

ADDENDUM TO 2003 PROPOSED SHORELINE MASTER PROGRAM GUIDELINES RULE AMENDMENT SUPPLEMENTAL FINAL ENVIRONMENTAL IMPACT STATEMENT

Chapter 173-18 WAC

Chapter 173-20 WAC

Chapter 173-22 WAC

Chapter 173-26 WAC

Chapter 173-27 WAC

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Chapter 173-18 WAC

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OBJECTIVES, PURPOSE, AND NEED

The Shoreline Management Act of 1971 (RCW 90.58) requires Ecology to periodically review and update the agency's rules that implement the Act. Ecology last updated its shoreline management procedural rules in 1996. The most recent comprehensive update of the Shoreline Master Program Guidelines (Chapter 173-26 WAC, Part III) was in 2003 and included changes to reflect advancements in land use planning practices, science and technology.

Ecology's objective and purpose for adopting the proposed rule changes is to:

- Incorporate commercial geoduck aquaculture specific provisions into the Shoreline Master Program Guidelines as directed by the 2007 legislature in Second Substitute House Bill 2220 and codified as Chapter 43.21A.681 RCW;
- Revise the criteria for limited amendments to local Shoreline Master Programs to clarify the relationship between limited amendments and comprehensive updates required by the legislature by 2014; and
- Make 'housekeeping' changes to the rules in response to recent changes in statute.

In 2003, Ecology developed a Supplemental Final Environmental Impact Statement (SFEIS) for the Shoreline Master Program Guidelines rule amendment (Ecology Publication 03-06-006). The 2003 rule amendment focused on WAC 173-26, Section 171 to 251 and definitions. This addendum, prepared pursuant to the provisions of WAC 197-11-625, is designed to add information to the SFEIS related to commercial geoduck aquaculture, limited amendments, and "housekeeping" changes. Information included in this addendum builds upon the existing analysis and does not change the analysis of impacts or alternatives in the original document.

As with the 2003 SFEIS, this document is a programmatic, non-project environmental analysis of the broad effects of the proposed rule changes across Washington's landscape. Because each town, city or county have varying deadlines for completing required shoreline master program (SMP) updates and have a certain degree of flexibility and sovereignty in crafting and administering their shoreline policies and regulations, the specific impacts of state rules are difficult to forecast.

This addendum does not attempt to analyze how a local government's shoreline program, amended in accordance with the proposed rules, would affect the built and natural environment as a result of individual projects. Direct environmental effects will be seen only when local shoreline programs are updated according to the new rules and on-the-ground projects are approved, constructed, and operated – many years into the future.

• The 2003 legislature required over 260 local governments to comprehensively update their shoreline master programs (SMPs). The update and approval process for local shoreline programs generally takes from two to four years. To date, thirty-two cities and counties have completed their updates and will not have to respond to the rule changes until their next update. The update cycle established in the Shoreline Management Act is seven years. This means that Whatcom County, for example, will not have to review and update their aquaculture policies and regulations until 2018.

The remaining local governments who have not locally adopted comprehensively updated shoreline programs by the time the rule changes are put into effect (tentatively January 8, 2011) will have to respond to the rule changes.

 The number, type, and timing of commercial geoduck projects will be driven by many factors outside the scope and control of Shoreline Management Act rules.
 Factors such as market demand, federal permitting, and business innovation do and will continue to have a profound effect on when, where and how geoduck aquaculture occurs.

SUMMARY OF PROPOSED RULE CHANGES

Proposed rule changes related to general aquaculture and commercial geoduck aquaculture include:

- WAC 173-26-020: "Aquaculture" definition added.
- WAC 173-26-201: Improved language related to ecologically intact shoreline areas; clarified relationship between Growth Management Act (GMA) critical areas and SMA critical resource areas; included language to emphasize importance of water quality to shellfish aquaculture consistent with 2003 SFEIS.

