consequences of actions. EPA is coordinating with the Services to ensure that adequate EFH analysis is completed during permit reissuance.

Any comments received from NOAA Fisheries regarding EFH will be considered prior to reissuance of this General Permit. If, during the course of the permit or ESA process, it is determined that a discharge *may adversely affect* any listed threatened, endangered, or candidate species; and/or *may adversely affect or* "extensive conservation requirements are necessary to protect" EFH, the facility may need to apply for an individual permit (Part III.E of the General Permit).

D. CWA §401 State and Tribal Certification

Section 401 of the CWA, 33 USC §1341, requires EPA to seek certification from a State or Tribe that the conditions of a general permit that authorizes discharges within their jurisdiction are stringent enough to comply with water quality standards, including the State or Tribe's antidegradation policy, before issuing the final permit. 40 CFR §124.53 allows for the State or Tribe to stipulate more stringent conditions in the permit, if the certification cites the CWA or state law upon which that condition is based. See also CWA Section 401(d). The regulations also require a certification to include statements of the extent to which each condition of the permit can be made less stringent without violating the requirements of state law. See 40 CFR §124.53(c).

Since this General Permit covers discharges to State and tribal waters within Washington State, EPA requested final 401 certification at the beginning of the public comment period from the State of Washington as well as all Tribes within Washington that have been approved for TAS from EPA for purposes of the Clean Water Act. The Tribes within Washington State with TAS for Clean Water Act purposes are listed here: the Confederated Tribes of Colville Reservation, the Confederated Tribes of the Chehalis Reservation, the Kalispel Tribe of Indians, the Lummi Nation, the Makah Indian Tribe, the Jamestown S'Klallam Tribe, the Port Gamble S'Klallam Tribe, the Puyallup Tribe of Indians, the Spokane Tribe of Indians, the Swinomish Indian Tribal Community, the Tulalip Tribes and Quinault Indian Nation.

E. Antidegradation

EPA is required under Section 301(b)(1)(C) of the Clean Water Act (CWA) and implementing regulations (40 CFR 122.4(d) and 122.44(d)) to establish conditions in NPDES permits that ensure compliance with state and tribal water quality standards, including antidegradation requirements. Since WAG130000 facilities either discharge to Washington waters or to Indian Country (with Washington as the downstream state), EPA used Washington's antidegradation implementation procedures as guidance. EPA referred to Ecology's 2011 Supplemental Guidance on Implementing Tier II Antidegradation, which is available at https://apps.ecology.wa.gov/publications/documents/1110073.pdf. EPA also referred to the relevant tribal antidegradation policies, which are part of those tribes' EPA-approved water quality standards. See http://water.epa.gov/scitech/swguidance/standards/wqslibrary/tribes.cfm#r10.

Determining the Applicable Level of Protection

The State of Washington's antidegradation policy follows the federal regulations in establishing three tiers of protection:

- Tier I ensures existing and designated uses are maintained and protected and applies to all waters and all sources of pollution.
- Tier II ensures that waters of a higher quality than the criteria assigned are not degraded unless such lowering of water quality is necessary to accommodate important economic or social development and is in the overriding public interest.
- Tier III prevents the degradation of waters identified as constituting an outstanding national or reservation resource and applies to all sources of pollution.

The receiving waters to which WAG130000 facilities discharge qualify for both Tier I and Tier II protection, as explained in more detail below.

Tier I Protection

A facility must first meet Tier I requirements. Existing and designated uses must be maintained and protected. No degradation may be allowed that would interfere with, or become injurious to, existing or designated uses, except as provided for in Chapter 173-201A WAC.

In order to protect and maintain designated and existing beneficial uses, a permitted discharge must comply with the narrative and numeric criteria of the State/Tribe's water quality standards, which address water quality limited waters. Water bodies not supporting existing or designated beneficial uses must be identified as water quality limited and a TMDL must be prepared for those pollutants causing the impairment. Discharge permits must contain limitations that are consistent with the WLAs in EPA-approved TMDL. A permit with effluent limitations consistent with the WLA from an applicable TMDL will provide the level of water quality necessary to support existing and designated uses and therefore satisfies Tier 1 antidegradation requirements.

Since this is a general permit, EPA referred to the applicable designated uses for waters of the State of Washington in this antidegradation analysis. The draft General Permit ensures a level of water quality necessary to protect the designated uses and, in compliance with 40 CFR 131.12(a)(1) and 131.35(e)(2)(i), also ensures that the level of water quality necessary so that existing uses are maintained and protected. EPA developed permit conditions to protect the following uses: salmonid spawning, rearing, and migration; primary contact recreation; domestic, industrial, and agricultural water supply; stock watering; wildlife habitat; harvesting; commerce and navigation; boating; and aesthetic values.

Where technology-based limits are not protective enough to meet water quality standards, EPA sets water quality-based effluent limits (WQBELs). If EPA receives information during the public comment period demonstrating that there are additional existing uses for the waterbodies in this General Permit, EPA will consider this information before issuing a final permit and will establish additional or more stringent permit conditions if necessary to ensure protection of existing uses.

The reissued General Permit will provide coverage to 32 existing facilities, and is anticipated to cover additional small federal and tribal aquaculture facilities. Seven of the facilities currently covered by the existing permit discharge to waterbodies that are impaired for temperature. Four of the seven facilities have been given WLAs as part of a TMDL. The Lummi Tribe's Skookum Creek Fish Hatchery has received a WLA for temperature in the South Fork Nooksack River TMDL and the Chief Joseph Fish Hatchery - Hatchery on the Columbia River, Colville Tribal Hatchery, and Spring Creek National Fish Hatchery have all received WLAs for temperature in the Columbia and Snake River TMDL.

The effluent limits in the General Permit are identical to those of the previous general permit. The limitations and requirements contained in the General Permit will ensure compliance with the narrative and numeric criteria in the water quality standards. Therefore, EPA has determined that the permit will protect and maintain existing and designated beneficial uses in compliance with the Tier 1 provisions.

Tier II Protection

A Tier II analysis consists of an evaluation of whether or not the proposed degradation of water quality that would be associated with a new or expanded action would be both necessary and in the overriding public interest. A Tier II analysis focuses on evaluating feasible alternatives that would eliminate or significantly reduce the level of degradation. The analysis also includes a review of the benefits and costs associated with the lowering of water quality. New discharges and facility expansions are prohibited from lowering water quality without providing overriding public benefits.

Nonetheless, with regard to the new discharges and facility expansions, EPA recognizes that the vast majority of the facilities currently covered by this permit have had NPDES permit coverage since at least 2016 and are classified as existing facilities. The following facilities have applied for and received WAG13000 permit coverage since the last permit issuance:

- The Suquamish Indian Tribe's Grovers Creek Salmon Hatchery, which is located on the Suquamish Reservation
- The Nisqually Indian Tribe's Kalama Creek Hatchery which is located on the Nisqually Reservation
- The Stillaguamish Tribe of Indians Brenner Creek and Harvey Creek Hatcheries, which are located on the Stillaguamish Reservation
- The Muckleshoot Indian Tribe's White River Hatchery, which is located on the Muckleshoot Reservation
- The Makah Tribal Council's Hoko Tribal Fish Hatchery, which is located on the Makah Reservation
- The Skokomish Indian Tribe's Enetai Hatchery, which is located on the Skokomish Reservation.

Under Ecology's antidegradation policy, individual facilities covered under general permits do not require a Tier II analysis. Instead, the Tier II evaluation focuses on whether the general permit meets the Tier II requirements. Therefore, EPA evaluated whether the General Permit meets the Tier II antidegradation requirements. EPA determined that the General

Permit meets the Tier II antidegradation requirements because the General Permit conditions are equally or more stringent than the existing permit. Under the BPJ provisions, the permit applies ELGs to all the small facilities (less than 100,000 pounds per day). (See Part V.B of this Fact Sheet). EPA is also requiring numeric limits for total suspended solids and for settleable solids.

Washington water quality standards define a measurable change to include:

- Temperature increase of 0.3°C or greater;
- Dissolved oxygen decrease of 0.2 mg/L or greater;
- Bacteria level increase of 2 cfu/100 mL or greater;
- pH change of 0.1 units or greater;
- Turbidity increase of 0.5 NTU or greater; or
- Any detectable increase in the concentration of a toxic or radioactive substance.

EPA determined that a Tier II analysis is not required for any of the facilities because none of the discharges will cause measurable change to existing water quality at the point of compliance. An explanation of EPA's Tier II eligibility analysis is below.

1. Temperature increase of 0.3°C or greater;

   Facility temperatures are closely monitored by facility staff to ensure optimum fish health. In addition, facilities that discharge to waters impaired for temperature must conduct continuous temperature monitoring of their effluent, as well as upstream of the facility. Therefore, the discharges will not cause measurable change to existing water quality and this parameter does not trigger a Tier II antidegradation analysis.

2. Dissolved oxygen decrease of 0.2 mg/L or greater;

   Solids from uneaten feed and feces that settle to the bottom of the raceways are composed of organic matter including BOD, which is used to measure the amount of oxygen consumed by microorganisms when they decompose the organic matter in a waterbody. The greater the BOD, the greater the degree of pollution and the less oxygen available. In the process of developing the ELG for CAAP facilities, EPA determined that control of suspended solids would provide sufficient treatment for the various pollutants of concern, including BOD_5, because it would remove uneaten feed and fish feces from the effluent since they are either bound to the solids or are incorporated into them (67 FR 57872). Ecology came to a similar conclusion in developing the Upland Finfish Hatching and Rearing General NPDES Permit (2010), i.e., that limits for settleable and suspended solids would effectively control BOD_5. This General Permit includes numeric limits for TSS and settleable solids. In addition, various BMP Operational Requirements ensure that minimal solids will be discharged by the facilities. For example, raceways and ponds must be cleaned at such frequency and in such a manner that minimizes accumulated solids discharged to waters of the United States. Similarly, fish feeding must be conducted so as to minimize the discharge of unconsumed food. Animal mortalities must be removed and disposed of on a regular basis. Most WAG130000 facilities have settling basins or are large earthen ponds that essentially act as large settling basins. Also, aquaculture facilities strive to maintain high dissolved

oxygen levels to maintain fish health. Therefore, the discharges will not cause measurable change to existing water quality and this parameter does not trigger a Tier II antidegradation analysis.

3. Bacteria level increase of 2 cfu/100 mL or greater;

   Aquaculture facilities are not considered to be significant sources of pathogens. Therefore, the discharges will not cause measurable change to existing water quality and this parameter does not trigger a Tier II antidegradation analysis.

