

From: [Christine Lengele](#)
To: [Lubliner, Nathan \(ECY\)](#)
Cc: [Jesse DeNike](#); [Billy Plache](#); [Terri Tyni](#)
Subject: Comment Letter re Draft General Permit for Z. japonica in Willapa Bay
Date: Friday, February 14, 2014 3:37:05 PM
Attachments: [Comment Ltr to N Lubliner re Z japonica.pdf](#)

Dear Mr. Lubliner,

I am a legal assistant in the office of Plauché & Carr LLP. Please find attached a Comment Letter we wish to file on behalf of Willapa-Grays Harbor Oyster Growers Association. If there are any problems with this transmission or PDF, please let me know. All other questions or concerns regarding this document should be directed to Jesse DeNike or Samuel Plauché. Thank you.

-Christine Lengele

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February 14, 2014

Via Email: nlub461@ecy.wa.gov

Nathan Lubliner

Washington State Department of Ecology

P.O. Box 47600

Olympia, WA 98504-7600

RE: Comments on the Draft General Permit for *Zostera japonica* Management on Commercial Clam Beds in Willapa Bay, Washington

Dear Mr. Lubliner:

We are submitting this comment letter on behalf of the Willapa-Grays Harbor Oyster Growers Association (“WGHOGA”) regarding the Draft General Permit for *Zostera japonica* Management on Commercial Clam Beds in Willapa Bay (“Draft Permit”).¹ WGHOGA is an association of commercial shellfish growers located in Willapa Bay and Grays Harbor. WGHOGA growers and their predecessors have been growing a variety of nutritious shellfish in Willapa Bay and Grays Harbor since 1849. WGHOGA growers employ hundreds of local residents in these communities and contribute millions of dollars annually to the local economies. They are also important environmental stewards in these bays and have recently played key roles in eradicating invasive plants, such as *Spartina*.

We appreciate the hard work that the Department of Ecology (“Ecology”) has dedicated towards developing the Draft Permit, as the use of imazamox will be a critical tool in the effort to control *Zostera japonica*, a class C noxious weed, in Willapa Bay. We do, however, object to the proposed 10 meter property boundary buffer in the Draft Permit as it violates fundamental laws limiting permit conditions, would hinder attempts to control a noxious weed, and is unsupported by the best available science. We therefore respectfully request that the buffer be eliminated or revised to remedy these flaws.

1. Introduction

The Draft Permit would allow shellfish farmers in Willapa Bay to apply imazamox to Manila clam beds in order to control the spread of *Zostera japonica* (“*Z. japonica*”). *Z. japonica* is as a Class C noxious weed throughout Washington State. WAC 16-750-015. First recorded in

¹ While this letter is submitted on behalf of WGHOGA, individual members of WGHOGA will also submit separate comment letters.

Willapa Bay in the mid-1950s, *Z. japonica* began an aggressive expansion in 1998. The Draft EIS recognizes that *Z. japonica* carpets approximately 9% of Willapa Bay,² and growers estimate that up to 25% of the upper intertidal areas are now covered with developed and expanding meadows of *Z. japonica*.³ Due to the widespread presence of *Z. japonica*, an estimated 3,000 acres once suitable for clam production, half of Willapa Bay's total clam growing area, are currently out of cultivation.⁴ The loss to WGHOGA's members from these 3,000 fallow acres alone is estimated at 31 million dollars annually.⁵ In addition, *Z. japonica* infestation of the 1,100 acres that remain in clam cultivation reduces clam density and impairs harvest activities, causing a further 12.6 million dollar loss annually.

Zostera marina ("Z. marina") is also present in Willapa Bay.⁶ *Z. marina* is a native species of eelgrass that typically grows at lower tidal elevations than *Z. japonica* and has not historically impacted commercial clam production in Willapa Bay. In order to protect *Z. marina*, the Draft Permit proposes a 10 meter property line buffer condition, requires treated clam beds to remain uncovered by the tide for at least an hour post-application, and prohibits application in drainage swales where *Z. marina* is present.

As discussed below, the proposed 10 meter property boundary buffer condition is unsupported by the law and science and would hinder efforts to control a noxious weed. WGHOGA accordingly requests that the property line buffer be eliminated or revised to remedy these flaws.

