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FOOD SAFETY

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Nathan Lubliner  
Washington Department of Ecology  
P.O. Box 47600  
Olympia, WA 98504-7600  
[Nathan.lubliner@ecy.wa.gov](mailto:Nathan.lubliner@ecy.wa.gov)

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

Department of Ecology:

Thank you for the opportunity to comment on the proposed modifications to the NPDES Permit for *Zostera Japonica* Management on Commercial Clam Beds in Willapa Bay, and Department of Ecology's proposal to modify the permit to allow continued spraying of imazamox on clam beds for the remaining two years of the permit.

Center for Food Safety (CFS) is a national non-profit organization representing over 800,000 members nationwide and tens of thousands in 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 is particularly concerned with the increasingly industrial aquaculture and in particular the use of pesticides in shellfish aquaculture.

While CFS supports the concept of monitoring and testing to validate the buffers imposed in the original imazamox permit, based on sound science, unfortunately it does not appear that Ecology can truly validate the 10m buffers based on the studies conducted. Instead, the information presented indicates that Ecology should **not modify** the permit and prohibit further imazamox spraying until more accurate studies can be conducted and the full impacts to the environment are taken into account (through permit renewal in 2019). As noted by

**NATIONAL HEADQUARTERS**  
660 Pennsylvania Avenue, SE, Suite 302  
Washington, D.C. 20003  
T: 202-547-9359 F: 202-547-9429

**CALIFORNIA OFFICE**  
303 Sacramento Street, 2nd Floor  
San Francisco, CA 94111  
T: 415-826-2770 F: 415-826-0507

**PACIFIC NORTHWEST OFFICE**  
917 SW Oak Street, Suite 300  
Portland, OR 97205  
T: 971-271-7372 F: 971-271-7374

**HAWAII OFFICE**  
1132 Bishop Street, Suite 2107  
Honolulu, Hawaii 96813  
T: 808-681-7688

[office@centerforfoodsafety.org](mailto:office@centerforfoodsafety.org)

[centerforfoodsafety.org](http://centerforfoodsafety.org)

the U.S. Fish & Wildlife Service in 2014, there is no sound reason to allow the direct spraying of any native eelgrass, including on commercial clam beds.<sup>1</sup> While CFS recognizes that Ecology is seeking only comment on the proposed modifications, Ecology has not provided good cause for modifying the permit as proposed. The inadequacy of the entire permit, including the current monitoring and buffer requirements, indicates the prohibition on further spraying in the original permit be allowed to go into effect. Further, because the buffer validation studies did not test the maximum allowed rate of imazamox use, it does not represent the full impacts of imazamox use on off-property native eelgrass. For this reason alone, Ecology should not modify the permit and use the next two years to gather data on the full potential effects of yearly imazamox spraying on commercial clam beds in Willapa Bay. Alternatively, Ecology does have good cause to modify the permit to require better buffers for native seagrasses, set numerical effluent limitations, and require increased monitoring and reporting by permittees, as well as studies that correct the inadequacies of the buffer validation Studies.

#### **A. Buffer Validation Studies Inadequate to Fully Assess Impacts of Imazamox.**

The buffer validation Studies are not adequate for several reasons. First, as noted by Washington Department of Natural Resources (WDNR), one of three agencies consulted to review the study data, the sample size (n=3) was too small, making the findings of that study “inconclusive.” The Grue 2015 study found negative effects to *z. marina* after 30 days, but given the small sample size, their finding of statistical insignificance “does not necessarily indicate that there is no impact” to native eelgrass beyond property boundaries.<sup>2</sup>

WDNR also identified problems with the dimensions evaluated in the study (failure to capture the way the tide flows across the test plots) and the failure to monitor impacts to another native seagrass susceptible to imazamox, *Ruppia maritima* (widgeon grass).