4. pH change of 0.1 units or greater;

   The General Permit includes a monitoring requirement for off-line settling basins that discharge directly to waters of the United States. However, pH is not a pollutant of concern for WAG130000/CAAP facilities (69 FR 51899). Therefore, the discharges will not cause measurable change to existing water quality and this parameter does not trigger a Tier II antidegradation analysis.

5. Turbidity increase of 0.5 NTU or greater; or

   This General Permit includes numeric limits and monitoring requirements for TSS and settleable solids. In addition, various BMP Operational Requirements ensure that minimal solids will be discharged by the facilities. For example, raceways and ponds must be cleaned at such frequency and in such a manner that minimizes accumulated solids discharged to waters of the United States. Similarly, fish feeding must be conducted so as to minimize the discharge of unconsumed food. Most facilities have settling basins or the large earthen ponds act as large settling basins. Anecdotally, facility managers report that the water leaving their facilities is clearer than the intake water because of the settling that occurs as part of normal facility operations. Therefore, the discharges will not cause measurable change to existing water quality and this parameter does not trigger a Tier II antidegradation analysis.

6. Any detectable increase in the concentration of a toxic or radioactive substance.

   Fish excrete small amounts of ammonia nitrogen which in high doses can be toxic to fish, depending on pH and temperature that controls the ionic species of the ammonia-ammonium complex. Facilities covered under this general permit have a high degree of dilution and closely monitor the health of their fish so ammonia toxicity would be unlikely in the facilities, much less downstream of them.

   Very few permitted facilities disinfect with chlorine. Most disinfect their ponds or raceways between seasons by draining them, pressure washing, and/or allowing them to dry in the sun. Those facilities that do use chlorine tend to use it to disinfect effluent from “isolation buildings,” which are incubation buildings that house fish eggs from another watershed. Any facility that uses chlorine is subject to permit limits for total residual chlorine, which are set at the Washington State water quality criteria for fresh and marine waters. Facilities are required to monitor for chlorine when the chemical is being used.

   Various facilities apply therapeutic chemicals, including formalin, iodine, and Chloramine-T, to promote fish health. As per a BMP requirement in this permit, all drugs and pesticides must be used in accordance with applicable label instructions (FDA),

unless exempted as part of an INAD Study or as an extralabel drug use as prescribed by a veterinarian. In all cases, FIFRA labeling must be adhered to.

Therefore, the discharges will not cause measurable change to existing water quality and therefore this parameter does not trigger a Tier II antidegradation analysis.

Summary

EPA has determined that facilities covered under the General Permit will not cause a measurable change in degradation to existing water quality at the edge of the chronic mixing zone. Therefore, a Tier II analysis is not necessary.

F. Permit Expiration

The General Permit will expire five years from the effective date.

G. Standard Permit Provisions

Parts VIII, IX and X of the General Permit contain standard regulatory language that must be included in all NPDES permits. The standard regulatory language covers requirements such as monitoring, recording, and reporting requirements, compliance responsibilities, and other general requirements.

XI. Definitions and Acronyms

The Act - The Clean Water Act, codified at 33 U.S.C. §1251 et seq.

Administrator - The Administrator of the United States Environmental Protection Agency, or an authorized representative (40 CFR §122.2).

Aquaculture facility – For the purposes of this permit, an aquaculture facility includes hatcheries, fish farms, or other such facilities which contain, grow, or hold aquatic animals for research purposes; for later harvest (or process) and sale; or for release. This includes fish sampling programs at dam fish passage facilities that result in discharges of water treated with Aqui-S20E, a fish anesthetic.

Average monthly limit - The maximum allowable average of "daily discharges" over a monitoring month, calculated as the sum of all "daily discharges" measured during a monitoring month divided by the number of "daily discharges" measured during that month. It may also be referred to as the "monthly average discharge"(40 CFR §122.2).

Background - The biological, physical, or chemical condition of waters measured at a point immediately upstream of the influence of the discharge.

BAT - Best available technology economically achievable

BCT - Best conventional pollutant control technology

Beneficial use - A desirable use of a water resource, such as recreation (fishing, boating, swimming) and water supply.

Best Management Practices (BMPs) - Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. (40 CFR §122.2)

BOD (Biochemical oxygen demand) - The measure of the oxygen required to break down organic materials in water. Higher organic loads require larger amounts of oxygen and may reduce the amount of oxygen available for fish and aquatic life below acceptable levels. Unless otherwise specified, this term means the 5-day BOD incubated at 20º C. (BOD_5)

BPJ - Best professional judgment.

BPT - Best practicable control technology currently available

Bypass - The intentional diversion of waste streams from any portion of a treatment facility. (40 CFR §122.41 (m))

CAAP - Concentrated aquatic animal production; At 40 CFR §122.24, the EPA defines a concentrated aquatic animal production (CAAP) facility as "a hatchery, fish farm, or other facility which meets the criteria in appendix C of [40 CFR §122.24], or which the Director designates under paragraph (c) of [40 CFR §122.24]". CAAP facilities are point sources subject to the National Pollutant Discharge Elimination System (NPDES) permit program.

CFR - Code of Federal Regulations, the body of federal regulations. Title 40 of the Code of Federal Regulations, Parts 1 - 1499 contains regulations of the Environmental Protection Agency.

cfs - Cubic feet per second.

Chemical - Any substance that is added to the facility to maintain or restore water quality for aquatic animal production and that may be discharged to waters of the United States.

Clean Water Act - Formerly referred to as the Federal Water Pollution Control Act of 1972, codified at 33 U.S.C. §1251 et seq.

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

Composite sample - A combination of four or more discrete samples taken at on-half hour intervals or greater over a 24-hour period; at least one fourth of the samples must be taken while cleaning. Facilities with multiple effluent discharge points and/or influent points must composite samples from all points proportionally to their respective flows.

Core rearing - A designated use of a water body where there is moderate to high density use by salmonid species, usually in the middle to upper reaches of a river system.

Critical Habitat - The geographical area occupied by a threatened or endangered species. See 16 U.S.C. §1532 (the Endangered Species Act of 1973) for a complete definition.

CWA - The Clean Water Act, 33 U.S.C. §1251 *et seq.*

DMR - Discharge monitoring report

Director - The Director of the EPA Region 10 Office of Water and Watersheds

Discharge of a pollutant - (a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or (b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by humans; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger" (40 CFR §122.2).

Disinfectant - A substance, or mixture of substances, that destroys or irreversibly inactivates bacteria, fungi and viruses, but not necessarily bacterial spores, in the inanimate environment. (40 CFR 158.2203)

Ecology - The Washington Department of Ecology.

Effluent - Wastewater discharged from a point source, such as a pipe.

Effluent limitation - Any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean (40 CFR §122.2).

ELGs (effluent limitations guidelines) - Regulations published by the Administrator under Section 304(b) of CWA to adopt or revise "effluent limitations." (40 CFR §122.2).

EPA - The United States Environmental Protection Agency.

Extralabel 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. (40 CFR §451.2(f))

FR (or Fed.Reg.) - The Federal Register, the official daily publication for rules, proposed rules, and notices of Federal agencies and organizations, as well as executive orders and other presidential documents.

Flow-through System - A system designed for continuous water flow to waters of the United States through chambers used to produce aquatic animals. Flow-through systems typically use either raceways or tank systems. Water is transported from nearby rivers or springs to raceways which are typically long, rectangular chambers at or below grade, constructed of earth, concrete, plastic, or metal. Tanks systems are similarly supplied with water and concentrate aquatic animals in circular or rectangular tanks above grade. The term "flow through system" does not include net pens.

General Permit - An NPDES permit issued in accordance with 40 CFR §122.28, authorizing a category of discharges under the CWA within a geographical area. (40 CFR §122.2)

Grab Samples - A discrete volume of water collected, by hand or machine, during one short sampling period (less than 15 minutes).

Hatchery - Culture or rearing unit such as a raceway, pond, tank, net or other structure used to contain, hold or produce aquatic animals. The containment system includes structures designed to hold sediments and other materials that are part of a wastewater treatment system.(40 CFR §451.2 (c))

Hazardous Substance - Any substance designated under 40 CFR part 116, pursuant to Section 311 of the CWA.

Impaired Waters - Waters identified by Ecology pursuant to Section 303(d) of the Clean Water Act for which effluent limitations guidelines are not stringent enough to implement all applicable water quality standards.

INAD - Investigational New Animal Drug, 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.360b(j), to conduct experiments. (40 CFR §451.2(h))

Indian Country - "all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same." (18 USC §1151)

Influent - The water entering a facility or part of a facility.

Listed Endangered or Threatened Species - Species that are in danger of extinction throughout all or a significant portion of their range or that are likely to become endangered

species within the foreseeable future. See 16 U.S.C. §1532 (the Endangered Species Act of 1973) for a complete definition.

mg/L - Milligrams of solute per liter of solution, equivalent to parts per million, assuming unit density.

Minimum level (ML) - The concentration at which the entire analytical system must give a recognizable signal and an 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 (40 CFR §136).

Monthly average - The average of "daily discharges" over a monitoring month, calculated as the sum of all "daily discharges" measured during a monitoring month divided by the number of "daily discharges" measured during that month (40 CFR §122.2).

Native - Referring to a species that is native to the water body to which it may be released.

NPDES (National Pollutant Discharge Elimination System) - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA (40 CFR §122.2).

Net - The difference between effluent concentration and influent concentration (or loads).

Net Pen - A stationary, suspended, or floating system of nets or screens in open marine, lake, or estuarine waters of the United States. Net pen systems are typically located along a shore or pier or may be anchored and floating offshore. Net pens and cages rely on tides or currents to provide a continual supply of high quality water.

New Source - Any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(a) After promulgation of standards of performance under Section 306 of the CWA, which are applicable to such source, or

(b) After proposal of standards of performance in accordance with Section 306 of the CWA, which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal. (40 CFR §122.2)

NOI (Notice of Intent) - A written application form submitted to the permitting authority (i.e., EPA) seeking authorization to discharge under a general permit.

NPDES - The National Pollutant Discharge Elimination System, the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing [wastewater discharge] permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. (40 CFR §122.2)

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

Outfall – A discrete point or outlet where the discharge is released to the receiving water.

Outstanding National Resource - A state park, game sanctuary or refuge; a national park, preserve, or monument; a national wildlife refuge; a national wilderness area; or a river designated as *wild* or *scenic* under the Wild and Scenic Rivers Act.

