



CENTER FOR
FOOD SAFETY

January 14, 2025

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

RE: Comments on Proposed Renewal of General Permit for Discharge of
Imazamox on Commercial Clam Beds in Willapa Bay

Dear Dept. of Ecology:

Thank you for the opportunity to comment on the proposed renewal of the NPDES Permit for *Zostera Japonica* Management on Commercial Clam Beds in Willapa Bay, to allow continued spraying of imazamox on clam beds.

Center for Food Safety (CFS) is a national non-profit organization representing nearly 1 million members nationwide and tens of thousands in the Pacific Northwest, including Washington State. CFS uses education, policy and legislation, and impact litigation to address the negative effects to public health and the environment from harmful food production technologies, and supports ecological food production, like organic and beyond. CFS operates in the Pacific Northwest and its members are particularly concerned with the increasingly industrial aquaculture, and particularly the use of pesticides in shellfish aquaculture.

CFS urges Ecology to deny this permit to continue killing eelgrass, whether on or off commercial clam beds. Washington is home to many iconic and endangered species like salmon and the orcas that rely on them, and numerous other fish, birds, and invertebrates. These species, and their prey, rely on eelgrass habitat in Willapa Bay. Washington has a “no net loss” policy for eelgrass given its importance and the decline of eelgrass and other seagrasses worldwide. Thus, Ecology must prevent further intentional destruction of this crucial habitat. As Ecology acknowledges (EIS at 76-78), introduced eelgrass also provides essential ecosystem functions, like food, shelter, and habitat stabilization for numerous species, as well as nutrient cycling and climate change mitigation.

As experts have stated, there is no sound reason to allow the direct spraying of any native eelgrass, including on commercial clam beds (*see* FWS Comments on 2014 Imazamox NPDES Permit). For ten years, Ecology has allowed the unmonitored spraying of eelgrass with the herbicide imazamox. Because of the past permit buffer rules, growers who sprayed imazamox were not required to monitor impacts to eelgrass outside of their plots, so hundreds of acres were sprayed over the last ten years without any monitoring of

off-site impacts. Ecology's buffer validation study in 2016 was fatally flawed, but even then showed negative impacts to native eelgrass, and should never have supported extending the permit for the full five years.¹ Given the benefits of introduced eelgrass, the negative impacts of herbicides to the Bay, native eelgrass, and other species, and the significant data gaps here, this under-studied plan should not move forward.

In this round of permit renewal, Ecology continues to rely on outdated and biased data to formulate the problem and need for this pesticide permit. Further, Ecology failed to conduct any review of the impacts on the ground after the last five years of spraying. While the additional monitoring and public comment period required in the proposed permit is an improvement, the permit, fact sheet, and EIS fail to show how use of synthetic herbicide complies with Washington's "no net loss" of eelgrass policy, water quality laws, or the principles of Integrated Pest Management (IPM), or how IPM principles (herbicide as a very last resort) will specifically be required through this permit. Ecology should not grant this permit, full stop, but if it does, it must do more to analyze the impacts of the last five years of spraying, use up-to-date data, and provide much more clear and strict limits on spraying that will protect *Z. marina*, water quality, and implement IPM.

State Environmental Policy Act

The State Environmental Policy Act ("SEPA") is Washington's core environmental policy and review statute. Like its federal counterpart, the National Environmental Policy Act ("NEPA"), SEPA broadly serves two purposes: first, to ensure that government decision-makers are fully apprised of the environmental consequences of their actions and, second, to encourage public participation in the consideration of environmental impacts. *Norway Hill Preservation and Prot. Ass'n v. King Co*, 87 Wn.2d 267, 279 (1976). For decades, SEPA has served these purposes effectively, requiring full environmental reviews for projects with significant environmental impacts.