Finally, the spraying on test plots in May 2014 used a rate of active ingredient per acre *lower* than the maximum rate allowed in the permit, and lower the rate actually reported by permittees. See Clearcast® label (EPA Reg. No. 241-437, most recent label approved Oct. 24, 2016).<sup>3</sup> The permit imposes no limits on the amount of active ingredient allowed per acre, other than the EPA approved labels for imazamox, the active ingredient. However, EPA has approved several

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<sup>1</sup> Ken S. Berg, Washington Fish and Wildlife Office (USFWS) Letter to Donald Seeberger, Department of Ecology, at 5 (Feb. 14, 2014).

<sup>2</sup> Cinde Donoghue, Wash. Dept. of Nat. Resources Comments to Nathan Lubliner, Ecology (July 8, 2016).

<sup>3</sup> Clearcast® Label, Oct. 24, 2016, attached as Exhibit A.

labels for products containing imazamox, including the technical grade active ingredient that is *all* imazamox, as opposed to formulations containing over 80% “inert” ingredients. This aside, the Clearcast® product that specifically addresses Japanese eelgrass has a general maximum rate of 1lb or about 16 oz of active ingredient per acre, and a Japanese eelgrass range of 4 fl oz to 32 fl oz Clearcast/Acre.<sup>4</sup> This Japanese eelgrass-specific rate is expressed as ounces of the *formulation* per acre, not active ingredient. This formulation of imazamox has 12.1% active ingredient, so a maximum rate of 32 oz of formulation would include 3.872 fl oz of active ingredient per acre. While the study reported a rate of 11.5-11.7 oz a.i./acre (Grue 2015 at 6), Ecology has stated that the actual rate was 1.4 oz a.i./acre.<sup>5</sup> So the tested rate was about 1.4 oz a.i./acre, while the maximum labeled rate for Japanese eelgrass is nearly 4 oz a.i./acre, or nearly *three times higher*. Ecology gave a range of reported use rates from 0.72 oz a.i. per acre to 2.26 oz a.i. per acre from 2014-2016.<sup>6</sup> Ecology indicated that about 18% of those applications were above tested rate of 1.4 oz a.i./acre.<sup>7</sup> Thus, not only did the buffer validation Studies use rates three times lower than the maximum rate for Japanese eelgrass, they do not even reflect the highest rate *actually used* by growers. The problem with this design is obvious and means the studies do not reflect the true extent of potential impacts to native eelgrass. For this reason alone, this study does not support or provide sufficient cause to modify the permit to allow continued spraying, because the full effect to native eelgrass off-property is still unknown.

**B. Ecology Should Not Modify the Permit or Should Modify it to Include More Protections for Native Seagrass, Numeric Effluent Limitations, and Increased Monitoring and Reporting.**

Ecology cannot modify an NPDES permit without cause. 40 C.F.R. § 122.62; WAC 173-226-230; 33 U.S.C. § 1342(b)(1)(C). The flawed studies have not provided any justification for a modification of the permit at this time, and Ecology has not identified any of the enumerated causes for modification listed in 40 C.F.R. § 122.62(a) or (b) that justify its proposal to modify the imazamox permit as proposed. To the contrary, the new information indicates that stronger protections for native seagrasses and more monitoring and reporting are needed. Indeed, federal CWA regulations consider modifications to NPDES permits that “[r]equire more frequent monitoring or reporting by the permittee” to be *minor* modifications, which Ecology could undertake at any time. 40 C.F.R. § 122.63. Thus, while Ecology seeks to limit public comment to its proposed permit modification, Ecology has failed to show good

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<sup>4</sup> *Id.* at 5, 9.

<sup>5</sup> Ecology, Workshop Presentation, *Draft Permit Modification for the Zostera japonica Management on Commercial Clam Beds in Willapa Bay NPDES General Permit* at 12.

<sup>6</sup> *Id.* at 22.

<sup>7</sup> Phone conversation with Nathan Lubliner, Jan. 30, 2017.

cause for modifying the permit as proposed. Instead, it should modify it to include increased monitoring and reporting requirements to respond to the findings of Grue 2015, and make up for the inadequacies in that study (i.e. small sample size, lower applications rates).

