

# **FACT SHEET FOR THE DRAFT UPLAND FINFISH HATCHING AND REARING GENERAL PERMIT**

A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM AND  
STATE WASTE DISCHARGE GENERAL PERMIT

**REISSUANCE DATE: AUGUST 18, 2021**

**EFFECTIVE DATE: OCTOBER 1, 2021**



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

## Executive Summary

This fact sheet is a companion document to the draft National Pollutant Discharge Elimination System (NPDES) General Permit for discharges associated with Upland Finfish Hatching and Rearing facilities. The general permit provides coverage for discharges from upland finfish hatching and rearing operations, and conditions the discharge of wastewater to waters of the state of Washington by the facilities covered under this permit. This proposed general permit limits the discharge of pollutants to surface waters under the authority of the Federal Water Pollution Control Act (U.S.C.S. 1251) and limits the discharge of pollutants to surface and ground water under the authority of Chapter 90.48 RCW.

The Department of Ecology (Ecology) is proposing to reissue the Upland Finfish Hatching and Rearing NPDES General Permit. This draft permit will replace the current permit that Ecology issued on December 16, 2015, effective on April 1, 2016, and expires on March 31, 2021.

This fact sheet explains the nature of the discharges covered by the general permit, Ecology's decisions on limiting the pollutants in the wastewater, and the regulatory and technical basis for those decisions.

The changes proposed for this reissuance of the permit include:

- Condition S1.E: Permittee can no longer request inactive status if production and feeding drops below thresholds. Condition remains that Permittee may request Inactive status if production and feeding is zero for one fiscal year.
- Condition S3.G.1: Permittees/facilities that discharge to impaired waterbodies for temperature must report daily maximum temperature and require DMR reporting.
- Condition S3.G.1: Permittees/facilities that discharge to impaired waterbodies for dissolved oxygen must monitor for nutrient parameters and requires DMR reporting.
- Condition S3.G.2: Added a list of Permittees/facilities with Total Maximum Daily Load (TMDL) determinations at the time of issuance are described. Requirements are contained in Appendix F TMDL Determinations.
- Condition S4.A: Flow must be recorded on the DMR on the days that SS and TSS sampling occur. Additionally, if nutrient monitoring is required, flow must also be recorded with those sampling events. Recording the monthly summary remains a requirement.
- Condition S5.C.2: Consolidates the submittal of the individual Site-Specific Sampling Plan, Pollution Prevention Plan, Solid Waste Handling Plan, and Spill Control Plans into a single plan called a Facility Site Plan. Each individual plan must be identified as separate sections easily accessible and a copy must be present on site.
- Condition S7.C1: Site specific sampling plans must include a map of all discharge points (outfalls) to surface water or land and location of sampling points. This must include a

map labelling all discharge and sampling points (i.e., monitoring points) and a list to include each corresponding latitudes/longitudes.

- Condition S11 - Engineering Documents: Added to this conditions is a new requirement that facilities with planned changes must submit an Engineering Checklist to assist in determining what construction projects and modifications will require Engineering Reporting in accordance with WAC 173-219-210.

A description of public involvement can be found in [Appendix B](#). Ecology makes the draft permit and fact sheet available for public review and comment at least thirty (30) days before issuing the final general permit. Ecology may change the proposed terms, limits, and conditions contained in the draft permit, subsequent to written public comments it receives and testimony provided at public hearings. After the public comment period closes, Ecology will summarize substantive comments and its responses to them. Ecology will include its summary and responses to comments to this fact sheet as an appendix, and publish it when issuing the final NPDES permit. The full document will become part of the legal history contained in the facility's permit file.

The draft permit does not authorize a violation of surface water quality standards or any other applicable local, state, or federal laws or regulations. Ecology may require any person seeking coverage under this permit to obtain coverage under an individual permit instead. Applicable local, state, or federal laws or regulations. Ecology may require any person seeking coverage under this permit to obtain coverage under an individual permit instead.

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## Introduction

The federal Clean Water Act (CWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. The NPDES permit program is one of the mechanisms for achieving the goals of the CWA. The NPDES Permit program is administered by the U.S. Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the state of Washington on the basis of Chapter 90.48 RCW. Chapter 90.48 RCW defines Ecology's authority and obligations in administering the wastewater discharge permit program.

State regulations specify procedures for issuing general permits (Chapter 173-226 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 173-200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that Ecology issue a permit before allowing discharge of wastewater to waters of the state. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the draft permit. WAC 173-226-110 requires the preparation of a draft permit and an accompanying fact sheet before issuing a general permit under the NPDES permit program. The fact sheet and draft permit are available for review (see Appendix A—Public Involvement of the fact sheet for more detail on the Public Notice procedures).

After the public comment period has closed, Ecology will summarize the substantive comments and respond to each comment. The summary and response to comments will become part of the administrative record. Parties submitting comments will receive a copy of Ecology's response. Ecology will summarize comments and the resultant changes to the draft permit in Appendix C-Response to Comments.

## Permit Coverage

Upland finfish hatching and rearing facilities are defined in Washington Administrative Code (WAC) Chapter 173-221A WAC as facilities in which finfish are hatched, fed, nurtured, held, maintained, or reared to reach the size of release or for market sale. This includes fish hatcheries, rearing ponds, spawning channels, and other similarly constructed or fabricated public, tribal, or private facilities. The WAC specifically states that a wastewater discharge permit is required for:

- (i) All facilities which produce more than 20,000 net pounds of finfish a year; or
- (ii) Feeds more than 5,000 pounds of fish food during any calendar month; or
- (iii) Is designated as a significant contributor of pollution by the department in accordance with 40 CFR 122.24.

This permit includes technology-based effluent limits and other permit conditions that Ecology has determined meet both the state requirement for "all known, available, and reasonable

treatment" (AKART) (RCW 90.48.010 and RCW 90.54.020) and the federal requirement for best conventional pollutant control technology (BCT).

Ecology will evaluate all applications for coverage under this general permit to ensure compliance with state water quality standards for surface water and ground water (Chapter 173-201A and 173-200 WAC) and state wastewater discharge standards and effluent limitations for these facilities (Chapter 173-221A). Facilities that require more stringent effluent limits or special conditions other than those contained in this general permit in order to meet state water quality standards may need to obtain coverage under an individual permit.

Ecology conditions general permits to provide coverage for a group of related facilities or operations of a specific industry type or group of industries. Ecology issues general permits when the discharge characteristics are similar and a standard set of permit requirements can effectively provide environmental protection and comply with water quality standards for discharges to surface water or ground water. Coverage under this general permit for discharges to surface water or discharges to ground water will be appropriate for most facilities with activities designated by the following NAICS (SIC) codes and which are subject to coverage: 112511 (0921) Fish Hatcheries and Preserves.

### ***How to Apply for Coverage***

Permittees that plan to continue coverage under the revised permit must submit a renewal application to Ecology to continue their coverage at least 180 days before the current permit expires. Ecology will consider any Permittee that does not reapply as a ***new applicant***.

The new applicant must submit a ***permit application (Notice of Intent or NOI)*** to Ecology. An official who has signature authority (WAC 173-226-200) for the entity applying for permit coverage must sign all documents. Ecology must receive the complete application for permit coverage on or before the second publication date of the public notice the permit applicant posted in a newspaper of general circulation (WAC 173-226-130). Ecology considers a newspaper of general circulation as a major newspaper publication for a region.

When Ecology receives the new applicant's complete application before public notice it can review the application and communicate necessary changes on application documents. Communication (prior to publishing public notice) about document changes can save the applicant (and sponsor) money by identifying any necessary changes before the applicant publishes and sends out the public notice.

The public has the opportunity to comment on the permit application and the proposed coverage during the 30 days after publication of the second public notice (public comment period). Ecology will consider comments about the applicability of the permit to the proposed activity received during this period. If Ecology receives no substantive comments, it may issue permit coverage on the 38<sup>th</sup> day (at the earliest) following receipt of a complete application. The public has the right to appeal coverage decisions.

## **Description of the Industry**

The number of facilities covered by this general permit has remained relatively constant over the past thirty years, with a total of 81 facilities covered currently. There were 17 applications for coverage received from private, tribal or government facilities other than WDFW and 64 applications for coverage received for WDFW operated facilities this year (2020). The mission of these facilities can range from public or tribal enhancement facilities to private enterprises running grow-out operations. Appendix A lists all the facilities seeking renewed coverage under this permit.

Ecology issued the first general permit to facilities rearing finfish in upland areas in 1990. This is the seventh issuance of the Upland Finfish Hatching and Rearing General Permit. Since 1990, these permits covered facilities that discharged at least 30 days a calendar year and produced more than 20,000 pounds of fish per year, or fed more than 5,000 pounds of fish food during any calendar month. Ecology also covered any fish rearing facility it deemed a significant contributor to waters of the state. This permit does not cover fish rearing and hatching operations on federal or tribal lands.

### ***Industrial Process***

Upland finfish hatching and rearing facilities can have a wide variety of rearing pond configurations including lined or unlined ponds, raceways, and circular ponds in which fish are held for culturing purposes. On a daily basis, facility operators give the fish a predetermined ration of pelletized fish food by hand feeding and/or mechanical means to promote growth. Once the fish attain the targeted size, they are released, harvested, or kept as brood stock.

Washington State Department of Fish and Wildlife (WDFW), private aquaculture enterprises, and some tribal facilities raise and release fish for enhancement purposes. The facilities mainly use fish pumps, dip nets, and volitional release to remove the fish from the ponds. The hatching and rearing facilities initiate the volitional release method by removing the pond screen at the outfall of a rearing pond so the bulk of the fish can leave on their own. At the end of a volitional release, the operators use moveable screens or nets to move the remaining fish into the receiving water. The most common method of moving the fish to a release site is by trucking them in fish holding tanks or by allowing them access into piping which directs them to the adjacent receiving water.

Private facilities, in addition to raising fish for enhancement purposes, produce and sell eggs, fry, and/or market-sized fish. These facilities move the fish out of the rearing ponds by the use of fish pumps or dip nets for harvest or for live transport to other rearing facilities.

*Ecology has classified the wastewater treatment processes for these facilities into three types: offline settling basins, flow-through settling systems, and rearing pond culture (facilities with a minimum of two hours of hydraulic retention time).*

The majority of the facilities requesting coverage under this draft permit use offline settling basins for vacuumed and removed pond and raceway solids. About 35 percent rely on inline settling for solids removal.

Most facilities use suction (trash) water pumps or venturi pumps to convey the accumulated pond solids to an offline settling basin. The least common method for removing the solids from the ponds is by sweeping the wastes off the pond bottom and letting the current carry the resuspended material into a bottom-drain system connected to the offline settling basin.

Facilities that lack an offline settling basin remove the accumulated solids for disposal onto adjacent fields or at a landfill by using pumps, front end loaders, and/or shovels. One facility vacuums the solids from the circular ponds and sends the wastewater to a Publically Owned Treatment Works (POTW).

### ***Discharge***

Fish hatching and rearing facilities generate the following wastes: fish fecal matter, uneaten fish food, fish mortalities, fish carcasses resulting from spawning operations, and medications and disease control chemicals used in the hatching and rearing of fish. Other wastes include sand, silt, and debris, which have settled out of the facilities source waters.

## **Wastewater Characterization**

Two related but separate sources at these facilities generate the wastewater discharge: the rearing portion of the facility (rearing ponds and raceways) and an offline settling basin if present.

### ***Rearing Pond and Raceway Discharges***

Rearing pond and raceway wastewater contains some organic solid wastes consisting of uneaten food and fecal material. The quantity of these wastes depends upon the volume of fish food added, the pounds of fish produced, pond design, and the amount of waste that settles out of the water prior to its discharge.

### ***Off-line Settling Basin Discharges***

The offline settling basin wastewater contains resuspended organic solids generated when facilities clean the bottom of the rearing ponds using a vacuum system or by sweeping to a bottom-drain system. The organic solids consist of fish food, fecal material, and other debris settled out from the facility's water source.

### ***Pollutants of Concern***

Nutrients: The primary pollutants of concern in hatchery and rearing pond wastewater are the waste food and feces. The main chemical constituents of concern in the waste food and feces are primarily nitrogen and phosphorus. The pollutant loading in the effluent is monitored monthly total suspended solids (TSS) and weekly settleable solids (SS) sampling and reporting.

The above-mentioned pollutants are present in the discharge from the raceways and rearing ponds at hatcheries and acclimation ponds in low concentrations, but in higher concentrations in the smaller volume discharges from the waste settling basins. Ecology determined that when facilities adequately remove solids, hatchery discharges pose a low risk of causing water quality violations.

With this permit, those facilities discharging to dissolved oxygen impaired waterbodies must monitor for a suite of nutrient parameters to determine the loading to these systems. TMDLs must be conducted to determine the controlling factors leading to the DO impairment and wasteload allocations can be determined for those facilities needing to reduce. The DO standard is met at the point of discharge when facilities are meeting their SS and TSS limits.

Polychlorinated biphenyls (PCBs): The historic use, worldwide distribution, and persistent nature of PCBs have led to bioaccumulation of these contaminants in fish feed and in fish tissue of the hatchery fish being fed. This has led to identifying fish hatcheries as a potential source of PCBs to the receiving waters in Washington State. As stated in 21 CFR Ch. 1 Subpart B – Tolerances for Unavoidable Poisonous or Deleterious Substances §509.30 Temporary tolerances for PCB's, certain foods and animal feeds, principally those of animal and marine origin, contain PCB's as unavoidable, environmental contaminants.

This permit continues to require management practices to assess and remove possible sources of PCB contamination in a hatchery facility that discharges to impaired waterbody. Also, those permittees are required to evaluate and choose the lowest level of PCB contamination in fish feed, when feasible.

Disease Control Chemicals: Ecology also considers the disease control chemicals used at these facilities as pollutants of concern. Fish hatching and rearing facilities use these chemicals to treat both internal and external fish diseases and to prevent the spread of disease at or between facilities. The draft permit limits the use of these chemicals to only those approved for hatchery use by the U.S. Food and Drug Administration (FDA) or by the EPA. Permittees may use FDA approved Investigational New Animal Drugs (INADs) provided the facility a) is signed up as an INAD study participant through USFWS; b) meets the conditions detailed in the facility's INAD permit application; c) uses INADs that are labeled correctly and do not violate Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) regulations; d) and reports the use on the Disease Control Chemical Use Form.

All disease control chemicals must be used in accordance with label instructions. This NPDES permit does not authorize the use of pesticides in a manner inconsistent with FIFRA labeling. The draft permit also prohibits the discharge of these chemicals in concentrations that would exceed federal or state water quality standards and requires facilities to use BMPs to minimize the concentration of these chemicals in the discharge.

These chemicals include the following:

**Internal Control**

Amoxicillin  
Terramycin (OTC)  
Epsom Salts  
Erythromycin  
Romet 30  
Florfenicol  
Penicillin  
Lincomycin  
Albuterol  
Clindamycin  
Vibrio Vaccine  
Trimethoprim-sulfadiazine  
Chlortetracycline  
Tylosin  
Fumagillin  
Cephalexin  
Benzocaine  
Sulfamethoxazole (Albon)  
GnRH=gonadotropin releasing hormone  
Isoeugenol (Aqui-S)  
Calcein  
BKD Vaccine

**External Control**

Acetic Acid  
Buffered Iodophor  
Chloramine-T  
Formalin  
Hydrogen Peroxide  
Potassium Permanganate  
Sodium Chloride (Salt)  
Diquat  
Citric Acid  
Copper Sulfate

**Disinfectant**

Chlorine (Bleach)

**Other**

MS-222  
Quaternary Ammonia  
Sodium Thiosulfate  
Aquashade  
LLMO  
Chlorhexidine  
Lime Type-S  
Carbon Dioxide (gas)  
Ozone (gas)

Fish hatching and rearing facilities administer disease control chemicals at known concentrations for their therapeutic or disease prevention effect. WDFW is the legal authority for aquaculture disease and the regulation of fish pathogens, in Washington State. Chapters 220-370 of the Washington Administrative Code (WAC) delegate this authority to WDFW.

This draft permit requires a facility to maintain a Chemical Operational Log, including chemical, dosage, duration, method of application, amount used, type of treatment (static bath or flow) estimated concentration at discharge and method of disposal information (Appendix H Example Log). Calculations for determining concentration of chemicals used in the treatment and effluent can be determined through calculation.

**Previous Permit Limits and Conditions**

Ecology issued the previous general permit for these facilities on December 16, 2015, with an effective date of April 1, 2016.

### **Solids**

The permit placed effluent limits on settleable solids and total suspended solids from general hatchery and rearing pond discharges, offline settling basin discharges, and pond drawdown for fish release discharges. The following tables depict those limits and the monitoring frequencies.