2. The property line buffer may only be imposed along property boundaries where *Z. marina* intersects with the property boundary

Under Section S4.B of the Draft Permit, growers must maintain a 10 meter⁷ property line buffer ("buffer condition"), measured perpendicular to property boundaries, within which treatment with imazamox will not occur. Supporting documents that accompany the Draft Permit explain that the buffer condition is intended to protect offsite adjacent *Z. marina* beds and to ensure no net loss of native eelgrass due to permit activities.⁸ However, the buffer condition is

² DEP'T OF ECOLOGY, DRAFT ENVIRONMENTAL IMPACT STATEMENT: MANAGEMENT OF ZOSTERA JAPONICA ON COMMERCIAL CLAM BEDS IN WILLAPA BAY, WASHINGTON § 3.1.10 (2014) ("DEIS"); DEP'T OF ECOLOGY, FACT SHEET FOR THE STATE OF WASHINGTON ZOSTERA JAPONICA MANAGEMENT ON COMMERCIAL CLAM BEDS IN WILLAPA BAY NPDES GENERAL PERMIT 20 (2014) ("Fact Sheet").

³ R. Wilson correspondence (02/12/14).

⁴ DEIS at § 2.5

⁵ Based on a four year harvest cycle. EIS at § 2.5

⁶ Fact Sheet at 33.

⁷ Note that the fourth full paragraph on page 20 of the Fact Sheet mistakenly refers to the buffer as 20 rather than 10 meters.

⁸ In Section 3.4 of the Small Business Economic Impacts Statement that accompanies the Draft Permit, Ecology states that the 10 m property line buffer is also intended to protect neighboring property owners from chemical trespass. There is no evidence demonstrating applications of imazamox would result in legal trespass. But even if there were, private property issues such as trespass do not constitute a legitimate state interest, and therefore Ecology could not justify the buffer condition on this basis. *Burton v. Clark Count*, 91 Wn. App. 505, 520 (1998) (permit conditions imposed to alleviate private problems are unconstitutional because they lack a legitimate public purpose); see also *Unlimited v. Kitsap County*,

imposed equally along all property boundaries, regardless of whether there in fact is any offsite adjacent *Z. marina* to protect. Accordingly, the buffer will in many instances not serve any protective function.

Under Washington and Federal law, permit conditions must have an essential nexus and rough proportionality to a legitimate state interest to be legal. *Nollan v. California Coastal Comm'n*, 483 U.S. 825, 837 (1987) (permit condition requiring a public access easement across private residential property did not have an essential nexus to the legitimate state interest in preserving shoreline views, and was unconstitutional); *Dolan v. City of Tigard*, 512 U.S. 374, 391, 394-96 (1994) (permit conditions requiring dedication of land for use as a public greenway and a public bicycle path were not roughly proportional to development's impacts and thus unconstitutional); *Koontz v. St. Johns River Water Mgmt. Dist.*, 133 S. Ct. 2586, 2599 (money exactions must satisfy the rough proportionality and essential nexus tests articulated in *Nollan* and *Dolan*); *Honesty in Envtl. Analysis & Legislation v. Central Puget Sound Growth Mgmt. Hearings Bd.*, 96 Wn. App. 522, 534 (1999) (the nexus and rough proportionality tests apply by extension to policies guiding local government land use permitting); *Burton v. Clark County*, 91 Wn. App. 505 (1998) (exacting an easement as a condition of development held to be unconstitutional where there was no evidence the easement would ever achieve Clark County's goal of connecting two roads); *Luxembourg Group, Inc. v. Snohomish County*, 76 Wn. App. 502, 505 (1995) (exactions that do not resolve problems arising from the development do not have the required essential nexus).