Permittee - An individual, association, partnership, corporation, municipality, Indian Tribe or authorized Indian tribal organization, State or Federal agency, or an agent or employee thereof, who is authorized by the EPA to discharge in accordance with the requirements of the general permit.

Point Source - Any discernible, confined, and discrete conveyance from which pollutants are or may be discharged.

Pollutant - Chemical wastes, biological materials, … industrial waste discharge into water. (40 CFR §122.2)

Production - The act of harvesting, processing or releasing fish, or the harvest weight of fish contained, grown, or held in a CAAP facility. (40 CFR §122, Appx. C)

Publicly Owned Treatment Works (POTW) - Devices and systems, owned by a state or municipality, used in storage, treatment, recycling, and reclamation of municipal sewage or liquid industrial wastes, including sewers that convey wastewater to a POTW treatment plant. (40 CFR §403.3)

QA - Quality assurance, an integrated system of management activities involving planning, implementation, documentation, assessment, reporting, and quality improvement to ensure that a process, item, or service is of the type and quality needed to meet the performance criteria.

Recirculating System - A system that filters and reuses water in which the aquatic animals are produced prior to discharge; recirculating systems typically use tanks, biological or mechanical filtration, and mechanical support equipment to maintain high quality water to produce aquatic animals.

Regional Administrator - The Administrator of Region 10 of the United States Environmental Protection Agency, or an authorized representative.

Satellite Facilities – A satellite facility is a facility in a separate location that operates in tandem with the NPDES-permitted facility as part of the hatchery program, regardless of whether the satellite facility also has a NPDES permit. This may include, but is not limited to, off-site acclimation ponds, net pens, other hatcheries that fish are transported to or from, and facilities from which eggs are delivered.

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 which 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)(ii))

Special Resource Tribal Waters - Waters that comprise a special and/or a unique resource to the Tribe, as determined by the appropriate tribal authority at the time a discharger seeks coverage under this General Permit

TSS - Total Suspended Solids

Tier II water - Waters of a higher quality than the criteria assigned that may not be degraded unless such lowering of water quality is necessary and in the overriding public interest.

Toxic pollutants - Those pollutants, or combinations of pollutants, including disease-causing agents,- which, after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformation in such organisms or their offspring. (CWA §502(13))

Toxic substances … Substances that when discharged above natural background levels in waters of the state have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health, as described in WAC 173-201A-240.

TSD - Technical Support Document for water quality-based toxics control (EPA 1991).

TSS - Total suspended solids, of which the concentration in water is measured in mg/L.

Upland hatchery - A hatchery not located within the waters of the State (or, by extension, the U.S.) where fish are hatched, fed, nurtured, held, maintained, or reared to reach the size of release or for market sale. (WAC 173-221A-030)

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 Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation. (40 CFR §122.41(n)(1)).

WAC - Washington Administrative Code.

WQBEL (Water quality-based effluent limitation) - An effluent limitation that is applied to a discharger when technology-based limitations would cause violations of water quality standards.

WET (Whole effluent toxicity) - The aggregate toxic effect of an effluent measured directly by a toxicity test (40 CFR §122.2).

WLA - Wasteload allocation, the amount of pollutant assigned to a specific discharger in a TMDL or, in the absence of a TMDL, calculated by the permitting authority to comply with water quality standards in the receiving water.

Warm water species - Warm water aquatic animals include, but are not limited to, the *Ameiuride*, *Centrarchidae* and *Cyprinidae* families of fish, e.g., respectively, catfish, sunfish and minnows.

Waters of the United States - means those waters defined in 40 CFR §120.

XII. References

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Appendix A. Facility Information

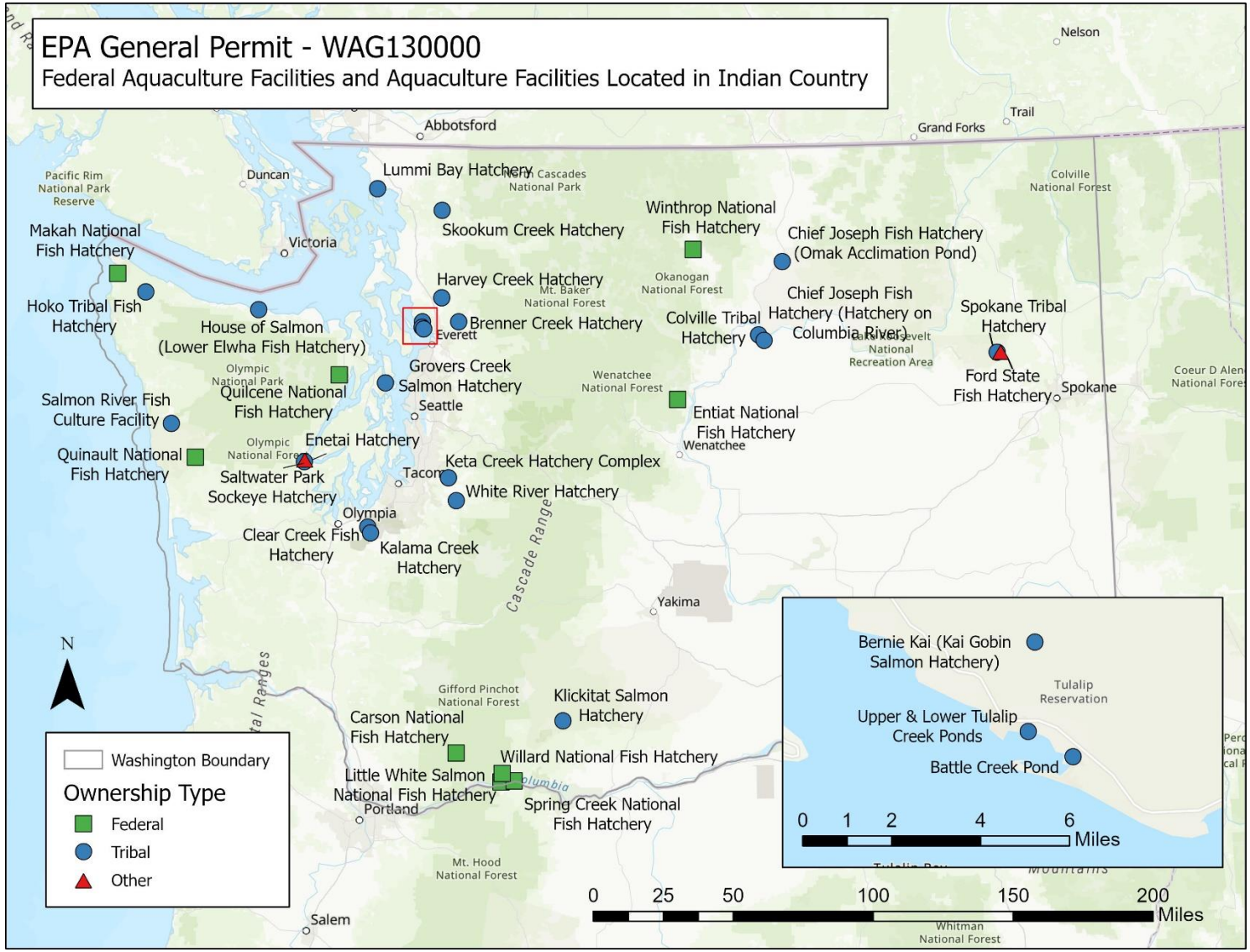

Table A-1. Facilities Covered by the General Permit

Permit Number	Facility Name	Agency/Tribe	Receiving Water
WAG130001	Carson National Fish Hatchery	U.S. Fish and Wildlife Services (USFWS)	Wind River
WAG130002	Entiat National Fish Hatchery	USFWS	Entiat River
WAG130003	Little White Salmon National Fish Hatchery	USFWS	Little White Salmon River
WAG130004	Makah National Fish Hatchery	USFWS	Sooes River
WAG130005	Quinault National Fish Hatchery	USFWS	Cook Creek
WAG130006	Spring Creek National Fish Hatchery	USFWS	Columbia River
WAG130007	Willard National Fish Hatchery	USFWS	Little White Salmon River
WAG130008	Winthrop National Fish Hatchery	USFWS	Methow River
WAG130009	Ford State Fish Hatchery	Washington Department of Fish and Wildlife	Chamokane Creek
WAG130010	Salmon River Fish Culture Facility	Quinault Indian Nation Quinault Department of Fisheries	Salmon River
WAG130012	Bernie Kai – Kai Gobin Salmon Hatchery	Tulalip Tribes of Washington	Tulalip Creek
WAG130013	Upper & Lower Tulalip Creek Ponds	Tulalip Tribes of Washington	Tulalip Bay
WAG130014	Battle Creek Pond	Tulalip Tribes of Washington	Battle Creek, Tulalip Bay
WAG130015	Clear Creek Fish Hatchery	Nisqually Indian Tribe	Nisqually River

Permit Number	Facility Name	Agency/Tribe	Receiving Water
WAG130016	Colville Tribal Hatchery	Confederated Tribes of the Colville Reservation	Columbia River
WAG130017	Skookum Creek Hatchery	Lummi Indian Business Council	South Fork Nooksack River
WAG130018	Lummi Bay Hatchery	Lummi Indian Business Council	Lummi Bay
WAG130019	Spokane Tribal Hatchery	Spokane Tribe of Indians	Chamokane Creek
WAG130020	Keta Creek Hatchery Complex	Muckleshoot Indian Tribe	Crisp Creek
WAG130021	Klickitat Salmon Hatchery	Yakama Nation	Klickitat River
WAG130022	Quilcene National Fish Hatchery	USFWS	Big Quilcene River
WAG130023	House of Salmon – Lower Elwha Fish Hatchery	Lower Elwha Klallam Tribe	Elwha River
WAG130024	Chief Joseph Fish Hatchery- Omak Acclimation Pond	Confederated Tribes of the Colville Reservation	Okanogan River
WAG130025	Chief Joseph Fish Hatchery – Hatchery on Columbia River	Confederated Tribes of the Colville Reservation	Columbia River
WAG130026	Saltwater Park Sockeye Hatchery	Tacoma Power	Hood Canal
WAG130028	Grovers Creek Salmon Hatchery	Suquamish Tribe	Grovers Creek
WAG130029	Kalama Creek Hatchery	Nisqually Indian Tribe	Kalama Creek
WAG130030	Brenner Creek Hatchery	Stillaguamish Tribe of Indians	Brenner Creek
WAG130031	Harvey Creek Hatchery	Stillaguamish Tribe of Indians	Harvey Creek
WAG130032	White River Hatchery	Muckleshoot Indian Tribe	White River

Permit Number	Facility Name	Agency/Tribe	Receiving Water
WAG130033	Hoko Tribal Fish Hatchery	Makah Tribal Council	Hoko River
WAG130034	Enetai Hatchery	Skokomish Indian Tribe	Hood Canal

Appendix B. Derivation of Total Residual Chlorine Limits

The applicable water quality criteria for total residual chlorine in the waters of the State of Washington are established by the Washington Department of Ecology at WAC 173-201A-240 for the protection of aquatic life. The same criteria have been adopted by the Lummi, Makah, and Puyallup Tribes; and the Chehalis and Spokane Tribes have adopted the fresh water standards. These criteria are presented in the following table:

Table B-1. Water Quality Criteria for Total Residual Chlorine for Protection of Aquatic Life

Pollutant	Units	Fresh Water		Marine Water	
		Acute	Chronic	Acute	Chronic
Total residual chlorine	µg/L	19	11	13	7.5

In accordance with the TSD method, EPA determined the WLA multipliers from page 5-1 of the TSD, and calculated the long-term averages (LTAs) for total residual chlorine, which are summarized below.

