



State of Washington  
Department of Fish and Wildlife

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

March 7, 2012

Ms. Kathy Hamel  
Washington State Department of Ecology  
Post Office Box 47600  
Olympia, Washington 98504-7600

Subject: **Announcing the Proposal of a Japanese Eelgrass Management on Commercial Shellfish Beds General Permit**

Dear Ms. Hamel:

The Washington Department of Fish and Wildlife (WDFW) appreciates the opportunity to provide comments on your Public Notice for the proposed use of the aquatic herbicide, Imazamox, to manage Japanese eelgrass (*Zostera japonica*) on commercial shellfish beds in marine waters of Washington State. While we recognize and respect the needs of the aquaculture industry to maintain conditions that support their commercial operations, we also have concerns regarding potential impacts to non-target species from control of Japanese eelgrass. These concerns are based on the significant ecological functions provided by eelgrass, both native and non-native species, and the corresponding benefits to fish and wildlife resources we manage.

Despite the known positive benefits of Japanese eelgrass for certain bird and fish species native to Washington, we believe that limited control of this vegetation can be conducted without large-scale consequences to fish and wildlife resources, provided that the activity is strictly limited to commercial shellfish beds within Willapa Bay. However, due to several uncertainties associated with potential impacts to non-target species resulting from application of Imazamox to Japanese eelgrass, we recommend only small, well-monitored applications be conducted in Willapa Bay. We believe that small, well-monitored applications will improve our understanding of the potential adverse impacts to native eelgrass (*Zostera marina*) and support the development of best management practices that can be used to ensure responsible use of aquatic herbicides to control Japanese eelgrass in shellfish growing areas.

The Public Notice indicates that the General Permit will allow activities "...where herbicides or other products may enter the surface waters of the state of Washington." We do not believe that any use of Imazamox to control Japanese eelgrass in Puget Sound is warranted without a more

thorough understanding of the effects to intermingled native eelgrass and associated aquatic animals, including ESA-listed salmon. We believe significant differences exist between the ecological conditions in Willapa Bay and Puget Sound, which warrant further study prior to broad use of Imazamox or other aquatic herbicides to control Japanese eelgrass beyond Willapa Bay. We recommend that the geographic scope of the Public Notice be revised to limit the use of aquatic herbicides to control Japanese eelgrass to commercial shellfish beds within Willapa Bay only.

We strongly recommend that buffers be established around identified spray areas to provide protection of nearby native eelgrass. The buffer size should vary depending on the application method, although aerial methods should be prohibited. Additional consideration should be given to tidal impacts on dispersal of the herbicide beyond the target area for application. For example, application during the lowest possible tide would provide greater time before tidal waters inundate areas of application. And consideration should be given to potential impacts to seasonal use of the area by fish and wildlife species such as juvenile salmon, spawning herring or migratory waterfowl.

A primary concern with herbicide use to control Japanese eelgrass is the potential to adversely affect native eelgrass (*Zostera marina*) that is present in close proximity to, or intermingled with, Japanese eelgrass. Native eelgrass provides extensive year-round ecological benefits without substantial consequences to shellfish growers. It is, therefore, extremely important that scientifically robust monitoring studies be developed and implemented to determine potential impacts to native eelgrass from use of aquatic herbicides to control Japanese eelgrass. To address this need, we recommend convening a technical panel to develop monitoring protocols that can assess potential collateral impacts from the application of Imazamox. We believe the panel should include scientists with appropriate expertise from industry, state and federal agencies, tribes, and academic institutions. Results from these monitoring activities should be thoroughly analyzed and discussed with interested stakeholders prior to future herbicide applications to ensure minimization of impacts to non-target species, including native eelgrass.

To refine the parameters for aquatic herbicide application to control Japanese eelgrass, WDFW requests to meet with Department of Ecology (DOE) staff to develop the following:

- A definition of a commercial shellfish bed where herbicide application will be allowed.
- Criteria that allows spraying of a particular area (*Z. japonica* percent coverage and overall area).
- Appropriate timing windows for application to protect salmon, herring, and migrating water birds.
- Appropriate buffers to protect native eelgrass and adjacent marsh vegetation.
- Application approaches that maximize the time between herbicide application and tidal inundation of the sprayed area.
- Limitations on overlap between Carbaryl and Imazamox applications at the same location.

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We encourage the DOE to adopt a precautionary approach to aquatic herbicide application to control Japanese eelgrass, including prohibiting aerial application. The potential for adverse impacts to native eelgrass is of considerable concern to WDFW due to the high ecological value of native eelgrass to birds and aquatic species, including salmon. WDFW is cautiously supportive of limited control of Japanese eelgrass in Willapa Bay where appropriate best management approaches can be developed and studied. WDFW is not supportive of Imazamox applications to control Japanese eelgrass in Puget Sound where recovery of eelgrass is a target indicator for the recovery of Puget Sound health and the recovery of ESA-listed salmon.

Finally, WDFW encourages the formation of a technical workgroup to develop a compliance and monitoring plan that ensures protection of native eelgrass during herbicide application to Japanese eelgrass.

Sincerely,

A handwritten signature in black ink, appearing to read "Greg Schrato", written in a cursive style.

Greg Schrato, Deputy Assistant Director  
Wildlife Program

cc: Lisa Veneroso  
David Price  
Randy Carman