Assuming *arguendo* that the protection of off-site *Z. marina* is a legitimate state interest, imposing a buffer condition where no *Z. marina* is present does not advance this interest. There is no evidence to suggest that application of imazamox in areas where no *Z. marina* grows adjacent to the treated clam bed will have any effect on native eelgrass. Since maintaining a buffer in the absence of *Z. marina* does not resolve any problem expected to arise from the application of imazamox, the buffer condition as written lacks an "essential nexus" to Ecology's stated objective. *Nollan*, 483 U.S. at 837. Equally, blind application of the property line buffer is grossly disproportional to any corresponding advancement of Ecology's interest—the condition goes well beyond what is necessary to ensure that native eelgrass will be unaffected by permit activities. *Dolan*, 512 U.S. at 394-96. Therefore, the buffer condition fails to satisfy the minimum constitutional requirements and must be eliminated or revised appropriately. Indeed, application of a 10 meter buffer where there is no *Z. marina* to protect would also be arbitrary and capricious agency action in violation of Washington's Administrative Procedure Act, Chapter 34.05 RCW. *Buechel v. Dep't of Ecology*, 125 Wn.2d 196, 202 (1994) (agency action is arbitrary and capricious where it is willful and unreasoning in disregard of facts and circumstances).

Moreover, the buffer condition would cause growers severe economic damages. Ecology estimates that up 307 acres of otherwise-productive clam beds will be within the buffer.⁹ The

50 Wn. App. 723, 727 (1988) (finding that a permit condition exacting a commercial access easement to service neighboring private property was unconstitutional because it lacked a public purpose).

⁹ DEP'T OF ECOLOGY, ECONOMIC IMPACT ANALYSIS: ZOSTERA JAPONICA MANAGEMENT ON COMMERCIAL CLAM BEDS IN WILLAPA BAY GENERAL PERMIT at § 4.2 (2012)

estimated gross loss from one acre of clam ground per year is approximately \$11,500.¹⁰ Therefore, the proposed 10-meter buffer would cost growers approximately \$3,530,000 each year. Smaller farms or growers would particularly suffer from this proposed buffer, as maintaining a 10 meter property line buffer may remove up to 40% of a smaller parcel's farmable acreage, reducing a growers' income proportionally. At the same time, applicants must incur additional monitoring costs for every additional 10 meters of buffer. As conditioned, the Draft Permit forces growers to carry these financial burdens even where no *Z. marina* grows adjacent to their property boundaries.

Further, by severely and unjustifiably limiting the amount of farm area that could be used for Manila clam aquaculture, the proposed buffer condition would thwart various laws and policies that encourage shellfish aquaculture. For example, the Shoreline Management Act and regulations identify aquaculture as a preferred, water-dependent use that is of statewide interest and can result in long term benefits while protecting the resources and ecology of the shoreline. RCW 90.58.020; WAC 173-26-241(3)(b). In addition, both the federal and Washington State governments have announced shellfish initiatives that encourage increased shellfish production in recognition of its various ecological, economic, and cultural benefits. Appendix A (National Shellfish Initiative); Appendix B (Washington Shellfish Initiative).

Finally, the buffer condition would prevent growers from controlling *Z. japonica*, a noxious weed on large amounts of their farm areas. This is contrary to state law and policy which strive to control noxious weeds to allow for productive uses, such as shellfish aquaculture. RCW 17.100.007. And, since the buffer condition would limit growers' ability to effectively control *Z. japonica* within their farm footprints, it could have the unintended consequence of requiring growers to treat their beds more frequently than if they were given appropriate flexibility to control this noxious weed up to their property boundaries.

Because the buffer condition imposes a substantial financial penalty on growers that is without an essential nexus and rough proportionality to a legitimate state interest, it constitutes an unconstitutional taking of property. Ecology should therefore revise the buffer condition to apply only where *Z. marina* grows offsite adjacent to property boundaries. This revision will achieve Ecology's goal to protect *Z. marina*, help satisfy the essential nexus and rough proportionality tests, minimize the buffer condition's economic impact to growers, and allow for the proper control of *Z. japonica*.

3. In those limited instances in which a buffer can be imposed, it may only extend to six meters

The scientific evidence in the record shows that, even under the most extreme circumstances (where imazamox was applied in a drainage swale draining directly onto *Z. marina*), imazamox has no effect on adjacent *Z. marina* past six meters from the application boundary.¹¹ Because the band of affected *Z. marina* around treatment boundaries was much

¹⁰ DEIS at § 3.1.10.

