

## Compiled Comments

### Options for Intertidal and Subtidal Geoduck Aquaculture Guidelines

(Based on the PowerPoint presentation at the September 8, 2008 meeting of the Shellfish Aquaculture Regulatory Committee.)

At the September 8th meeting, the Shellfish Aquaculture Regulatory Committee discussed the options outlined in the first 15 slides of the PowerPoint presentation. Members agreed to review and comment on the remainder of the presentation so the October meeting can focus on the issues with the most interest and the widest range of opinions.

This document lists all of the comments received on each issue. The name of the commenter is included at the end of each comment.

Name	Organization
Rich Childers	Dept. of Fish and Wildlife
Cyrilla Cook	People for Puget Sound
Diane Cooper	Taylor Shellfish Farms
Jeff Dickison	Squaxin IslandTribe
Yongwen Gao	Makah Tribe
Bryan Harrison	Pacific County
Laura Hendricks	Property Owner
Eric Hurlburt	Department of Agriculture
Krystal Kyer	Tahoma Audubon
Blain Reeves	Dept. of Natural Resources
Dave Risvold	Pierce County
Ward Willets	Property Owner

#### General Comments

The Shoreline Management Act (SMA) [RCW 90.58] clearly articulates the cooperative nature of shoreline management in the state of Washington. Local governments are responsible for planning and administering a regulatory program consistent with the policy of the SMA. The Department of Ecology is to “*act primarily in a supportive and review capacity with an emphasis on providing assistance to local government*”. The SMA also establishes the concept of preferred uses of shoreline areas. The Act requires that “*uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the states' shorelines...*” Aquaculture is inarguably a use that is dependent upon the shoreline and is specifically identified as a preferred use in the Shoreline Master Program (SMP) guidelines (WAC 73.126). The SMP guidelines further state “*When aquaculture is managed appropriately, it can result in long term over short term benefit and can actually serve to protect the resources and ecology of the shoreline.*” The SMA recognizes that much of the shoreline is in private ownership and the property rights must be protected consistent with the public interest. - (B. Reeves--WDNR)

Development and regular updates of the SMP guidelines by the Department of Ecology for regulation of the uses of the state shoreline is required under the SMA and must be consistent with the elements of the SMA. Any amendments or updates to the SMP guidelines should therefore: 1) respect the cooperative responsibilities between state and local jurisdictions; 2) refrain from undermining through over-regulation preferred shoreline uses described in the SMA, and 3) ensure protection of private property rights. Planning and regulatory responsibility must remain largely at the local level with decisions based on local ecological and societal considerations. - (B. Reeves--WDNR)

As per the requirements in HB2220, the SARC is to advise DOE on appropriate guidelines for geoduck aquaculture operations to be included in SMP's. The SARC is further directed to specifically examine: 1) methods for quantifying and reducing marine litter, and 2) possible landowner notification policies and requirements for establishing new geoduck aquaculture farms. I have been a member and/or active participant in the SARC since the inception and can attest to the fact that a comprehensive examination of all issues related to geoduck aquaculture has been completed. I believe that consensus SARC recommendations on the issue of geoduck aquaculture are unlikely due to irreconcilable differences between aesthetic and profit-making motives. Therefore, I offer the following comments and recommendations after consultation with DNR colleagues and managers. - (B. Reeves--WDNR)

We prefer the establishment of a best management practices approach for geoduck aquaculture. Any changes to SMP guidelines should be limited to broad policy statements, a reference to a geoduck aquaculture BMP document, and a clearly described adaptive management framework. The BMP document should be developed simultaneously with any changes to the guidelines and should be based on best available science and SARC input. A formal adaptive management framework should be described and codified in the guidelines. An overarching broad policy statement that DOE might consider is "all new geoduck aquaculture farms should to adhere to the BMP's, unless it can be demonstrated that a specific project plan will not result in a net loss of ecological function based on site specific analysis and review of emerging science." - (B. Reeves--WDNR)