- WAC 173-26-211: Clarified language to support Attorney General Opinion 2007
 No. 1; new section in Aquatic Environment designation regarding area for protection and restoration; language to clarify local governments should ensure adequate space for water dependent shoreline uses.
- WAC 173-26-221: "Critical saltwater habitats" is redefined. The proposed definition includes only habitats, not uses, such as commercial aquaculture. Habitats listed within the "critical saltwater habitat" definition are some of the most ecologically important within the intertidal area, and removing uses from the definition is necessary to ensure no net loss of ecological functions.
- WAC 173-26-241: Aquaculture use provisions are revised to require a shoreline conditional use permit for new and expanded commercial geoduck aquaculture.

Proposed rule changes related to limited shoreline master program updates include:

WAC 173-26-201: New provisions for limited (non-comprehensive) shoreline
master program amendments are added; inventory information sources are
expanded; description of species is broadened beyond "priority species;" "large"
is removed from woody debris description; hyporheic provision is deleted for
lakes.

'Housekeeping' changes are defined as changes that are not determined to be legislatively significant rules, as determined by RCW 34.05.328(5)(b). The proposed housekeeping changes include:

- WAC 173-18: Lists of shoreline streams are removed for cities and counties where shoreline master program comprehensive updates have been approved. Applies to Section 130 and Section 430.
- WAC 173-20: Lists of shoreline lakes are removed for cities and counties where shoreline master program comprehensive updates have been approved. Applies to Section 200, Section 210, Section 800, and Section 810.
- WAC 173-22-030: Definitions no longer needed are removed.
- WAC 173-22-035: Reference to wetland delineation method is deleted; reference to current version of wetland delineation manual adopted by Ecology is added.

- WAC 173-22: Reference to wetland maps maintained by Ecology is removed for cities and counties where shoreline master program comprehensive updates have been approved. Applies to Section 618, Section 674, and Section 678.
- WAC 173-22-080: Entire outdated section deleted.
- WAC 173-26-020: Definitions for "floodway" and "master programs" are added consistent with legislative changes to the Shoreline Management Act.
- WAC 173-26-060: Record retention requirements for adopted shoreline master programs is revised.
- WAC 173-26-080: List of jurisdictions required to adopt an shoreline master program is updated.
- WAC 173-26-110: Requirements for shoreline master program submittals is updated.
- WAC 173-26-130: Shoreline master program appeals process is updated per HB 2395 (2010).
- WAC 173-26-150: Pre-designation of future annexation areas authorized for non-GMA cities is added.
- WAC 173-26-190: Acknowledgement of exemptions from SMA; "project of statewide significance" revised per SSB 5473 (2009).
- WAC 173-26-221: "Critical areas" section is updated to conform to HB 1635
 (2010); clarifies that SMA critical resource areas must include all GMA critical
 areas, but may go beyond; added "lakes" in critical freshwater habitat discussion
 to correct previous oversight.
- WAC 173-26-360: Ecology address and citation in Ocean Management discussion corrected.

The environmental impacts from these changes are discussed in general terms. Adoption of the proposed changes will have no direct effect on the environment—it will simply require local governments to amend their local shoreline master programs in a manner consistent with the updated rules and the Shoreline Management Act. Direct environmental effects will be seen only when proposed projects are approved, constructed, and operated under newly amended local master program provisions, years in the future.

AREAS OF UNCERTAINTY

One of the proposed substantial changes to the Shoreline Master Program Guidelines is the addition of a requirement for a conditional use permit for new and expanded commercial geoduck aquaculture. Most negative environmental impacts associated with aquaculture stem from poor planning, inappropriate site selection and management procedures, as well a lack of attention to environmental protections (Lucas & Southgate, 2000). The proposed rule changes include limits and conditions for local governments to consider during project review and permit writing. Many of these proposed limits and conditions will enable local governments to address areas of uncertainty, establish baseline conditions, and collect additional information when reviewing and permitting commercial geoduck aquaculture. There are a handful of areas of uncertainty, including:

- Potential effects on eelgrass, forage fish habitat and essential fish habitat;
- Possible impacts to benthic invertebrates;
- Potential effects on water quality;
- Cumulative impacts, potential for expansion, and carrying capacity; and
- Resolution of conflicting shoreline uses, including aesthetic concerns and marine debris.