¹¹ ENVIRON, SCREENING-LEVEL ECOLOGY RISK ASSESSMENT OF THE PROPOSED USE OF THE HERBICIDE IMAZAMOX TO CONTROL INVASIVE JAPANESE EELGRASS (*ZOSTERA JAPONICA*) IN WILLAPA BAY, WASHINGTON STATE § 5.1.2.1 (2012).

narrower, a six meter buffer would be an extremely conservative and effective measure to protect off-site *Z. marina*.

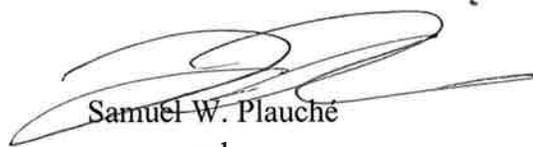
Nonetheless, the Draft Permit proposes a 10 meter buffer. Neither the Draft Permit nor its accompanying documentation explains Ecology’s decision to increase the buffer from six to 10 meters, a full four meters beyond the width necessary to achieve Ecology’s objective. Therefore, the proposed 10 meter buffer is not roughly proportional to the expected impact of imazamox applications on offsite *Z. marina* and is invalid. *Dolan*, 512 U.S. at 391. Further, just as imposing a buffer where there is no adjacent, off-site *Z. marina* present would cause unjustifiable economic harm to growers and thwart efforts to control a noxious weed, so to would imposition of a 10 meter buffer where a six meter buffer would be fully protective.¹²

Accordingly, to ensure the buffer is legally defensible, does not impose unjustifiable economic harm on growers, and is consistent with the state’s goal to control noxious weeds, WGHOGA requests that Ecology revise the buffer width from 10 meters to six in areas where there is adjacent, off-site *Z. marina*.

* * * * *

WGHOGA appreciates the opportunity to work with Ecology to address the persistent threat to shellfish aquaculture posed by the *Z. japonica* infestation of Willapa Bay. WGHOGA is committed to advancing the interest of its members in a strong clam shellfishery in Willapa Bay and appreciates Ecology’s cooperation in identifying and developing a management tool to control this noxious weed. Consistent with Ecology’s duty to advance the public interest by fostering shellfish aquaculture, controlling noxious weeds, and imposing permit conditions that are legally defensible, WGHOGA respectfully requests that the property line buffer condition be eliminated, or revised to six meters and imposed only where there is offsite adjacent *Z. marina*.

Sincerely,



Samuel W. Plauché

and

Jesse G. DeNike

JGD:cml
Enclosures

¹² The Draft Permit also requires that clam beds treated by imazamox remain uncovered by the tide for at least an hour post-application. While imazamox is applied to dry *Z. japonica* beds, any adjacent *Z. marina* is expected to be at least partially submerged at the time of treatment. In test applications, *Z. marina* growing adjacent to treatment borders that was submerged by 20-30 cm of water when adjacent *Z. japonica* was treated with imazamox showed no measurable effects from treatment. DEIS at § 3.2.4

Appendix A



NOAA's National Shellfish Initiative

The goal of the National Shellfish Initiative is to increase shellfish aquaculture for commercial and restoration purposes, thereby stimulating coastal economies and improving ecosystem health. The focus is on bivalves or mollusks, not on crustaceans. This initiative will help meet the growing demand for seafood while creating jobs, restoring depleted species, conserving habitat for important commercial, recreational, and endangered fish species, improving water quality, and stabilizing and protecting coastlines.

Overview of the National Shellfish Initiative

Put simply, this initiative recognizes the broad suite of benefits provided by shellfish aquaculture and aims to increase shellfish production and wild shellfish populations in U.S. coastal and marine waters. To that end, NOAA – in collaboration with public and private partners – will focus on a limited number of actions under each of the following five topics:

1. **Enhanced shellfish restoration and farming** – Support the authorization of shellfish sanctuaries/restoration sites and additional aquaculture permits/leases that are aligned with the twofold goal of providing environmental and economic benefits; build hatchery capacity to supply seed for commercial shellfish production and public/private restoration projects; and develop innovative culture and post-harvest processing methods.
2. **Research on environmental effects** – Conduct research on the interactions between shellfish and the environment in terms of climate change, ocean acidification, naturally occurring pathogens and parasites, and other factors; gather data needed to assess and refine restoration strategies and priorities; examine synergies with the shellfish industry.
3. **Streamlined permitting** – Improve coordination among federal agencies to facilitate timely permitting of shellfish farms and restoration projects; develop model permit processes; participate in reissuance of Army Corps of Engineers' Nationwide Permit 48 for commercial shellfish aquaculture.