Table B-2. Total Residual Chlorine Long Term Averages (LTAs)

	WLA(µg/L)	WLA Multiplier	LTA (µg/L)
Fresh Water – Acute	19	0.321	6.10
Fresh Water – Chronic	11	0.527	**5.80**
Marine Water – Acute	13	0.321	4.17
Marine Water – Chronic	7.5	0.527	**3.95**

Average monthly effluent limitations (AMLs) and maximum daily effluent limitations (MDLs) are calculated by multiplying the most limiting LTA (acute or chronic) by a multiplier that accounts for averaging periods and maximum exceedance frequencies of the effluent limitations, and the effluent monitoring frequency. The CV was set equal to 0.6 (CV = 0.6) and, in the case of the AML, the sampling frequency was set equal to 4 (n = 4). Both of these values are those recommended as default values in the TSD for situations where

facility specific data is not available. Following the EPA Region 10 permitting policy, a 99th percentile occurrence probability was used to determine the MDL multiplier and a 95th percentile occurrence probability was used to determine the AML multiplier. Given these assumptions and using Table 5-2 of the TSD, the MDL multiplier is determined to be 3.11, and the AML multiplier is 1.55.

Table B-3. Total Residual Chlorine Effluent Limitations

Type of Water	**Long-Term Average**	**MDL Multiplier**	**AML Multiplier**	**MDL (µg/L)**	**AML (µg/L)**
Fresh Water	5.80	3.11	1.55	**18.0**	**9.0**
Marine Water	3.95	3.11	1.55	**12.3**	**6.1**

For all facilities that use chlorine or Chloramine-T that is discharged to waters of the United States, EPA has determined there is reasonable potential to exceed the water quality standard. The permit includes an average monthly limit / action threshold (9 µg/L) and a maximum daily limit / action threshold (18 µg/L) for freshwater discharges and an average monthly limit / action threshold (6.1 µg/L) and a maximum daily limit / action threshold (12.3 µg/L) for marine water discharges.

Appendix C. Ammonia and Temperature Reasonable Potential Analyses

Table C-1. Ammonia Reasonable Potential Analyses for Facilities with offline settling basins (OLSB) that discharge directly to surface waters, utilizing the Washington freshwater ammonia criteria. (USGS Stream Gauges: Quilcene – 12052210; Entiat – 12452990; Little White Salmon – 14125500; Klickitat – 14107000)

Pollutant, CAS No. & NPDES Application Ref. No.			AMMONIA, NH3 (Quilcene NFH)	AMMONIA, NH3 (Entiat NFH)	AMMONIA, NH3 (Little White Salmon NFH)	AMMONIA, NH3 (Klickitat Salmon Hatchery)
Effluent Data	# of Samples (n)		18	17	11	15
	Coeff of Variation (Cv)		0.53	0.88	1.71	0.54
	Effluent Concentration, ug/L (Max. or 95th Percentile)		140	330	10	210
	Calculated 50th percentile Effluent Conc. (when n>10)					
Receiving Water Data	90th Percentile Conc., ug/L		26	165	10	228
	Geo Mean, ug/L					
Water Quality Criteria	Aquatic Life Criteria, ug/L	Acute	3,404	1005.67	7018.67	13283.2
		Chronic	743	185.827	1618.07	2199.04
	WQ Criteria for Protection of Human Health, ug/L		-	-	-	-
	Metal Criteria Translator, decimal	Acute	-	-	-	-
		Chronic	-	-	-	-
	Carcinogen?		N	N	N	N

Aquatic Life Reasonable Potential

Effluent percentile value			0.950	0.950	0.950	0.950
s	$s^2=\ln(CV^2+1)$		0.498	0.757	1.169	0.506
Pn	$Pn=(1-\text{confidence level})^{1/n}$		0.847	0.838	0.762	0.819
Multiplier			1.36	1.64	2.98	1.45
Max concentration (ug/L) at edge of…		Acute	188	188	12	234
		Chronic	165	167	10	229
Reasonable Potential? Limit Required?			**NO**	**NO**	**NO**	**NO**

Table C-2. Temperature Reasonable Potential Analysis for the House of Salmon – Lower Elwha Fish Hatchery

	Core Summer Critera	Supplemental Criteria
INPUT	July 1-Sept 14	Sept 15-July 1
1. Chronic Dilution Factor at Mixing Zone Boundary	4.0	4.0
2. 7DADMax Ambient Temperature (T) (Upstream Background 90th percentile)	20.0 °C	15.0 °C
3. 7DADMax Effluent Temperature (95th percentile)	16.1 °C	13.9 °C
4. Aquatic Life Temperature WQ Criterion in Fresh Water	16.0 °C	13.0 °C
OUTPUT		
5. Temperature at Chronic Mixing Zone Boundary:	19.0 °C	14.7 °C
6. Incremental Temperature Increase or decrease:	-1.0 °C	-0.3 °C
7. Maximum Allowable Incremental Temperature Increase:	0.3 °C	0.3 °C
8. Maximum Allowable Temperature at Mixing Zone Boundary:	20.3 °C	15.3 °C
A. If ambient temp is warmer than WQ criterion		
9. Does temp fall within this warmer temp range?	YES	YES
10. Temperature Limit if Required:	NO LIMIT	NO LIMIT
B. If ambient temp is cooler than WQ criterion but within 28/(T_{amb}+7) and within 0.3 °C of the criterion		
11. Does temp fall within this incremental temp. range?	---	---
12. Temp increase allowed at mixing zone boundary, if required:	---	---
C. If ambient temp is cooler than (WQ criterion-0.3) but within 28/(T_{amb}+7) of the criterion		
13. Does temp fall within this Incremental temp. range?	---	---
14. Temp increase allowed at mixing zone boundary, if required:	---	---
D. If ambient temp is cooler than (WQ criterion - 28/(T_{amb}+7))		
15. Does temp fall within this Incremental temp. range?	---	---
16. Temp increase allowed at mixing zone boundary, if required:	---	---
RESULTS		
17. Do any of the above cells show a temp increase?	**NO**	**NO**
18. Temperature Limit if Required?	**NO LIMIT**	**NO LIMIT**

Table C-3. Temperature Reasonable Potential Analysis for the Quilcene National Fish Hatchery

	Core Summer Critera	Supplemental Criteria
INPUT	July 1-Sept 14	Sept 15-July 1
1. Chronic Dilution Factor at Mixing Zone Boundary	1.2	1.2
2. 7DADMax Ambient Temperature (T) (Upstream Background 90th percentile)	15.9 °C	13.1 °C
3. 7DADMax Effluent Temperature (95th percentile)	14.7 °C	12.6 °C
4. Aquatic Life Temperature WQ Criterion in Fresh Water	16.0 °C	13.0 °C
OUTPUT		
5. Temperature at Chronic Mixing Zone Boundary:	14.9 °C	12.7 °C
6. Incremental Temperature Increase or decrease:	-1.0 °C	-0.4 °C
7. Maximum Allowable Incremental Temperature Increase:	1.2 °C	0.3 °C
8. Maximum Allowable Temperature at Mixing Zone Boundary:	16.2 °C	13.4 °C
A. If ambient temp is warmer than WQ criterion		
9. Does temp fall within this warmer temp range?	NO	YES
10. Temperature Limit if Required:	---	NO LIMIT
B. If ambient temp is cooler than WQ criterion but within 28/(T_{amb}+7) and within 0.3 °C of the criterion		
11. Does temp fall within this incremental temp. range?	YES	---
12. Temp increase allowed at mixing zone boundary, if required:	NO LIMIT	---
C. If ambient temp is cooler than (WQ criterion-0.3) but within 28/(T_{amb}+7) of the criterion		
13. Does temp fall within this Incremental temp. range?	NO	---
14. Temp increase allowed at mixing zone boundary, if required:	---	---
D. If ambient temp is cooler than (WQ criterion - 28/(T_{amb}+7))		
15. Does temp fall within this Incremental temp. range?	NO	---
16. Temp increase allowed at mixing zone boundary, if required:	---	---
RESULTS		
17. Do any of the above cells show a temp increase?	**NO**	**NO**
18. Temperature Limit if Required?	**NO LIMIT**	**NO LIMIT**

Appendix D. CWA 401 State and Tribal Certifications

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

December 5, 2022

Susan Poulsom, Manager
NPDES Permits Unit
United States Environmental Protection Agency - Region 10
1200 Sixth Avenue, Suite 155, OWW
Seattle, WA 98101
Sent by email: poulsom.susan@epa.gov

RE: Clean Water Act Section 401 Certification for EPA National Pollutant Discharge Elimination System Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington (#WAG1300000)

Dear Susan Poulsom:

This letter is in response to the US Environmental Protection Agency's letter, dated September 7, 2022, requesting Washington State Department of Ecology (Ecology) provide a Clean Water Act Section 401 Certification for the Draft National Pollutant Discharge Elimination System (NPDES) Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington (#WAG1300000).

With this Section 401 Water Quality Certification, Ecology certifies the NPDES Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington (#WAG1300000) with general conditions as found in Order No. 21442. The enclosed Order may be appealed by following the procedures described in the Order.

If you have any questions or would like to discuss these matters further, please contact Laurie Niewolny, Aquaculture Specialist and NPDES Permit Coordinator, at 360-584-8852 or laurie.niewolny@ecy.wa.gov.