Most of these uncertainties will be explored in the coming months and years through a variety of venues:

- Washington Sea Grant: Current geoduck research program
 (http://www.wsg.washington.edu) will be completed by 2013. The program may
 be continued or expanded if funding is available.
- <u>Federal Permits</u>: The Army Corps of Engineers Nationwide Permit 48 should be finalized in by the end of 2010, including re-consultation with the National Marine Fisheries Service and U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act.

The federal permit process covers existing aquaculture operations and the consultation should provide additional environmental information related to

harvest techniques, fish habitat, and other issues not addressed in the first consultation.

The Army Corps of Engineers and the Washington Department of Ecology is also reviewing and issuing Individual Permits and 401 Water Quality Certifications for new aquaculture operations, including geoduck aquaculture. Permit limits, conditions, mitigation, and monitoring requirements will provide additional information on baseline conditions, environmental effects and best management practices.

Washington Department of Natural Resources: In addition to federal and state
permits, DNR's Aquatic Lands Lease would provide an opportunity to gather
additional information and baseline data on environmental effects and the
effectiveness of mitigation measures and best management practices. As a
condition of their potential leases, DNR has developed a set of best management
practices for lease holders to implement during intertidal geoduck harvesting.
Since January 2009, DNR has been re-evaluating its role for a potential leasing
program originally initiated in 2006.

All of these research, permitting, and compliance efforts will provide valuable information for the adaptive approach set up by the proposed rule changes. Each new permit for planting or expansion of a commercial geoduck aquaculture operation will allow local jurisdictions and Ecology to consider new research and monitoring results, then revise limits or conditions.

- Consistency among jurisdictions and predictability for stakeholders: The proposed rule changes create a structure to improve consistency among local jurisdictions with commercial geoduck aquaculture potential and provide some predictability for stakeholders. Shoreline master programs have varying permit requirements for commercial geoduck aquaculture operations, creating inconsistencies in application requirements, public notice of proposals, and agency permit review. Once shoreline master programs are updated based the proposed rule changes, aquaculture businesses and other stakeholders will have more predictability in the permitting process.
- <u>Local Permit Compliance and Enforcement</u>: Federal, state and local compliance and enforcement efforts will provide another avenue to collect information on

the effectiveness of permit conditions, limits, mitigation, and monitoring requirements.

ANTICIPATED IMPACTS

Ecology was directed by SHHB 2220 (see RCW 43.21A.681) to add language to the Shoreline Master Program Guidelines related to the siting and operations of geoduck aquaculture within Washington's marine shorelines. Ecology is proposing changes to Chapter 173-26 WAC to meet the legislative intent of SHHB 2220. These changes reflect the recommendations of the Shellfish Aquaculture Regulatory Committee (SARC), and input from cities and counties updating their shoreline master programs, Washington tribes and the Northwest Indian Fisheries Commission, Washington's natural resource agencies, and individual members of the public who commented on early discussion drafts of the proposed rule changes. The rule changes also reflect Ecology's current knowledge related to geoduck permitting and research.

Changes to Chapter 173-26-201 WAC will make it easier for local governments to know when and under what conditions a limited amendment of their shoreline master program may be allowed, especially if the local government is engaged in a comprehensive update of their shoreline program. The proposed rule changes will provide guidance to over 260 local governments required to have shoreline programs.

The legislature has made changes to the Shoreline Management Act and other related laws since the last significant rulemaking in 2003. The proposed small housekeeping changes will better align the rules, which carry out the Act, with the Act itself and other relevant laws.