Overview of NOAA's National Shellfish Initiative, cont'd

4. **Spatial planning** – Engage in local and regional planning efforts to site commercial shellfish production and shellfish restoration projects. This will include engaging with the Regional Planning Bodies that carry out coastal and marine spatial planning under the National Ocean Policy.
5. **Innovative financing** – Develop indicators that “monetize” ecosystem services provided by shellfish aquaculture, such as nutrient reduction and carbon sequestration. (Payments for ecosystem services, were they available, may spur participation in both commercial and restoration aquaculture.)

NOAA is seeking to leverage its existing staff, science knowledge and capabilities, regulatory authorities, and grant programs in partnership with others to implement the Initiative. An internal staff work group led by the NMFS Office of Aquaculture (with participation from several NMFS headquarters and regional offices, NOAA science centers, and the National Sea Grant Program office) is coordinating NOAA's efforts. To identify priorities and specific opportunities, this staff group is

- reaching out to industry participants, restoration groups, states, and others;
- reviewing recommendations provided by the National Shellfisheries Association and the East Coast Shellfish Growers Association based on recent surveys of their membership;
- reviewing research priorities and restoration strategies identified by industry associations, restoration NGOs, and others;
- reviewing topics and priorities for upcoming NOAA grant competitions (budget permitting); and
- reaching out to other DOC (e.g., Economic Development Administration) and federal agencies (e.g., USDA and NSF) to identify and coordinate grant opportunities to support the Initiative.

For more information:

National

- Dr. Michael Rubino, Director, NOAA's Office of Aquaculture, (301) 427-8325
- Chris Botnick, Outreach Coordinator, NOAA's Office of Aquaculture, (301) 427-8325

Northwest

- Dr. Laura Hoberecht, NOAA's Northwest Regional Aquaculture Coordinator, (206) 526-4453

Southeast

- Dr. Jess Beck, NOAA's Southeast Regional Aquaculture Coordinator, (727) 551-5755

Northeast

- David Alves, NOAA's Northeast Regional Aquaculture Coordinator, (978) 281-9210

Southwest

- Diane Windham, NOAA's Southwest Regional Aquaculture Coordinator, (916) 930-3619

Appendix B

Washington Shellfish Initiative

The Washington State Shellfish Initiative is a convergence of the National Oceanic and Atmospheric Administration's (NOAA) National Shellfish Initiative and the State's interest in promoting a critical clean water industry. While the initiative supports Governor Gregoire's goal of a "dig-able" Puget Sound by 2020, it also encompasses the extraordinary value of shellfish resources on the coast. As envisioned, the initiative will protect and enhance a resource that is important for jobs, industry, citizens and tribes.

I. Overview

Washington State is taking additional action to protect and enhance shellfish resources. This effort supports the long-term goal of abundant shellfish resources for Washington's residents and Native American tribes, as well as a thriving and healthy shellfish aquaculture industry. As an outcome of the 2007 treaty rights settlement, many Puget Sound tribes are undertaking shellfish aquaculture as a means of enhancing shellfish resources for cultural and economic gain.

We recognize and respect that shellfish aquaculture and commercial and tribal harvest of wild shellfish resources are water-dependent uses that rely on excellent water quality. Shellfish also can help filter and improve the quality of our marine waters thereby being part of the solution to restore and preserve the health of endangered waters. We can have healthy marine waters and productive shellfish beds for a growing industry, Native American tribes and for all the citizens of Washington.

The Puget Sound Partnership has targeted a net increase from 2007 to 2020 of 10,800 harvestable shellfish acres, which includes 7,000 acres where harvest is currently prohibited in Puget Sound. However, the recent shellfish downgrade in Samish Bay is a reminder of the constant vigilance needed by landowners, businesses and local, state, federal and tribal governments to protect and restore shellfish beds. Such efforts also are required on the coast where there is considerable opportunity to enhance shellfish resources.