SEPA was enacted to "encourage productive and enjoyable harmony between humankind and the environment" and to "prevent or eliminate damage to the environment and biosphere." RCW 43.21C.010. Thus, in adopting SEPA, the Washington legislature declared the protection of the environment to be a core state priority, "recogniz[ing] that each person has a fundamental and inalienable right to a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment." RCW 43.21C.020(3). This policy statement, which is stronger than a similar statement in the federal counterpart of NEPA, "indicates in the strongest possible terms the basic importance of environmental concerns to the people of the state." *Leschi v. Highway Comm'n*, 84 Wn.2d 271, 279-80 (1974).

¹ CFS, Comments on Proposed Modification of General Permit for Discharge of Imazamox on Commercial Clam Beds in Willapa Bay (Jan. 31, 2017); CFS, Comments on Proposed NPDES Permit Renewal (Nov. 4, 2019) (both attached).

SEPA is more than a purely “procedural” statute that encourages informed and politically accountable decision-making. SEPA requires agencies to integrate environmental concerns into their decision-making processes by studying and explaining environmental consequences before decisions are made. *See Stempel v. Dep’t of Water Resources*, 82 Wn.2d 109, 117–18 (1973). In enacting SEPA, the state legislature gave decision-makers the affirmative authority to deny projects where environmental impacts are significant, cannot be mitigated, and collide with local rules or policies. SEPA provides substantive authority for government agencies to condition or even deny proposed actions—even where they meet all other requirements of the law—based on their environmental impacts. RCW 43.21C.060.

Because SEPA’s purpose is informed decision-making, information is critical, and the regulations direct the lead agency to obtain necessary information, if possible, provided the “costs are not exorbitant.” WAC 197-11-080(1). While Ecology drafted an EIS in support of this proposed permit, it relies on old information rather than information from the last five years of imazamox spraying under the prior permit. Even at the outset in the problem formulation section, Ecology relies on a 14-year-old study with one author that had a direct economic conflict and was previously sanctioned.² EIS at 7. Ecology relies on a 13-year-old survey of shellfish growers conducted by their own trade group, the same group seeking the permit, to claim that use of imazamox is necessary. *Id.* Given the two iterations of this same permit, Ecology should update its information as things may have changed in the last decade plus. EIS at 7-10. The costs of obtaining such information should not be “exorbitant” as the permittees were required to file annual reports, and information such as the extent of clam aquaculture and *Zostera* beds should be available from other sources, including the U.S. Army Corps of Engineers and National Marine Fisheries Service.

Nowhere in the Fact Sheet or EIS does Ecology clearly lay out the extent to which acres were sprayed under the last permit or any results of monitoring (if there was indeed any monitoring under the last permit). While this EIS again uses the 1,100-acre number for acres of clam aquaculture, that number came from 2012 and has been regurgitated in 2014 and again in 2019, but the actual current acreage that may be impacted by this permit remains unclear. Is *Z. japonica*, given all its admitted benefits to the ecosystem (EIS at 76-78), still truly such a problem for current shellfish aquaculture operations? Ecology continues to rely on an unpublished 2011 study by Kim Patten claiming that *Z. japonica* causes on average a 44% decrease in clam yield. This is unsubstantiated and unscientific, a far cry from the “information reasonable sufficient to evaluate the environmental impacts of a proposal” that SEPA requires. WAC 197-11-335. *See also*

² *See* Center for Food Safety Comments on Proposed Renewal of General Permit for Discharge of Imazamox on Commercial Clam Beds (Nov. 4, 2019) (incorporated herein by reference and attached), citing Washington State Executive Ethics Board, Investigative Report and Board Determination of Reasonable Cause, No. 2017-012, Kim Patten, Director WSU Pacific County Ext. (July 20, 2017).