As DNR's consistent response is to detail the specific siting and operational requirements in a BMP manual (not unlike the Wetlands Manual) our responses to the comment sections listed below regarding preparation of seed, planting, predator exclusion, harvesting, and operation of geoduck aquaculture farms reiterate this point. - (B. Reeves--WDNR)

### Comments on Zoning

I would prefer that the SMP guidelines for Geoduck Aquaculture include a process/directive to local governments to determine siting appropriateness in a manner consistent with the foundational ecological principals within the SMA [no net loss of ecological functions based upon site specific analysis and review of best available science (with respect for cumulative impacts)]. Outright prohibition of aquaculture in areas without following these principles, and preemptory of and outside of the inventory and local government analysis process is not in keeping with the tenets of SMA as stated in the aquaculture section, and does not respect the existing cooperative rule development process established between state and local governments. - (B. Harrison--Pacific County)

WAC 173-26 already provides tools for a local jurisdiction to locate and identify areas that are suitable for geoduck aquaculture. Therefore, no new environmental designation is needed at this time. There may be value in developing a special overlay that delineates specific areas for conservation, preservation or restoration opportunity. However, I believe this task is beyond the scope of the SARC and the DOE geoduck aquaculture guideline development processes. If such an overlay were to be developed, I believe it would still be up to local jurisdictions to incorporate its' use into their SMP's. - (B. Reeves--WDNR)

**SLIDE 9** shows how staff have organized the possible requirements for siting and operation of Geoduck Aquaculture projects and notes that siting was addressed at the August meeting.

**Section II -- Requirements for Geoduck Aquaculture**

- Siting (August SARC)
- Preparation of Seed
- Planting
- Predator exclusion devices
- Harvest
- Operations

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**SLIDE 10** lists the four issues Ecology staff has suggested under the heading of Preparation of Seed. This heading is intended to cover all of the steps related to the selection of seed and holding seed before planting.

**Preparation of Seed**

- A. Geoduck stock selection
- B. WDFW requirements for preventing disease and parasites
- C. Floating or Upland holding pools or facilities (holding seed before planting)
- D. Holding pools placed on the intertidal substrate

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**Slide 11** covers guidelines options for two issues. First, there is concern that the geoducks planted in an aquaculture operation will become mature and spawn before they are harvested. If they are genetically different from the local wild geoducks then offspring from the planted geoducks or cross-breeding of wild and cultured geoducks may reduce the ecological health of the wild populations. Further research is needed on this issue. It was noted at the meeting that WDFW doesn't have a program to approve the genetics of shellfish seed.

The second concern is that if cultured geoduck seed carry parasites or diseases, these may be released into the wild population. The Washington Department of Fish and Wildlife has

authority to determine whether seed pose a threat from diseases or parasites but has no authority or program dealing with the genetics of geoduck stocks.

### Preparation of Seed

#### A. Requirements for geoduck stock selection for planting—relationship to local populations

- Guideline options
  1. *General statement*
  2. *Defer to WDFW*
  3. *Criteria*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

Defer to WDFW (C. Cook--P4PS)

I would defer to the WDFW process, perhaps with recommendation for further attention to this area (i.e. a recommendation that WDFW adopt an adaptive management approach that is attentive to advances in science/knowledge in this area). However (D) is ripe for discussion in the guidelines. Holding pools certainly would have some impact based upon the site, scale, and length/timing of placement. Perhaps this and other like uses should be addressed as a form of emerging technology SSDP. Given that, experimentation in this industry should be promoted, but with reasonable limits as to scale and length of operations necessary to demonstrate technical viability, and so long as damage to ecological functions will not result. - (B. Harrison--Pacific County)

Even though genetic divergence among Puget Sound geoduck aggregations appears to be low and the populations have similar genetic profiles, fine-scale genetic adaptations of geoducks to localized selective processes have not been investigated. Without any existing program at WDFW to certify seed for genetics, the following general principle is preferred within the BMP document: The progeny of any hatchery spawning should only be planted in the region from which brood stock was harvested. - (B. Reeves--WDNR)