To restore and expand shellfish resources, Washington must renew its protection, restoration and enhancement efforts. These efforts will pay off in increased recreation, additional clean water jobs, and a healthier Puget Sound and coastal marine waters.

II. Shellfish: Jobs and Economic Opportunity

Shellfish are critical to the health of Washington's marine waters and the state's economy. Washington leads the country in production of farmed clams, oysters and mussels with an annual value of over \$107 million. Washington shellfish growers directly and indirectly employ over 3,200 people and provide an estimated total economic contribution of \$270 million. Surveys from the early 2000's indicate shellfish growers are the largest private employer in Pacific County and the second largest in Mason County. In just those two counties, they generate over \$27 million annually in payroll. In addition there is ceremonial and subsistence harvest in Puget Sound and Coastal waters that tribes consider invaluable and unquantifiable.

Bivalves coming from Washington's cool clean waters are prized as some of the best in the world. This reputation has ensured that domestic and international demand for them has long exceeded supply. This strong demand has fostered continued growth of shellfish production and hiring even during the

current economic downturn. Implementation of the NOAA's National Shellfish Initiative in Washington will enable shellfish aquaculture in the state to expand to meet the demand for quality shellfish providing critical new jobs in rural Western Washington.

Annually, tourists and residents purchase over 300,000 licenses to harvest clams and oysters from Washington waters, providing more than \$3.3 million in state revenues. WDFW conservatively estimates that the 125,000 shellfish harvesting trips made each year to Puget Sound beaches provide a net economic value of \$5.4 million to the region. On Washington's coast an average of 244,000 digger trips are made each season to harvest razor clams contributing an estimated \$22 million value to the coastal economies.

III. Shellfish Initiative

1) Create a Public/Private Partnership for Shellfish Aquaculture

- a) *Federal, State, and Local Model Permitting Program.* Provide unified state leadership from state natural resource agencies by identifying a shellfish aquaculture coordinating lead for the State and a lead in each agency. Use the Governor's Office of Regulatory Assistance (ORA) to facilitate the State Team. Formalize clear and efficient coordination among state and federal agencies, tribes, and local governments for permitting and licensing. Develop and implement a Model Permitting Program that ensures early and continued coordination from all parties, with an Operational Agreement that commits all parties to see each project through from beginning to end. The goal of the Program is to develop a consistent process for improved timeliness of permit decisions while ensuring regulatory compliance. The process will address tribal notification and consultation protocols. The process also will address opportunities for early and ongoing dialogue with permittees and others. The Model Permitting Program will be based on existing, successful programs like the MAP Team (Multi-Agency Permitting) which has a proven record of promoting coordinated decision making. The permitting team has initiated work on a draft Operational Agreement.
- b) *Continue vital shellfish aquaculture research.* Sustain research on key issues related to aquaculture management and planning. Seek opportunities to partner with NOAA, Washington Sea Grant, USGS, and others to build on existing programs and to build our understanding of shellfish and aquaculture in the Pacific Northwest. Priority should be given to research on geoduck aquaculture, the role of shellfish in nutrient cycling, and other aspects of ecosystem services provided by shellfish. New research projects include:
 - i. The Jamestown S'Klallam Tribe recently received their state 401 Water Quality Certification for a new geoduck farm which includes a significant monitoring component for evaluating potential impacts to adjacent eelgrass beds. The data from this monitoring will help improve understanding of the relationship between farms and eelgrass.
 - ii. Washington Sea Grant will provide \$79,198 over two years to support development of a model that will serve as an innovative tool to assess the risk of toxic blooms in Puget Sound. WSG funded research will study the cyst stage of the toxic algae *Alexandrium catenella*, responsible for paralytic shellfish poisoning, and evaluate the effectiveness of using cyst mapping as a tool for early warning of bloom events in Puget Sound.

