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Shellfish Industry Plans to Eradicate Japonica Eelgrass in Washington Also Threatens Native Eelgrass

Both Native eelgrass (*Zostera marina*) and Japanese eelgrass (*Zostera japonica*) have been considered important fish habitat by scientists and protected by the Washington Department of Fish and Wildlife. On March 11, 2011, the protection for Japonica eelgrass was deleted by the Department of Fish and Wildlife, at the request of Rep. Brian Blake, Chairman of the House Natural Resources Committee-on behalf of the shellfish industry.

Link: Letter from Fish and Wildlife to Rep Blake

<http://www.caseinlet.org/uploads/Blake2.8.11Zosterajaponica.pdf>

History

The shellfish industry decided that Japonica eelgrass should be eradicated in Willapa Bay and Puget Sound because “In general, (Kim) Patten said that it appears there is more oyster growth without japonica present and that the presence of the grass may inhibit softshell production by 44 percent”(Chinook Observer).

At the request of the shellfish industry, The State Noxious Weed Board listed japonica as a Class C Noxious weed in November 2011. Now industry is trying to obtain approval to eradicate japonica in Willapa Bay and Puget Sound by applying the herbicide imazamox and the chemicals imazapyr, imazapic and glyphosate have also been mentioned. In addition to destroying habitat for birds and fish, interested parties should be concerned about the impact of herbicides being applied in marine waters and the threat to adjacent native eelgrass.

For more information on the industry plan to eliminate both aquatic animals and eelgrass, see the following link (list of animals page 27, eelgrass pages 48-51):

“Integrated Pest Management Plan for Bivalves in Oregon and Washington”

<https://www.sierraclub.org/sites/www.sierraclub.org/files/sce-authors/u591/OR-WAbivalvePMSP.pdf>

“Weeds-Algae, Grasses, Japanese Eelgrass, Native Eelgrass” Paage 27

Science Studies

1. Expansion of seagrass habitat by the exotic *Zostera japonica*, and its use by dabbling ducks and brant in Boundary Bay, British Columbia, John R. Baldwin, James R. Lovvorn, January 6, 1994

<http://www.int-res.com/articles/meps/103/m103p119.pdf>

“This introduced species provides an important feeding habitat for many migratory waterfowl.”

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“Numerical densities of decapods, gammarid amphipods, cumaceans and a variety of other invertebrates are also higher in *Z. japonica* than on unvegetated flats (Dinnel et al 1986, Simenstad et al 1988, authors’ unpubl. data).” “These invertebrates are important foods of both fish and waterbirds in this region.” Page 125

2. Padilla Bay

<http://www.padillabay.gov/researchselectedHannam.asp>

3. Distribtuon and potential effects of a non-native seagrass in Washington State

http://www.dnr.wa.gov/Publications/aqr_zostera_study.pdf

According to scientists, this is an important issue that agencies and environmental groups should weigh in on. Eelgrass, including *Zostera japonica*, has been considered a critical habitat and resource. Spraying these herbicides in the intertidal area could also eradicate native species (*Z. marina*) as the two eelgrass species do inter-mix across the tideflats. Native eelgrass is critical for all our anadromous salmon species, all our marine forage fish and many rockfish species, and for a functioning Puget Sound ecosystem.

According to Anne Shaffer, a former WDF&W biologist, "*Z. japonica* has no negative impact to environment or other species and provides more caloric resource--both from the plant itself and invertebrates that colonize it--to fish and wildlife than the native eelgrass species. There is NO reason to remove it."

Using the argument that *japonica* should be eradicated because it is non-native when the shellfish industry is expanding non-native Manila clams and Pacific oysters must be carefully examined using a transparent process.

Documentation for Review

1. The following summary from LookChem, completely contradicts the information in the Ecology Freshwater EIS and industry information:

<http://www.pesticide.org/get-the-facts/pesticide-factsheets/factsheets/imazapic>

16. OTHER INFORMATION-Imazamox

[http://www.lookchem.com/msds/2011-06%2f1%2f34227\(114311-32-9\).pdf](http://www.lookchem.com/msds/2011-06%2f1%2f34227(114311-32-9).pdf)

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Aquatic Acute

Aquatic Chronic

H410

N

R50/53

Acute aquatic toxicity

Chronic aquatic toxicity

Very toxic to aquatic life with long lasting effects.

Dangerous for the environment

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2. Imidazolinone Herbicide Family-Fact Sheet-Chemical Family Impacts

<http://www.pesticide.org/get-the-facts/pesticide-factsheets/factsheets/imazapic>

"Imazapic is in the imidazolinone herbicide family, "some of the most potent herbicides on the market." Imidazolinone herbicides have the same mode of action as another potent herbicide family, the sulfonylureas.

3. Shellfish Industry Slideshow-Kim Patten

<http://longbeach.wsu.edu/spartina/documents/pcsogaeelgrasstalk2008.pdf>

"Control Options--Chemical-no data, marine registrations problematic, potential impacts to native eelgrass"

4. Ecology Freshwater EIS-for Penorsulam, **Imazamox**, Bispyribac-sodium, Flumioxazin, & Carfentrazone-ethyl

http://www.ecy.wa.gov/programs/wq/pesticides/final_pesticide_permits/noxious/docs/eis100511.pdf

"Ecology currently does not have resources to develop independent risk assessments for new active ingredients for aquatic use in Washington. Therefore, it intends to rely on the Environmental Protection Agency (EPA) risk assessment evaluations of new aquatic pesticide products and any other risk assessments (e.g., Canadian, European, New York State, etc.) and information sources that may be available for these active ingredients when writing this SEIS." page vii

Non-target plants

"Although imazamox applied as an in-lake application to control submersed or floating leaved vegetation could potentially have an impact on native emergent wetland communities, Ecology considers this unlikely. Emergent plant species are not particularly susceptible to water column treatments. Elevated concentrations of imazamox should not persist in well-lighted and aerobic shorelines. However, improperly applied foliar applications could impact non-targeted emergent plants. Applicators are required to follow all label and water quality permit conditions that reduce non-target impacts." Page 34

"Because of possible sub-lethal impacts to juvenile salmon, Ecology imposed timing restrictions on the use of some chemicals. However, because of low fish toxicities and low use rates of imazamox, Ecology does not plan to require timing windows for fish (salmon, bull trout, or steelhead) in its water quality permits for the use of imazamox." Page 37

"Perhaps the most serious environmental impact from the use of imazamox could occur to rare floating or submersed plant species." Page 37

For more information on the importance of eelgrass and kelp in Puget Sound, the following links have been included for your convenience:

Kelp and Eelgrass in Puget Sound

http://www.pugetsoundnearshore.org/technical_papers/kelp.pdf

The Role of Seagrasses and Kelps in Marine Fish Support

<http://el.erdc.usace.army.mil/elpubs/pdf/tnwrap06-1.pdf>

Eelgrass Conservation for the B C Coast (Includes the Pacific Northwest)

<http://www.stewardshipcentre.bc.ca/static/eelgrass/discussionpaper.pdf>

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