<b>Raceways and Rearing Ponds</b>			
<b>Parameter</b>	<b>Monthly Average</b>	<b>Maximum Daily</b>	<b>Monitoring Frequency</b>
Total Suspended Solids TSS (net mg/L)	5.0	15.0	1/month
Settleable Solids SS (net mL/L)	0.1	--	1/week
<b>Off-line Settling Basins</b>			
<b>Parameter</b>	<b>Monthly Average</b>	<b>Instantaneous Maximum</b>	<b>Monitoring Frequency</b>
Total Suspended Solids (mg/L)	--	100	1/month
Settleable Solids (mL/L)	--	1.0	1/month
<b>Pond Drawdown for Fish Release Discharges</b>			
<b>Parameter</b>	<b>Instantaneous Maximum</b>	<b>Monitoring Frequency</b>	
Total Suspended Solids (mg/L)	100	1/drawdown	
Settleable Solids (mL/L)	1.0	1/drawdown	

### **Chlorine**

WAC173.201A-240 Toxic substances, Table 240(3) lists Chlorine (Total Residual) acute limits as 19.0 µg/L freshwater and 13.0 µg/L marine water. This is a 1-hour average concentration not to be exceeded more than once every three years on the average. Method detection level is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte. The MDL is 50 µg/L.

<b>Rearing Vessel Disinfection Water</b>		
	<b>Instantaneous Maximum</b>	<b>Monitoring Frequency</b>
Total Residual Chlorine (µg/L) <sup>a</sup>	(19.0) <sup>a</sup>	1/discharge

<sup>a</sup> The chlorine limits apply when chlorine or Chloramine-T is being used. The Permittee will be in compliance with the effluent limits for total residual chlorine, provided the total residual chlorine levels are at or below the compliance level of 50 µg/L. This limit is based on the Method Detection Level (MDL).

### **Impaired Waterbodies**

Temperature: The permit required facilities that discharged to temperature impaired waterbodies to monitor temperature of their discharges from May through October starting in 2017. Data was reported as a submittal and monitored in the manner described in the table below.

Discharges to Impaired Waterbody				
Parameter	Sampling Points	Limit <sup>a</sup>	Sampling Frequency	Type of Sample
Temperature	Effluent (and receiving water if indicated by 2-year sample results)	0.3 °C over receiving water	Continuous, from May thru October	Meter

<sup>a</sup> Temperature monitoring will begin in May 2017. If data collected shows reasonable potential to violate WQ standards, further effluent and receiving water monitoring will be required by Ecology.

**Polychlorinated Biphenyls:** The permit limited the potential of PCBs entering the receiving waters with impairments by requiring PCB assessment and mitigation when necessary. Permittees assessed and remove potential sources of PCB contamination to the receiving waters and sediments. Permittees were required to implement the listed BMPs, that include fish feed evaluation for low PCB content, and removal of any suspected PCB-contaminated paint that comes in contact with water, as a first step in reducing PCB discharges.

***Disease control chemicals:***

The permit limited the use of drugs, medications, and chemicals (disease control chemicals) to those approved for aquaculture use by the FDA or the EPA. The permit required the facilities to report their use of drugs, medications, or chemicals annually on a form provided by Ecology. The facilities were also required to record the disposal of all spent chemical dip treatment solutions in the Operational Log maintained on-site.

**Summary of Compliance with Previous Permit**

Ecology assessed compliance with the previous general permit based on querying and reviewing the Permit and Reporting Information System (PARIS) database. Beginning with this permit cycle, permittees were required to submit reports and DMRs electronically instead of using paper. This proved challenging for many WDFW and private operators in the first half of the permit cycle. To date, the most common permit violation was for Late Submittal of DMRs. The amount substantially lessened after 2018, when Ecology provided in-person electronic reporting training to WDFW and other permittees. From 2016 through the end of 2018, 689 violations were reported. In contrast, from 2019 to the present, only 14 violations have been reported. Similarly, the second most common violation was a failure to submit a required report, and after training the violations lessened, going from 158 to 23 during the same time periods.

The previous permit had 66 numeric effluent limit violations. Most were total suspended solids limit exceedances. This permit cycle saw 39 effluent limit violations with an average of 7.8 violations per year (minimum of 5 in 2019 and maximum of 10 in 2017). It was reported in several instances that during extremely high water events, facilities exceeded effluent solids permit limits usually because high flow volumes flushed influent solids through the system without allowing them to settle or re-suspended settled solids from the ponds. Of the permit limit violations, most were for settleable solids or total suspended solids exceedances; 24 for

inline and raceway discharges, 9 for offline settling basin discharges, 5 for drawdown, and only 1 exceedance for Total Residual Chlorine.

During the same 5-year time period, Ecology issued 11 formal enforcement actions: five Notices of Violation for permit limits and notification requirements, three orders for water quality monitoring, two agreed orders for reporting extensions, and one order to seek coverage.

Sixteen informal actions were completed; 11 letters, four meetings, and one phone call. Facility managers followed up numerous technical assistance calls for permit compliance issues. One informal action led to the development of the Engineering Reporting Checklist now a requirement under special condition 11. It is proposed in this permit that permittees complete the checklist and submit to Ecology to determine whether the modification or construction activity requires an engineering report to eventually be submitted.

Facilities required to monitor and report temperature of their effluent because they discharged to temperature impaired waterbodies, was done with various success. The manner of implementation and subsequent reporting did not allow for an analysis of maximum daily temperature preventing Ecology from deciding if the facility discharged above standard. This permit requires facilities to use continuous temperature monitoring and daily recording of maximum temperature through quarterly reporting via eDMR. A temperature sampling and analysis plan must be submitted and approved prior to beginning monitoring.

Facilities required to evaluate and mitigate for PCBs submitted assessments, removal plans, and removal documentation when necessary in compliance with the permit. A total of six hatcheries assessed and three did not have PCB present on site or in contact with water. Of the three hatcheries did, two mitigated and provided removal documentation. One hatchery has requested an extension. Ecology and the permittee are beginning the process of creating a compliance schedule to comply with the removal requirement and meet the narrative water quality criteria.

Ecology has inspected nearly all of the facilities covered under this general permit at least once during the permit term and provided technical assistance to help them comply with the permit terms and conditions.

## **Regulatory Information**

### ***Legal Requirements for Limitations to Control Pollutants in Discharges***

Section 502(11) of the CWA defines “effluent limitation” as any restriction on the quantity, rate, and concentration of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance. Effluent limitations are among the permit conditions and limitations prescribed in NPDES permits issued under Section 402(a) of the Act, 33 U.S.C. §1342(a).

Federal and state regulations require that effluent limits in an NPDES permit must be either technology- or water quality-based.

- Technology-based limits are based upon the treatment methods available to treat specific pollutants. Technology-based limits are set by the EPA and published as a regulation, or Ecology develops the limit on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC).
- Water quality-based limits are calculated so that the effluent will comply with the surface water quality standards (Chapter 173-201A WAC), ground water standards (Chapter 173-200 WAC), sediment quality standards (Chapter 173-204 WAC) or the National Toxics Rule (40 CFR 131.36).

### ***Types of Effluent Limitations: Technology-Based and Water-Quality Based***

The CWA requires that discharges from existing facilities, at a minimum, meet technology-based effluent limitations reflecting, among other things, the technological capability of Permittees to control pollutants in their discharges which are economically achievable. State laws (RCWs 90.48.010, 90.52.040 and 90.54.020) require the use of “all known, available and reasonable methods of prevention, control and treatment” (AKART).

Water quality-based effluent limitations (WQBELs) are required by CWA Section 301(b)(1)(C) and, in Washington State, are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Groundwater Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the Federal human health criteria for Washington (40 CFR §131.45). The more stringent of these two limits (technology or water quality-based) must be chosen for each of the parameters of concern, and implemented through NPDES permits. [CWA sections 301(a) and (b)].

Effluent limitations in NPDES permits may be expressed as numeric or non-numeric standards. Under EPA’s regulations, non-numeric effluent limits are authorized in lieu of numeric limits, where “[n]umeric effluent limitations are infeasible.” [40 CFR §122.44(k)(3).] Courts have recognized that there are circumstances when numeric effluent limitations are infeasible and have held that EPA may issue permits with conditions (e.g., Best Management Practices or “BMPs”) designed to reduce the level of effluent discharges to acceptable levels:

Natural Res. Def. Council, Inc. v. EPA, 673 F.2d 400, 403 (D.C. Cir. 1982) (noting that "section 502(11) defines 'effluent limitation' as 'any restriction' on the amounts of pollutants discharged, not just a numerical restriction"; holding that section of CWA authorizing courts of appeals to review promulgation of "any effluent limitation or other limitation" did not confine the court's review to the EPA's establishment of numerical limitations on pollutant discharges, but instead authorized review of other limitations under the definition) (emphasis added).

In *Natural Res. Def. Council, Inc. v. Costle*, 568 F.2d 1369 (D.C. Cir. 1977), the D.C. Circuit stressed that when numerical effluent limitations are infeasible, EPA may issue permits with conditions designed to reduce the level of effluent discharges to acceptable levels.

Ecology does not develop effluent limits for all reported pollutants. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation.

Nor does Ecology usually develop permit limits for pollutants not reported in the permit application but that may be present in the discharge. The permit does not authorize discharge of the non-reported pollutants. During the five-year permit term, a facility's effluent discharge conditions may change from those conditions reported in the permit application. The facility must notify Ecology, as described in 40 CFR 122.42(a), if significant changes occur in any constituent.

## **Technology-Based Effluent Limits**

In 1974, EPA released a "Draft Development Document for Effluent Limitations Guidelines for Fish Hatcheries and Farms," for public review. In 1984, EPA Region 10 contracted with JRB Associates for a study of Idaho trout facilities. The study recommended effluent limits, which would represent best conventional pollutant control technology (BCT).

Ecology based individual NPDES permits for upland fin-fish hatching and rearing facilities issued in Washington before 1984 primarily on the EPA draft development document released in 1974. Permits issued after 1984 in Washington generally followed the effluent recommendations in the 1984 EPA/JRB Idaho fish hatchery study.

In 1990, Ecology established all known, available, and reasonable methods of treatment (AKART) for upland fin-fish facilities when it adopted Chapter 173-221A WAC, Wastewater Discharge Standards and Effluent Limitations. Ecology amended the regulation in October 1995 primarily to acknowledge the widespread and commonly accepted extra-label use of drugs and chemicals.

This regulation contains both wastewater discharge standards and design criteria for wastewater treatment systems. This permit contains the effluent limits identified in Chapter 173-221A WAC. Design criteria for wastewater treatment systems are not in the permit but are contained in the regulation covering this industry. Listed below are the wastewater discharge performance standards:

<u>Rearing Pond Discharges</u>	<u>Limit</u>
Instantaneous Maximum Total Suspended Solids	15 mg/L
Average Monthly Total Suspended Solids Concentration	5 mg/L
Average Monthly Settleable Solids Concentration	0.1 mL/L

### Off-line Settling Basin and Rearing Pond Drawdown for Fish Release Discharges

Instantaneous Maximum Total Suspended Solids	100 mg/L
Instantaneous Maximum Settleable Solids	1.0 mL/L

The implementation of the Pollution Prevention Plan and the Solid Waste Management Plan during past permit cycles provided further reductions in the amount of solids discharged, protected groundwater quality, prevented spills, and required facilities to develop procedures for spill response. The site-specific Facility Sampling Plan required each facility to identify influent and effluent sampling points and outline procedures for composite sampling. This permit requirement has resulted in more representative sampling of the discharges from the fish hatching and rearing facilities.

This permit continues to require Permittees to assess and remove potential sources of PCB contamination to the receiving waters and sediments. Permittees are required to implement the listed BMPs, that include fish feed evaluation for low PCB content, and removal of any suspected PCB-contaminated paint that comes in contact with water.

The draft permit continues the prohibition on the discharge of Atlantic salmon (*Salmo salar*) into freshwater surface waters of the state, without written permission from WDFW. Ecology based this prohibition in part on the May 1997 Pollution Control Hearings Board ruling declaring Atlantic salmon a biological pollutant.

Ecology believes that a precautionary stance in regards to the inadvertent release of Atlantic salmon is a reasonable step to prevent their escapement to state waters. This requirement only affects a few permitted facilities statewide. Chapters WAC 220-450 and 640 also prohibits the release of exotic species into the state without a permit from the WDFW.

Facilities that Ecology determines do not need to apply for and receive coverage under the Upland Fin-Fish Hatching and Rearing NPDES General Permit must still meet the practices and effluent standards of WAC 173-221A-100.

Fish hatching and rearing facilities use disease control chemicals for two purposes.

- For the internal and external control of fish diseases.
- To disinfect facility tools, rearing ponds, or source waters to prevent the spread of these diseases.

The discharge concentration of these chemicals should not cause receiving water toxicity if the use is consistent with product labels, FDA regulations, and the permit requirement mandating BMPs. Ecology has determined that the use of BMPs will meet AKART for disease control chemicals.

The proposed permit required a more thorough accounting for the use of formalin, with required reporting of dosage, method of application, amount used, flow, water temp, estimated concentration in the discharge, method of disposal and location of discharge. The Permittee must follow all label directions.

Disease control chemicals must be used in accordance with label instructions, and approved by FDA or EPA, or under an INAD. Permittees may use FDA approved INADs provided the facility a) is signed up as an INAD study participant through USFWS; b) meets the conditions detailed in the facility's INAD permit application; c) uses INADs that are labeled correctly and do not violate FIFRA; d) and reports the use on the Disease Control Chemical Use Form. WDFW has jurisdiction over fish pathogens, treatment, and aquaculture disease control.

## **Water Quality-Based Requirements**

### ***Designated Uses and Surface Water Quality Standards***

The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) were designed to protect existing water quality and preserve the beneficial uses of Washington's surface waters. Waste discharge permits must include conditions that ensure the discharge will meet established surface water quality standards (WAC 173-201A-510). When drafting a general permit Ecology must consider the typical discharge conditions and cannot readily accommodate site-specific variables. Ecology may base water quality-based effluent limits on an individual waste load allocation or on a waste load allocation developed during a basin wide total maximum daily loading study (TMDL). Ecology determined that surface water discharges for this industry group are most likely to freshwater (WAC 173-201A-200).

### ***Numerical Criteria for the Protection of Aquatic Life***

Numerical water quality criteria are published in the Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in receiving water to protect aquatic life and recreation in and on the water. Ecology uses numerical criteria along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limits, the discharge must meet the water quality-based limits.

### ***Numerical Criteria for the Protection of Human Health***

The U.S. EPA has published 91 numeric water quality criteria for the protection of human health that are applicable to dischargers in Washington State (40 CFR 131.36). These criteria are designed to protect humans from exposure to pollutants linked to cancer and other diseases, based on consuming fish and shellfish and drinking contaminated surface waters.

### ***Narrative Criteria***

Narrative water quality criteria (e.g., WAC 173-201A-240(1); 2006) limit the toxic, radioactive, or other deleterious material concentrations that the facility may discharge to levels below those which have the potential to:

- Adversely affect designated water uses.
- Cause acute or chronic toxicity to biota.

- Impair aesthetic values.
- Adversely affect human health.

Narrative criteria are also established to condition the application of the numeric criteria and to provide regulatory responsibility to protect the specific designated uses of all fresh waters (WAC 173-201A-200, 2006) and of all marine waters (WAC 173-201A-210; 2006) in the state of Washington.

### ***Antidegradation***

The purpose of Washington's Antidegradation Policy (WAC 173-201A-300-330) is to:

- Restore and maintain the highest possible quality of the surface waters of Washington.
- Describe situations under which water quality may be lowered from its current condition.
- Apply to human activities that are likely to have an impact on the water quality of surface water.
- Ensure that all human activities likely to contribute to a lowering of water quality, at a minimum, apply all known, available, and reasonable methods of prevention, control, and treatment (AKART).
- Apply three tiers of protection (described below) for surface waters of the state.

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 dischargers do not degrade waters of a higher quality than the criteria assigned unless such lowering of water quality is necessary and in the overriding public interest. Tier II applies only to a specific list of polluting activities. Tier III prevents the degradation of waters formally listed as “outstanding resource waters” and applies to all sources of pollution.

WAC 173-201A-320(6) describes how Ecology implements Tiers I and II antidegradation in general permits. All Permittees covered under the general permit must comply with the provisions of Tier I. Ecology determined that the permit does not cover discharges to Tier III waters.

