Wild Fish Conservancy

See attached document for comments.

Wild Fish Conservancy
NORTHWEST
SCIENCE EDUCATION ADVOCACY

RE: Draft NPDES General Permit for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country in Washington (WAG130000)

Summary of comments and recommendations

Ecology must consider the effects from the facilities' physical presence and operation as well as evaluating the draft permit's ability to meet water quality criteria. Ecology has the authority to do so and experience in considering the non-discharge effects in previous certifications for at least one hatchery. The application for the certification (including the draft permit and fact sheet) does not provide sufficient information for Ecology to have a "reasonable assurance" that the facilities' activities will not violate water quality standards. Rather than deny certification, however, Ecology should condition this certification so that individual facilities and the applicant provide information for Ecology to make individual evaluations for each facility. This phased approach would recognize the important societal needs related to hatcheries (e.g., the Federal government's tribal trust responsibilities), and allow the facilities to continue to operate, while gathering information to inform Ecology.

In addition, Ecology should condition the certification so that facilities that discharge to Puget Sound monitor and report the concentrations of nitrogenous compounds and $CBOD_5$ in their effluent, similar the requirements in Ecology's Puget Sound Nutrient General Permit for municipal wastewater treatment plants, and at least one recent Section 401 certification for an EPA-issued NPDES permit for a municipal wastewater treatment plant discharging into Puget Sound.

Comments

We offer the following comments on the subject general NPDES permit proposed by the US Environmental Protection Agency (EPA). In certifying the current permit in 2016 (May 24, 2016 letter from Heather Bartlett, Water Quality Program Manager, Ecology, to Michael Lidgard, NPDES Permit Unit Manager, EPA Region 10), Ecology had little to say about the permit: "Ecology staff has had discussions with the EPA permit writer about monitoring and Best Management Practices Plan requirements that were taken into account in the final permit. The final permit complies with Washington State's water quality standards." The discussed topics apparently dealt only with the discharge of pollutants.

This narrow evaluation should not be repeated with the draft permit, as the physical presence and operation of hatcheries also can lead to water quality standards violations. These effects are also known as "facility effects" and it is Ecology's duty to consider those effects in this certification.

"Facility effects"

Many hatcheries in Washington were built as mitigation for the negative effects on fish populations from separate actions (e.g., overfishing, main-stem Columbia River dams), and ironically the hatcheries themselves cause negative effects that attract little notice.

Besides discharging pollutants, it is well known that some hatcheries block fish passage to migrating fish including salmonids through dams, culverts, and other obstructions. Some of these are non-operable permanent structures while others are operated during broodstock collection with little regard to the need of non-hatchery origin native fish to pass.

Many, if not most, hatcheries in Washington use water very inefficiently, by raising fish in raceways. Little water is recirculated. Through exercising their water rights, hatcheries often de-water extensive reaches of streams or rivers (generally upstream of the facility), causing various water quality problems and lowering fish habitat quality independent of water quality.

A recent report by the Washington Department of Fish and Wildlife[1] (WDFW) concisely summarizes the facility effects of hatcheries and the fact that little thought is given to them:

> **Hatchery facilities often alter the physical environment, potentially impacting the quality and quantity of fish habitat. Instream structures such as weirs or water diversion dams can impede upstream or downstream fish migration, and impacts can include displaced spawning, fallback, increased injury or mortality due to handling effects, and changes to redd distribution. The diversion or withdrawal of water can impact the environment in the vicinity of the hatchery, and directly or indirectly affect natural populations.** Hatchery effluents can affect nutrient levels, temperatures, invertebrates, and presumably fish populations downstream of the discharge point. In general, physical impacts of hatchery facilities are regulated by local, state, and federal environmental authorities. **There is little research on the effects of hatchery facilities and hatchery activities on local water quality, invertebrates, or fish, other than compliance monitoring.** Hatcheries tend to be evaluated on a case-by-case basis according to these regulations. **Site-specific features related to the hatchery facility itself and the local environment (stream size, gradient, flow regime, etc.)**

[1] https://wdfw.wa.gov/sites/default/files/publications/02121/wdfw02121_0.pdf accessed October 12, 2022.
A review of hatchery reform science in Washington State. J.H. Anderson, et al. Final report to the Washington Fish and Wildlife Commission, January 23, 2020.

> **make it very difficult to generalize about these effects but this variation does not mean that the effects are inconsequential. Effects on natural salmonid populations and other fishes can be important** (emphases added).

WDFW should be considered an expert on this topic as they operate 77 fish hatcheries across Washington.[2] The statement regarding "site-specific features" speaks to the need for individual evaluation of these facilities, and is precisely what Congress had in mind when enacting Section 401: that facilities that receive a Federal license or permit only operate with proper regard to State requirements. The NPDES permit proposed by EPA will regulate only some of the effects described above, and it is Ecology's duty to evaluate the other effects and ensure that water quality standards and other applicable requirements are being met at these facilities.