Sincerely,

Jeff Killelea, Manager
Program Development Services Section
Water Quality Program

Enclosure: Administrative Order # 21442

By Certified Mail # 9489 0099 0027 6085 8864 29

cc: Martin Merz, Permit Writer, Region 10 EPA
Sally Goodman, NPDES Permitting Section, Region 10 EPA
Laurie Niewolny Aquaculture Specialist and NPDES Permit Coordinator, WQ Program
Angela Zeigenfuse, 401 Certification Coordinator, WQ Program
Vincent McGowan, P.E., Water Quality Program Manager, WQ Program
Loree' Randall, 401 Policy Lead, SEA Program
ecyrefedpermits@ecy.wa.gov – Aquatics ID # 141669

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF GRANTING A WATER QUALITY CERTIFICATION TO U.S. Environmental Protection Agency pursuant to 33 U.S.C. 1341 (FWPCA § 401), 40 CFR Part 121, RCW 90.48.120, RCW 90.48.260 and chapter 173-201A WAC	)))))	**ADMINISTRATIVE ORDER DOCKET #21442 Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington (#WAG1300000)**

TO: United States Environmental Protection Agency
Region 10
Attn: Susan Poulsom
1200 Sixth Ave, Suite 155, OWW
Seattle, WA 98101

On September 7, 2022, the US Environmental Protection Agency (EPA) requested a Section 401 Water Quality Certification for the draft NPDES permit authorizing discharges to a water of the state (defined in chapter 90.48 RCW) from federal aquaculture facilities and aquaculture facilities located in Indian country within the boundaries of the state of Washington.

The NPDES General Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington was last issued August 1, 2016, expiring on July 31, 2021, and is currently administratively continued. This General Permit issuance continues to provide permit coverage for concentrated aquatic animal production (CAAP) facilities (refer to 40 CFR §122.24) and for those facilities below the CAAP thresholds. Additionally, coverage has been defined to include facilities that include research and fish passage-related aquaculture activities.

EPA continues to implement our state water quality standards (Chapter 173-201A WAC) using technology-based discharge standards and best management practices based on WAC 173-221A-100. Furthermore, EPA adopted monitoring and best management requirements in impaired waterbodies based on Ecology's NPDES General Permit for Upland Finfish Hatching and Rearing. EPA's permit applies water quality-based effluent limits when wasteload allocations require more stringent discharge limits to protect water quality.

Important changes providing increased water quality protection in the EPA's draft general permit include the following:

- Increased scope of eligible aquaculture activities requiring coverage to include more types of aquaculture facilities such as research and fish passage facilities; defined aquaculture species to include all aquatic animals.
- Added tiered monitoring based on facility size; added monitoring and action thresholds for non-CAAP facilities.

- Updated water quality based effluent limits and compliance schedules for facilities with wasteload allocation from applicable, approved TMDLs.
- Added monitoring for nutrient parameters if discharging to water bodies with dissolved oxygen impairments.
- Required Annual Reports to be electronically submitted

Ecology conducted a public review and comment period of the state's 401 certification of EPA's draft NPDES General Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country in Washington from September 27 until October 17, 2022.

EPA may not issue an NPDES permit to conduct activity that may result in any discharges into waters of Washington State until Ecology has granted certification under Clean Water Act (CWA) section 401, or has waived its right to certify. 33 U.S.C. 1341 (a)(1); 40 C.F.R. 124.53(a).

In accordance with 40 CFR 124.53(e)(3), Ecology has determined that no condition in the draft NPDES permit may be made less stringent without violating requirements in Washington State law.

AUTHORITIES

In exercising authority under 33 U.S.C. § 1341, 40 CFR Part 121, RCW 90.48.120, and RCW 90.48.260, Ecology has examined the EPA's request for CWA 401 certification of the draft permit pursuant to the following:

1. Conformance with applicable water quality-based, technology-based, and toxic or pretreatment effluent limitations as provided under 33 U.S.C. §1311, 1312, 1313, 1316, and 1317 (FWPCA § 301, 302, 303, 306 and 307);

2. Conformance with the state water quality standards contained in chapter 173-201A WAC and authorized by 33 U.S.C. §1313 and by chapter 90.48 RCW, and with other applicable state laws;

3. Conformance with the provision of using all known, available and reasonable methods to prevent and control (AKART) pollution of state waters as required by RCW 90.48.010; and

4. Conformance with Washington's prohibition on discharges that cause or tend to cause pollution of waters of the state of Washington as required by RCW 90.48.080.

WATER QUALITY CERTIFICATION CONDITIONS

With this Certification and through issuance of this Order, Ecology certifies that that the discharge as proposed by this Certification will comply with applicable water quality standards or other appropriate requirements of State law. In view of the foregoing and in accordance with 33 U.S.C. §1341, RCW 90.48.120, RCW 90.48.260 Chapter 173-200 WAC and Chapter 173-201A WAC, water quality certification is granted to the Federal Agency subject to the conditions within this Order and NPDES Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington (#WAG1300000).

Certification of the proposed draft permits does not authorize the Project Proponent to exceed applicable state surface water quality standards (chapter 173-201A WAC), ground water quality standards (chapter 173-200 WAC) or sediment quality standards (chapter 173-204 WAC), standards in the EPA's Revision of certain Federal water quality criteria applicable to Washington (40 CFR 131.45), and other appropriate requirements of State law.

A. General Requirements

1. For the purposes of this Order, the term "Federal Agency" shall mean the US Environmental Protection Agency. The Federal Agency shall enforce the permit and ensure that the Project Proponent complies with the conditions of the permits at all times.

    a. Justification - Ecology needs to identify that conditions of this WQC Order apply to anyone conducting work on behalf of the Project Proponent to ensure compliance with the water quality standards and other applicable state laws.

    b. Citation - 40 CFR 121.1(j), Chapter 90.48 RCW, RCW 90.48.080, RCW 90.48.120, RCW 90.48.260, Chapter 173-200 WAC, Chapter 173-201A WAC, and WAC 173-225-010.

2. For purposes of this Order, the term "Project Proponent" shall mean those that are seeking coverage under this permit, and its agents, assignees and contractors.

    a. Justification - Ecology needs to identify that conditions of this WQC Order apply to anyone conducting work on behalf of the Project Proponent to ensure compliance with the water quality standards and other applicable state laws.

    b. Citation - 40 CFR 121.1(j), Chapter 90.48 RCW, RCW 90.48.080, RCW 90.48.120, RCW 90.48.260, Chapter 173-200 WAC, Chapter 173-201A WAC, and WAC 173-225-010.

3. Failure of any person or entity to comply with this Certification may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Certification.

    a. Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses. Ecology has independent state authority to ensure protection of state water quality. Civil penalties and other enforcement actions are the primary means of securing compliance with water quality requirements.

    b. Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.037, RCW 90.48.080, RCW 90.48.120, RCW 90.48.140, RCW 90.48.142, RCW 90.48.144, and WAC 173-225-010.

B. Timing Requirements

1. This Certification is valid until the expiration date including any administrative extension or termination date of the Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington (#WAG1300000) (40 CFR § 122.46).

    a. Justification - Certifications are required for any license or permit that authorizes an activity that may result in a discharge or fill material into waters. This WQC Order is not valid until the Federal agency issues a permit. Additionally, Ecology needs to be able to specify how long the WQC Order will be in effect.

    b. Citation - Chapter 90.48 RCW, Chapter 173-201A WAC, and WAC 173-225-010.

C. Notification Requirements

1. The Federal Agency shall enforce and the Project Proponent must comply with all the reporting and notification conditions of the NPDES permit in order to comply with this Order (40 CFR § 121.11).

    a. Justification - Ecology has independent state authority to ensure protection of state water quality. Ecology must be aware of when a project starts and ends and whether there are any issues. This allows Ecology to evaluate compliance with the state water quality requirements.

    b. Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.120, Chapter 173-201A WAC, WAC 173-201A-300 - 330, Chapter 173-204 WAC, and WAC 173-225-010.

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person (see addresses below). E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses

Department of Ecology
Attn: Appeals Processing Desk
300 Desmond Drive SE
Lacey, WA 98503

Pollution Control Hearings Board
1111 Israel RD SW
STE 301
Tumwater, WA 98501

Mailing Addresses

Department of Ecology
Attn: Appeals Processing Desk
PO Box 47608
Olympia, WA 98504-7608

Pollution Control Hearings Board
PO Box 40903
Olympia, WA 98504-0903

CONTACT INFORMATION

Please direct all questions about this Order to:

Laurie Niewolny
Department of Ecology
PO Box 47600
Olympia, WA 98503-7600
360-584-8852
laurie.niewolny@ecy.wa.gov

MORE INFORMATION

- Pollution Control Hearings Board Website[1]
- Chapter 43.21B RCW - Environmental and Land Use Hearings Office – Pollution Control Hearings Board[2]
- Chapter 371-08 WAC – Practice And Procedure[3]
- Chapter 34.05 RCW – Administrative Procedure Act[4]
- Chapter 90.48 RCW – Water Pollution Control[5]
- Chapter 173.204 Washington Administrative Code (WAC) Sediment Management Standards[6]
- Chapter 173-200 WAC Water Quality Standards for Ground Waters of the State of Washington[7]
- Chapter 173-201A WAC Water Quality Standards for Surface Waters of the State of Washington[8]

SIGNATURE

Jeff Killelea, Manager
Program Development Services Section
Water Quality Program

[1] http://www.eluho.wa.gov/Board/PCHB
[2] http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21B
[3] http://apps.leg.wa.gov/WAC/default.aspx?cite=371-08
[4] http://apps.leg.wa.gov/RCW/default.aspx?cite=34.05
[5] http://apps.leg.wa.gov/RCW/default.aspx?cite=90.48
[6] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-204
[7] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-200
[8] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-201A

JAMESTOWN S'KLALLAM TRIBE
1033 Old Blyn Highway, Sequim, WA 98382 360/683-1109 FAX 360/681-4643

November 4, 2022

Susan Poulsom, Manager
NPDES Permitting Center
US Environmental Protection Agency
1200 Sixth Avenue, Suite 155 Seattle, WA 98101-3188

RE: Jamestown S'Klallam Tribe – 401 Certification of NPDES Permit No. WAG130000, General Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Tribal Lands of Washington State

Dear Manager Poulsom,

On September 7, 2022 the U.S. Environmental Protection Agency Region 10 requested that the Jamestown S'Klallam Tribe provide Clean Water Act Section 401 certification for the draft National Pollutant Discharge Elimination System (NPDES) general permit referenced above. EPA is the project proponent for this action. The permit will authorize discharges from federal upland aquaculture facilities, as well as aquaculture facilities located upon Tribal land. EPA estimates that the general permit will authorize discharges from approximately 42 facilities. None of the facilities listed in Table A-1, Fact Sheet NPDES General Permit #WAG130000, are located within Tribal lands of Jamestown S'Klallam jurisdiction.