The water quality standards at WAC 173-201A-320(6) describe how Ecology should conduct an antidegradation Tier II analysis when it reissues NPDES general permits. This section of the rule requires Ecology to:

- Use the information collected, from implementation of the permit, to revise permit or program requirements.
- Review and refine management and control programs in cycles not to exceed five years or the period of permit reissuance.

- Include a plan that describes how Ecology will obtain and use information to ensure full compliance with water quality standards. Ecology must develop and document the plan in advance of permit or program approval.

Ecology has an internal technical workgroup that meets regularly to discuss and evaluate data received from general hatchery Permittees, emerging wastewater treatment technology, and evaluate the efficacy of the general hatchery permit in protecting water quality. To comply with the antidegradation requirements, Ecology has reviewed the requirements of the general permit and evaluated its effectiveness in protecting water quality.

Ecology is not aware of any new control technologies that have been developed or generally implemented during the past 5 years that reduce pollution from hatcheries that are reasonable and economically achievable. Inspections at each facility with emphasis on BMPs and compliance with existing permit limits meets water quality standards. The draft permit has been revised to include BMPs for PCB reduction, where PCBs come in contact with water.

To date, facilities that have submitted application for coverage under this general permit are all existing facilities that have previously been public noticed, giving the general public an opportunity to question or comment on individual actions.

Although the antidegradation regulations for general permits state that individual actions covered under a general permit do not need to go through independent Tier II reviews, Ecology considers it important that the public have the opportunity to weigh in on whether individual actions are in the overriding public interest. The antidegradation rule establishes a refutable presumption that they do, but only through a public notice of intent to provide coverage and expected compliance with antidegradation does the general public have an opportunity to question individual actions. Thus, Ecology will solicit public comments for new requests for coverage under this permit, through public notification in a local paper and on Ecology's webpage.

This fact sheet describes how the permit and control program meets the antidegradation requirement.

## **Evaluation of Surface Water Quality-Based Effluent Limits for Numeric Criteria**

### ***Temperature and Dissolved Oxygen***

The pollutants of potential concern in the first version of this permit were temperature and constituents that impacted dissolved oxygen in the receiving water. The concern was raised and studied in a 1989 publication, [\*Quality and Fate of Fish Hatchery Effluents during the Summer Low Flow Season\*](#)<sup>1</sup> (Ecology publication 89-17). The facilities monitored these parameters during their first year of permit coverage. The results of this monitoring showed that these facilities do not have a reasonable potential to exceed these parameters. Based upon this

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<sup>1</sup> <https://apps.ecology.wa.gov/publications/SummaryPages/8917.html>

information, Ecology determined that it would not require further monitoring of temperature and dissolved oxygen in subsequent permits for every facility.

Because of a change in the water quality standards and 303(d) listings for temperature and dissolved oxygen in several of the receiving waters, this permit requires monitoring for temperature and nutrient parameters in the effluent for those facilities discharging to temperature and dissolved listed waterbodies. Additional temperature or dissolved oxygen monitoring can be required for individual facilities through an Administrative Order if there is probability or concern that an individual facility is impacting the receiving water.

If a Total Maximum Daily Load assessment is ongoing or proposed for a receiving water for either a temperature or dissolved oxygen, Ecology will wait for TMDL completion and determination. Ecology will assign the WLA and water quality limit for that constituent that was determined. If a facility is part of a TMDL assessment for dissolved oxygen, they will likely be assigned limits for the parameters of concern, such as phosphorous, nitrogen or BOD5. If a WLA is already assigned, the Permittee must comply with the monitoring and limits specifically assigned in the WLA. In this permit, Ecology has added TMDL determinations and water quality limits at the time of issuance. Condition S3.G.2 describes the facilities and Appendix F describes the requirements for each facility. During the permit cycle, Ecology can require additional monitoring and implement limits through an Order on a case-by-case basis.

### ***Toxic Pollutants***

PCBs are a pollutant of concern covered under this general permit. This permit requires facilities that discharge to a PCB listed waterbody, complete a facility assessment and PCB removal plan. Facilities are also required to preferentially purchase feed and products that are free of PCBs to the greatest extent feasibly and economically feasible.

Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the water quality criteria. Ecology does not exempt facilities with technology-based effluent limits from meeting the water quality standards.

PCBs are potential toxic pollutants that could be released from a hatchery and result in violation of state water quality standards. Currently, EPA has approved NPDES permit sample methods that are not sensitive enough to adequately characterize PCB discharge concentrations in hatchery wastewater.

Ecology has concluded a study, [\*Evaluation of Fish Hatcheries as Sources of PCBs to the Spokane River\*](#)<sup>2</sup> (Ecology publication 18-03-014). which found that hatchery fish placed in Lake Spokane continued to uptake PCBs. Sediment in the oxbow where the hatchery discharges was below sediment clean-up levels and it was inconclusive whether the hatchery water discharge was contributing since the source of the hatchery water was not evaluated to determine a net

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<sup>2</sup> <https://apps.ecology.wa.gov/publications/SummaryPages/1803014.html>

input. Overall, it was recommended to continue identification, tracking and monitoring of PCB sources to the Spokane River. Ecology determined the permittee must plan to remove the painted troughs in the hatchery building that were found contained PCBs during the permit required evaluation and continue to implement a reduced PCB in feed plan to reduce PCBs in the discharge.

WDFW, the operator of the Spokane Hatchery is currently working with Ecology to develop a Compliance Schedule that includes hatchery reconstruction, offline settling, and the removal the rearing structures currently painted with paint that contain PCBs. The requirements of the Compliance Schedule can be found in Appendix F. The administrative order that will be issued containing the Compliance Schedule should include an effectiveness monitoring study to indicate pre- and post-construction discharge characterization of PCBs (via EPA 1668) to determine the degree of reduction.

This permit continues to require a PCB assessment and the removal for those facilities that discharge to PCB listed waterbodies across the state. Additionally, these facilities must continue to implement Fish Feed PCB Reduction plans to prevent and reduce the uptake in the fish and the discharge of any waste feed.

#### ***Emergency Extra-Label Drug and Chemical Use***

Some of the disease control chemicals used at these facilities classify as toxic pollutants. Washington has not adopted numeric water quality standards for most of these compounds. Ecology has determined that when facilities use these chemicals according to FDA requirements, follow product label requirements, and follow BMPs to dilute the treatment concentrations with other hatchery flows, these chemicals pose no reasonable potential to violate federal or state water quality standards.

The document entitled, "Approval of Disease Control Chemical Use Under the Department of Ecology's General Permit for Upland Fin-fish Hatching and Rearing Facilities" (1990) authorized the use of non-emergency and emergency extra-label drug and chemical use without the prior approval of Ecology. In October 1995, Ecology amended Chapter 173-221A WAC to specifically allow the extra-label use of disease control drugs and chemicals if the drugs and chemicals are administered by or under the supervision of a licensed veterinarian and approved in advance by Ecology.

The previous permits adopted the document conditions and incorporated them into S6.B. Ecology recognizes that there are many situations where extra-label disease control drug and chemical use could occur with little reasonable potential to impact water quality. Ecology also recognizes that an epizootic disease outbreak may require extraordinary measures to save the fish. Epizootic disease outbreaks may require the extra-label use of a drug or chemical or the use of a drug or chemical that is not approved by the FDA or EPA. Ecology requires 24-hour prior notification for emergency drug and chemical use and a detailed account of quantity of disposed disease control drugs and chemicals, in the facility's operational log.

WDFW has legal authority (Title 77 RCW: Fish and Wildlife) to regulate and issue policy for Aquaculture Disease Control through Chapter 220-370 WAC and *The Salmonid Disease Control Policy of the Fisheries Co-Managers of Washington State*, July 2006.

### ***Discharges to 303(d) Listed Impaired Waterbodies***

The current permit stipulates that facilities discharging a pollutant named as a pollutant causing a water quality standards violation at a location identified on the current (at the time permit coverage is granted) EPA-approved 303(d) list for Washington State are not authorized to discharge that pollutant at a concentration above the surface water quality standards (Chapter 173-201A WAC). Considering the pollutants associated with fish hatching and rearing facilities, Ecology has determined that facilities discharging to waterbodies listed for fine sediment, temperature, and dissolved oxygen must comply with:

- TMDLs with applicable wasteload allocations, completed prior to the date Ecology issues permit coverage.
- An effluent limit that is equal to the applicable surface water quality standard (WAC173-201A) at the point of discharge if it discharges to an impaired water body that does not have a completed TMDL.

The current permit specifies that Permittees that exceed the effluent limit for a discharge to a 303(d) listed waterbody constitute a violation of the general permit. Condition S1.B.1 of the current permit states that Ecology will not provide coverage under the general permit to facilities that discharge to a waterbody listed pursuant to Section 303(d) of the Clean Water Act unless it is not causing or contributing to the impairment of the receiving water. The proposed permit adds language that allows the Permittee to continue coverage under the general permit if a limit or monitoring requirement is included either in this permit or in a companion letter or order.

Ecology's Permit Writers' Manual (page 196) discusses existing discharges to Category 5, 303(d) listed water bodies that have no TMDL completed. If the pollutant is a far-field pollutant, is present in the discharge, and is subject of a TMDL in progress, the permit writer may defer any water quality-based limits on the pollutant until the TMDL is completed and a WLA is assigned.

Ecology is requiring BMPs to minimize solids discharges and will reevaluate effluent limits for nutrients, phosphorous, and other oxygen-depleting parameters once the TMDLs are completed. Data will be collected for a TMDL when appropriate and determined by Ecology.

The list of permittees that have submitted applications for coverage under this permit and discharge to a 303(d) listed waterbody 0.5 mile of their location are listed in the draft permit Appendix D. There were facilities that do not discharge to a listed waterbody, do not discharge parameters of concern, or do not discharge at during critical times of the year. Ecology will evaluate the facility discharges in their regions as to their potential to meet water quality standards after the permit cycle for the waterbody and parameters on the 303(d) list approved at the time this draft permit is issued.

This draft permit continues to require hatchery managers to evaluate their facility for possible PCB sources, including paint and caulk that might come in contact with water (Section S6.C). Facilities discharging to PCB listed waterbodies must conduct a complete facility assessment for paint or caulk manufactured prior to 1980, submit a plan for removal, and complete the plan two years after issuance of the permit. The permit requires facilities to develop and implement a plan to reduce PCBs in fish feed through preferential purchasing, feeding practices that minimize the discharge of unconsumed feed, and reduce/remove accumulated solids so they don't enter surface waters. The aquaculture feed industry continues to reduce dependence on forage fish (primary source of PCBs in feed) and is developing technology to remove organic contaminants from feed ingredients.

In this permit, Ecology has added TMDL determinations and water quality limits at the time of issuance. Condition S3.G.2 describes the facilities that have TMDL determinations and draft permit Appendix F describes the requirements for each facility. During the permit cycle, Ecology can require additional monitoring and implements limits through an Order on a case-by-case basis.

### ***Human Health***

Washington's water quality standards include 91 numeric human health-based criteria that Ecology must consider when writing NPDES permits. These criteria were established in 1992 by EPA in its National Toxics Rule (40 CFR 131.36). Ecology has determined that the discharge from this industry group is unlikely to contain chemicals regulated for human health. However, the proposed permit requires Permittees that discharge to PCB listed waterbodies evaluate possible sources of Polychlorinated Biphenyls (PCBs) in the hatchery. See PCB evaluation section above.

### ***Whole Effluent Toxicity***

The water quality standards for surface waters forbid discharge of effluent that causes toxic effects in the receiving waters. Many toxic pollutants cannot be measured by commonly available detection methods. However, laboratory tests can measure toxicity directly by exposing living organisms to the wastewater and measuring their responses. These tests measure the aggregate toxicity of the whole effluent, so this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity.

Using the screening criteria in WAC 173-205-040, Ecology determined that whole effluent toxic effects caused by unidentified pollutants in the effluent are unlikely. Therefore, this permit does not require WET testing. Ecology may require WET testing in the future, if it receives information indicating that toxicity may be present in this effluent.

### ***Sediment Quality***

The aquatic sediment standards (WAC 173-204) protect aquatic biota and human health. Under these standards, Ecology may require a facility to evaluate the potential for its discharge to

cause a violation of sediment standards (WAC 173-204-400). You can obtain additional information about sediments at the [Aquatic Lands Cleanup Unit website](#)<sup>3</sup>.

Ecology has determined through a review of fish hatching and rearing facility wastewater characteristics that this discharge has no reasonable potential to violate the sediment management standards. Findings from the study [Evaluation of Fish Hatcheries as Sources of PCBs to the Spokane River](#)<sup>4</sup> determined that the sediment sampled in the oxbow adjacent to where the hatchery discharge occurred was below sediment clean-up levels.

### **Ground Water Quality**

The ground water quality standards (Chapter 173-200 WAC) protect beneficial uses of ground water. Permits issued by Ecology must not allow violations of those standards (WAC 173-200-100). Ecology has determined that a properly operated upland fin-fish hatching and rearing facility poses little potential to impact state ground water standards. This permit does not authorize a violation of these standards. Ecology may require facilities with the potential to violate these standards to obtain coverage under an individual permit and/or require additional sampling and groundwater monitoring, and/or require these facilities to line rearing and pollution abatement ponds if necessary.

### **SEPA Compliance**

The coverage of existing facilities under this proposed general permit is exempt from the procedures mandated under the State Environmental Policy Act (WAC 197-11-855). The exemption does not apply to any new source or new discharger. A new source or new discharger must complete the SEPA process prior to application for coverage under the proposed general permit. A new source is any new discharge from a fin-fish hatching or rearing operation that meets the state threshold of greater than 20,000 pounds of fish on station or feeds more than 5,000 pounds of feed in any calendar month.

Any existing facility planning a significant change or increase in production must submit a new application for coverage to modify their site-specific cover sheet and demonstrate that the proposed change has complied with SEPA review. Facilities must notify their Ecology permit manager of any planned change that has the potential to impact their wastewater discharge.

## **Special Conditions**

### **Comparison of Discharge Limits with the Previous Permit**

The effluent limits for total suspended solids and settleable solids in the draft permit are the same as those in the permit issued in 2016. WAC 173-221A-100(4)(a)(iv) states “Effluent limitations shall apply as net values provided the criteria contained in 40 CFR 122.45 (net gross

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<sup>3</sup> <http://www.ecy.wa.gov/programs/tcp/smu/sediment.html>

<sup>4</sup> <https://apps.ecology.wa.gov/publications/SummaryPages/1803014.html>

allowance) are met.” The 2016 permit required fish hatching and rearing facilities to report influent and effluent values on the DMR form along with their net value calculations. Ecology evaluated this data to assess whether additional sampling was necessary to prove substantial similarity between influent and effluent solids. The majority of sampling data indicate that only a few facilities reported high influent and effluent solids values.

### ***Monitoring and Reporting***

Ecology requires monitoring, recording, and reporting (WAC 173-226-090 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and that the discharge complies with the permit’s effluent limits.

Since facilities designed the offline settling basins to meet the removal efficiency and hydraulic retention standards, Ecology believes it is more important to monitor the quality of the effluent leaving the settling basins than percent removal. The previous permit required sampling of the offline settling basin every month the settling basin discharged, regardless of pounds of fish on hand or food fed per month. Monthly sampling for total suspended solids remains in this permit. Ecology feels this sampling frequency is justified because the solids entering the receiving water from the offline settling basins is the most important indicator of a hatchery’s environmental performance.

The draft permit continues to allow facilities to use the DPD colorimetric field test for chlorine as an acceptable alternative to constant bioassay. It also required facilities to neutralize residual chlorine prior to discharge to less than 19 µg/L, which is the acute toxicity criterion promulgated in the Washington State surface water quality standards (Chapter 173-201A WAC). The method detection limit for total residual chlorine is 50 µg/L (0.05 mg/L). 50 µg/L is equivalent to EPA’s Minimum Level (ML), which is defined in 40 CFR Part 136. Total residual chlorine is also an effective indicator of Chloramine-T levels in the effluent. The Permittee is in compliance with this permit for chlorine if they meet the 50 µg/L ML.

### ***Calculating Net Values***

The draft permit continues the use of net values when submitting results for TSS and settleable solids. If the facility chooses to calculate net discharge values for solids, it must report both the influent and effluent values on the DMR form. It must take a sample of the “raw” water which represents the influent sample. The net calculation is applicable when the material (solids) in the influent is substantially similar in character as the solids in the effluent. Ecology may require additional sampling for Total Volatile Suspended Solids (TVSS) or BOD<sub>5</sub>, to determine the organic proportion of solids in the influent and effluent, if it has concerns.

When a permittee must monitor for nutrients, facilities can use net values if it is suspected the influent contributes due to watershed or surface water variability with rain or other upland activities. It is not required but should be a consideration.