This addendum was developed through the use of existing peer-reviewed literature, and builds upon existing environmental data collected from Washington's natural resource agencies over the past couple decades. One challenge in developing this addendum is the extremely limited amount of literature focused on geoduck and commercial geoduck aquaculture. Much of the published literature and data on geoduck is focused on life history, shell analysis, and geographical distribution. Aquaculture research has primarily been focused on oyster, mussel, and clam (excluding geoduck) aquaculture operations and facilities, but in recent years researchers have begun to investigate geoduck aquaculture operations and potential environmental impacts and benefits. The World Aquaculture Society recognized geoduck aquaculture in 2010 with a full day of

preliminary research presentations ranging from the evolution of geoduck aquaculture in Washington State to assessing patterns of impact and recovery in benthic communities.

As the body of knowledge continues to grow, results from Washington's Sea Grant geoduck research program, along with permit review, monitoring, other independent and government sponsored investigations will play a large role in future environmental impact evaluations of commercial geoduck aquaculture.

Information gathered from research, along with state and federal agency investigations will be integrated into the permit review process and applied through limits and conditions on permits. Limits and conditions can be modified over time as agencies and local governments learn more about commercial geoduck aquaculture and its environmental effects.

In selecting the alternatives in this document, Ecology considered the built and natural environment, and temporary and permanent impacts to those environments. Discussion on the rule changes covers the following general issues: habitat, plants, animals, navigation, transportation, recreations, aesthetics, noise, and lights.

HABITAT, PLANTS, AND ANIMALS

Geoduck (*Panopea abrupta*) live in substrate of soft mud, sand, gravel substrates, or mixtures of these materials (Goodwin & Pease, 1989). Commercial geoduck aquaculture operations are often located in the intertidal zone, between -2 tidal elevation to +3 tidal elevation (MMLW) (Taylor, 2005), sharing the landscape with eelgrass beds, tide flats, herring spawning grounds, other forms of aquaculture, and other critical nearshore habitat features and processes.

Eelgrass provides numerous ecosystem functions, including primary production, fixing carbon that enters the food web, and providing a three-dimensional structure to slow currents and trap sediment, detritus, and larvae. Eelgrass beds are used by a variety of species as areas to feed, settlements for larvae, and refuge from predators (Mumford, 2007). In some instances, aquaculture and eelgrass shoots may occur in the same area, resulting in competition. Research has been focused on the "mechanism and strength of this competition" and data have shown that "geoduck at aquaculture densities (10 m⁻²) reduced eelgrass densities by ~30% in the south Puget Sound during summer months;

this difference disappeared during winter when shoot densities naturally thinned in control plots" (Dumbauld, Ruesink, & Rumrill, 2009).

Benthic invertebrates are also important inhabitants of the intertidal zone. Technical Report 2007-03, Marine Forage Fishes in Puget Sound, states that "standard aquaculture practices may have profound effects on the benthic ecology of Washington state's tidelands" (Penttila, 2007). The report does not discuss geoduck aquaculture specifically, but does provide some general statements on certain aquaculture techniques, such as dredge harvest of oysters and oyster bed ground-culture operations.

Birds, especially bald eagles, are also of concern at commercial geoduck aquaculture sites. In general, the response of bald eagles, and other birds, will be site and species specific "due to bird feeding and roosting behavior relative to the tides and the presence of other birds and predators" (Dumbauld, Ruesink, & Rumrill, 2009). Bald eagles are protected under the federal Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, and the state Bald Eagle Protection Act (RCW 77.12.655). Generally, Bald Eagle Management Plans are not required by the Washington Department of Fish and Wildlife for aquaculture activities. In the case of geoduck farms, predator exclusion nets that are exposed at low tide may to be a hazard to eagles, but their use does not warrant a bald eagle habitat management plan. However, death of an eagle from net entanglement would constitute "take or harm" and is prohibited under the Endangered Species Act and the Bald and Golden Eagle Act (M.Tirhi, WDFW, personal communication, July 29, 2010).

Local and short term effects from bivalve shellfish aquaculture have been observed in west coast estuaries, but it has also been noted that bivalve aquaculture does not reduce the amount of land within an estuary or degrade water quality like some other human activities within the shoreline area, "and thus has not been implicated in shifts to alternate states or reduced adaptive capacity of the larger ecological system" (Dumbauld, Ruesink, & Rumrill, 2009).

