Summary

Meeting dates: April 8, 2016

Agenda item: Herbicide and Pesticide use in the Control of Japanese Eelgrass and Ghost Shrimp in Willapa Bay – (Briefing)

Presenter(s): Dan Ayres, Fish Program, Coastal Shellfish Manager
David Price, Habitat Program, Restoration Division Manager
Heather Bartlett, Dept. of Ecology, Water Quality Program Manager
Kim Patten, Washington State University, Extension Professor and Pacific County Extension Director

Background summary:

Burrowing shrimp (ghost shrimp, Neotrypaea californiensis and the mud shrimp Upogebia pugettensis) create bioturbation causing oyster mortalities and loss of shellfish growing productivity and negative impacts on native eelgrass (Zostera marina) and other species that rely on substrate stability. In 2001 the Washington Department of Fish and Wildlife (WDFW) was one of the original signatories of the Memorandum of Agreement (MOA) between the Washington Department of Ecology (WDOE), Washington State Department of Agriculture (WSDA), Washington State Commission on Pesticide Registration, Willapa/Grays Harbor Oyster Growers Association (WGHOGA), Pacific Coast Shellfish Growers Association and the Pacific Shellfish Institute. The purpose of the MOA was to establish a process and time frame for the development of a sustainable, site-specific, environmentally sound and ecologically based integrated pest management plan (IPM) for the control of burrowing shrimp. This agreement moved the growers away from using Carbaryl for burrowing shrimp control and towards alternate control methods that could be more species specific, economical, reliable and environmentally responsible.

Japanese eelgrass (Zostera japonica), a non-native species, was introduced to the Pacific Northwest coast several years ago and since has spread to most intertidal areas in Willapa Bay/Grays Harbor, where it forms thick blankets at low tide, affecting water drainage, sediment temperature, and likely nutrient composition. Japanese eelgrass hinders burrowing shrimp control and shellfish harvest. It is listed as a class C noxious weed by the Washington State Noxious Weed Control Board. The herbicide Imazamox is used as a control method for Japanese eelgrass.

Over the years, WDFW has closely followed the work conducted by the shellfish growers as they search for alternative methods of control of burrowing shrimp and the control of Japanese eelgrass. In addition, WDFW has funded some of the research on imidacloprid (for burrowing shrimp) and imazamox (for Japanese eel grass) using funds from the WDFW Oyster Reserve Research account in accordance with RCW 77.60.160.

This briefing from Department staff and external experts will update the Fish and Wildlife Commission on the historical and current use of imazamox to control invasive Japanese eelgrass and imidacloprid to control native ghost shrimp in Willapa Bay.

The presentation will be divided into four main components:

- A brief review of the history of the control of burrowing shrimp and non-native eelgrass, Dan Ayres;
- A review of the research conducted to find appropriate methods of control, Kim Patten;
- Status of Ecology's permitting processes, Heather Bartlett;
- Fish and Wildlife Management Implications and Department actions, David Price.

Approximately 45 minutes will be needed for the presentation and questions/answers.

Policy issue(s) you are bringing to the Commission for consideration:

None; briefing only.

Public involvement process used and what you learned:

N/A

Action requested:

None; briefing only.

Draft motion language:

N/A

Justification for Commission action:

N/A

Communications Plan:

N/A