The monitoring and testing schedule is detailed in the permit under Conditions S4 and S5. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

***Impaired Waterbodies (S3.G)***

Facilities with TMDL determination have been incorporated into the permit (see Appendix F of permit) to include the parameter of concern monitoring, reporting, and water quality limit. The draft permit requires monitoring and reporting of temperature and nutrients parameters for those facilities that discharge to 303(d) Category 5 listed waterbodies for temperature and dissolved oxygen.

***Reporting and Record Keeping (S5)***

Ecology based Special Condition S5, Reporting and Record Keeping Requirements, on its authority to specify any appropriate reporting and record keeping requirements to prevent and control waste discharges (WAC 173-226-090).

***Facility Site Plan (S5.C)***

The draft permit (Condition S5.C) establishes the submittal of a single Facility Site Plan and combines the four permit required plans as one submittal. Each individual plan must be identified as separate sections and each must be completed as required noted in the sections identified below:

- a. Site-Specific Sampling Plan (S7)
- b. Solid Waste Management Plan (S8.D)
- c. Pollution Prevention Plan (S9)
- d. Spill Control Plan (S10)

The Permittee must keep a copy of the Plan on site and available to their staff and Ecology upon request.

***Operational Log (S5.D and S6.B)***

The Permittee is required to keep records on disease control chemicals used at the facility, including who administered the chemicals, date of application, trade name, where used (specific pond, raceway, troughs, etc.), estimated concentration during application and at discharge, duration of use, reason for use, and disposal methods. WDFW developed a form during the last permit cycle that Ecology is incorporating into this permit (Chemical Operational Log – Appendix H). The purpose of the Chemical Operational Log is to verify chemical concentration calculations and amounts. The collection and recording of meaningful information to determine chemical concentration in the effluent is necessary to verify permit and water quality standards compliance.

The Operational Log must also include hatchery fish loadings and total amount of food fed for each calendar month. The log must be kept on-site and available to Ecology employees upon request.

### ***Reporting of Spills of Oil or Hazardous Materials (S5.I)***

Hatcheries store and use chemicals that have the potential to cause water pollution or groundwater contamination. Ecology can require a facility to develop Best Management Plans to prevent this accidental release (Section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080).

S5.I requires the Permittee to report spills of oil or hazardous materials in accordance with RCW 90.56.280 and Chapter 173-303-145 WAC. Permit condition S9 requires the development of a Pollution Prevention Plan and S10 requires a Spill Prevention Plan that incorporates how the reporting of spills is implemented at the facility.

### ***Polychlorinated Biphenyls Evaluation (S6.C)***

Polychlorinated Biphenyls (PCBs) belong to a broad family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from 1929 until their manufacture was banned in 1979. PCBs do not readily break down in the environment and therefore may remain for long periods of time cycling between air, water, and soil. PCBs can be taken up into the bodies of small organisms and fish.

As a result, people who ingest fish may be exposed to PCBs that have bioaccumulated in the fish they are ingesting. Data indicates that PCBs are a potential contaminant that can be present in hatchery effluent and fish tissue. Section S6.C of this permit includes a BMP requirement that facilities that discharge to PCB 303(d) listed waterbodies evaluate possible sources of PCBs in the hatchery, including paint, caulk, and fish feed, that come in contact with water. The permit contains the requirement that Permittees assess their facilities for the presence of pre-1980 paint and caulk, which comes in contact with discharge water, and develop a plan for their removal. Facilities have the option of not removing pre-1980 paint or caulk if tests show it does not contain 50 ppm or greater PCBs (TSCA level), but Ecology expects most facilities will opt for removal of all pre-1980 paint and caulk that comes in contact with water, without testing to avoid expensive sampling costs.

Section S6.C also contains a requirement that facilities develop and implement a plan to reduce PCBs from fish feed when economically achievable. The USFWS and the USGS have been investigating PCBs and other contaminants in fish feed. EPA and Ecology are not aware of a feasible way to reduce PCBs in fish feed for hatcheries, since there are only a few fish feed distributors they can choose from. There are only a few sources for purchasing fish feed for hatchery use. If a reduced PCB feed formulation becomes available during this permit cycle, Ecology encourages the Permittee to use fish food that contains the lowest amount of PCBs practically and economically feasible and employ methods for minimizing the discharge of unconsumed food.

### ***Site-Specific Sampling Plan (S7)***

The Site-Specific Sampling Plan is required under condition S7 and must be submitted in the Facility Site Plan (S5.C.2). The Sampling Plan must identify the locations of the influent, effluent or outfalls, and each sampling or monitoring point and the sampling procedures for each. The facility must sample in accordance with this plan along with any revisions directed by Ecology. A copy of this plan must be kept on site for staff to consult and upon request by Ecology in an inspection.

### ***Solid Waste Management Plan (S8)***

Ecology has determined that these facilities can prevent groundwater contamination and minimize the release of pollutants through the development and use of a Solid Waste Management Plan. The plan must address floating, suspended, and settled solids and describe how it plans to remove collected solids. Facilities must operate in accordance with this plan along with any revisions directed by Ecology to prevent pollution.

The Permittee is required to prepare or update the Solid Waste Management Plan and submit to Ecology for review, and review and update the plan as necessary.

*Carcass Placement:* Carcasses are considered solid waste unless they are reintroduced into the ecosystem as replacement for marine-derived nutrients (MDN). Anadromous salmon carcasses contribute MDN to freshwater ecosystems in the Pacific Northwest (Naiman, 2001). These nutrients are no longer available in historic amounts because fewer adult fish are returning to inland systems (Hatchery Scientific Review Group, 2009). Distributing spawned salmonid carcasses and analogs from fish hatcheries is one method of artificially enhancing nutrient loads in oligotrophic (nutrient poor) systems.

WDFW promotes nutrient enhancement efforts. Carcass placement and nutrient enhancement activities are not regulated under this NPDES permit. The activity is considered to have a potential to violate in the short term water quality standards. The activity may be regulated through Ecology's authority in RCW 90.48 and considered a nonpoint pollution source. Ecology anticipates working on developing a Nutrient Enhancement Policy to ensure that nutrient enrichment activities are done with the receiving waters in mind, with focus on oligotrophic systems, and to not exacerbate water quality problems or contribute to downstream impairments.

### ***Pollution Prevention Plan (S9)***

Ecology has determined that fish hatching and rearing facilities can prevent or minimize the release of pollutants through the development and use of a Pollution Prevention Plan. Facilities must operate in accordance with this plan along with any revisions directed by Ecology to prevent an accidental release of pollutants under the authority of 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080. Facilities must review the Pollution Prevention Plan each permit cycle and update it as necessary, and ensure that staff are aware of and trained in implementing the Plan.

The Permittee must include temperature reduction BMPs, disease control chemical BMPs, spill prevention, and ongoing PCB reduction activities including preferential purchasing of supplies, construction and operating materials and fish feed that has low or no PCB content (Permit Condition S6.C).

### ***Spill Control Plan (S10)***

Ecology has determined that to manage, contain, and report any spill of chemicals that have the potential to cause water pollution or groundwater contamination that a Spill Control Plan be developed and implemented. Ecology requires permittee to prevent any accidental release oil and petroleum products and other materials used and/or stored on-site, which when spilled, or otherwise released into the environment, designate as Dangerous Waste (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070. This include other materials used and/or stored on-site which may become pollutants or cause pollution upon reaching state's waters (Section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080). Special condition S5.I requires the Permittee to report spills of oil or hazardous materials in accordance with RCW 90.56.280 and Chapter 173-303-145 WAC and the reporting procedures facility staff follow must be set forth in the Spill Control Plan.

### ***Engineering Documents: Modifications and Reconstruction (S11)***

Planned Changes: Facilities must give notice to Ecology of planned physical alterations or additions, production increases, or process modifications. In this draft permit, Permittees must now submit an Engineering checklist for any planned changes to determine whether an engineering report be submitted.

Facilities must notify Ecology and submit an engineering report for review and approval prior to constructing or modifying any wastewater control facilities (including any pollution abatement structures) in accordance with Chapter 173-240 WAC. An engineering report and detailed plans and specifications must be submitted to Ecology for approval. Engineering reports, plans, and specifications must be submitted at least 180 days prior to the planned start of construction unless a shorter time is approved by Ecology. Fish hatching and rearing facilities must construct and operate wastewater control units in accordance with the approved plans.

## **General Conditions**

Ecology bases the General Conditions on state and federal law and regulations. They are included in all discharge permits issued by Ecology.

### ***Duty to Reapply***

All NPDES permits require the Permittee to reapply for coverage 180 days prior to the expiration date of the general permit in accordance with 40 CFR 122.21 (d), 40 CFR 122.41(b), and WAC 173-226-220(2).

### **Permit Modifications**

Ecology may modify this permit to impose new or modified numerical limitations, if necessary to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for Ground Waters. Ecology would base any modifications on new information obtained from sources such as inspections, effluent monitoring, or Ecology-approved engineering reports. Ecology may also modify this permit because of new or amended state or federal regulations.

### **Small Business Economic Impact Statement**

Ecology's State Waste Discharge General Permit Program rule (WAC 173-226-120) requires an economic impact analysis (EIA) of any draft wastewater general permit intended to directly cover small businesses. The analysis is required to serve the following purposes:

- A brief description of the compliance requirements of the draft general permit.
- The estimated costs for complying with the permit, based on existing data for facilities to be covered under the general permit.
- A comparison, to the greatest extent possible, of the cost of compliance for small businesses with the cost of compliance for the largest ten percent of the facilities to be covered under the general permit.
- A discussion of what mitigation the permit provides to reduce the effect on small businesses (if a disproportionate impact is expected), without compromising the mandated intent of the permit.

RCW 19.85.020(4) defines a small business as any business entity, including a sole proprietorship, corporation, partnership, or other legal entity, that is owned and operated independently from all other businesses, and that has fifty or fewer employees.

The [Small Business Economic Impact Analysis for Upland Finfish Hatching and Rearing General Permit](#)<sup>5</sup> (Publication number 20-10-043) found that the general permit likely imposes disproportionate costs on small businesses, so Ecology took the legal and feasible actions described in this chapter to reduce small business compliance burden.

Ecology considered monthly DMR reporting but retained the quarterly schedule to reduce burden. Permittees only have to submit DMRs quarterly as opposed to monthly, reducing the time spent reporting to four times per year. Quarterly reporting requires aggregating three months' worth of monitoring, thereby reducing time spent uploading to Ecology's WebPortal.

By using performance standards, as opposed to mandating specific technologies that must be used, Ecology minimized the impact on permittees by allowing them to determine how best to meet limits. In general, however, the permit's impact on facilities of any size is difficult to

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<sup>5</sup> <https://apps.ecology.wa.gov/publications/documents/2010043.pdf>

legally and feasibly mitigate. More significant mitigation is not possible without reducing the effectiveness of the permit that regulates the discharge of pollutants to protect surface water and ground water quality, per the stated objectives of the Clean Water Act and chapter 90.48 RCW (the State Water Pollution Control Act).

### **Recommendation for Permit Issuance**

The draft permit meets all statutory requirements for authorizing a wastewater discharge. It includes those limits and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. Ecology proposes to issue this general permit for a term of five (5) years.

## References:

Categorization of references: Documents prepared after June 12, 2014 also identify information sources by the following 11 categories:

1. Peer review is overseen by an independent third party.
2. Review is by staff internal to Department of Ecology.
3. Review is by persons that are external to and selected by the Department of Ecology.
4. Documented open public review process that is not limited to invited organizations or individuals.
5. Federal and state statutes.
6. Court and hearings board decisions.
7. Federal and state administrative rules and regulations.
8. Policy and regulatory documents adopted by local governments.
9. Data from primary research, monitoring activities, or other sources, but that has not been incorporated as part of documents reviewed under other processes.
10. Records of best professional judgment of Department of Ecology employees or other individuals.
11. Sources of information that do not fit into one of the other categories listed.

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### ***Federal Publications {7}:***

21 CFR Ch. 1 Food and Drug Administration Part 1 General Enforcement Regulations Subpart B  
General Labelling Requirements

40 CFR § 122.21 - Application for a permit

40 CFR § 122.24 - Concentrated aquatic animal production facilities

40 CFR § 122.41 - Conditions applicable to all permits

40 CFR § 122.42 - Additional conditions applicable to specified categories of NPDES permits

40 CFR § 122.44 - Establishing limitations, standards, and other permit conditions

40 CFR § 122.45 - Calculating NPDES permit conditions

40 CFR § 125.3 - Technology-based treatment requirements in permits.

40 CFR § 131.36 - Toxics criteria for those states not complying with Clean Water Act section  
303(c)(2)(B)

40 CFR § 131.45 - Revision of certain Federal water quality criteria applicable to Washington

40 CFR Part 136 Guidelines Establishing Test Procedures for the Analysis of Pollutants

40 CFR § 403.3 - Definitions

***Revised Code Washington or RCW {7}:***

Chapter 19.85 RCW - Regulatory Fairness Act

Chapter 43.21B RCW- Environmental and Land Use Hearings Office—Pollution Control Hearings Board

Chapter 90.48 RCW - Water Pollution Control

Chapter 90.54 RCW – Water Resources Act of 1971

Chapter 90.52 RCW - Pollution Disclosure Act of 1971

Chapter 90.56 RCW - Oil and Hazardous Substance Spill Prevention and Response

***Washington Administrative Code or WAC {5}:***

Chapter 173-200 WAC: Water Quality Standards for Groundwaters of the State of Washington

Chapter 173-201A WAC: Water Quality Standards for Surface Waters of the State of Washington

Chapter 173-204 WAC: Sediment Management Standards

Chapter 173-205 WAC: Whole Effluent Toxicity Testing and Limits

Chapter 173-221A WAC Wastewater Discharge Standards and Effluent Limitations

Chapter 173-226 WAC: Waste Discharge General Permit Program

Chapter 197-11 WAC: State Environmental Policy Act Rules

Chapter 173-303 WAC: Dangerous Waste Regulations

Chapter 220-370 WAC: Aquaculture

Chapter 220-450 WAC: Wildlife in Captivity and Wildlife Rehabilitation

Chapter 220-640 WAC: Invasive/Nonnative Species

***Washington State Department of Fish and Wildlife***

2006, Washington State Department of Fish and Wildlife (WDFW) and the Northwest Indian Fisheries Commission (NWIFC). 2006. The salmonid disease control policy of the fisheries co-managers of Washington State. Olympia, Washington. ([WA Fisheries Co-Manager Salmonid Disease Control Policy<sup>6</sup>](http://files.nwifc.org/fish-health/FinalDiseasePolicy-July2006_Ver3.pdf))

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<sup>6</sup> [http://files.nwifc.org/fish-health/FinalDiseasePolicy-July2006\\_Ver3.pdf](http://files.nwifc.org/fish-health/FinalDiseasePolicy-July2006_Ver3.pdf)

**Washington State Department of Ecology**

1989, January. [Quality and Fate of Fish Hatchery Effluents during the Summer Low Flow Season](#)<sup>7</sup>. Ecology Publication No. 89-17. {2}

2016, April. Upland Finfish Hatching and Rearing NPDES General Permit.{4}

2018, July Permit Writer’s Manual. Ecology Publication Number 92-109. 2018 revision.{3}

2018, April. [Evaluation of Fish Hatcheries as Sources of PCBs to the Spokane River](#)<sup>8</sup>. Ecology Publication 18-03-014.{2}

2020, December. [Small Business Economic Impact Analysis for Upland Finfish Hatching and Rearing General Permit](#). Ecology Publication number 20-10-043.{2}

**Environmental Protection Agency or EPA {7}**

1974. Development document for proposed effluent limitations, guidelines, and new source performance standards for the fish hatcheries and farms point source category. Internal draft report. National Field Investigations Center, Denver, CO. 237 pp.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

2016, June. [NPDES Permit and Fact Sheet- 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](#)<sup>9</sup>.