Shellfish seed producers also participate in High Health Programs. These programs are a set protocols developed with input from shellfish pathologists, veterinarians, and national and international shellfish experts. - (D. Cooper--Taylor Shellfish)

Defer to WDFW. As I understand it, WDFW has broad authority to restrict the introduction of any aquatic organism into state waters. Also, any genetic impacts will not be limited to a single county and need to be managed on a broad regional basis. WDFW is the appropriate agency and this is within their scope of responsibility. If WDFW feels it's authority is insufficient, then lets recommend at change. 2. In the interim, and pending the Sea Grant studies, we could recommend in guidelines that brood stock should be taken from the general area of the are where planting will occur. - (E. Hurlburt--WDA)

Defer to WDFW - (J. Dickison--Squaxin Island Tribe)

Defer to WDFW; may need scientific research thru SeaGrant and others to address this issue. - (K. Kyer--Tahoma Audubon)

General statement with emphasis on diversity of population. Defer to WDFW, only if they are given the authority to make decisions and enforce regulations they feel are necessary to protect the genetic integrity of our wild geoduck population. - (L. Hendricks--Gig Harbor)

There is no specific mandate or rules regarding requirements for geoduck stock selection. Developing requirements based on genetics alone would be a difficult, if not impossible, task. The genetic profile of a geoduck population at a specific site is a complex mosaic that one might expect from a long-lived (many decades) marine broadcast spawner. Water current directions and velocities change in a tide cycle and can carry larvae from many different locations to a given site. Larvae may be settling regularly or sporadically over a 6+ month spawning period each year, and year-after-year. Matching planting stock seed genetics with the wild stock population profile is not a practical option or known to produce a positive outcome. A precautionary approach, given the current state of knowledge of genetics and the marine environment, would be to recognize that larval dispersal may be somewhat confined to major basins in Puget Sound and to limit outplant of seed to the same basins where parental broodstock were acquired. A second practice is to increase the number of broodstock used in the hatchery (collected from a given region) to increase the genetic diversity of outplant stock. This number of broodstock would need to be optimized to begin to develop a standard. Deferring to WDFW given the current regulations would result in an advisory response. A new option is to develop best hatchery practices that take into account the current state of the science and reduce potential interactions between high-density culture and wildstocks. This might include use of sterile triploid geoducks for outplanting. A technical review will be needed regardless of where the oversight responsibility lies (WDFW, Ecology, county, ?). - (R. Childers--WDFW)

Defer to WDFW - (W. Willets--Olympia)

Drop it, because there are no researches available from WDFW for this issue. - (Y. Gao--Makah Tribe)

## **B. Requirements for WDFW certification of Seed—diseases and parasites**

- Guideline options
  1. *General statement*
  2. *Defer to WDFW*
  3. *Criteria*

“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”

Defer to WDFW (C. Cook--P4PS)

I would defer to the WDFW process, perhaps with recommendation for further attention to this area (i.e. a recommendation that WDFW adopt an adaptive management approach that is attentive to advances in science/knowledge in this area). However (D) is ripe for discussion in

the guidelines. Holding pools certainly would have some impact based upon the site, scale, and length/timing of placement. Perhaps this and other like uses should be addressed as a form of emerging technology SSDP. Given that, experimentation in this industry should be promoted, but with reasonable limits as to scale and length of operations necessary to demonstrate technical viability, and so long as damage to ecological functions will not result. Defer to WDFW review process with recommendation of further analysis and adaptive management in response to new information. - (B. Harrison--Pacific County)

Defer to WDFW - (B. Reeves--WDNR)

Option 2. Same response as A (above), including comments on High Health Programs. - (D. Cooper--Taylor Shellfish)

