



State of Washington
DEPARTMENT OF FISH AND WILDLIFE

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Main Office Location: Natural Resources Building, 1111 Washington Street, Olympia, WA

Shawn Ultican
Washington Department of Ecology
Water Quality Program
PO Box 47696
Olympia, WA 98504-7696

October 23, 2025

Subject: Proposed revisions to the Aquatic Plant and Algae Management General Permit

To Mr. Ultican,

The Washington Department of Fish and Wildlife (WDFW) appreciates the opportunity to provide feedback on the Department of Ecology's (Ecology's) revised Aquatic Pesticide and Algae Management (APAM) Permit. Our agency includes both staff that apply for APAM permit coverage as well as species and habitat subject matter experts that provide technical support to applicators. As such, we understand the effort required to balance the benefits of noxious and nuisance weed control with potential risks to threatened species and habitats. WDFW is deeply invested in supporting Ecology's continued regulatory and implementation efforts in this space.

We have strong concerns with two of the treatment timing window exemptions Ecology has proposed in section S4.D.3 of the draft permit. WDFW's treatment timing windows were designed to protect priority fish and wildlife species in the state, including listed endangered and threatened species, at critical life stages. These proposed exemptions may create incidents where pesticide applicators unknowingly damage fish or other wildlife populations, either through direct toxic impacts to the species or by removing aquatic plants or algae that act as critical habitat and food at times when the species cannot easily relocate.

The language in section S4.D.3.a of the draft permit appears to exempt certain pesticide treatments from following WDFW timing windows if those treatments use pesticides below specified concentration thresholds. We understand the logic that there is likely a concentration for each approved herbicide or algicide below which there is no toxic impact to fish or other wildlife within the water. However, we do not think standard species ecotoxicity tests are sufficient to determine concentration thresholds that are protective of sensitive ESA-listed species, as even standard test species can vary by orders of magnitude in their sensitivity to



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specific pesticides.¹ Allowing even select pesticide applications to occur in waterways that host endangered species without consultation with the state could cause unintended harm to species that are already threatened in Washington state.

In addition to our concerns about toxicity, we also note that the WDFW's timing windows consider certain indirect impacts from aquatic pesticides. Such negative impacts may include harming aquatic wetland emergent species, such as *Phragmites australis americanus* that serves as a host plant for a state candidate butterfly species or removing algae as a food source for certain species of tadpoles. Although the applied pesticide concentration does influence the severity of these secondary impacts, the severity is also heavily influenced by how and when treatments occur. As such, we ask that Ecology not create treatment timing window exemptions based on the concentration of applied pesticides.

Similarly, we also urge Ecology to remove the treatment timing window exemption in S4.D.3.b for pesticide applications made to shoreline and emergent plants. Several waterfowl species listed in WDFW's timing windows use emergent plants and plants near the shoreline to nest and rear young. These species cannot easily relocate from established nesting sites because the young are flightless during this time and so rely on emergent plants to protect them. If applicators are not required to consult WDFW timing windows before treatment, they run the risk of damaging waterfowl habitat and potentially exposing the species to higher rates of predation.

WDFW recognizes that requesting a treatment timing window modification can be an onerous process for permittees. In lieu of blanket exemptions, we propose that our agencies work together to improve the efficiency of the consultation process while still ensuring that proposed pesticide applications do not harm listed species. As an example, we would be willing to explore with Ecology whether certain modification requests could be granted for multiple seasons, instead of the current limit of one year or treatment season described in S4.D.4.

As a government entity that also conducts activities covered in this permit, we would also like to provide feedback about two of the monitoring and survey requirements currently proposed in the APAM permit. First, the rare plant surveying process as described in section S9 seems likely to delay pesticide treatments. Under the current permit proposal, rare plant surveys must be conducted annually and cannot be conducted sooner than three months in advance of treatment.

¹ As an example, toxicity data reported in the 2018 United States Environmental Protection Agency's "Draft Ecological Risk Assessment for the Registration Review of Flumioxazin" reported No Observed Adverse Effects Concentrations (NOAECs) that varied by two orders of magnitude between different model freshwater fish and invertebrates.



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This delay may significantly reduce the treatment window, which may limit the effectiveness of treatments. It is also unclear in the permit language if a botanist must also conduct follow-up surveys, or if they can be done by the applicator. We would appreciate more clarity from Ecology regarding this requirement.

Second, while we applaud Ecology's concern regarding the impact of herbicide treatments on dissolved oxygen levels, we encourage Ecology to articulate a more stringent set of circumstances under which dissolved oxygen monitoring is required section S6.A. We believe the requirement as currently written will lead to costly monitoring with unclear benefits to aquatic species. As an example of more stringent requirements, Ecology could require weekly dissolved oxygen monitoring if water temperatures exceed 15° C, and treatment is likely to result in necrosis to >60% of pre-treatment vegetation cover in the waterbody. We would be happy to collaborate with Ecology to refine specific circumstances in which we agree monitoring is required to protect aquatic species.

Finally, we have a few other comments regarding recordkeeping requirements:

- We question the utility of providing Ecology with an up-to-date list of all licensed applicators within our agency, as mentioned in section S2.A.3.c. It is unclear how Ecology would expect to be updated when the list changes. Additionally, the Washington Department of Agriculture already maintains a database of all currently licensed applicators, so it is unclear what advantage this duplication would provide.
- We would also encourage Ecology to require record keeping for seven years instead of five in S7.B.1, to make the permit consist with other state pesticide regulations.

We appreciate Ecology's continued efforts to ensure responsible pesticide applications in state waters and look forward to continued collaboration. Please reach out to Rae Eaton at 564-669-8393, rae.eaton@dfw.wa.gov with any questions about the contents of this letter or any other information that could support your decision-making.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Conklin".

Chris Conklin, Habitat Program Director
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