[EPA Guidance Document. Managing Remediation Waste from Polychlorinated Biphenyls \(PCBs\) Cleanups](#)<sup>10</sup>

[EPA Guidance Document. Steps to Safe PCB Abatement Activities](#)

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<sup>7</sup> <https://apps.ecology.wa.gov/publications/SummaryPages/8917.html>

<sup>8</sup> <https://apps.ecology.wa.gov/publications/SummaryPages/1803014.html>

<https://apps.ecology.wa.gov/publications/documents/2010043.pdf>

<sup>9</sup> <https://www.epa.gov/npdes-permits/npdes-general-permit-federal-aquaculture-facilities-and-aquaculture-facilities-located>

<sup>10</sup> <https://www.epa.gov/pcbs/managing-remediation-waste-polychlorinated-biphenyls-pcbs-cleanups>

### ***Other References***

Center for Veterinary Medicine. Program Policy and Procedures Manual 1240.4200 Enforcement Priorities for Drug Use in Aquaculture. Date: 08/09/2002; 4/26/07 minor revisions; 07/26/2011 correction. [Enforcement Priorities for Drug Use in Aquaculture](#)<sup>11</sup> {11}

1984. Development of effluent limitations for Idaho fish hatcheries. Report to U.S. Environmental Agency. JRB Associates, Bellevue, WA. 119+ pp. {11}

Hatchery Scientific Review Group. 2009. "[Columbia River Hatchery Reform Project Final Systemwide Report – Appendix A. White Paper No. 6](#)."<sup>12</sup> {11}

Maule, et al, 2007. Chemical contaminants in fish feeds used in federal salmonid hatcheries in the USA. *Chemosphere* 67:1308-1315. {1}

Naiman, R.J., R.E. Bilby, D.E. Schindler, and J.M. Helfield, 2002. Pacific Salmon, Nutrients, and the Dynamics of Freshwater and Riparian Ecosystems, *Ecosystems* (2002) 5:399-417 {1}

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<sup>11</sup> <https://www.fda.gov/media/70193/download>

<sup>12</sup> [http://hatcheryreform.us/wp-content/uploads/2016/05/4\\_appendix\\_a\\_6\\_nutrient\\_enhancement\\_to\\_increase\\_production.pdf](http://hatcheryreform.us/wp-content/uploads/2016/05/4_appendix_a_6_nutrient_enhancement_to_increase_production.pdf)

## Glossary

**All definitions listed below are for use in the context of this permit only.**

**303(d) List:** The list of waterbodies in Washington State that do not meet the water quality standards specified in Chapter 173-201A WAC based on the Washington State Water Quality Assessment. The Washington State Department of Ecology prepares and the U.S. Environmental Protection Agency approves this list every 2 years. See Water quality standard.

**303(d)-Listed waterbody:** Waterbody listed as impaired (polluted) through assignment to Category 5 in the current Washington State Water Quality Assessment.

**40 CFR:** Title 40 of the Code of Federal Regulations. The Code of Federal Regulations is the codification of the general and permanent rules published in the *Federal Register* by the executive departments and agencies of the federal government.

**Acute Toxicity:** The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

**AKART:** The acronym for “all known, available, and reasonable methods of prevention, control and treatment”. A technology-based approach of engineering and economic decision-making for limiting pollutants from discharges. AKART represents the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants and controlling pollution associated with a discharge, which can be reasonably installed or used at a reasonable cost.

**Ambient Water Quality:** The existing environmental condition of the water in a receiving water body.

**Ammonia:** Ammonia is produced by the breakdown of nitrogenous materials in waste water. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect waste water.

**Antidegradation Policy:** Description in [WAC 173-201A-300](#).

**Applicable TMDL:** Any TMDL which has been completed and approved by EPA either before the issuance date of this permit or the date the Permittee first obtains coverage under this permit, whichever is later.

**Authorized representative:**

1. If the represented entity is a corporation: President, secretary, treasurer, or vice-president of the corporation in charge of a principal business function; any other person who performs similar policy- or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operation facilities, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2. If the represented entity is a partnership or sole proprietorship: General partner or proprietor, respectively.

3. If the represented entity is a federal, state, or local governmental facility: Director or the highest official appointed or designated to oversee the operation and performance of the activities of the government facility, or his/her designee.

The individuals described above may designate another authorized representative if the authorization is written, specifies the individual or position responsible, and is submitted to the Washington State Department of Ecology.

**Best Management Practices (BMPs):** Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control spillage or leaks, sludge or waste disposal, discharge of pollutants.

**BOD<sub>5</sub>:** Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD<sub>5</sub> is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

**Bypass:** The intentional diversion of waste streams from any portion of a treatment facility.

**CAAP:** Concentrated aquatic animal production.

**CFR:** Acronym that means Code of Federal Regulation.

**Chlorine:** Chlorine is used to disinfect waste waters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

**Chronic Toxicity:** The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction, or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

**Clean Water Act (CWA):** The Clean Water Act, 33 U.S.C. §1251 *et seq.* The CWA is the primary Federal law in the United States governing water pollution, with the objective to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. (Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117, and 100-4; USC 1251, *et seq.*).

**Composite Sample:** A flow-proportional mixture of not less than six discrete aliquots. Each aliquot shall be a grab sample of not less than 100 ml and shall be collected and stored in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.

**Critical Condition:** The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low; thus, its ability to dilute effluent is reduced.

**Current EPA-approved 303(d) list:** The 303(d) list that is in effect on the effective date of this permit or on the date Ecology receives the Permittee's first application for coverage, whichever is later. See 303(d) List.

**Daily Discharge:** The amount of a pollutant discharged during a calendar day or any 24-hour period that reasonably represents a calendar day. For pollutants with limits expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged during the day. For pollutants with limits expressed in other units of measurement, the daily discharge is calculated as the arithmetic average of all the measurements of the pollutant throughout the day, except for pH.

**Director:** The Director of the Washington State Department of Ecology or their authorized representative.

**Ecology:** Washington State Department of Ecology.

**Epizootic:** Means the occurrence of a disease event that is a sharp increase in the incidence rate of disease beyond normal background rate. This can be a few cases of a rare disease or many cases of a common disease.

**FIFRA:** The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) is the Federal statute that governs the registration, distribution, sale, and use of pesticides in the United States. Acronym for the Toxics Substances Control Act.

**FWPCA:** The acronym that stands for the Federal Water Pollution Control Act (The Clean Water Act), Title 33 United States Code, Section 1251 *et seq.*

**GPD:** Gallons per day.

**Grab Sample:** An individual discrete water sample.

**Instantaneous Maximum:** The maximum allowable concentration of a pollutant determined from the analysis of any discrete or composite sample collected, independent of the flow rate and the duration of the sampling event.

**Lined Pond:** Asphalt, concrete, plastic membrane, or similarly lined ponds. Ponds lined with gravel or soil are considered unlined.

**Maximum Daily:** The highest allowable sample value from a daily discharge taken during a calendar month.

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte. [40 CFR Part 136, Appendix B to Part 136.](#)

**MGD:** Million gallons per day.

**mg/L:** Milligrams per liter (“Net mg/L” = mg/L in Hatchery Effluent minus mg/L in Hatchery Influent).

**mL/L:** Milliliters per liter (“Net mL/L” = mL/L in Hatchery Effluent minus mL/L in Hatchery Influent).

**Monthly Average:** Calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

**New Discharge(r):** Defined as a facility from which there is a discharge that did not commence discharging at a particular site prior to August 13, 1979, which is not a new source, and which has never received a finally effective NPDES permit for discharges at that site. See 40 CFR 122.2.

**New Facility:** Defined as a facility that begins activities that will result in a discharge or potential discharge to waters of the state on or after the effective date of the general permit.

**National Pollutant Discharge Elimination System (NPDES):** The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/state permits issued under both state and federal laws.

**Offline Settling Basin:** The pond cleaning waste treatment system with hydraulic detention time of 24 hours and a designed removal efficiency of at least 85% for total suspended solids and 90% for settleable solids.

**PCBs:** The acronym for the chemical suite of 209 congeners called polychlorinated biphenyls.

**Production:** Production, beginning with the 2010 permit, is defined as net gain of weight at the facility. Furthermore, Ecology has defined net gain (i.e., net pounds) as the maximum pounds of fish on station in any one time (i.e., month) of a year’s production cycle or period. A facility producing greater than 20,000 pounds in any month of the year must have permit coverage. This is based on WAC 173-221A-100(1)a)(i), which states that facilities that produce more than 20,000 net pounds of finfish on station at any time of the year is required to obtain a permit or permit coverage. Production is the act of harvesting, processing or releasing fish in a hatchery or the harvest weight of fish contained, grown, or held in a CAAP facility in a year (40 CFR §122 Appx.C).

**Publicly Owned Treatment Works (POTW):**

1. A sewage treatment plant and its collection system that is owned by a municipality, the State of Washington, or the federal government. A POTW includes the sewers, pipes and other conveyances that convey wastewater to the treatment plant, and any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature.

2. The municipality or other entity that has jurisdiction over the indirect discharges to and the discharges from the treatment works.

**Rearing Ponds or Raceways:** Ponds, raceways, circular ponds, or any other method used to keep finfish captive for culture purposes at an upland finfish rearing facility.

**Rearing Vessel:** Rearing ponds, raceways, and fish hauling tanks.

**Representative Sample:** Defined as a sample representing multiple outfalls/discharges with similar waste streams. Each can be sampled and combined into one sample for one analysis. The sample volume from each outfall shall be apportioned according to the volume of flow at the time of sampling. These apportioned samples can then be combined into one representative sample for analysis.

**Sampling and Analysis Plan or SAP:** The plan that describes how, who, what, when and where samples are collected, analyzed, and reported to assure reproducible and representative data. In this permit, such plan is needed for the monitoring of additional parameters for impaired waterbodies.

**Settleable Solids:** Defined as the solids in surface waters or waste waters which are measured volumetrically in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.

**Section 303(d) List:** Part of the federal Clean Water Act that requires states to identify waterbodies that are water quality limited or do not meet the water quality standards specified in Chapter 173-201A WAC based on the Washington State Water Quality Assessment. (i.e., waterbodies that do not meet, or are not expected to meet, applicable water quality standards after sources have undergone technology-based controls). The Washington State Department of Ecology prepares and the U.S. Environmental Protection Agency approves this list every 2 years.

**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 or losses in production.

**Surface Waters:** Lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington. For the purposes of this permit, surface waters do not include hatchery ponds, raceways, pollution abatement ponds, and wetlands constructed solely for wastewater treatment.

**Total Maximum Daily Load (TMDL):** Defined as the sum of all waste load allocations (WLAs) and load allocations (LAs) (non-point source and background) and a safety margin. The TMDL is a mechanism for establishing water quality-based controls on all point and nonpoint sources of pollutants within a water quality-limited basin, sub-basin, or hydrographic segment.

**TSCA:** Acronym for the Toxics Substances Control Act. This United States law, passed by the US Congress in 1976, is administered by the US EPA and regulates the introduction of new or

already existing chemicals. This law provides EPA with the authority to require reporting, record-keeping and testing requirements and restrictions relating to chemical substances and/or mixtures.

**TVSS:** The total volatile suspended solids in the influent or effluent water, which are measured in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.

**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 preventive maintenance, or careless or improper operation.

Note – An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met:

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:

- 1) an upset occurred and that the Permittee can identify the cause(s) of the upset;
- 2) the permitted facilities were being properly operated at the time of the upset;
- 3) the Permittee submitted notice of the upset as required; and
- 4) the Permittee complied with any remedial measures required under this permit.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

**WDFW:** Washington State Department of Fish and Wildlife.

**Waters of the State:** Defined to include those waters defined as "waters of the United States" in 40 CFR 122.2 within the geographic boundaries of Washington State and "waters of the state" as defined in Chapter RCW 90.48 RCW which include lakes, rivers, ponds, streams, waters, underground waters, salt waters, and all other surface water and water courses including wetlands within the jurisdiction of the state of Washington.

**Water Quality Standards:** Defined as the water quality standards for ground waters of the state of Washington (Chapter 173-200 WAC), the water quality standards for surface waters of the state of Washington (Chapter 173-201A WAC), and the sediment management standards of the state of Washington (Chapter 173-204 WAC).

**In the absence of other definitions set forth herein, the definitions set forth in 40 CFR Part 403.3 or in chapter 90.48 RCW apply.**

## Appendix A: List of Facilities

This is a list of facilities that applied for permit coverage under the 2021 draft permit.

Production is defined as the maximum amount in pounds of fish on station in any one month.

Facility	Permit Number	Production (lbs)	Facility	Permit Number	Production (lbs)
Arlington Hatchery	WAG133009	67,000	Eastbank Hatchery	WAG135011	67,000
Beaver Creek Hatchery	WAG131027	48,926	<i>Eells Springs Hatchery<sup>a</sup></i>	<i>WAG131047</i>	<i>179,000</i>
Bellingham Hatchery	WAG994275	19,500	<i>Elwha Hatchery<sup>a</sup></i>	<i>WAG131043</i>	<i>58,600</i>
<i>Bingham Creek Hatchery<sup>a</sup></i>	<i>WAG131022</i>	<i>74,629</i>	Fallert Creek Hatchery	WAG131053	84,000
Bogachiel Hatchery	WAG131051	40,000	Forks Creek Hatchery	WAG131049	92,221
Cascade Aqua Farms Cinebar	WAG131029	40,000	Garrison Springs Hatchery	WAG131018	13,000
Cascade Aqua Tilton River	WAG131050	240,000	George Adams Hatchery	WAG131019	63,372
<i>Chambers Creek Hatchery<sup>a</sup></i>	<i>WAG131055</i>	<i>17,000</i>	<i>Goldendale Hatchery<sup>a</sup></i>	<i>WAG135001</i>	<i>61,731</i>
Chelan Falls Rearing Facility Hatchery	WAG137019	40,000	Grays River Hatchery	WAG131015	35,000
Chelan Hatchery	WAG135006	42,000	<i>Hoodsport Hatchery<sup>a</sup></i>	<i>WAG131011</i>	<i>73,780</i>
Chief Joseph Fish Hatchery Program	WAG137022	38,447	Humptulips Hatchery	WAG131048	85,394
Riverside Acclimation Pond			Icy Creek	WAG133013	41,000
Chiwawa Ponds	WAG135015	34,600	Issaquah Hatchery	WAG133010	49,887
Cle Elum Supplementation & Research Facility	WAG135016	26,000	Kalama Falls Hatchery	WAG131039	78,000
Columbia Basin Hatchery	WAG137010	28,037	Kendall Creek Hatchery	WAG133007	70,000
Cottonwood Acclimation Pond	WAG137005	50,000	Lake Aberdeen Hatchery	WAG131033	42,874
Cooke Aquaculture Pacific LLC – Scatter Creek Fish Hatchery	WAG131007	409,000	Lakewood Hatchery	WAG131030	40,000
Coulter Creek Hatchery	WAG131012	28,000	Lewis River Hatchery	WAG131040	256,000
Cowlitz Salmon Hatchery	WAG131021	323,608	Lyons Ferry Hatchery	WAG137006	173,220
Cowlitz Trout Hatchery	WAG131034	226,042	Marblemount Hatchery	WAG133015	84,700
Curl Lake Acclimation Pond	WAG137018	21,450	McKernan State Hatchery	WAG131036	26,590
Dayton Acclimation Pond	WAG994492	33,333	Melvin R. Sampson Coho Facility	WAG994355	36,000
Dryden Pond	WAG135014	46,000	Merwin Hatchery	WAG131052	62,963
Dungeness Hatchery	WAG131037	60,000	Methow Hatchery	WAG135000	60,000
			Minter Creek Hatchery	WAG131024	51,500
			Mossyrock Hatchery	WAG131013	57,120
			Naches Hatchery	WAG135003	27,000
			Naselle Hatchery	WAG131020	122,310
			Nemah Hatchery	WAG131025	31,228

Facility	Permit Number	Production (lbs)
Nisqually Trout Farm 2	WAG131002	45,000
North Fork Skokomish Salmon Hatchery <sup>a</sup>	WAG131061	14,481
North Toutle Hatchery	WAG131010	30,000
Pacific Aquaculture - Boxley Springs, LLC	WAG133017	16,000
Pacific Aquaculture - Shelton, LLC <sup>a</sup>	WAG131062	250,000
Palmer Ponds	WAG133002	57,000
Priest Rapids Hatchery	WAG137013	160,957
Reiter Ponds	WAG133005	49,000
Ringold Springs Hatchery <sup>a</sup>	WAG137009	105,000
Samish Hatchery	WAG133011	65,000
Satsop Springs Hatchery	WAG131023	49,500
Similkameen Hatchery	WAG135007	33,700
Skamania Hatchery	WAG131026	58,882

Facility	Permit Number	Production (lbs)
Skookumchuck Hatchery	WAG131042	74,727
Sol Duc Hatchery	WAG131045	85,250
Soos Creek Hatchery	WAG133014	37,000
Speelyai Hatchery	WAG131041	56,293
Spokane Hatchery	WAG137007	80,354
Tokul Creek Hatchery	WAG133004	37,760
Troutlodge 1	WAG137001	400,108
Troutlodge 2	WAG137002	176,975
Troutlodge Hoodspout	WAG131003	121,603
Troutlodge Inc Winchester	WAG137021	53,601
Tucannon Hatchery	WAG137017	54,375
Vancouver Hatchery	WAG131032	28,769
Wallace River Hatchery	WAG133006	100,297
Washougal Hatchery	WAG131044	160,478
Wells Fish Hatchery	WAG135009	193,191
Whitehorse Ponds	WAG133008	60,000
Yakama Nation Prosser Hatchery	WAG135017	23,620

<sup>a</sup> modification notification and public notice submitted

## Appendix B: Public Involvement Information

The Washington State Department of Ecology (Ecology) proposes to reissue the Upland Finfish Hatching and Rearing General National Pollutant Discharge Elimination System and State Waste Discharge General Permit (permit). The current permit was issued on April 1, 2016, and is scheduled to expire at the end of March 2021. The draft permit and accompanying fact sheet, which explained the technical basis for the permit, were available for review and public comment from April 7 until 11:59 p.m. on May 26. Ecology hosted two public workshops and public hearings on the draft permit on May 11 and 12, 2021.