NAVIGATION, TRANSPORTATION, AND RECREATION

Navigation is an essential activity within the Puget Sound. A variety of vessels, including kayaks, sailboats, barges, and container ships, utilize the sound for recreation, transportation, military, and commercial activities. Vessels are often used to access commercial geoduck sites. These vessels are often small, open work boats that are

normally grounded on mudflats or open space at the site to minimize damage to the operation site and limit the creation of excessive turbidity at the site (NMFS, 2009). Many operations are located on private property, but the placement of structures, vessels, tubes, nets, and other operation equipment has the potential to impede navigation or recreation in public waters.

AESTHETICS, NOISE, AND LIGHT

The proposed rule changes include limits and conditions on the use of predator exclusion devices, most often PVC tubes and netting. Based on a brief literature review conducted by Ecology in January 2010, the use of PVC pipe in the marine environment has a low potential for leaching toxic chemicals into the environment and impacting marine organisms (Johnson, 2010). The materials used as predator exclusion devices may change as the industry refines its operations. The use of new materials will be reviewed by local governments and Ecology during permit review and may be subject to additional limits, conditions, and mitigation.

In addition to Pierce County's Findings of Fact in *Taylor Shellfish Farms v. Pierce County*, (SHB Nos. 06-039, 07-003 and 07-005), Ecology recognizes the nature of commercial geoduck aquaculture and the need to conduct harvest work during low tides, which may occur at night or on weekends. Locally unique patterns of existing and proposed shoreline development and shoreline ecology will provide the basis and framework for developing the specific limits and conditions set forth in local shoreline programs to minimize the impacts and use conflicts associated with noise and light.

ALTERNATIVES

ALTERNATIVE A: NO ACTION

No Action means the continued implementation of the existing rules.

For purposes of this addendum, continuing to use the existing Shoreline Management rules is considered to be the "no action alternative." Previous environmental impact statements, and the 2003 Supplemental Final Environmental Impact Statement, have analyzed the continued use of existing rules.

Continued use of the existing rules would be a violation of state law, given Ecology would not fulfill the requirements established by SHHB 2220 (see RCW 42.21A.681) to address commercial geoduck aquaculture in the Shoreline Master Program Guidelines. To comply with RCW 42.21A.681, Ecology must reject the "no action" alternative. Regardless, lack of sufficient guidance in the existing rules creates relatively inconsistent regulations from county-to-county for aquaculture businesses and the public. It also makes it difficult for local governments to protect critical saltwater habitats. Ecology expects the changes will increase regulatory consistency, and increase consideration of the built and natural environments.

The existing rules also contain information that is out of date or not in alignment with the Shoreline Management Act or other existing laws. The "no action "alternative does not provide for an opportunity to bring the rules into alignment with existing statute.

Continued use of the existing rules also would not allow Ecology to clarify the process for review and approval of limited amendments to Shoreline Master Programs contained in WAC 173-26-201. The existing language has proven to be too restrictive, leading to uneven application across jurisdictions. Under the "no action" alternative, less-than-comprehensive amendments will continue to be restricted and may result in inconsistent policies and regulations, legal challenges and time consuming and costly requirements for comprehensive SMP updates.

ALTERNATIVE B: PRESCRIPTIVE STANDARDS

Prescriptive standards would result in a rule with specific numerical standards, effective state-wide, that set minimum requirements for local governments to achieve through their local shoreline master programs for the full range of shoreline uses.

Alternative B, Prescriptive Standards, would include the development of stringent limits and conditions for local governments to include in their shoreline master programs that protect the intertidal habitat and meet the future shoreline use and development needs of the community. Existing federal, state, and local regulations would continue to protect water quality, reduce and mitigate habitat degradation, and maintain an element of "no net loss" of resources.

