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Black Hills Audubon Society is a volunteer, non-profit organization of more than 1,300 members in Thurston, Mason, and Lewis Counties whose goals are to promote environmental education and protect our ecosystems for future generations.

July 23, 2024

To: Department of Ecology

RE: New water quality standards

From: BHAS Conservation Committee

We have some concerns and suggestions about the proposals for the new water standards proposed by the Department of Ecology. We believe that the continued presence of wildlife and biodiversity is an overriding public interest, and that the wildlife use of state waters is a designated use which, along with human health, must be protected by state water quality rules.¹

- 1. New water standards should scale properly.** Water quality standards which are isolated to a specific site may not scale well at the watershed level. Especially with the advent of climate change events that increase the risk and scale of flooding and stormwater runoff, we can logically expect increased risk of intermingling of waters which might not typically connect to each other. This increases the potential for a 'naturally conditioned' polluted waterway to flow into other water bodies which are not 'naturally conditioned', causing those bodies to become out of compliance with their numerical water quality standards. We recommend that new standards simply and reliably protect all water bodies in a watershed, and site specificity be extremely limited.
- 2. Water Quantity should be added as a Water Quality standard.** Wildlife species (along with humans) need sufficient levels of both water quality and water *quantity*, some of them with very specific needs. In addition to this designated use, water quantity should be called out explicitly as a water quality standard, since the volume of water is a key measurement factor when calculating dissolved oxygen (DO) and allowed pollutant concentrations, temperature, and pH². Sufficient levels of water

¹ EPA Nov 19, 2021 letter of disapproval to WA Dept of Ecology. And the EPA technical addendum to that letter, p. 7.

"Question 2- "Does the provision address designated uses, water quality criteria (narrative or numeric) to protect designated uses, and/or antidegradation requirements for waters of the United States? "

² Ecology's water quality standards already reference volume, as temperature is measured at specific depths, and DO, and contaminants are all represented, measured and monitored as *concentrations in water*. When streams lose volume of water due to overallocation of surface water or groundwater, contaminant concentrations will increase in that waterbody, degrading or destroying those areas as habitat for wildlife.

(usually a minimum, but sometimes also a maximum) are required to support local species' designated use of the aquatic environment as life-sustaining habitat . Finally, water quantity changes should be included as part of this water quality standard in order to protect sensitive species from sudden significant surges or withdrawals of water volume which can destabilize wildlife aquatic habitat and put the species at risk.

Examples of water level needs for species:

- A) Pacific Flyway migrants and resident waterfowl in WA rely on water in their wetlands, rivers, ponds and lakes for foraging, resting and breeding. In their 2021 paper “Natural Climate Solutions” National Audubon states:
- “Despite their significance, the US has experienced substantial wetland loss and degradation (e.g., harmful algal blooms) from water diversions, pollution, and nutrient loading (e.g., fertilizer application, inadequate or malfunctioning septic fields), amongst other causes, since the 1950s. **These threats have led to significant population declines of many wetland-dependent bird species.** Wetland bird taxa are vulnerable to climate change, with nearly 80% of waterbird species at risk.”³ Audubon’s interactive “Survival by Degrees” page for Washington lists drought as a primary climate change threat to bird species in Washington state.⁴
- B) Water levels are crucial in wetlands and seasonally inundated sites used by Oregon Spotted Frogs. Increasing or decreasing volume outside of normal seasonal variations can make habitat unsuitable for native species and encourage populations of ‘invasive’ species⁵. An example, less water in seasonally inundated areas can increase temperature, encouraging invasive species that degrade wildlife habitat.
- C) Water access is imperative as lack of water prevents or discourages terrestrial wildlife from traversing the area as a wildlife corridor. Climate change is forcing species to move when their habitats are degraded or destroyed.

Ecology already sets quantity standards via ‘instream flow’ rules, but there appears to be no agency connection between the side of Ecology which administers water rights and in-stream flow rules (water quantity), and the side of Ecology which manages water quality standards, despite the interdependency between quality and quantity. In addition, instream flow rules only protect selected rivers – not wetlands, ponds and lakes. From Audubon’s point of view, all these aquatic habitats have water level needs critical to the ‘designated use’ of that waterbody as habitat by its typical wildlife species, so all waterbodies should be included in a water quality standard.

³ Natural Climate Solutions Report, Climate Initiative, National Audubon Society, 2021, p.16.

⁴ <https://www.audubon.org/climate/survivalbydegrees/state/us/wa> (scroll to bottom)

⁵ For example, Oregon Spotted Frogs need both year-round water (6”) and seasonally inundated sites for breeding. Bullfrogs, a competing and predatory species, thrive in deeper waters. When waters for OSF become deep enough to provide bullfrog habitat (e.g. increased stormwater inundation in wetlands due to nearby building development with excessive impervious surface), the OSF populations diminish and can be wiped out. BHAS has taken action to protect and support recovery of the Oregon Spotted Frogs (federally endangered species). Ref. - see the 2023 Draft Recovery Plan Oregon spotted frogs.

- Ecology already uses a species tolerance basis for water quantity standards in its 'instream flow standards' for salmon, which recognizes water flow/volume below specified conditions degrades the environment beyond what the fish can tolerate. All aquatic species and all water habitat should be protected in a parallel manner as a 'water quality' standard.
- Ecology as an agency has control over water volume as the primary administrator of anthropogenic water [use] rights in the state, so Ecology is uniquely situated to ensure compliance with these water quality/quantity standards.

We consider all water bodies as potential habitat for wildlife and are working to ensure that aquatic habitats are protected from development and degradation. We strongly encourage Ecology to set water quality standards that protect aquatic habitat for designated use by Wildlife. We see a future where every water body is a precious one worth restoring and conserving.

Thank you for your consideration.

BHAS Conservation Committee