Rather than support the modification proposed, the new information indicates that the permit requires more protections for native seagrasses and increased monitoring and reporting. 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. Further, in the three years of spraying under this permit, only one grower has ever been required to monitor impacts in the 10m buffer, on a total of 17.9 acres out of the nearly 700 sprayed from 2014-2016. This extremely limited monitoring leaves the public (and Ecology) hamstrung to actually access the impacts of this permit to native seagrasses and the environment.

Part of the cause of confusion and lack of sound science is the lack of numeric effluent standards in the imazamox discharge permit. The only limit is a label approved by EPA, but this does not clearly state any particular rate of active ingredient per acre, as there are different labels for different imazamox products. 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.” 33 USC § 1362(11). These may be non-numeric technology based standards only where numeric standards are *infeasible*. *Citizens Coal Council v. United States Environmental Protection Agency*, 447 F3d 879, 895-96 (6th Cir. 2006). Here, numeric standards are completely feasible, because at least one label (Clearcast® EPA Reg. No. 241-437) includes a range for Japanese eelgrass. However, Ecology should not accept the highest labeled rate without consideration of the impacts from that application rate to native flora and fauna in Willapa Bay. If Ecology is going to modify the permit at all, it should first require/conduct studies with the highest labeled application rate (as allowed by the current permit), evaluate impacts and then select the appropriate application rate as a numerical effluent standard for the permit. Instead, Ecology has put the horse before the cart, allowing three years of imazamox spraying, with application rates up to the highest labeled rate, and basing its current decision to continue that spraying on a one-time application study using rates nearly three times lower than the highest allowable rate and below the *actual* known use rates.

To address the lack of information about impacts to native seagrasses, Ecology can and should adopt all recommendations from WDNR regarding monitoring and reporting by growers as noted in the July 8, 2016 comments. CFS

applauds Ecology for adopting the first recommendation, requiring annual reporting of the distance of treatment from the property edge. However, without the remaining recommendations from WDNR, there is no way to know the actual impacts from currently allowed spraying. Further, as noted by Washington Department of Fish and Wildlife, there remains a need to for caution when applying imazamox and for additional study, because of the inadequacies of the Grue, Patten, and Novak studies.<sup>8</sup> Notably, WDFW, the originator of the 20% loss of eelgrass effect magnitude, stated that “there is little evidence that it ensures continued biological functions, persistence, etc.” *Id.* WDFW agreed that further studies should reflect maximum legal rates. *Id.* Thus, both Washington agencies consulted pointed to the inadequacies of the current buffer validation studies and required monitoring to ensure that this permit is not having a negative impact on the seagrass and overall environment of Willapa Bay. CFS urges Ecology to listen to these agencies and use its authority to not modify the permit until best management practices (including buffers) and monitoring and reporting requirements can be tailored using sound science.

Under both the Clean Water Act and Washington Water Pollution Control Act, Ecology should not modify the permit to allow continued spraying. While Japanese eelgrass has been listed as a noxious weed (as requested by shellfish growers), there is no legitimate reason to allow herbicide use that kills native eelgrass and other seagrasses, and Ecology has a duty to protect Washington’s aquatic ecosystems. Ecology should go back to the drawing board and fashion a permit based on sound science, which ensures that valuable native sea grass habitat is not being adversely impacted before allowing any further herbicide spraying in Willapa Bay.

Alternatively, Ecology should modify the permit conditions to require better practices to avoid native eelgrass on mixed beds (including set buffers around drainage swales containing native seagrasses and clear requirements for avoiding native seagrass in mixed beds), numerical effluent limits (i.e. a cap on the amount of active ingredient per acre allowed under the permit), increased monitoring and reporting (as enumerated by WDNR), and further studies to address data gaps due to the flaws outlined above.

Sincerely,



Amy van Saun  
Legal Fellow

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<sup>8</sup> Kirk L. Krueger, Ph.D., WDFW Comments to Ecology (Aug. 12, 2016).

Center for Food Safety  
917 SW Oak St. Suite 300  
Portland, OR 97205  
(971) 271-7372  
[avansaun@centerforfoodsafety.org](mailto:avansaun@centerforfoodsafety.org)