- iii. Washington Sea Grant will host a public symposium to share latest scientific research findings on shellfish production effects on the environment. The meeting will explore the scientific basis for management decisions to balance competing land use interests, environmental protection and coastal development needs
- c) *Implement Pilots.* Implement pilot projects and use the Model Permitting Program to determine permitting efficiency, practicality and regulatory compliance (e.g., habitat protection). Potential pilots include a Washington Department of Natural Resources (DNR) lease site and North Sound restoration projects in bays like Sequim, Similk and Fidalgo.
- d) *Improve Guidance for Local Shoreline Master Programs.* Increase local government and public understanding and application of the new shellfish provisions in State Shoreline Guidelines (Chapter 173-26 WAC). The Department of Ecology (Ecology) will publish an aquaculture Shoreline Master Program Handbook section with special emphasis on geoduck aquaculture and net pen operations, update its aquaculture web resources to make them more comprehensive, and provide direct technical assistance and training to local governments. The guidance will address regulatory and technical assistance to protect against habitat impacts and planning to minimize conflicts with adjoining shoreline owners and other marine water users.
- e) *Review of Shellfish Ecosystem Services.* U.S. Geological Survey will conduct a review of available filter feeding models to quantitatively evaluate the capacity of cultivated shellfish to mitigate nitrogen pollution in Puget Sound. This work will be informed by NOAA research. If appropriate and feasible, Ecology will explore the possibility of implementing a nitrogen credit system using shellfish for pollution reduction. The credit system could stimulate new shellfish culture and jobs as well as identifying the role of shellfish in reducing nitrogen discharges.

2) Promote Native Shellfish Restoration and Recreational Shellfish Harvest

- a) *Restore Native Shellfish.* Native shellfish restoration efforts will focus on two species: native Olympia oysters and pinto abalone.

Olympia oysters:

- i. Restore 19 historic, large, Puget Sound natural oyster beds and associated local ecosystems by 2022.
- ii. Direct a \$200,000 NOAA grant to the Northwest Straits Commission for Olympia oyster restoration in the North Sound.
- iii. Revise and update Washington Department of Fish and Wildlife's (WDFW) 1998 Native Oyster Rebuilding Plan by December 31, 2011. Share the revised plan with NOAA for inclusion in the national Oyster Restoration Plan. WDFW's standardized metrics will be used to determine success.
- iv. NOAA is planning to host a hatchery breeding program for native oysters to increase seed production that meets established genetic conservation guidelines.
- v. Increase collaboration with NOAA for assistance in funding and facilitating Olympia oyster research and restoration efforts conducted by WDFW, Puget Sound Restoration Fund (PSRF), tribal co-managers, shellfish growers and other partners.

Pinto abalone:

- i. Use a \$560,000 federal grant awarded by NOAA to WDFW in September to bolster the number of pinto abalone. The program aims to reestablish a self-sustaining population of pinto abalone without ESA protections. The NOAA-funded research coupled with continued state funding will advance abalone restoration efforts by developing hatchery and nursery programs for captive propagation and rearing. Priority abalone actions will be conducted by WDFW, Puget Sound Restoration Fund, University of Washington and non-profit organizations.

- b) *Enhance Recreational Shellfish Harvest.* Improve and increase public access to shellfish on public tidelands for tribal and recreational harvest through signage, maps, acquisition and other efforts.

- c) *Create Public Support for Shellfish Initiative.* Leverage Washington State Parks to engage the public in the initiative.
 - i. Washington Sea Grant will lead the state agencies and partners through a simple planning process to develop shellfish-related messages, publicize events, and otherwise develop materials to make connections between clean water, our region's shellfish resources, and jobs.
 - ii. State Parks will conduct shellfish interpretive programs and events to help forge personal connections between clean, productive Puget Sound waters, the shellfish we eat, and the iconic role shellfish occupy in Washington's cultural and culinary identity. State Parks will collaborate with other public/tribal/private interests and help promote support of public lands and the Discover Pass program.