### ***Copies of the Draft Permit and Fact Sheet***

The [draft permit and fact sheet](#)<sup>13</sup> were available online on April 7, 2021. You could also request copies from Water Quality Reception at (360) 407-6600.

### ***Assistance for Persons with Disabilities***

To request ADA accommodation for disabilities, you could have called Ecology at 360-407-7285 or visited <https://ecology.wa.gov/accessibility>. People with impaired hearing could have called Washington Relay Service at 711. People with speech disability could have called TTY at 877-833-6341.

### ***Submitting Written Comments***

Ecology accepted written comments on the draft permit and fact sheet April 7 until 11:59 p.m. on May 26. Ecology preferred online comment submission via the eComment form (link below) and was found on the permit webpage (<https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Upland-fin-fish-permit>). Written comments mailed must have been postmarked by May 26, 2021. Comments should have referenced specific permit text when possible.

**Online eComment form:** [Submit eComment form](#)<sup>14</sup> (*preferred method*)

**By mail:** Laurie Niewolny  
Washington State Department of Ecology  
PO Box 47775  
Olympia, WA 98504-7775

### ***Public Workshop and Hearing***

The purpose of the workshop was to explain the general permit and to answer questions prior to the formal public hearing. The purpose of the hearing was to provide an opportunity for people to give formal oral testimony on the proposed draft permit. Oral testimony received the same consideration as written comments submitted online or by mail.

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<sup>13</sup> <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Upland-fin-fish-permit>

<sup>14</sup> <https://wq.ecology.commentinput.com/?id=dsPUF>

The public hearing began immediately following the public workshop and was concluded when public testimony was complete. The workshop and hearings occurred at the following dates and times:

**Morning Webinar\***

**Tuesday, May 11, 2021 – 10:00AM**

Join the webinar at

<https://watech.webex.com/watech/onstage/g.php?MTID=ee391e55d64b50bce24fc99ed93262a53>

**Evening Webinar\***

**Wednesday, May 12, 2021 – 6:00 PM**

Join the webinar at

<https://watech.webex.com/watech/onstage/g.php?MTID=ed2d95aa4942075914ca2da70c7ce4aad>

\*Workshops and hearings offered via webinar allowed individuals to view the presentation and provide testimony via computer or mobile device. *Ecology was not offering in-person hearings due to COVID-19 safety concerns.*

***Issuing the Permit***

Ecology received and considered all public comments, and made a decision to issue the permit in August 2021. If you have questions, please contact Laurie Niewolny, Upland Finfish Hatching and Rearing General Permit Writer, at [Laurie.Niewolny@ecy.wa.gov](mailto:Laurie.Niewolny@ecy.wa.gov) or (360) 584-8852. The response to comments is posted on [Ecology's permit website](#)<sup>15</sup> or you can refer to [Appendix C](#).

***Right to Appeal***

Permittees and the public have a right to appeal this permit to the Pollution Control Hearings Board (PCHB) within 30 days of the date of issuance of the final permit. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC.

To appeal you must do the following within 30 days of the date of issuance of this permit:

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

Appealing parties must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

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<sup>15</sup> <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Upland-fin-fish-permit>

**Street Addresses****Department of Ecology**

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

**Pollution Control Hearings Board**

1111 Israel Road  
SW Suite 301  
Tumwater, WA 98501

**Mailing Addresses****Department of Ecology**

Attn: Appeals Processing Desk  
P.O. Box 47608  
Olympia, WA 98504-7608

**Pollution Control Hearings Board**

P.O. Box 40903  
Olympia, WA 98504-0903

## Appendix C: Response to Comments

This Response to Comments addresses comments received on the formal draft of the Upland Finfish Hatching and Rearing General Permit. The responses identify changes made to the formal draft as a result of these comments. Ecology includes it as Appendix C to the Fact Sheet for the Upland Finfish Hatching and Rearing General Permit.

The public comment period for this permit began on April 7, 2021 and lasted until 11:59 p.m. of May 26, 2021. No oral testimony was given at the public hearings. Ecology received written comments from eight entities through Ecology's online comment site, email, and USPS mail.

Ecology modified the Upland Finfish Hatching and Rearing General Permit based on comments received that were substantive water quality concerns and within the authority of this general permit. The comment, Ecology's response, and permit revision prompted by the comment submitted are listed below, categorized by the entity that submitted the comment. There were three comments on the requirements of this permit for the Spokane Hatchery. Ecology responded with a single response to all three.

The comments received or submitted through email, letter, or online can be found and read in their entirety on Ecology's [Upland Finfish Hatching and Rearing General Permit website](#)<sup>16</sup>.

### COMMENTS AND RESPONSES ORGANIZED BY ENTITY

#### **COMMENTS FROM:**

**WDFW-Eric Kinne, Hatchery Division Manager**

**PO Box 43200, Olympia, WA 98504-3200**

**Email: Eric.Kinne@dfw.wa.gov**

**Submit Date: letter 05/26/2021 and one additional comment sent 6/4/20201**

**Submit Method: Email**

**Production:** WDFW shall provide updated production to DOE and requests production be revised in the permit for the following eleven facilities: Eells Springs, Chambers Creek, Similkameen, Ringold Springs, Hoodsport, Goldendale, Bellingham, Fallert Creek, Satsop Springs, George Adams and Marblemount.

Production at eight facilities has increased more than 20% since the permit issued on Dec 16, 2015. WDFW will publish twice in a local newspaper of general circulation a notice for coverage has been made pursuant to Section 173-226-130(5) WAC. These eight facilities include: Bingham Creek, Eells Springs, Elwha, Chambers Creek, Similkameen, Ringold Springs, Hoodsport, and Goldendale.

***Ecology Response:*** *We have received the updates for the eleven facilities with production changes relative to the NOIs for continued coverage submitted last fall (2020). Permit coverage is based on your facility's coverage issued at the last permit*

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<sup>16</sup> <https://ecology.wa.gov/FishHatcheryPermit#document>

*issuance and is specific to the maximum production in one month. Increasing production above your current coverage of greater than 20% is outside the scope of renewing general permit coverage and requires a permittee to request to modify coverage for said production. We are awaiting the affidavits for the public notices and the close of public comment on the eight WDFW facilities requiring a modification due to exceeding the 20% threshold. None exceeded 50% production compared to the 1995 production levels. Once the 30 day comment period is closed and Ecology reviews the comments and the modifications, the modified coverage can be issued. There are no changes to the permit, the list of facilities that includes production in Appendix A of the fact sheet will be updated, and the facility attributes in PARIS similarly updated.*

**Discharges to Impaired Waters:** On page 56 and in Appendix E – Monitoring for Effluent Discharges, the sampling protocol for the dissolved oxygen parameters calls for six representative grab samples to be collected throughout the normal workday to create flow proportional composite samples. WDFW requests nutrient monitoring of effluent discharges be guided by the discharge monitoring requirements set forth in Administrative Orders #17969 and #17971. This request is based on the difficulty sampling throughout the day and meeting the 48-hour holding time for samples shipped overnight to laboratories. Also, many facilities have limited overnight shipping options nearby.

***Ecology Response:** We reviewed page 56 of the permit (which is the Spokane Hatchery phosphorus monitoring and testing requirements) and Appendix E (which is the DO impaired waterbody, nutrient monitoring and testing requirements). The monitoring regime for each are for different purposes. In both cases, it is understood that the holding time and biological nature of these parameters prevent extensive day-long sampling (i.e., 6 samples) in order to ship to the contracted lab and meet holding times. Flow proportional composite samples representative of the discharge to the receiving water must be collected but temporal (day-long) composite sampling will be amended.*

*We revised the Spokane Hatchery phosphorus temporal compositing scheme to be a minimum of a grab sample within one hour after feeding begins and another while cleaning the raceways and/or rearing ponds. The precise number of grab samples or whether they are to be composited can be determined through the SAP approval process.*

*We revised Appendix E nutrient monitoring and testing for those facilities discharging to water bodies impaired for dissolved oxygen. We changed the sampling to be a grab sample taken within 1 hour after feeding begins. Ecology considers this point in time representative for nutrient loading indicative of production at the facility. This sampling regime must be applied at all facilities similarly as a standardized approach in an effort to reduce nutrient data variability.*

**Discharges to Impaired Waters:** Hatcheries that discharge to impaired waters do not need to collect an influent sample if they assume the influent concentration is zero. The source water for many facilities is an impaired waterbody based on the State of Washington's 303(d) list.

Adding optional influent samples may be cost prohibitive for many facilities because the full nutrient suite costs \$200 per sample event for each site. First, WDFW asks DOE to consider using applicable water quality data from the water quality assessment to characterize the facility's influent water source rather than assuming concentration is zero. Second, WDFW requests DOE consider an adaptive sampling protocol to balance the data required to assess effluent discharge with the actual pounds of fish feed used each month and the cost per parameter in the nutrient suite. For example, when feed use is under 1000 pounds per month, nutrient sample frequency could be reduced to once per month. Also, when feed use is low, the number of parameters in the nutrient suite could be reduced to those essential for evaluation of the effluent discharge to save costs.

**Ecology Response:** *The purpose of nutrient monitoring of a facility's discharge to a waterbody that is impaired for dissolved oxygen is to answer the question whether nutrients levels discharged can be predicted based on production of fish for future TMDL considerations and other water quality assessments such as nutrient loading to Puget Sound. If influent is highly influenced by the surrounding watershed such as surface water from a river with high degree of septic or nonpoint pollution, it is recommended that the permittee add influent monitoring.*

*Groundwater is generally expected to be consistent no matter the time of year, however surface waters can be temporally variable. Existing data of the surface water and rain events can be used to support our analysis of the nutrient parameters. The influence of the influent will not be automatically considered zero but as a potential covariate along with the type of wastewater treatment, feeding levels and fish production.*

*The latter two points are critically important and Ecology does not agree with an adaptive or reduced monitoring scheme during times when fish production is low since data is necessary to collect across all production levels to answer the primary question. There is no change to the permit.*

**Discharges to Impaired Waters:** WDFW respectfully requests that Vancouver Hatchery, which discharges into the Columbia River, be considered for exemption from additional monitoring. This request is based on the volume of discharge from the hatchery being insignificant compared to the receiving waterbody.

**Ecology Response:** *All point sources of pollution (i.e., those with NPDES permits) of the Columbia River must have a wasteload allocation (WLA) for temperature, including the Vancouver Hatchery. As a result, temperature and flow reporting are required to be monitored and reported. The data will be included in the [EPA Temperature TMDL for the Columbia and Lower Snake Rivers](#) currently under development. As for nutrient monitoring and reporting, the hatchery discharges within 0.5 miles of a reach of the Columbia River impaired for dissolved oxygen. The monitoring of the nutrient parameters are necessary to determine if this hatchery produces the level of nutrients with potential to further impair the waterbody and cannot be categorically dismissed even if small as it is still a point source. There is no change to the permit.*

**Aquaculture Drugs:** The maximum holding time for Standard Methods 4500-Cl G is 0.25 hour, requiring proximity to a laboratory or in-house accreditation. The short holding-time for this method essentially makes Chloramine-T, an effective aquaculture drug, unusable at hatcheries and few replacement aquaculture drugs are available. In Appendix A, WDFW would appreciate recommendations for chlorine screening methods that are practical in a hatchery setting and training for hatchery staff.

**Ecology Response:** *Ecology extensively reviewed the application of total residual chlorine as the water quality standard for the protection of aquatic life, the discharge limit and subsequent monitoring and reporting requirements when permittees use Chloramine-T. Total residual chlorine is the chemical parameter identified through the years of Chloramine-T's development as a disease control chemical to be the applicable water quality criterion measuring the exposure and product in the discharge. Subsequently, testing for compliance with the discharge limit in the permit must be performed by an accredited lab and through use of an approved method (WAC 173-220-210(b)). While Standard Methods 4500-Cl G is the optimal method to perform on site or in the field, the 15 minute hold time and accreditation concerns cannot be addressed.*

*Based on follow up conversations with the WDFW commenters and veterinarians, the description of NPDES permit requirements for the use of chloramine-T was revised to be clearer about its use to be in compliance with the permit and be an authorized discharge. This included added reporting of the process of neutralizing Chloramine-T on the Chemical Use Operational Log. It is recommended that Fish Health staff work closely with the NPDES permit compliance staff to understand the permit requirements for monitoring and reporting.*

*Ecology recommends WDFW submit to Ecology a study plan for a wastewater characterization study of chloramine-T to determine the frequency of use, levels of total residual chlorine found during treatment, and the hatchery configurations that influence the discharge concentrations. The study would assist Ecology in assessing how compliance monitoring must be done in the next permit cycle to ensure the protection of aquatic life when using Chloramine-T. The minimum data needed are discharge concentration curves of total residual chlorine throughout a treatment prior to neutralization as the worst case scenario to determine the scale or level of total residual chlorine in the treated raceways and rearing ponds before discharging to the receiving waterbody. The study should be done across multiple hatcheries with various configurations. The study should include supporting data such as the total daily flow of the hatchery, the volume of Chloramine-T treated water that will mix with total flow, the percent of the total flow and for how long the treated water volume is present in the discharge prior to entering the receiving waterbody. Additionally, record whether the treated water enters the hatchery outflow immediately after neutralization or if and how long the treated water is retained in a depuration pond before being discharged.*

**Aquaculture Drugs:** Does Section 6. B.– Disease Control Chemicals include drugs used under the direction of a licensed veterinarian?

**Ecology Response:** *The section (i.e., permit) does not exclude drugs that a licensed veterinarian has authority to use, however, all disease control chemicals used at the permittee’s hatcheries must be used in compliance with NPDES permit to be an authorized discharge. Specifically, the permittee must follow Section 6.B for use of any disease control chemical or drug including the additional drug and chemical use requirements for non-emergency extra-label use, emergency use, and formalin/chloramine-T use. Based on follow up conversations with the WDFW commenters and veterinarians, the description of NPDES permit requirements for the use of disease control chemicals was revised to be clearer about how to be in compliance with the permit and be an authorized discharge.*

**Aquaculture Drugs:** On page 27. B. – Veterinarian, by extra label, may use any FDA labeled product not necessarily approved in fish or hatchery use as a treatment for fish. Permittees must use disease control chemicals in conformance with product label instructions or approved INAD protocols. WDFW suggests changing the second half of this sentence to “or extra label use by a licensed veterinarian.”

**Ecology Response:** *We reviewed Chapter 173-221A WAC that sets the minimum discharge standards for hatching and rearing facility wastewater and specifically WAC 173-221A-100(5)(f) describes allowable disease control chemical use practices. The permit sets forth the allowable practices as described in WAC and that includes that “All disease control drug and chemical use must be done in conformance with product label instructions, approved INAD protocols, or be administered by or under the supervision of a licensed veterinarian.” Ecology revised the permit to more precisely reflect the language in the WAC. The permittee must follow the non-emergency extra-label drug use and emergency drug use protocols specified in Section 6.B.1 and 2 to be in compliance with NPDES permit requirements. Based on follow up conversations with the WDFW commenters and veterinarians, the description of NPDES permit requirements for the extra label use of disease control chemicals was revised to be clearer about their use to be in compliance with the permit and be an authorized discharge.*

**Aquaculture Drugs:** On page 28, under Formalin Use, the Permittee must follow label directions. WDFW requests the exception for extra label use under the direction of a licensed veterinarian be included.