Ecology considered updating the rules to reflect specific prescriptive standards for commercial geoduck aquaculture operations. This would result in a rule update with

specific numerical standards and minimum requirements for local governments to meet in their local shoreline programs for commercial geoduck aquaculture, and guidance for submitting limited amendments of their shoreline programs to Ecology for approval.

Anticipated Impacts from Alternative B, Prescriptive Standards

Habitat, Plants, Animals

In consideration of the importance of eelgrass, proposed limits and conditions in the rule changes would include specified buffers widths and dimensions from eelgrass beds, known spawning areas, or other critical saltwater habitats. Specific buffer distances would be required to minimize damage from planting, maintenance, and harvest activities on the site. Buffers should be based on scientific investigation of potential impacts. At this time, most studies of commercial geoduck harvest have focused on Washington's subtidal fishery (Ebasco, 1992) and recreational harvest. Research on intertidal commercial geoduck impacts is currently under way as part of Sea Grants geoduck research program, and is scheduled to be completed 2013 (Washington Sea Grant, 2009). However, without proper site specific baseline information, such as a survey of priority habitat and species, it is difficult to evaluate the impacts of individual aquaculture operations.

The practice of placing pools, tanks or other impervious materials, site alterations, and equipment use may be detrimental to the intertidal ecology. Additional information on the biological effects of commercial geoduck operations is necessary to understand the ecological interactions, seasonal flux of species, as well as planting and harvest effects on the landscape (Washington Sea Grant, 2009). These findings may support more or less restrictive limits and conditions in the future to ensure "no net loss" of ecological functions in the intertidal system.

Navigation, Transportation, Recreation

To reduce the impact of commercial geoduck aquaculture on navigation and recreation, the proposed rule changes would require property corner markers that are visible at low tide, and mandate limits on the number of barges or vessels moored or beached at the site. Measures to minimize impacts to recreational uses of the water over the site at high tide would also be required. Debris removal schedules and restricted use of predator exclusion devices would be required in each conditional use permit.

Aesthetics, Noise, Light

Establishing fixed buffers, prohibitions on site activities, and mandated mitigation activities does not provide local governments the flexibility needed to protect natural resources on a site specific basis. The Puget Sound contains a wide variety of intertidal ecosystems, each with unique resources, species interactions, and site resources. There is not enough scientific research to support the development of prescriptive limits and conditions on conditional use permits issued for commercial geoduck aquaculture. Alternative B does not provide enough support for local governments to develop a shoreline master program that is protective of the environment and sensitive resources while recognizing the needs and conditions of specific commercial geoduck aquaculture sites and local shorelines.

Noise and light use would be confined to limits set forth in local or state ordinances. Using existing ordinances will provide local consistency and predictability for operators and adjacent landowners.

Limited amendments

The proposed rule update to Chapter 173-26-201(1) includes entirely new provisions for non-comprehensive Shoreline Master Program updates (limited amendments). The proposed language provides criteria for review and approval of limited SMP amendments by local government and Ecology. The existing language restricts limited amendments and favors comprehensive updates. With the proposed rule changes in place, comprehensive updates will continue to be accomplished per statutory schedule and with state funding.

Changes to Section 201 include an expansion of inventory information sources, broadens the description of species beyond "priority species," and removes "large" from woody debris, recognizing that woody debris of all sizes is important to shoreline systems. These changes will provide for a more robust and comprehensive review of information when preparing for a shoreline master program update.

Housekeeping changes

Proposed rule changes to will prompt compliance with current state statute. Housekeeping changes do not require environmental assessment because they are required by statute.

ALTERNATIVE C: POLICY GUIDANCE (PREFERRED ALTERNATIVE)

Policy guidance would result in providing guidance to local governments and flexibility to implement individually customized shoreline master programs at the local level to address issues of local concern.

Alternative C, Policy Guidance, provides local governments with the framework and policies necessary to develop an effective Shoreline Master Program that adequately addresses commercial geoduck aquaculture, submit limited amendments of their shoreline master program to Ecology for approval, and comply with state law.