Scope of Ecology's Authority

The proposed issuance of the NPDES permit triggers Clean Water Act Section 401, and Ecology's duty is to ensure that the *activities* of each facility seeking coverage under the General Permit will result in no violations of water quality standards or related statutes or other requirements. Ecology must consider *all* of the activities of each facility, not simply the discharge of wastewater, and condition the Section 401 certification accordingly.

Issues surrounding Section 401 and its applicability have been extensively litigated. In one Washington case, Ecology required a minimum instream flow in order to protect the aquatic life uses of the Dosewallips River from the proposed Elkhorn hydroelectric project. Water quality standards would not have been met otherwise because the use would not have been protected. Upholding a Washington Supreme Court decision, the US Supreme Court ruled in *PUD No. 1 of Jefferson County* v. *Washington DOE* (511 U.S. 700, 1994) that "activities" not simply "discharges" must be considered when assessing compliance with water quality standards. The ruling also said that Washington's antidegradation policy protected "uses," not just water quality criteria, and both uses and criteria must be protected in order for an activity to comply with water quality standards. Ecology was correct in placing conditions that did not necessarily have a basis on numeric water quality criteria because those conditions protected the designated uses of the Dosewallips River.

Therefore, Ecology must apply a complete antidegradation analysis to each facility, using information supplied by the permittee in order to ensure that uses will be protected. WAC 173-201A-300(2(e)(i) states that Tier I antidegradation applies to "all waters and all activities," and WAC 173-201A-320(7) states that all Tier II authorizations must also comply with Tier I.

[2] https://wdfw.wa.gov/fishing/management/hatcheries/facilities?county=All accessed October 13, 2022.

The Washington Supreme Court's decision in the Elkhorn case (*Washington DOE* v. *PUD No. 1 of Jefferson County*, 849 P.2d 646 (1993) specifically outlines Ecology's obligations in a Section 401 certification process:

> In short, section 401 requires states to certify compliance with state water quality standards. Washington's standards prohibit the degradation of the state's waters, and prohibit the degradation of fish habitat and spawning in the Dosewallips in particular. Therefore, section 401 required Ecology to certify that the Elkhorn project would not degrade fish habitat and spawning in the Dosewallips. Given that Ecology's fisheries biologists determined that the instream flows urged by Tacoma risked such degradation, Ecology therefore could not issue the 401 certificate without imposing more protective instream flow conditions. Absent such a condition, Ecology could not assure compliance with state water quality standards.

Ecology must also determine if the activities of the permittee comply with other laws related to water quality statutes and regulations.[3] Examples of other applicable state requirements include RCW 90.54.020(3)(a), providing for adequate flow in perennial streams, RCW 77.55.010, requiring fish guards on diversion devices, and RCW 77.55.040, requiring fish passage devices on dams or other obstructions.

Recommendations

On January 7, 2010, Ecology issued Order No. 7192, a Section 401 certification of an EPA-issued NPDES permit to the Leavenworth National Fish Hatchery (LNFH), Chelan County. The certification was conditioned by requiring a series of studies that were to inform future operations of the LNFH so that facility would comply with water quality standards and other applicable requirements. Some studies had to do with the discharge (e.g., instream temperature) while others dealt with facility effects (e.g., fish passage and instream flow/habitat relationships).

The 2010 Section 401 certification for the LNFH can serve as a model for the type of information that needs to be supplied by the facilities and EPA, so that Ecology can determine if particular operational constraints or physical modifications are needed at the permitted aquaculture facilities. Ecology should condition its certification by requiring a basic operational plan and physical description of each facility, so that facility effects such as fish passage blockages and water use can be assessed. Much of that information probably exists for many of the facilities, especially those operated by the US Fish and Wildlife Service.

It could be argued that the permit as it stands does not provide sufficient information to Ecology for it to have a "reasonable assurance" that water quality standards will be met after the final

[3] CWA Section 401(d); *Ecology* et al. v. *PUD No. 1 of Jefferson County*, 121 Wash.2d 179, 189-192 (1993).

permit is issued to facilities. Fish hatcheries, in part due to their impacts, have failed to recover self-sustaining wild fish populations and remain an unproven method to fulfill government treaty trust responsibilities. For these reasons, a phased approach to evaluating the facilities and gradual improvement is better than the status quo where the facility effects of hatcheries continue to go unexamined and unregulated.

In addition, Ecology should recognize that aquaculture facilities can be responsible for significant nutrient loads to waterbodies. Facilities that discharge to Puget Sound should monitor and report the concentrations of nitrogenous compounds and $CBOD_5$ in their effluent, similar to the requirements found in Ecology's Puget Sound Nutrient General Permit for municipal wastewater treatment plants. Ecology has also conditioned one recent Section 401 certification for an EPA-issued NPDES permit, for the Suquamish Wastewater Treatment Plant (WA 0023256; Ecology CWA Section 401 Certification Order 16892, Second Amendment, issued May 13, 2022) in that way. Ecology should condition this Section 401 certification the same way so that aquaculture facilities that discharge to Puget Sound meet the requirements of other dischargers of nitrogenous compounds and $CBOD_5$.

I appreciate the opportunity to comment on behalf of Wild Fish Conservancy. Please contact me at the provided email address if you have any questions.

Sincerely,

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