**Ecology Response:** *Ecology cannot provide approval for extra label use of formalin. The FDA requires a 10-fold dilution of finfish treatment water and a 100-fold dilution of finfish egg treatment water, which should lead to a discharge concentration of no more than 25 parts per million (ppm), equivalent to 25 µL/L formalin, or 10 ppm formaldehyde (active ingredient). The FDA labeled use and related hatchery discharge was studied in*

the report [Water Sampling and Testing for Formaldehyde at Northwest Fish Hatcheries](https://www.epa.gov/sites/production/files/2017-09/documents/water-sampling-formaldehyde-nw-fish-hatcheries-report-2017.pdf)<sup>17</sup> prepared for the EPA Region 10 Office of Water and Watersheds. The report was finalized August 2017. .

*The study indicates that at the current, labeled use of the product, the 10 ppm formaldehyde was not exceeded in any hatchery discharge studied. Based on the 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, the current levels of formalin use are generally protective of aquatic life. There is no change to the permit.*

**Aquaculture Drugs:** On page 31. C. – WDFW requests the permit add that any carcasses treated with drugs or chemicals under the direction of a licensed veterinarian need to be released by prescribing veterinarian for withdrawal purposes.

**Ecology Response:** *We placed the following sentence at the end of S8.C to prevent carcasses with drug residues (those fish that have not met the depuration period for withdrawal) to be used in nutrient enhancement; “This includes that any carcass from fish treated with drugs or chemicals under the direction of a licensed veterinarian must be released by the prescribing veterinarian.”*

**Aquaculture Drugs:** Appendix G. does not include Chloramine-T as an aquaculture drug. H<sub>2</sub>O<sub>2</sub> is no longer a low regulatory priority drug as it is a labeled product. WDFW veterinarian provided this list of FDA approved drugs to update Appendix G.

- Chorionic Gonadotropin (Chorulon®)
- Formalin (Parasite-S, Formalin-FTM, Formacide-B)
- Hydrogen Peroxide (35% Perox Aid®)
- Chloramine-T (Halamid® Aqua)
- Oxytetracycline Hydrochloride (several products available)
- Tricaine Methanesulfonate (Tricaine-S)
- Florfenicol (Aquaflor®)
- Oxytetracycline dihydrate (Terramycin® 200 for Fish)
- Sulfadimethoxine & Ormetoprim (Romet® 30 & Romet® TC)

**Ecology Response:** *We reviewed the list of approved aquaculture drugs and updated Appendix G. In the process, we updated appendix G for current low regulatory drugs and INADs.*

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<sup>17</sup> <https://www.epa.gov/sites/production/files/2017-09/documents/water-sampling-formaldehyde-nw-fish-hatcheries-report-2017.pdf>

**Water Quality:** In the table on the top of page 18 and on page 56, please provide additional information to explain flow sample frequency, specifically for sample and non-sample days.

**Ecology Response:** *Rather than just reporting a summarized monthly value in the DMR, the permit will now require flow data to be recorded on the same days that SS, TSS, and nutrient parameters (if required) are sampled. Those individual daily values will be required to be recorded on the electronic DMR form on the date sampled as well as a summarized monthly value as was required before.*

**Water Quality:** WDFW questions why discharges to Municipal Sewer Systems (POTW) require TSS and BOD<sub>5</sub> monitoring, when the POTW treats wastewater before discharging it to receiving waters?

**Ecology Response:** *There is federal regulation (40 CFR part 403) to control or restrict non-domestic wastewater (hatchery discharge or otherwise) that enters a POTW in a manner to prevent industrial wastewater from causing pollutant pass-through or interference of operations. To that end, hatchery water quality permits are drafted in accordance with state waste discharge permit program rules at Chapter 173-216 WAC for discharges to a POTW. This upland finfish hatchery and rearing general permit is both an NPDES and state waste discharge permit and as such sets requirements of the discharges to POTWs.*

*Specifically, Chapter 173-216 WAC require all sources of non-domestic wastewater sent to a POTW or to ground to apply for a state waste discharge permit (per WAC 173-216-070). Permit terms and conditions (per WAC 173-216-110) may include pretreatment requirements, conditions reflective of the requirement to provide AKART, and any appropriate monitoring requirements (among others).*

*Permittees with hatchery discharges to a POTW must additionally follow and comply with sections S3 for discharge limits (page 14) and section S4 for monitoring (page 19).*

*No permit changes were made.*

**PCB Mitigation:** On page 56. B. - The Spokane Hatchery's renovation will require removal, source control and reduction, and treatment for PCBs. Please define the difference between removal and treatment of PCBs.

**Ecology Response:** *Source control is considered removal or an elimination of the pollutant of concern so that it doesn't enter the effluent. Treatment refers to treating effluent that contains the pollutant to prevent the discharge. In the case of PCBs, removing rearing structures with PCB containing paint and caulk and using feed with as little PCBs as reasonable are source controls or removal. Using an offline settling basin to treat the hatchery effluent to remove solids is a method to treat the effluent to further reduce the quantity of uneaten feed that contain PCBs. No permit changes were made.*

**PCB Mitigation:** On page 56. B - Please clarify the statement regarding the use of reduced PCB fish feed. WDFW intends to use reduced PCB fish feed whenever sufficient quantity/quality is available and is fiscally possible.

**Ecology Response:** *The sentence was amended to state that the facility must comply with Section 6.C. for Fish Feed PCB Reduction which includes the use of reduced PCB feed when feasible and feeding/cleaning activities to reduce uneaten food from entering the wastestream and discharged.*

**Reporting and DMRs:**

- WDFW requests that DMRs allow a value and the code M, monitoring is conditional, to be entered on the same day. Please provide additional information to define and clarify the code “monitoring is conditional” and also “conditional,” as it applies to net values.
- WDFW requests new DMRs facilitate calculations of heat loads and have instructions for how to report laboratory results not received before quarterly deadlines.
- WDFW requests the ability to report and document flood conditions on the DMR, when stormwater impacts the water quality, outside of the facility’s control.

**Ecology Response:** *All comments on reporting and DMRs are not directly related to the language in the permit. These comments are related to implementation of ongoing and new reporting of discharge monitoring data. Ecology has reviewed the comments. We suggest that WDFW set a meeting for technical assistance with Ecology for follow-up on these concerns before the permit becomes active (10/1/2021) for resolution.*

**Additional WDFW comment (from Eric Kinne) submitted via email on June 4.**

WDFW is concerned with the amount of Nutrient monitoring that is in the draft permit. The current draft requires monitoring anytime fish is being fed which will be year around at 5 of the 9 facilities listed for WDFW. The permit also requires twice a month sampling. We would like to understand the rational for year around sampling and sampling twice a month. This will be very costly and time consuming and want to better understand the need.

**Ecology Response:** *The purpose of nutrient monitoring of a facility’s discharge to a waterbody that is impaired for dissolved oxygen is to answer the question whether nutrients levels discharged can be predicted based on production of fish for future TMDL considerations and other water quality assessments such as nutrient loading to Puget Sound. The amount of data needed to determine the influence of production on nutrients in the discharge from hatcheries is not initially understood. The likelihood to determine change over time within one year would require monthly sampling at a minimum and bimonthly sampling if the hatchery is seasonally operated meaning less than 12 months in a calendar year. Ecology will revise the permit (specifically Appendix E where sampling frequency is identified) with this modified sampling frequency. Additionally, Appendix D - Table 2 that identifies current facilities seeking renewed coverage that must perform nutrient monitoring will be updated to indicate those hatcheries that are seasonal.*

**COMMENTS FROM:**

**WDFW-Megan Finley, Fish Health Veterinarian**

**895 Riverside Dr. G279, Wenatchee, WA 98801**

**Email: [megan.finley@dfw.wa.gov](mailto:megan.finley@dfw.wa.gov)**

**Submit Date: 05/24/2021**

**Submit Method: Website**

I have established 2 testing facilities for chlorine to cover my use of chloramine T at 12 hatcheries. The process to be approved and re-accredited every year is onerous and expensive. We use chloramine T maybe once a year at most hatcheries, often less because of poor availability of the product. Our effluent discharge is always low (we neutralize the chlorine with sodium thiosulfate), and heavily diluted, and the effort to test at the outflow is often dangerous for staff. Unfortunately, because hatcheries are spaced out over the state it is not possible to bring samples to one lab within the 15 minute time period so multiple labs had to be set-up. As well, hatcheries operate year round and may need to treat fish on a weekend or holiday. With this set-up it often means that I personally have to travel to the hatchery with the meter to perform the testing whenever i prescribe a treatment. This is not sustainable or an efficient use of time and state resources.

***Ecology Response:** Ecology extensively reviewed the application of total residual chlorine as the water quality standard for the protection of aquatic life, the discharge limit and subsequent monitoring and reporting requirements when permittees use Chloramine-T. Total residual chlorine is the chemical parameter identified through the years of Chloramine-T's development as a disease control chemical to be the applicable water quality criterion measuring the exposure and product in the discharge. Subsequently, testing for compliance with the discharge limit in the permit must be performed by an accredited lab and through used of an approved method (WAC 173-220-210(b)). While Standard Methods 4500-Cl G is the optimal method to perform on site or in the field, the 15 minute hold time and accreditation concerns cannot be addressed.*

*Based on follow up conversations with the WDFW commenters and veterinarians, the description of NPDES permit requirements for the use of chloramine-T was revised to be clearer about its use to be in compliance with the permit and be an authorized discharge. This included added reporting of the process of neutralizing Chloramine-T on the Chemical Use Operational Log. It is recommended that Fish Health staff work closely with the NPDES permit compliance staff to understand the permit requirements for monitoring and reporting.*

*Ecology recommends WDFW submit to Ecology a study plan for a wastewater characterization study of chloramine-T to determine the frequency of use, levels of total residual chlorine found during treatment, and the hatchery configurations that influence the discharge concentrations. The study would assist Ecology in assessing how compliance monitoring must be done in the next permit cycle to ensure the protection of aquatic life when using Chloramine-T. The minimum data needed are discharge concentration curves of total residual chlorine throughout a treatment prior to*

*neutralization as the worst case scenario to determine the scale or level of total residual chlorine in the treated raceways and rearing ponds before discharging to the receiving waterbody. The study should be done across multiple hatcheries with various configurations. The study should include supporting data such as the total daily flow of the hatchery, the volume of Chloramine-T treated water that will mix with total flow, the percent of the total flow and for how long the treated water volume is present in the discharge prior to entering the receiving waterbody. Additionally, record whether the treated water enters the hatchery outflow immediately after neutralization or if and how long the treated water is retained in a depuration pond before being discharged.*

**COMMENTS FROM:**

**WDFW-Jed Varney, Fish Health Veterinarian**

**PO Box 424, Sedro Woolley, WA 98284**

**Email: jed.varney@dfw.wa.gov**

**Submit Date: 05/26/2021**

**Submit Method: Website**

We have concerns about how Halamid or Chloramine T is managed in the permit. The FDA label on the compound sets a discharge benchmark for local NPDES authority, see the label for benchmark numbers. Currently it is required under our NPDES permit to measure free Chlorine within 15 minutes of taking a sample by a certified lab. Unfortunately, there are few certified labs located within 15 minutes of most hatchery facilities. Hatchery specialists are not lab technicians and our attempts to get hatcheries as certified labs to measure Cl is difficult or unsuccessful. Discharge requirements in this permit essentially make this compound unusable and we have very few drugs at our disposal in aquaculture. Halamid is safe in fish and effective for many topical bacterial agents. Further Halamid when used is depurated with sodium thiosulfate. Given depuration and dilution from other ponds, our tests demonstrate we do not get measurable free Cl.

There must be another solution.

1. Can Cl be added to the exempted parameters on page 20 H
2. Can Cl be tested under the internal process control parameter in that list on page 20 H. Internal process control parameter is not defined in appendix B definitions.
3. Instead of measuring free Cl can the discharge level be calculated
4. Can we set a list of equipment to be used in the measurement of free Cl at hatcheries and provide training in the use of this equipment as a substitute for testing by a certified lab.
5. If the sample has to be measured by a certified lab can the sample be preserved so we can eliminate the 15 minute requirement and ship the sample to a certified lab.

We have so few drugs available for use in aquaculture, Halamid is safe and effective, we would not want to loose it based on discharge requirements.

**Ecology Response:** Ecology extensively reviewed the application of total residual chlorine as the water quality standard for the protection of aquatic life, the discharge limit and subsequent monitoring and reporting requirements when permittees use Chloramine-T. Total residual chlorine is the chemical parameter identified through the years of Chloramine-T's development as a disease control chemical to be the applicable water quality criterion measuring the exposure and product in the discharge. Subsequently, testing for compliance with the discharge limit in the permit must be performed by an accredited lab and through use of an approved method (WAC 173-220-210(b)). While Standard Methods 4500-Cl G is the optimal method to perform on site or in the field, the 15 minute hold time and accreditation concerns cannot be addressed.

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Ecology recommends WDFW submit to Ecology a study plan for a wastewater characterization study of chloramine-T to determine the frequency of use, levels of total residual chlorine found during treatment, and the hatchery configurations that influence the discharge concentrations. The study would assist Ecology in assessing how compliance monitoring must be done in the next permit cycle to ensure the protection of aquatic life when using Chloramine-T. The minimum data needed are discharge concentration curves of total residual chlorine throughout a treatment prior to neutralization as the worst case scenario to determine the scale or level of total residual chlorine in the treated raceways and rearing ponds before discharging to the receiving waterbody. The study should be done across multiple hatcheries with various configurations. The study should include supporting data such as the total daily flow of the hatchery, the volume of Chloramine-T treated water that will mix with total flow, the percent of the total flow and for how long the treated water volume is present in the discharge prior to entering the receiving waterbody. Additionally, record whether the treated water enters the hatchery outflow immediately after neutralization or if and how long the treated water is retained in a depuration pond before being discharged.

**COMMENTS FROM:**

**EPA Region 10 NPDES Permitting Section - Martin Merz**

**Email: merz.martin@epa.gov**

**Submit Date: 05/26/2021**

**Submit Method: Website**

EPA Region 10 NPDES Permitting Section recommends that Ecology amend the following permit and fact sheet provisions to clarify that to be authorized in discharge, Investigational New Animal Drugs (INADs) must be labeled correctly, used in accordance with U.S. FDA and U.S. FWS

regulations and protocols, and be used in a consistent manner with Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) regulations. This NPDES general permit cannot be used to authorize use of pesticides in a manner inconsistent with FIFRA regulations. Broadly speaking, an NPDES permit cannot be used to authorize something that is otherwise illegal under other federal regulations. The permit and fact sheet should be revised accordingly. We recommend amending language as follows:

**Permit Comments:**

1. P17 H.5. –[...] and/or the EPA for hatchery use, or approved as an Investigational New Animal Drug (INAD) that is labeled correctly, used in accordance with established protocols, and that does not violate FIFRA. (see S6.B).
2. S6.B. –[...] Permittees may use USFDA approved Investigational New Animal Drugs (INADs) provided the facility a) is signed up as an INAD study participant through USFWS; b) meets the conditions detailed in the facility's INAD permit application; c) uses INADs that are labeled correctly and do not violate FIFRA; c) and reports the use on the Disease Control Chemical Use Form required in S5.C.1 (Disease Control and Chemical Use Annual Reporting).
3. Appendix G –[...] At production aquaculture facilities, it is illegal to use any drug that is not approved unless it is being used under the strict conditions of INAD protocols or an extra-label prescription issued by a licensed veterinarian. Permittees may use USFDA approved Investigational New Animal Drugs (INADs) provided the facility a) is signed up as an INAD study participant through USFWS; b) meets the conditions detailed in the facility's INAD permit application; c) uses INADs that are labeled correctly and do not violate FIFRA; c) and reports the use on the Disease Control Chemical Use Form required in S5.C.1 (Disease Control and Chemical Use Annual Reporting).
4. Appendix G –The link to the INAD list is not active. This link may be what you intended: <https://www.fws.gov/fisheries/aadap/inads.html>

***Ecology Response:** The language EPA has provided above to revise the permit has been incorporated in each section identified. While the language Ecology incorporated is not precisely as suggested by EPA, each section has added language to specify a permittee can only have an authorized discharge of an INAD disease control chemical if use is consistent with its label and FIFRA.*

**Fact Sheet Comments:**

P 11 – Pollutants of Concern –

[...] Permittees may use USFDA approved Investigational New Animal Drugs (INADs) provided the facility a) is signed up as an INAD study participant through USFWS; b) meets the conditions detailed in the facility's INAD permit application; c) uses INADs that are labeled correctly and do not violate FIFRA; c) and reports the use on the Disease Control Chemical Use Form.

P 11 – Pollutants of Concern –

EPA recommends that Ecology clarify that ‘Diquat’ – listed under external controls – must be labeled correctly and that the NPDES permit cannot be used to authorize use of pesticides in a manner inconsistent with FIFRA labeling.