This alternative includes the development of general language for limits and conditions, allowing local governments to develop a Shoreline Master Program that protects the intertidal habitat while meeting the use and development needs of the community. Existing federal, state, and local regulations would continue to protect water quality, reduce and mitigate for habitat degradation, and help achieve "no net loss" of shoreline ecological functions.

Many of the proposed commercial geoduck aquaculture changes to WAC 173-26 were written in response to SSHB 2220. The proposed changes build on existing requirements found within the Shoreline Master Program Guidelines, including existing permit and mitigation requirements.

Updating the rules to require a conditional use permit for commercial geoduck aquaculture with general limits and conditions would allow local governments to work within an existing permit framework to review and permit commercial geoduck aquaculture operations. The proposed five year permit cycle would require local governments and Ecology to incorporate the most recent scientific findings and best management practices on a regular basis. The current rules require mitigation and appeal of permits, consistent with existing local shoreline master program policy and process. State (Ecology) approval of shoreline conditional use permits is required by the Shoreline Management Act. The requirement for a conditional use permit will provide some level of consistency among jurisdictions where commercial geoduck operations occur, as well as an increased level of predictability for stakeholders.

Ecology recognizes that we don't know all there is to know about the impacts of geoduck aquaculture on the built and natural environments, and that new information

will become available in the near future that enhances our ability to address environmental impacts.

Anticipated Impacts from Alternative C, Policy Guidance

Habitat, Plants, Animals

In consideration of the importance of eelgrass, the proposed limits and conditions in the rule changes include prohibiting or limited vehicle access in the intertidal area, as well as limiting on-site activities during certain times to minimize impact on fish and wildlife using the site for spawning, rearing, or migration. Limiting alterations to the natural conditions of the site will also minimize impacts to eelgrass beds, spawning grounds, intertidal rearing areas, and other critical saltwater habitats.

The preliminary results from the ecological effects investigation have shown some "interesting patterns in species richness and abundance across months coincident with harvest disturbance." Additional data collection and analysis is necessary to determine any patterns of disturbance and to "distinguish the effect of geoduck aquaculture from seasonal patterns" (Washington Sea Grant, 2009). Scale and placement within the landscape are important considerations when considering limits and conditions to protect habitat used by important invertebrates and fish (Dumbauld, Ruesink, & Rumrill, 2009).

Proposed policy guidance provided to local governments will encourage limits and conditions on the use of tanks or pools directly on intertidal sediments, the amount of area covered by predatory exclusion devices, and the length of time predator exclusion devices are used. These limits and conditions, along with best management practices, will minimize the impacts to benthic invertebrates on site.

Buffers and the use of best management practices are recommended in the proposed rule changes to accomplish the intent of the limits and conditions set forth in local shoreline programs.

Navigation, Transportation, Recreation

Navigation is an essential activity within the Puget Sound. A variety of vessels, including kayaks, sailboats, barges, and container ships, utilize the sound for recreation, transportation, military, and commercial activities. To minimize the impact of

commercial geoduck aquaculture on navigation and recreations, the proposed rule changes suggest requiring property corner markers that are visible at low tide, as well as establishing limits on the number of barges or vessels moored or beached at the site. Measures to minimize impacts to recreational uses of the water over the site at high tide are also required. Impacts to beach recreation opportunities can be minimized through debris removal, limited use of predatory exclusions devices, visible property corner markers, and maintaining public access to public lands and waters.

Aesthetics, Noise, Light

Limiting the portion of a site that can be covered by predator exclusion devices and requiring removal of devices as soon as they are no longer necessary will limit the aesthetic impacts of the tubes and nets.

The proposed rules require local governments to allow work during low tides, but recognize the need for local governments to require limits or conditions to minimize impacts, such as noise and light, to adjacent existing uses.