Boehm v. City of Vancouver, 111 Wn. App. 711, 718, 47 P.3d 137 (2002) (internal citations and footnotes omitted). As Ecology notes in its EIS, this same Mr. Patten claimed that waterfowl do not eat *Z. japonica*, downplaying an important impact of using herbicide on this eelgrass, and was proven wrong by a citizen scientist who provided evidence to the contrary, including photographs and not just the word of someone who has economic conflicts. EIS at 77. Further, in Mr. Patten's published 2014 study, the results indicated only a 9-33% increase in yield for young, fast-growing clams, and no significant differences for fully mature clams.³ The study admits that the "45% increase in commercial yield" is "likely an artifact of the study design" because clams are mobile and will seek more favorable locations (i.e. away from thick *Z. japonica*). *Id.* So Ecology's continued use of the 44% decrease in yield figure in its EIS does not conform to the requirements of SEPA.

Further, while Ecology lists several areas of uncertainty, it also states that a determination of necessary buffer distance to protect *Z. marina* is still "needed." EIS at 18, 90. If Ecology still has not validated to a reasonable certainty the 10m buffers it has imposed in the last two permits, how can Ecology claim that this permit will uphold the state's "no net loss" policy for eelgrass or comply with state and federal water quality laws? Before Ecology can claim that spraying a systemic, synthetic herbicide into aquatic environments will have no significant impacts, much less violate federal and state water quality laws and policies, Ecology must use the best information available, rather than rely on unsubstantiated claims from the very industry that seeks to spray the pesticide.

NPDES and Water Quality Permitting Standards

Ecology must also comply with all Clean Water Act and Washington State water-quality standards when permitting the discharge of pesticides into water. The goal of the Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Discharges are prohibited from causing or contributing to violations of water quality standards. 33 U.S.C. §§ 1311(b)(1)(C), 1342(a)(2); RCW 90.48.010, 90.48.520, 90.52.040, and 90.54.020. Water quality standards are defined as the designated beneficial uses of a water body, in combination with the numeric and narrative criteria to protect those uses and an antidegradation policy. 40 C.F.R. § 131.6; Chapter 173-201A WAC. The antidegradation policy is meant to ensure that the highest possible water quality is restored, that existing uses are maintained, and that any human activities that may lower water quality are allowed, at a minimum, with AKART. WAC 173-201A-300-330.

Ecology claims that Integrated Pest Management is AKART and the equivalent of technology-based-effluent limitations but fails to describe how IPM principles will *actually*

³ K. Patten, *The Impacts of Nonnative Japanese Eelgrass (Zostera japonica) on Commercial Shellfish Production in Willapa Bay, WA*, Agricultural Sciences Vol. 5, No.7 (June 2014).

be used and how they will be effective. As with the last version of this permit, it remains entirely unclear how this permit meets technology-based or AKART standards. In its Fact Sheet, Ecology says that Appendix C of the proposed permit sets out the minimum standards and guidelines for a Discharge Monitoring Plan (required by EPA), but this appendix provides zero guidance of what the thresholds should be for determining when it is appropriate to use imazamox, which as a synthetic herbicide should be a very last resort under IPM principles. Fact Sheet at 50. Ecology claims that DMPs will incorporate IPM to “help reduce pesticide use,” Fact Sheet at 69, but never says what these thresholds should be and how it will ensure that a permittee actually takes all non-chemical actions before going to the easiest and cheapest solution (imazamox).

As to surface water quality-based effluent limits, Ecology does not provide what beneficial uses are designated for Willapa Bay or how this permit to spray herbicide into the Bay will maintain those uses, including such things as wildlife habitat. Willapa Bay, as a marine water, is currently considered to be in “excellent” condition for aquatic life and well-suited for wildlife habitat and aesthetics. *See* WAC 173-201A-612. “Wildlife habitat” means waters of the state used by, or that directly or indirectly provide food support to, fish, other aquatic life, and wildlife for any life history stage or activity. WAC 173-201A-020. Habitat therefore *includes* areas used for commercial shellfish aquaculture, it is in no way excluded from this definition. So, Ecology has an obligation to ensure that any pollutants discharged, even on commercial clam beds, will not violate state water quality requirements, including protecting beneficial uses like wildlife habitat. To protect its current integrity and to prevent deterioration, Ecology may only issue a permit that will protect water quality and must show how this permit will be effective at doing that but instead provides no analysis. Ecology admits, as it must, that all eelgrass sprayed will be killed, but shrugs this off as still compliant with the “no net loss” policy because that eelgrass exists on commercial clam beds. EIS at 18. Tidal habitat, and the species it supports, does not stop and start at leased tide beds used for commercial aquaculture.