P 17 – Technology based effluent limits

Disease control chemicals must be used in accordance with label instructions, and approved by USFDA or USEPA or under an INAD. Permittees may use USFDA approved Investigational New Animal Drugs (INADs) provided the facility a) is signed up as an INAD study participant through USFWS; b) meets the conditions detailed in the facility's INAD permit application; c) uses INADs that are labeled correctly and do not violate FIFRA; c) and reports the use on the Disease Control Chemical Use Form. WDFW has jurisdiction over fish pathogens, treatment, and aquaculture disease control.

**Ecology Response:** *The language EPA has provided above to revise the fact sheet has been incorporated in each section identified. While the language Ecology incorporated is not precisely as suggested by EPA, each section has added language to specify a permittee can only have an authorized discharge of an INAD disease control chemical if use is consistent with its label and FIFRA.*

**COMMENTS FROM:**

**PUD No. 1 of Chelan County**

**327 N. Wenatchee Ave Wenatchee, WA 98801**

**Email: Ian.Adams@chelanpud.org**

**Submit Date: 05/26/2021**

**Submit Method: Website and Email**

1. Discharge Limits for Eastbank and Chelan Hatcheries: Condition S3.G.2, Table 3 of the Draft General Permit (Page 16) indicates that Eastbank and Chelan Hatcheries have a final heat load allocation under the Total Maximum Daily Load (TMDL) for temperature in the Columbia and Lower Snake Rivers<sup>1</sup> • Appendix F of the General Permit provides the heat load allocation applicable for these hatcheries as applicable in the TMDL (also provided in Table 1 below). During the public comment period, Chelan PUD provided proposed revisions to the heat load allocations to accurately reflect the flow and temperature information that were used for these point sources in the Columbia and Snake Rivers Temperature TMDL (Table 1). U.S. Environmental Protection Agency has not yet released a final TMDL that has reconciled these revisions. We request that the final General Permit use the requested revisions to the flow, temperature, and the heat load allocations as shown in Table 1 to accurately reflect the conditions at the hatcheries.

**Ecology Response:** *EPA's Temperature TMDL for the Columbia and Lower Snake River was issued as a final determination in May 2020 and reissued in an amended TMDL in August 2020. The permit has been updated to reflect the amended TMDL WLAs for the Chelan and Eastbank Hatcheries.*

2. Monitoring and Reporting Requirements for Chelan and Eastbank Hatcheries: Condition S3.G.2, of the Draft General Permit, identifies that facilities with a TMDL or pollution prevention plan will be required to conduct monitoring as under Appendix F. Section B, states, " *The implementation of the heat load WLAs will be assessed as an average monthly limit during the critical period of July through September...* ". The

waste load allocations for temperature in the Columbia and Snake Rivers Temperature TMDL applies from July - October, and is as such different from the period indicated in Appendix F. The table in Section C. on Page 58 of Appendix F, identifies that the Chelan and Eastbank Hatcheries are required to monitor temperature continuously from July 1 - September 31, which we have interpreted to mean September 30. Please clarify whether the period indicated in Appendix F is correct for monitoring temperature and flow at the hatcheries.

**Ecology Response:** *In appendix F for facilities with WLAs based on the [Total Maximum Daily Load for Temperature in the Columbia and Lower Snake Rivers](#), Ecology has made the changes to replace September with the month October. The critical period indeed is July through October.*

3. Inconsistencies in Quantitation Levels for Parameters in Appendix A and Appendix E: The quantitation levels for pH and dissolved organic carbon provided in Appendix A and Appendix E are inconsistent. Please clarify which one should be followed.

**Ecology Response:** *Appendix E indicates more specific quantification levels as necessary to gather data related to dissolved oxygen consumption. Appendix A indicates that quantification levels may be further specified. No permit change.*

#### **COMMENTS AND RESPONSE REGARDING THE SPOKANE HATCHERY:**

##### **#1 OF 3 - SPOKANE HATCHERY and GENERAL PERMIT COMMENTS FROM (see Ecology's response below on page 60):**

**Spokane Riverkeeper (SRK)**

**35 W Main Street #308, Spokane, WA 99201-3042**

**Email: [jerry@spokaneriverkeeper.org](mailto:jerry@spokaneriverkeeper.org)**

**Submit Date: 05/26/2021**

**Submit Method: Website**

Spokane Riverkeeper (SRK) believes that the Little Spokane River (LSR) Facility is the primary hatchery within our area of concern. The following comments primarily focus on this facility unless specified.

The LSR hatchery is a hatchery that discharges high levels of Total Phosphorus into the LSR that contributes nearly half of the nutrient loading at the critical low flow time of year. This is a significant source of pollution and a degradation of uses in the watershed. The LSR TMDL recommends a 50% reduction of phosphorus. SRK supports this reduction of pollution loading and the recommended Waste Load Allocation for Total Phosphorus inside the NPDES draft permit and the Dissolved Oxygen TMDL. We appreciate that the WDOE produced the LSR TMDL and are following the guidance of this approved TMDL for water quality improvement in the LSR and main stem Spokane River.

We support the reporting requirements for nutrients and Total Phosphorus (TP) as presented inside the draft permit. We support the infrastructure spending on design and construction of

LSR Hatchery upgrades to minimize pollution for both TP, TSS and PCBs. We support the prioritization of this infrastructure upgrade both within the WDFW priority list as well as Washington State infrastructure upgrades. We would add that this upgrade needs to occur in an expedited manner as it is critical to water quality improvements.

Compliance Schedule: We support the development of a compliance schedule (for the LSR Facility) but feel that optimally, the development of terms and conditions be specifically outlined inside the permit to contain binding benchmarks, schedules and water quality outcomes prior to permit approval. This is optimal rather than nonspecific references to the terms and conditions after the draft permit and comment period for the permit closes. However, since this will occur later in the permit cycle (and is conditional on funding), we feel that the public should at least have access to the terms and conditions of the compliance schedule and that the conditions should also be open for public input before April of 2022. This could lead to significant improvements and providing a mechanism for public input during the development would be constructive. Prior to the design phase and the construction phase, the compliance schedule should contain a public process around the development of those benchmarks, targets, schedules. That process should include windows for input and comment, and include email updates (to public stakeholders) via listserv, posted on the WDOE/WDFW web pages and are publicly reported.

#### PCB pollution:

The Spokane Hatchery discharges PCBs into state surface waters that are on the Category 5 list of impaired waterbodies for PCBs. As such, we ask that a PCB TMDL for the the Little Spokane River and the Spokane River be developed and approved so that any facility planning and Waste Load Allocations for facilities such as the LSR Hatchery are made in adherence to a final loading number and a larger loading calculus that is relevant to both rivers and the ultimate achievement of meeting Water Quality Standards for PCBs. As such we also ask that a WLA for PCBs be developed and then compliance planned for, documented and reported on. In the absence of TMDL guidance, and a coherent plan with implementation guidance that contains outcomes, relevant WLAs, targets for fish tissue, water column improvements, progress is not guided with precision and accuracy. Without a TMDL, efforts to regulate individual pollution sources and meet water quality standards in both rivers are and will remain, vague, ad hoc, incoherent and ineffective.

We recommend that this permit permanently and specifically dissolve the requirement of WDFW to participate in the Spokane River Regional Toxics Task Force. Given the lack of measurable progress in the implementation side, we feel that WDFWs participation is not an effective use of public resources, and that WDFW energy and time could be better spent independently to improve Washington's waters and accomplish their own mission and objectives by simply coordinating directly with the WDOE where and when substantive water quality improvements can be coordinated - agency to agency.

Compliance schedule 2b: We suggest a compliance plan/schedule that includes the evaluation of PCBs removal and the study, development and implementation of AKART for this pollutant as well as Total Phosphorus.

In an appendix to the permit, we ask that WDOE report (for the LSR operations) the result and progress of the PCB removal work as per AO 13422 (specifically SC61.a, SC.6.1b, SC.6.1.c which pertain to paint and calk removal). This should be included inside the Fact Sheet and the appendices of the general permit. Further, the results should then spell out specifically the continued work that needs to happen in the LSR Hatchery in this permit cycle (2021-2026). The current disconnection of information makes it difficult for the public to connect with the history of PCB removal, the 2016 AO, WDOE and WDFW actions and progress in addressing PCB pollution with remedial actions.

Further, if the (paint, caulk, and construction materials) work needs to continue, we suggest folding into the framework of the compliance schedule (alongside facility upgrades) - to include benchmarks, schedules and outcomes. This was referenced and contested in the last round of permitting and should have specific terminal dates around which these paints and caulks are removed.

Monitoring for PCBs at periods of high facility production should continue in receiving waters using Method 1668c.

WDFW and WDOE should maintain efforts and public report outs on the effort to find and or develop fish feeds that have minimal PCB content. A record of the search and the effort to meet the fish feed requirement should be available to the public.

Pollution Prevention Plans (PPP): Any revisions, updates and progress inside of PPPs (sections S9 and S6) should be reported to the public via a web page updates on the WDOE website and listserv announcements, quarterly PPP reviews should be available to the public via email on listserv updates.

Comments by permit sections:

Spokane Riverkeeper supports all suggestions to the general permit (with exceptions in 6C). From Test of Draft Fact Sheet: The changes proposed for this reissuance of the permit include:

- Condition S1.E: SRK supports this and appreciates the modification.
- Condition S3.G.1: SRK supports this and appreciates the modification.
- Condition S3.G.1: SRK supports this and appreciates the modification.
- Condition S3.G.2: SRK supports this and appreciates the modification.
- Condition S4.A: SRK supports this and appreciates the modification.
- Condition S5.C.2: SRK supports this and appreciates the modification.

S6.C Comments (also see above):

S6.C, 1. And 2: We suggest two reporting periods during the life of the permit. These should be accompanied by a progress report from last permit cycle - report required December 31, 2017.

- Condition S7.C1: SRK Supports these and appreciates their inclusion.
- Condition S11 - Engineering Documents: SRK Supports these and appreciates their inclusion.

**#2 OF 3 - SPOKANE HATCHERY and GENERAL PERMIT COMMENTS FROM (see Ecology's response below on page 60):**

**Inland Empire Paper Company (IEP)**

**3320 N Argonne, Spokane, WA 99212**

**Email: [dougkrapas@iepc.com](mailto:dougkrapas@iepc.com)**

**Submit Date: 05/26/2021**

**Submit Method: Website and USPS**

IEP was also a party to an appeal of the Washington Department of Fish and Wildlife (WDFW) Permit for its Spokane Hatchery under permit number WAG137007. That appeal resulted in the issuance of Administrative Order No. 13422 dated July 1, 2016. IEP has the following comments regarding the draft permit:

1. The 2016 administrative order required WDFW to engage in more specific efforts to address PCBs than will be required under the proposed Condition S6.C of the draft Hatchery Permit. Can Ecology explain why it is reducing the PCB compliance measures from the administrative order?
2. The administrative order required WDFW to monitor fish, water and fish feed during and after 2017. The draft permit does not require WDFW to monitor or test for PCBs in any medium. All other NPDES permitted dischargers to the Spokane River are required to test for PCBs using a method that achieves a 50 pg/L target method detection limit, or lower, for all PCB congeners. Can Ecology explain why it is eliminating the requirement for PCB monitoring and testing in the draft permit?
3. The administrative order required WDFW to submit a Best Management Practices Plan (Plan) to Ecology by June 30, 2018 and to submit an annual report every year thereafter on the status of implementing and updating the Plan. Can Ecology explain the status of compliance with these conditions in the administrative order and whether the requirements in the proposed Condition S6.C are replacing or supplementing the requirements in the administrative order?
4. The draft permit will not require WDFW to continue to be a participant in the Task Force as required in the administrative order. WDFW has been an important and constructive member of the Task Force and should be required to continue as a participant as required in IEP's NPDES permit and as required for all other individual NPDES permit holders on the Spokane River in Washington and Idaho.

5. The Fact Sheet for the Draft Upland Finfish Hatching and Rearing NPDES General Permit (April 2021) states “The draft permit does not authorize a violation of surface water quality standards or any other applicable local, state, or federal laws or regulations.” Ecology is currently pursuing litigation against EPA that may result in a repeal and replacement of the state water quality standard for PCBs from 170 pg/L to 7 pg/L. Has Ecology conducted a reasonable potential analysis to determine whether the Spokane Hatchery will cause or contribute to a violation of the 7 pg/L standard?
6. Proposed Condition S6.C would require WDFW to eliminate PCB discharges from the Spokane Hatchery to the “maximum extent possible.” Can Ecology explain the legal and regulatory basis for this qualification? Will this qualification apply as well to IEP’s obligation to develop and implement toxic reduction plans under its NPDES permit? If not, can Ecology explain why it would not apply the same qualification for individual NPDES permits on the Spokane River?
7. Ecology reported in 2018 that the “estimated PCB loads from hatchery operations were comparable to PCB loads from individual municipal wastewater treatment plants.” Ecology, Evaluation of Fish Hatcheries as Sources of PCBs to the Spokane River, at 30 (April 2018). Has Ecology concluded that it is not required to impose numeric water quality based effluent limits in NPDES permits for discharges to the Spokane River? In response to this comment can Ecology explain the basis for not including numeric PCB limits in the permit for the Spokane Hatchery?

**#3 OF 3 - SPOKANE HATCHERY and GENERAL PERMIT COMMENTS FROM (see Ecology’s response below on page 60):**

**Roger Williams**

**2391 Pasadena Lane, Spokane Valley, WA 99215**

**Email: watercleaner@juno.com**

**Submit Date: 05/05/2021**

**Submit Method: Website**

In reviewing the draft Upland Finfish Hatching and Rearing General Permit, there was no requirement to test the hatcher discharge water for PCBs. Since the discharge ends up in the Spokane River which is listed for PCBs, all discharges to the Spokane River should be tested for PCBs. The Upland Finfish Hatching and Rearing General Permit needs to include at least quarterly testing for PCBs using EPA Methods 8082 A and 1668.

***Ecology response to address the three sets of comments (see previous three comments) on the Spokane Hatchery and how the facility is meeting water quality standards for PCBs.***

*We appreciate the detailed comments concerning Ecology’s administration of the 2016 administrative order for the WDFW Spokane Hatchery and how this draft general permit identifies requirements for the Spokane Hatchery to meet water quality standards. Ecology’s response here is a summary of our approach to that end. The current administrative order will expire as soon as the new general permit coverage is issued. In accordance with the previous permit and 2016 order, WDFW submitted the*

PCB BMP plan that identified the need to remove caulk and paint from rearing structures. This removal project requires WDFW to update and modify the hatchery through a capital funded project. [The hatchery PCB evaluation study](#)<sup>18</sup> concluded in 2018 and can be available online. While Ecology intended that WDFW would continue PCB monitoring at the Spokane Hatchery following the PCB evaluation study, Ecology determined PCB point source identification and removal should be prioritized. This led to specific requirements identified in Appendix F of the draft general permit for the Spokane Hatchery.

So when issued, this permit will require the WDFW Spokane Hatchery to follow a compliance schedule to meet both PCB and phosphorus water quality limits. The permit describes a minimum of what the compliance schedule must contain. The compliance schedule will include yearly benchmarks for the eventual construction of a new upgraded hatchery without rearing structures using paint or caulk containing PCBs and modernizing treatment for solids that reduce discharge of phosphorus and PCBs. You can find these requirements in Appendix F of the draft general permit under the Spokane Hatchery. The compliance schedule must include an Engineering Report with an AKART study to determine the best treatment to remove PCBs and phosphorus.

The WDFW Spokane Hatchery will be issued this compliance schedule through a subsequent administrative order (AO). The new permit requires a compliance schedule to be finalized by April 2022 of which will be issued through an AO thereafter. During the development of the final compliance schedule PCB monitoring specifically to evaluate effluent change before and after construction to determine that facility is meeting the water quality limits will be considered, as well as WDFW's continued participation in the SRRTTF. The current draft permit continues to require source control for PCBs described in Condition S6.C and compliance with the PCB water quality limit.

Your comments on this permit and your concerns that WDFW continue to address their contribution of PCBs to the Spokane River have been forwarded to the Eastern regional facility manager, compliance specialist, and Ecology's Task Force representative. Ecology's Eastern regional staff is beginning work now with WDFW to draft the schedule and discuss monitoring. We appreciate your comments on how the 2016 AO and this general permit require WDFW to meet water quality standards. Ecology has modified the PCB limitation criteria in Appendix F to be more precise about how the hatchery must meet water quality standards. Your comments will be taken into consideration when drafting the next administrative order containing the compliance schedule.

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<sup>18</sup> <https://apps.ecology.wa.gov/publications/documents/1803014.pdf>