On behalf of the Jamestown S'Klallam Tribe, this letter certifies that Jamestown concurs this permit complies with WA Water Quality standards, and we hereby provide 401certification for NPDES GP WAG130000. Jamestown has not developed or submitted independent water quality standards to EPA for approval. Until Jamestown develops unique standards, the Tribe relies upon WA Water Quality standards. As this permit is designed to meet WA standards, no additional permit conditions are necessary for Jamestown lands at this time. However, Jamestown requires that any new dischargers seeking coverage under the General Permit WAG130000 within jurisdiction of Jamestown S'Klallam, provide copy of their EPA Notice of Intent (NOI). Jamestown reserves the right to review the submitted NOI to assure eligibility and certification.

If you have any questions about this decision, please contact Sissi Bruch by e-mail at sbruch@jamestowntribe.org.

Sincerely,

Hansi Hals
Natural Resources Director

Cc: Lucas DuSablon, EPA Tribal Coordinator

LUMMI INDIAN BUSINESS COUNCIL
2665 KWINA ROAD BELLINGHAM, WASHINGTON 98226 (360) 312-2000
DEPARTMENT_____DIRECT NO. _____

September 21, 2022

Ms. Susan Poulsom, Section Manager
NPDES Permitting Section, 19-C04
EPA Region 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101
Submitted via email: Poulsom.susan@epa.gov

SUBJECT: Lummi Nation Clean Water Act Section 401 Certification for the Draft General Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of Washington State, NPDES Permit No. WAG130000

Dear Ms. Poulsom:

In response to your letter dated September 7, 2022 and Section 401 of the Clean Water Act (CWA), the Lummi Natural Resources Department hereby certifies that the proposed reissuance of the National Pollutant Discharge Elimination System (NPDES) Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of Washington State (NPDES Permit No. WAG130000) will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA and Title 17 of the Lummi Code of Laws, as amended provided that the conditions listed below are implemented.

General Conditions:

1. Pursuant to LCL Title 17, each operator of a facility that discharges to Lummi Nation Waters shall be responsible for achieving compliance with the Water Quality Standards for Surface Waters of the Lummi Indian Reservation (Lummi Administrative Regulations [LAR] 17 LAR 07.010 through 17 LAR 07.210).

2. Each operator of a facility that discharges to Lummi Nation Waters must immediately report to the Lummi Natural Resources Department Executive Director at 360-410-1706 any spills of oil or hazardous materials to Lummi Nation Waters.

3. Each operator of a facility that discharges to Lummi Nation Waters shall submit or make available a copy of the Notice of Intent (NOI), Discharge Monitoring Reports (DMR), Quality Assurance Plan (QAP) Certification, Hatchery Best Management Practices (BMP) Plan Certification, Annual Reports, Spill Reports, any Non-

Compliance Reports, and Notice of Termination (NOT) to the Lummi Water Resources Division at the same time they are submitted to EPA.

4. The NOI, DMR, QAP Certification, BMP Plan Certification, Annual Reports, Spill Reports, any Non-Compliance Reports, and NOT shall be submitted or made available to:

    Lummi Natural Resources Department
    ATTN: Water Resources Manager
    2665 Kwina Road
    Bellingham, WA 98226

Please see the Lummi Nation website (www.lummi-nsn.gov) to review a copy of Title 17 of the Lummi Code of Laws and the references upon which the conditions identified above are based.

For any further coordination, please contact Lummi Water Resources Manager Kara Kuhlman (360-312-2128 or karak@lummi-nsn.gov).

Sincerely,

Merle Jefferson, Executive Director
Lummi Natural Resources Department

cc Kara Kuhlman, Lummi Water Resources Manager

MAKAH TRIBE
P.O. BOX 115 • NEAH BAY, WA 98357 • 360-645-2201

Dan Opalski, Director
Water Division
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101

RE: Section 401 Water Quality Certification of NPDES General Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country Within the Boundaries of The State of Washington
Hoko Tribal Fish Hatchery
NPDES ID # WAG130033
6764 Hoko Ozette Road
Clallam Bay, WA 98326-9704
Latitude/Longitude: 48.201832°N, 124.427051°W

Dear Mr. Opalski,

The Makah Fisheries Water Quality Department has reviewed the materials provided regarding the NPDES permit (WAG-13-0000) and request for Section 401 Water Quality Certification Submitted September 7th, 2022.

Based on available information, talks with hatchery managers, and the best management practices described it is the judgement of this office that the proposed project will not cause a significant or lasting impairment to quality of the affected waters or its waters as defined by the Makah Water Quality Standard policy. A comment period has been opened on this certification and under the condition that there is no strong opposition and that any exceedance of discharge is reported to the Makah Water Quality Department and that no significant changes are made to the project or executed without further consultation the department does hereby grant section 401 Water Quality Certification for the NPDES General Permit (WAG-13-0000). This certification is valid starting this day, December 20, 2022, and is valid until otherwise noted.

Certification Valid:
Starting: December 20, 2022
Ending: Until Further Notice

Approved by:

Elizabeth Miller
Makah Fisheries Water Quality Specialist

MAKAH TRIBE
P.O. BOX 115 • NEAH BAY, WA 98357 • 360-645-2201

Dan Opalski, Director
Water Division
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101

RE: Section 401 Water Quality Certification of NPDES General Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country Within the Boundaries of The State of Washington
Makah National Fish Hatchery
NPDES ID # WAG130004
897 Fish Hatchery Road
Clallam Bay, WA 98326
Latitude/Longitude: 48.2897°N, 124.6518°W

Dear Mr. Opalski,

The Makah Fisheries Water Quality Department has reviewed the materials provided regarding the NPDES permit (WAG-13-0000) and request for Section 401 Water Quality Certification Submitted September 7th, 2022.

Based on available information, talks with hatchery managers, and the best management practices described it is the judgement of this office that the proposed project will not cause a significant or lasting impairment to quality of the affected waters or its waters as defined by the Makah Water Quality Standard policy. A comment period has been opened on this certification and under the condition that there is no strong opposition and that any exceedance of discharge is reported to the Makah Water Quality Department and that no significant changes are made to the project or executed without further consultation the department does hereby grant section 401 Water Quality Certification for the NPDES General Permit (WAG-13-0000). This certification is valid starting this day, December 20, 2022, and is valid until otherwise noted.

Certification Valid:
Starting: December 20, 2022
Ending: Until Further Notice

Approved by:

Elizabeth Miller
Makah Fisheries Water Quality Specialist

Natural Resources Department
6406 Marine DR NW
Tulalip, WA 98271

November 21, 2022

Susan Poulsom, Section Manager
NPDES Permitting Section
EPA Region 10, OWW-130
1200 Sixth Avenue, Suite 900
Seattle WA 98101-3140

RE: Tulalip Tribes Clean Water Act Section 401 Certification for the draft National Pollutant Discharge Elimination System General Permit for Federal Aquaculture Facilities and Aquaculture Facilities located in Indian Country within the boundaries of Washington State - Permit No. WAG130000

Dear Ms. Poulsom,

Pursuant to Section 401 of the Clean Water Act the Tulalip Tribe's Natural Resources Department certifies under 40 CFR §124.55 that the final National Pollutant Discharge Elimination System (NPDES) General Permit for Aquaculture Facilities located within the boundaries of the Tulalip Reservation complies with applicable provisions of the CWA, and the Tulalip Tribes Water Quality Standards. Owners and operators seeking coverage under this permit who intend to discharge to waters of the Tulalip Tribes must follow the requirements and conditions in the General Permit along with the conditions set forth in this letter. This certification is valid from the date of the General Permit.

Owners and operators seeking coverage under this permit who intend to discharge to waters of the Tulalip Tribes must submit a copy of the Notice of Intent (NOI) to the Tulalip Tribes Natural Resources Department, along with applicable monitoring reports, submissions, and records.

Conditions:

Compliance with Tulalip Tribes Final Water Quality Standards: Permittee shall be responsible for achieving compliance with applicable sections of the Tulalip Tribe's Water Quality Standards (Ratified November 1996).

Authorization to inspect: The Department may conduct an inspection of any facility covered by this permit to ensure compliance with tribal water quality standards and enforce its certification conditions.

6406 Marine DR NW
Tulalip, WA 98271
360-716-4214

Incorporation by reference: This certification does not exempt the applicant from compliance with other statues and codes administered by the Tribes, county, state and federal agencies.

Permits on-site: A copy of the General Permit shall be kept on the job site and readily available for reference by the facility manager or other responsible party and Tribal inspectors.

Permit management: The applicant shall ensure that managers and other responsible parties have read and understand conditions of the permit, this certification, and other relevant documents, to avoid violations or noncompliance with this certification.

Good housekeeping: The permittee shall be responsible for best management practices that addresses keeping the project site clean

Compliant with Tulalip Tribes Environmental Infractions: Permittee shall be responsible for achieving compliance with applicable sections of the Tulalip Tribe's Environmental Infractions. (Tulalip Tribal Code Title 8 Chapter 8.20).

Spills or Emergencies: Owners and operators must report immediately to the Tribes (360-716-5911) any spills of drugs, pesticides, oil or hazardous materials to waters of the Tulalip Tribes.