- 3) Ensure Clean Water to Protect and Enhance Shellfish Beds**
 - a) *Direct \$4.5 million in Environmental Protection Agency funding to protect and improve water quality to meet state standards in commercial, recreational and Tribal shellfish growing areas.* Funds will be used to help reach the Puget Sound Partnership's shellfish indicator target of upgrading 10,800 acres of harvestable shellfish beds by 2020. The Department of Health (DOH) and the Washington Department of Ecology (Ecology) are managing this new funding, which includes the following:
 - i. More than \$2 million to help local governments create sustainable pollution identification and correction programs (PIC programs). These programs will be designed to identify and address pathogen and nutrient pollution from a variety of nonpoint sources, including on-site sewage systems, farm animals, pets, sewage from boats, and stormwater runoff. Counties being offered funding pending negotiations are San Juan, Thurston, Pierce, Skagit, Kitsap, as well as the Hood Canal Coordinating Council, the consortium of counties and tribes that encompass the Hood Canal.
 - ii. More than \$1 million to help Local Health Jurisdictions carry out onsite sewage system management plans that inventory, inspect, and fix failing onsite sewage systems in Marine Recovery Areas and other areas sensitive to pathogen pollution.
 - iii. \$1.5 million to reduce pathogen and nutrient loading by improving manure management in those areas with PIC programs. The fund will pay for eligible agricultural best management practices including livestock exclusion fencing, off-stream watering, and livestock feeding. Interested land owners must work through a conservation district, local government, tribe, or other governmental entity. Some of this work can be implemented by putting the newly created Sound Corps to work.

- iv. Increase local government understanding and application of practices for controlling pathogens, consistent with Chapter 173-201 WAC. Ecology will provide guidance on nonpoint source BMPs consistent with state water quality standards as well as training to local governments to ensure that PIC programs and federal funding implement these standards.
 - v. Develop economically viable strategies to address impacts from stormwater and wastewater treatment outfalls, which are a significant factor for shellfish bed prohibitions.
- b) *Improve Shellfish Growing Area Protection and Restoration Efforts.* Additional efforts are needed at all levels of government to improve water quality protections for shellfish growing areas. Two immediate steps are to:
- i. Form an EPA and state (i.e., Ecology, DOH, Washington State Department of Agriculture) “pollution action team” to respond quickly when water quality problems are identified that threaten to shellfish areas. The team will focus in priority areas and support PIC programs where established. The team will work with technical staff from affected tribes with treaty reserved rights. Services provided by the team include pollution identification, inspections, enforcement, flyovers and technical assistance, consistent with guidance provided for use of federal funds. The team will focus initially in Drayton Harbor and Portage Bay. There has been a long struggle to protect the community shellfish beds in Drayton Harbor, and there are growing concerns over tribal resources in Portage Bay. The Whatcom Conservation District will be a key local partner in working with the state and federal pollution action team.
- c) *Take Steps to Address Ocean Acidification.* Conduct research and develop recommendations to understand, monitor, mitigate and adapt to acidification in Puget Sound and Washington waters.
- i. Convene a Blue Ribbon Panel on Ocean Acidification including scientific experts, the relevant agencies and stakeholders to develop clear, actionable recommendations on understanding, monitoring, adapting, and mitigating ocean acidification in Puget Sound and Washington waters.
 - ii. A new Washington Sea Grant research project will investigate the effects on Pacific oysters of exposure to natural water seawater that contains a high level of carbon dioxide. It will also explore new breeding programs for enhancing the tolerance of farmed Pacific oysters to higher CO₂ seawater. Washington Sea Grant will provide \$112,693 over two years (2012-2014) for the project, building on 2010-2013 funding of \$478,082 and a total four-year investment of \$590,785 to address ocean acidification impacts on shellfish resources.
- d) *Work with Boaters to Address Potential Pollution Impacts.*
- i. *Strategically Administer the Clean Vessel Program.* State Parks and Recreation Commission will target Clean Vessel Act grants towards marinas where significant recreational, commercial, and Tribal shellfish resources exist and are harvested. These grants will fund the construction, renovation, operations, and maintenance of boat pumpout stations and waste reception facilities for recreational boaters. State Parks will partner with the Washington Sea Grant, DNR, and other entities on educational outreach to marinas and boaters that will publicize these pump-out locations and the need for their use.

- ii. ***Complete No Discharge Zone Assessment.*** Ecology will complete an assessment needed to establish a No Discharge Zone, which would ban sewage disposal from commercial and recreational vessels for all or parts of Puget Sound.