Over time, the conditional use permits will use more refined limits and conditions based upon scientific results and on-the-ground experience. Providing more clarity and establishing a permit framework based on existing tools and guidance in the Shoreline Management Act allows local governments to development shoreline master programs that are protective of the environment and sensitive resources while recognizing the needs and limitations of water-dependent uses.

Limited amendments

The proposed rule update to Chapter 173-26-201(1) includes entirely new provisions for non-comprehensive Shoreline Master Program updates (limited amendments). The proposed language provides criteria for review and approval of limited SMP amendments by local government and Ecology. The existing language restricts limited amendments and favors comprehensive updates. With the proposed rule changes in place, comprehensive updates will be accomplished per statutory schedule and with state funding.

Changes to Section 201 include an expansion of inventory information sources. The update broadens the description of species beyond "priority species," and removes "large" from woody debris, recognizing that woody debris of all sizes is important to

shoreline systems. These changes will provide for a more robust and comprehensive review of information when preparing for a shoreline master plan update.

Housekeeping changes

Proposed rule changes to Chapter 173-18, 173-20, 173-22, and 173-27 will ensure the rules are consistent with laws governing over 260 towns, cities and counties with the responsibility to update and implement local shoreline master programs. Housekeeping changes are also included in Chapter 173-26, in addition to the other rule changes discussed above. Housekeeping changes do not require environmental assessment because they are required by statute.

PUBLIC INVOLVEMENT/REVIEW

Public Comment Period: August 18, 2010 - October 18, 2010

Public Meetings and Hearings:

September 8, 2010

Big Bend Community College – Masto Conference Center 7662 Chanute Street N.E., Moses Lake, Washington Informal Open House: 6:30 PM Formal Public Hearing: 7:00 PM

September 13, 2010

Everett Station – Weyerhaeuser Room 3201 Smith Street, Everett, Washington Informal Open House: 6:00 PM Formal Public Hearing: 7:00 PM

September 14, 2010

Washington Department of Ecology Headquarters – Auditorium 300 Desmond Drive SE, Lacey, Washington Informal Open House: 6:00 PM Formal Public Hearing: 7:00 PM

September 15, 2010

Grays Harbor College - Bishop Center
1620 Edward P. Smith Drive, Aberdeen, Washington
Informal Open House: 6:00 PM Formal Public Hearing: 7:00 PM

WEBSITE AND E-MAIL:

http://www.ecy.wa.gov/programs/sea/shorelines/smp/rulemaking.html shorelinerule@ecy.wa.gov

REFERENCES

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DISTRIBUTION

The Shorelands and Environmental Assistance (SEA) Program used the Shoreline Rulemaking 2010 website and listserv, a focus sheet, and a press release to provide public notice of the availability of this document.

The document was made available on the Shoreline Rulemaking website: http://www.ecy.wa.gov/programs/sea/shorelines/smp/rulemaking.html

And on the agency's rules website: http://www.ecy.wa.gov/laws-rules/SMA2010/1007.html

Notices were sent via the listsery and reached:

- Planning directors and staff at local governments required to have Shoreline Master Programs
- Shellfish Aquaculture Regulatory Advisory Committee (SARC) members and alternates
- SARC listserv members, including large and small aquaculture businesses, shoreline property owners, media, and other interested parties
- Natural resource directors of Indian Tribes bordering marine waters or with aquaculture interests
- Northwest Indian Fisheries Commission staff and management
- Washington State legislators and staff
- Representatives of the signatories to the 2002 Negotiated Settlement Agreement for the Shoreline Master Program Guidelines
- State natural resource and land use agency contacts: Department of Commerce, Department of Health, Department of Natural Resources, Department of Fish and Wildlife, Puget Sound Partnership, Washington Conservation Commission
- Federal natural resource agency contacts: US Environmental Protection Agency, US Army Corps of Engineers, US Fish and Wildlife Service, NOAA
- And other interested parties that have voluntarily joined the listserv.

A rulemaking focus sheet included a brief discussion of the SEPA Addendum and was distributed via the website and listserv, and at rule public hearings. The press release was sent to Ecology's statewide media distribution list.