For further 401 Certification coordination with the Tulalip Tribes Natural Resources Department, please contact Mr. Kurt Nelson (360) 716-4617 knelson@tulaliptribes-nsn.gov. Tribal Hatchery NPDES questions should be directed to the Enhancement Program Manager Mike Crewson (360) 716- 4626 mcrewson@tulaliptribes-nsn.gov. Any permit related action that may affect historic or archaeological properties should contact Richard Young, of the Tulalip Tribe's Cultural Resources Department (360) 716-2652 and ryoung@tulaliptribes-nsn.gov

Sincerely,
The Tulalip Tribes

Kurt Nelson
Environmental Department Manager

Spokane Tribal Natural Resources
P.O. Box 480 • Wellpinit, WA 99040 • (509) 626 - 4400 • fax 258 - 9600

November 2, 2022

Environmental Protection Agency, Region 10
Sally Goodman, Environmental Engineer
NPDES Permitting Section
1200 Sixth Avenue, Suite 900
Seattle WA 98101

RE: 401 Certification Action of General Hatchery Permit No. WAG130000

Dear Mrs Goodman

In accordance with Section 401 (a)(1) of the Clean Water Act of 1977 and provisions of the Spokane Tribal Water Quality Standards, the Spokane Tribal Interim Water Control Board herby certifies the USEPA general *Authorization to Discharge under 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* with the following conditions:

1) The owner/operator must also submit the information in Appendix A to the Spokane Tribe, WCB (Water Control Board), (pg 59) and;

2) The permittee shall submit its QA Plan to the Spokane Tribe, WCB within 90-days of receiving authorization to discharge under this permit (pg 31) and;

3) The permittee shall submit its BMP Plan to the Spokane Tribe, WCB within 90-days of receiving authorization to discharge under this permit (pg 32) and;

4) The permittee shall notify the Spokane Tribe, WCB of any spills or hazardous material to waters of the Reservation (pg 40) and;

5) The permittee shall submit the annual report to the Spokane Tribe, WCB (pg 41) and;

6) The permittee shall submit DMR's annual reports, NOI, BMP plans, QA plans and any non-compliance reports to the Spokane Tribe, WCB (pg 11, 31 and 38) and;

7) The permittee shall notify the Spokane Tribe, WCB of any INAD use, extra label drug use, or first use of low regulatory priority drugs or potassium permanganate (pg 38) and;

8) The permittee shall monitor their effluent for PCB congeners and report its findings to the Spokane Tribe, WCB (pg 15) and;

9) The permittee shall allow the Tribal Water Control Board or its designee to inspect and sample at the facility as needed (pg 52).

The correspondence address for the Spokane Tribe Water Control Board is:

Water Control Board
c/o Brian Crossley
PO Box 480
Wellpinit WA 99040
(509)626-4425

Please contact us at (509) 626-4425 if you have any questions about this certification.

Sincerely,

Brian Crossley
Interim Water Control Board
Spokane Tribe of Indians
Department of Natural Resources

The Confederated Tribes of the Colville Reservation
P.O. Box 150, Nespelem, WA 99155
(509) 634-2200
FAX: (509) 634-4116

Monday, December 19, 2022

Ms. Susan Poulsom, Section Manager
NPDES Permitting Section, 19-C04
EPA Region 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101
Submitted via email: Poulsom.susan@epa.gov

Subject: Confederated Tribes of the Colville Reservation Clean Water Act Section 401 Certification for the draft National Pollutant Discharge Elimination System (NPDES) Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of Washington State (#WAG130000).

Dear Ms. Poulsom:

In response to the EPA's letter dated September 7, 2022 and pursuant to Section 401 of the Clean Water Act (CWA), the Confederated Tribes of the Colville Reservation (CTCR) hereby certifies the proposed reissuance of the NPDES Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of Washington State (Permit No. WAG130000).

With this Section 401 Water Quality Certification, CTCR certifies the NPDES Permit with general conditions identified in the attached Analysis. The general permit issuance will also comply with the applicable provisions of the CWA and Title 4 of the CTCR Law & Order Code as amended, provided that the conditions in the Analysis are implemented.

For further coordination on this proposed issuance of this permit, please contact CTCR Watershed Program Manager -Douglas Marconi Jr (509-634-2428, douglas.marconi@colvilletribes.com).

Sincerely,

Jarred-Michael Erickson, Chairman
Confederated Tribes of the Colville Reservation

cc
Cody Desautel, Executive Director
Rebecca Hunt, Natural Resource Director
Rodney Cawston, Environmental Trust Program Manager

The Confederated Tribes of the Colville Reservation
P.O. Box 150, Nespelem, WA 99155 (509) 634-2200
FAX: (509) 634-4116

Confederated Tribes of the Colville Reservation Clean Water Act Section 401 Certification for the NPDES Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington
Permit No. WAG130000
Analysis

In response to the EPA's letter dated September 7, 2022 and pursuant to Section 401 of the Clean Water Act (CWA), the Confederated Tribes of the Colville Reservation (CTCR) Natural Resource Division Environmental Trust Program hereby certifies that the proposed issuance of the National Pollutant Discharge Elimination System (NPDES) Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the boundaries of the State of Washington. The proposed aquaculture general permit will authorize discharges from federal upland aquaculture facilities (as defined in the permit) as well as aquaculture facilities on Indian Country land in Washington. The previous aquaculture general permit was issued on June 9, 2016, expired on July 31, 2021, and is currently administratively continued.

CTCR was authorized Treatment-as-a-State (TAS) in accordance with Section 518(e) of the CWA on May 2, 2018 by the U.S. Environmental Protection Agency (EPA) for administering Water Quality Standards under CWA Section 303(c) and certifying that discharges comply with those Water Quality Standards under CWA Section 401. *See* U.S. EPA, *Approval of the CTCR for Treatment in the Same Manner as a State for Sections 303(c) and 401 of the Clean Water Act* (May 2, 2018), *available at* *https://www.epa.gov/sites/default/files/2018-05/documents/wqs-tribal-colville-tas-decision-document-cover-letter-may-2017.pdf*

This general permit issuance for WAG130000 will comply with the applicable provisions of the CWA and Title 4 of the CTCR Law & Order Code[1] as amended, provided that the conditions below are implemented. This certification is valid for the term of the reissued permit subject to the following conditions:

General Conditions:

1. Certification: This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and CTCR agencies. Pursuant to Colville Tribal Law & Order Code Title 4 Natural Resources and Environment, the facility operator may also require a Waste Discharge permit from either BPA or the Department as applicable as provided in Chapter 4-8 Water Quality Standards[2] and Chapter 4-10 Water Resources Use and Permitting[3] adopted thereunder.

[1] Colville Tribal Law & Order Code Title 4 Natural Resources and Environment
[2] Colville Tribal Law & Order Code Chapter 4-8 Water Quality Standards
[3] Colville Tribal Law & Order Code Chapter 4-10 Water Resources Use and Permitting
[4] Colville Tribal Law & Order Code Chapter 4-8-5(d) Non-point Sources and Tribal Water Quality Standards
[5] Colville Tribal Law & Order Code Chapter 4-10-132 Additional Policy Guidelines

2. Non-Point Sources and Tribal Water Quality Standards[4]: Pursuant to CTCR, each operator of a facility that discharges to CTCR Waters shall be responsible for achieving compliance with the Water Quality Standards for waters of the Colville Reservation.

3. Members of the Confederated Tribes of the Colville Reservation rely heavily on locally caught fish for subsistence and ceremonial uses and have higher consumption rates than the general public. The promulgation of new or amended Water Quality standards or regulations having a direct bearing upon permit conditions or require permit revision, the CTCR may require reopening and modification of the current permit. Other issues that may impact Water Quality Standards for further consideration include:

- Reopening certification due to substantial changes in conditions or operations
- Releasing water stored pursuant to the US-Canada Treaty
- Implementation of the Columbia River System Operation Environmental Impact Statement preferred alternative
- Seasonal reservoir drawdowns[5]
- Columbia River System Operations Biological Opinion(s)
- Increase water flows for recreation

4. Culture: Cultural sites, (archaeological and traditional places) are adversely impacted by various types of non-point "pollution"; caused by CJD, including but not limited to cultural plants, cultural ceremonies, cultural medicines, cultural foods, and, IN PARTICULAR anadromous aquatic species, sustainers of Native American life, traditions, and physical, mental, emotional, and spiritual well-being. Please see Attachment One: "National Point Discharge Elimination System Cultural Resource Assessment."

Where to Submit Information: All required or requested documents shall be submitted to:

Confederated Tribes of the Colville Reservation
Environmental Trust Department
ATTN: Watershed Program Manager
PO Box 150
Nespelem, WA 99155

Please see the CTCR website (https://www.colvilletribes.com and https://www.cct-cbc.com/current-code/) to review a copy of the Title 4 Natural Resources and the Environment and the references upon which conditions identified above are based.

[1] Colville Tribal Law & Order Code Title 4 Natural Resources and Environment
[2] Colville Tribal Law & Order Code Chapter 4-8 Water Quality Standards
[3] Colville Tribal Law & Order Code Chapter 4-10 Water Resources Use and Permitting
[4] Colville Tribal Law & Order Code Chapter 4-8-5(d) Non-point Sources and Tribal Water Quality Standards
[5] Colville Tribal Law & Order Code Chapter 4-10-132 Additional Policy Guidelines

Colville Confederated Tribes
M E M O R A N D U M
HISTORY/ARCHAEOLOGY PROGRAM

Attachment One: National Point Discharge Elimination System Cultural Resource Assessment

Impacts

Cultural resources, tribal culture, and historic properties on the Columbia River have been the focus of tribal concerns with federal agency actions since breaking ground for Bonneville Dam in 1933 and Grand Coulee Dam in 1934. Adverse impacts accelerated and worsened when construction began on Chief Joseph Dam in 1949.

The Upper Columbia River constitutes a cultural landscape since time immemorial. While part of a lager and complex weave of history, sociology, economics and politics, the impacts and outcomes of the dams are often clear and discernable. In essence the dams themselves are a polluting element and will remain so as long as they stand. All operation and maintenance for all authorized purposes are direct impacts of the ongoing operation of the dams. This impact, this pollution, is the primary reason for the loss of Native American culture above Grand Coulee Dam and to a lesser degree above Chief Joseph Dam.

When we speak of a cultural landscape or resource we include cultural sites (archaeological and traditional places), subsistence fauna, cultural plants, ceremonies, medicines, cultural foods, and, in particular, anadromous aquatic species, sustainers of Native American life, traditions, and physical, mental, emotional, and spiritual well-being. Impacts are well documented in various on-line resources linked here:

1. Salmon & Our People: The Chief Joseph Dam Fishery Story
2. The Kettle Falls Fishery
3. Grand Coulee Dam: Tribal Impacts
4. Legends And Landscapes: "Coyote Stories Along the Columbia"
5. The Price We Paid
6. Book Of Legends
7. Heart of The Palus
8. Place Name Document

and in countless other documents.

An entire way of life was polluted, the waters, the air, preventing salmon and lamprey runs, loss of the sturgeon fishery, inundation of the Indian towns breaking up traditional social groupings, the move to a cash economy upset leadership roles, the construction boomtowns around the dams

lead to various vices, an influx of outsiders, the disintegration of ethnic grouping (Indian bands), and the breaking up of families to move to work places to earn money.