Under the antidegradation analysis, Ecology must use the information collected from implementation of the permit to revise the permit or program requirements. However, Ecology *has* no monitoring data because the last two permits failed to require monitoring whenever spraying “does not occur up to the 10m property line buffer.” 2019 Permit Special Condition S.5.A.1. During the first five years of the permit, only one grower has ever been required to monitor impacts in the 10m buffer (according to self-reported Annual Reports), on a total of 17.9 acres out of the over 1,000 sprayed over the life of the permit.⁴ Monitoring on *1.6% of acres treated* is far from enough data to conduct the required analysis. Even if impacts were occurring to native eelgrass within treatment areas, or within the 10m buffer, or off-site, if growers did not spray “up to the 10m buffer”

⁴ *See* Ecology, Annual reports and pre-treatments plans, <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Aquatic-pesticide-permits/Zostera-japonica-eelgrass-management#report> (last accessed Nov. 4, 2019).

(potentially meaning just inches away under the vague permit language), there was no monitoring. It is an improvement that Ecology is now proposing to require monitoring after *all* use (Draft Permit at 14), but Ecology should not continue this approach of spray now, evaluate later without better information on the actual impact of using this herbicide in the Bay.

Further, the buffer validation study conducted after year three of the first permit suffered from serious flaws (including a small sample size and use of a lower per-acre rate of active ingredient than allowed on the label). *See* Exhibit 1. Despite the problems with the buffer validation studies, they still found an over 20% reduction of eelgrass on lower elevation plots, and 2 of 3 test areas showed impacts to native eelgrass beyond the 10m buffer zone. (Grue & Conquest 2015). These findings, even with the small sample size and low rate of application, indicate that the 10m buffers are not sufficient to avoid impacts to native eelgrass off the property. Ecology calls this “no significant impact” but under a “no net loss” of native eelgrass policy, it is hard to see how a 20% reduction in cover/stem density is acceptable. Fact Sheet at 41. The appears to be *no* actual antidegradation analysis here, or plan to ensure that the water quality of Willapa Bay and its beneficial uses will be maintained.

Ecology Should Say No to Intentional Eelgrass Destruction

As stated above, Ecology has the power under SEPA to say no to projects or permits based on their environmental impacts. Ecology should not assume the public interest in killing eelgrass, native or introduced. Further, even if killing *Z. japonica* is acceptable (it is not), this permit will allow harm to native eelgrass. There are mixed beds of introduced and native eelgrass in Willapa Bay, given how shallow it is, and the two species can look similar. Eelgrass habitat is crucial to many species, including as food and shelter. For example, herring, a key forage fish, spawn at sites near active aquaculture cites on *Z. japonica*. Ecology discounts impacts to native eelgrass, despite evidence that they will happen. And evidence that numerous species are in severe decline, indicates that Ecology *must* take seriously the impacts that allow more eelgrass killing will have on these species, in conjunction with all the other stressors they face from human activities.

Further, much of the mitigation Ecology relies on is the dilution of the imazamox with tidal flushing in Willapa Bay. But recent science indicates this tidal flushing is much slower than previously assumed.⁵ Rather, high-tide water flowing over the Willapa Bay flats can take as many as four tidal cycles—or about two days—before it is fully replaced by “new” water. This means that imazamox residues will stick around longer and be

⁵ James Urton, *Tides don't always flush water out to sea, study shows*, UW News (Sept. 19, 2019), <https://www.washington.edu/news/2019/09/10/tidal-flats-old-water/>; Wheat *et al.*, *Multi-day water residence time as a mechanism for physical and biological gradients across intertidal flats*, *Estuarine, Coastal and Shelf Science*, Vol. 227 (Oct. 31 2019).

moved to other parts of the Bay to impact other eelgrass beds. Ecology must take this study and its implications for where “old” and “new” water concentrate in the Bay into account when determining the environmental impact of the proposed permit. Until it does so, it is relying on old and inaccurate information.

In sum, Ecology should deny this permit based on environmental impacts and the public interest. We applaud Ecology for requiring better monitoring and public notice and comment provisions in this draft permit but allowing the continued destruction of eelgrass habitat is unacceptable, and Ecology has a duty to prevent such degradation of a crucial piece of the near shore ecology. At the very least, the permit should be strengthened in the following ways:

1. Include a more detailed example of what IPM (AKART) is when it comes to removal of *Z. japonica* from commercial clam beds (i.e. using manual or mechanical methods first, pesticides as a last resort).⁶
 - a. What are appropriate action thresholds for *Z. japonica* on commercial clam beds? A single sighting of one clump of *Z. japonica* is clearly too low a threshold, so how much must be present before imazamox may be used? CFS suggests it should be a heavy density, and that this threshold should also take into account the available space in a given operation (including however many adjacent plots it controls) for clams to migrate to an area with less dense *Z. japonica*.
 - b. In less than heavy density *Z. japonica* beds, mechanical or manual removal methods should be used first. Only when these methods are ineffective at keeping the *Z. japonica* density moderate to low should imazamox control be employed.
 - c. Ecology should work with experts to determine what IPM principles are for this type of pesticide use in this aquatic environment before issuing a permit that allows permittees to decide for themselves.
2. Monthly reporting on compliance with Special Condition S3, S4, and S5 requirements during the permissible imazamox application window (currently May through July) regardless of whether treatment has occurred or is planned. Such reporting should be made available to the public through Ecology’s Permitting and Reporting Information System (PARIS).⁷ Also post notification forms used prior to treatment publicly.
3. Public notice on all permits, including renewing or existing permittees.
4. Prohibit use of vehicles for accessing spray area or spraying imazamox, specify backpack sprayers or other hand-sprayers only.
5. Shorten application window to end in early June.
6. Lengthen dry time from one to six hours and require monitoring during dry time.

⁶ See e.g., EPA, How do IPM programs work?, https://www.epa.gov/safepestcontrol/integrated-pest-management-ipm-principles#how_ipm_programs; WSU Extension, Integrated Pest Management, <https://ipm.wsu.edu/>.

⁷ CFS joins the comments by Twin Harbors Waterkeeper.

7. Specify how wind speeds must be monitored for compliance with the wind speed limitations.
8. Prohibit spraying near or over pools where *Z. marina* exists and create a buffer around drainage swales that contain *Z. marina*.
9. Require markers (such as flags) on boundaries of 10m buffer.
10. Specify monitoring requirements for buffers: measure for *zostera spp.* plant kill every 250 feet in the buffer one week after herbicide application.
11. Improve public notice by requiring signs posted four business days prior to treatment at and around Leadbetter Point, including near and around Leadbetter Point State Park and the Willapa National Wildlife Refuge; include additional information like location with description and map, amount of imazamox to be applied, number of acres treated, and name and contact information for the commercial clam bed owner/operator.
12. Remove allowance for Experimental Use of chemicals not listed in the permit: state and federal experimental use permits are not NPDES permits and the current permit does not include any limits to such experiments that ensure they will not cause harm.

Thank you for considering this comment.

Sincerely,



Amy van Saun
Senior Attorney
Center for Food Safety
2009 NE Alberta St. Suite 207
Portland, Oregon 97211
(971) 271-7372
avansaun@centerforfoodsafety.org