The Scope of Impacts

One uniform rule in cultural resource management is scaling cultural studies, investigations, and treatments to the scope of the undertaking and the impacts. Scope means both the nature and the size of the project and nature and the size of the impacts. The scope of Grand Coulee and Chief Joseph dams is enormous and far reaching; they affect the entire Columbia River watershed. Direct impacts are concentrated along the main-stem of the Columbia River. Flow and spill requirements along the Columbia condition water management on the Snake River. There are effects to all tributaries, large and small. The most obvious impacts are in the major storage reservoirs and the Columbia Basin Project; however, there are impacts along the entire system.

Pollution is sometimes obvious and quantifiable, waste from smelters or the toxic bloom in Rufus Woods. Sometimes they are less obvious – housing, businesses, roads, or recreation. Each of these elements bring their own impacts. Transmission resources attract off channel power projects. Impacts are direct, indirect, and cumulative. The size and nature of the Columbia River Treaty undertaking and impacts are so immense it is difficult to quantify impacts.

For the purposes of the Columbia River Treaty, CCT cultural resources include, but are not limited to, those in applicable laws directed toward tangible resources. They also include cultural resources that are not necessarily site-specific such as ritual, ceremony, language, teachings, etc., and they include resources such as the land, water, air, and animals. These resources consist of individual artifacts, sites, natural resources, and ecosystems.

Regulatory Frame Work Identify Polluting Elements

What follows is a summary of various laws that include ‘cultural resources’. Much of the language is directly from the regulations. Tie-ins to these regs concludes paragraphs.

Archaeological Resources Protection Act - The term "archaeological resource" means any material remains of past human life or activities which are of archaeological interest, as determined under uniform regulations promulgated pursuant to this chapter. Such regulations containing such determination shall include, but not be limited to: pottery, basketry, bottles, weapons, weapon projectiles, tools, structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials, or any portion or piece of any of the foregoing items. No item shall be treated as an archaeological resource under these regulations unless such item is at least 100 years of age. The more typical impacts are various types of erosion, agricultural development, and looting

Protection of Historic Properties 36 CFR 800.16 - Historic property means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or

Native Hawaiian organization that meet the National Register criteria. Audio and visual pollution affects qualities of solitude and seclusion necessary to many ceremonies, rites, religious, and spiritual activities.

Native American Graves Protection and Repatriation Act - These regulations apply to human remains, funerary objects, sacred objects, or objects of cultural patrimony. This is the single most important spiritual concern to the Colville Tribes and to tribal members, the continuous erosion or excavation of human remains from banks, canals, ditches and infrastructure. Respectful recovery is often hindered by rising and lowering reservoir elevations, reservoir distribution of pollutants and toxins.

Revised Code of Washington 27.44 – Includes any glyptic or painted records, cairns, graves, and any associated archaeological material from any such cairn or grave. Recreation is the biggest danger to glyptic records, graffiti, removal, and covering them. If you did not have elevational, maintained reservoirs and a National Park unit there wouldn't be digging potties, installing huge plastic slides, building forts, bank carving, and looting exposed sites and artifacts.

Revised Code of Washington 27.53 – All sites, objects, structures, artifacts, implements, and locations of prehistorical or archaeological interest, whether previously recorded or still unrecognized, including, but not limited to, those pertaining to prehistoric and historic American Indian or aboriginal burials, campsites, dwellings, and habitation sites, including rock shelters and caves, their artifacts and implements of culture such as projectile points, arrowheads, skeletal remains, grave goods, basketry, pestles, mauls and grinding stones, knives, scrapers, rock carvings and paintings, and other implements and artifacts of any material that are located in, on, or under the surface of any lands or waters owned by or under the possession, custody, or control of the state of Washington or any county, city, or political subdivision of the state are hereby declared to be archaeological resources. Any object that comprises the physical evidence of an indigenous and subsequent culture including material remains of past human life including monuments, symbols, tools, facilities, and technological by-products or any geographic locality, including but not limited to, submerged and submersible lands and the bed of the sea within the state's jurisdiction, that contains archaeological objects. Artifact diving, especially on old town sites has become quite the rage.

Guidelines for Evaluating and Documenting Traditional Cultural Properties (TCP) – A traditional cultural property is defined as a property eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that are rooted in that community's history, and are important in maintaining the continuing cultural identity of the community. In practice, CTCR TCPs include, but are not limited to: religious areas, sacred areas, resource gathering areas (plant, animal, fish, and mineral), places associated with stories and legends, archaeological and ethnographic sites, habitation sites, campsites, rock images, special use sites, trails, and places with Indian names. Seemingly safe from the standard polluting discussed above, it is actually equally susceptible.

National Environmental Policy Act – NEPA expands cultural resource beyond objects and bounded properties. NEPA states the need to preserve important historic, cultural, and natural

aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice. Under the Scoping clause (1508.25), project components cannot be reviewed independently as unconnected actions. This means irrigation projects, recreation, hydroelectric power, power transmission, off-channel storage, etcetera are not separate from the undertaking. This broader interpretation of cultural resources and the scoping clause combines relate directly to fish and other natural resources and they pave the way for assigning direct, indirect, and cumulative impact designation in a domino effect. Using Grand Coulee Dam as an example – the dam is a pollutant itself, especially during construction and reservoir filling. Erosion of thousands of tons sediment, washing out sites, cemeteries and towns is certainly pollution. Without the dam, there is no town, no reservoir, no roads, no population growth, no recreation, etc.

American Indian Religious Freedoms Act – Religious practices of the American Indian are an integral part of their culture, tradition, and heritage – such practices form the basis of Indian identity and value systems. Traditional American Indian religions, as an integral part of Indian life, are indispensable and irreplaceable. It shall be the policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites. Touched on earlier, here impact is from audio and visual pollution.

When added together, tangible cultural resources span the gamut from an isolated fire-cracked rock to entire ecosystems, such as those supporting anadromous fish runs.

How does this Effect Tribal Culture

Language, ceremonies, rituals, traditional teachings, religion, legends, settlement and subsistence patterns, and many other intangible things are a product of and shape the beliefs of a living community and the history of that community. They are essential to maintaining the continuing cultural identity of the tribes. The impact of the loss or diminution of these cultural ways are identifiable and can be documented historically, quantitatively, and qualitatively. However, assigning the cause of the impact is rarely ascribable to a single action, event, entity, or moment. Impacts are cumulative.

We understand there is difficulty documenting the causal relationship between the loss of language, ceremonies, legends, and other non-property based aspects of culture to specific undertakings. We offer the following statement in support of the connection.

Sylvia Peasley (personal communication 2012), formerly of the Colville Business Council, stated “culture” is lost when the Indian language is lost and when spiritual ceremonies are no longer conducted. Sylvia grew up on Keller Butte, above the Sanpoil River. Sylvia’s grandfather and great grandparents lived along the Sanpoil River arm of the Columbia River by the town of Keller. She learned her traditional ways from her grandfather. Her family ritually practiced daily sweat baths. During the ceremony, they spoke in their language, discussed family history, and

told legends. Elders relayed details of the sweat bath ceremony through teaching and through practice. As an adult, Sylvia moved down to Keller. Knowing smelter contamination pollutes the water (which now is the Grand Coulee Dam's Lake Roosevelt Reservoir instead of the Sanpoil River), she is hesitant to continue the ways taught to her. She still sweats intermittently; although she fears heating the rocks, vaporizing the water, and burning fir boughs will release toxins she will inhale or ingest.

All of her traditions are compromised. Indian people are aware of the contamination and they fear it, as they do the toxic blooms of Rufus Woods Lake. Salmon are gone above Chief Joseph Dam and there are health alerts limiting the intake of resident fish in the Grand Coulee Dam reservoir. She sees youth, elders, and other community members overcome with various health issues tied into the river and all that the river encompasses in Indian culture. Youth in Keller are losing their ways, the tainted river and loss of salmon damaged our way of life. Parents do not have the same opportunities to pass down their customs and traditions. Few know all the words to the different ceremonies anymore. No one person still remembers the names of all the fish. No one person remembers all the different names used for some species of fish, as they are called by different names as they move through the stages of their life. Sylvia contends that when sweats are not conducted, the language is not spoken as often, legends not told, family history forgotten, ritual practices lost, and the status and role of the elders change.

The example provided by Sylvia Peasley is the experience of one tribal member; there are over nine thousand other CCT tribal members with similar experiences in their families.

Impact Assessment: In terms of the resources themselves, each pollutant, point and non-point source takes its toll. The land is polluted, overpopulated, and deforested. Air is polluted; the climate is changing. Rain is more acidic. The fish are gone in some reservoirs and severely reduced in the others. Many of the big game animals are extirpated or have been pushed back into the wilderness. Cultural loss is due to many factors, but each factor plays a role and shares a portion of the responsibility for cultural loss. The history of river management and dams is a major contributor to cultural loss. The rivers brought the earliest European explorers and traders. Rivers were the impetus and conduit for early agriculture and hydrologic mining. Early industry focused on salmon harvest. With electric power, industries grew to include aluminum plants and the Hanford Nuclear Reservation. Reivers became pond for refinery waste. Rivers evolved into modern trade corridors, first on a smaller scale and then to service today's agribusiness. Ultimately, the Columbia River system became a power generator and transmission corridor.

In the Pacific Northwest, the Columbia River is directly tied to the central flood control mechanism, it is the largest recreation draw, and it is the largest irrigation system. These projects are inexorably entwined. Any and all tribal cultural losses related to the rivers is continued, reinforced, and maintained by these current and ongoing undertakings, the dams.

Can This All Be Fixed Overnight and What is the Fix

As noted in the begging, the overwhelming changes to people and place over the last one hundred years prevent us from turning back the clock. But it does not prevent us from trying to retrieve some of the old way and traditional knowledge. We can also protect what remains.

Detailed analyses will cause more delay, which increases harm to cultural resources. Detailed analyses also require a great expenditure of funds, which could be used to treat and mitigate impacts. To address the impending impacts to cultural resources and tribal culture, we recommend the Colville Tribes work through Water Quality Certification task forces to set priorities, identify fund and move forward to clean up the environment, protect historic properties and restore full lifecycle fish passage. We have Departments and Program that work with these resources and have concepts outline, plans in mind and project ready or nearly ready to being implemented.

Continuation of the existing resident and anadromous fish policies, cultural resource programs, language programs, environmental remediation, and mitigation lands programs will help address impacts to cultural traditions. However, we need assistance building and maintaining capacity to provide support for cultural programs with the tribes in language, native plants, and spiritual traditions. Further recommendations will be provided as the Confederated Tribes of the Colville Reservation work in partnership with agencies and regulators to identify and solve problems through creative mitigations and treatments.