Defer to WDFW. This is part of WDFW's responsibility and they have the necessary powers and authority to do it. Fish stocks cannot be managed on a county by county basis and this is not WDOEs area of competence, so let's drop it and leave it to the responsible authority. - (E. Hurlburt--WDA)

Defer to WDFW - (J. Dickison--Squaxin Island Tribe)

Defer to WDFW; may need scientific research thru SeaGrant and others to address this issue. - (K. Kyer--Tahoma Audubon)

General statement on the importance of disease and parasite free seed. Defer to WDFW, only if they are given the authority to make decisions and enforce regulations they feel are necessary. - (L. Hendricks--Gig Harbor)

Consider dropping. WDFW has a mandate, rules, and adequate program staff to regulate and control the spread of shellfish diseases. - (R. Childers--WDFW)

Defer to WDFW - (W. Willets--Olympia)

Defer to WDFW. - (Y. Gao--Makah Tribe)

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**Slide 12** addresses the use of wading pools or other facilities to hold geoduck seed between when they are received from the hatchery and when they are planted. Because placing plastic wading pools filled with sand on the intertidal substrate has different effects on the ecological functions of the intertidal than do upland or floating facilities, we separated the two options. During the meeting we learned from representatives of the industry that holding pools are only used at a limited number of nursery operations, not every geoduck aquaculture site.

### **Preparation of Seed**

#### **C. Floating or upland holding pools or facilities**

- Guideline options
  1. *General statement*
  2. *Requirements for mooring permits*
  3. *Upland setback requirements*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

Upland facilities should be regulated similarly to other water-dependent uses. Floating pools in the intertidal or below the OHW line should be limited. They should be required to get special permits to ensure potential impacts to natural resources are mitigated. (C. Cook--P4PS)

The extent and necessity of this practice has not been adequately explored by the SARC. I would lump this into an emerging issues category and manage it separately. For these guidelines and BMP's, I think DOE should stick to the basic geoduck aquaculture operation as it has been presented for the past year and a half. Related activities that fall outside the basic geoduck aquaculture framework can be appropriately managed through substantial development or conditional use permits. This could be codified within the guidelines. - (B. Reeves--WDNR) -

Should be dropped. Most shoreline master programs address floating aquaculture and upland facilities. Reference should be made to those requirements. - (D. Cooper--Taylor Shellfish)

Drop it. Upland generally refers to an area outside the shoreline, in which case the SMA may not have authority. Most aquaculture activities on established shellfish farms are not regulated under the SMA. However, when there are significant structures, eg. mussel rafts, then SMA review and approval kicks in. It seems that this type of activity should be treated as any other shoreline activity and not be subject to special treatment as part of this geoduck review - (E. Hurlburt--WDA)

Agree with PSS comments: Floating pools in the intertidal or below the OHW line should be limited. They should be required to get special permits to ensure potential impacts to natural resources are mitigated. - (K. Kyer--Tahoma Audubon)

All upland facilities should be equally regulated using the same environmental protections for ecologically sensitive areas with appropriate buffers. All aquaculture floating equipment should be required to obtain a special permit with environmental review required. - (L. Hendricks--Gig Harbor) -

Defer to industry and hatcheries. - (Y. Gao--Makah Tribe)

**D. Holding pools placed on the substrate**

- Guidelines options
  1. *General statement*
  2. *Prohibition*
  3. *Duration limits*
  4. *Limits on area covered*
  5. *Aesthetic requirements*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

Holding pools placed on the substrate should be extremely limited. There should be strict limits on areas where they are allowed. They should be prohibited within or near pocket estuaries used by salmon or forage fish or areas of eelgrass beds, native oysters and clams or areas known to

attract seabirds, as identified in the baseline survey. An environmental suitability analysis should be required prior to permitting. Mitigation to avoid impacts to nearshore ecological processes and fish and wildlife should be required. (C. Cook--P4PS)

I would defer to the WDFW process, perhaps with recommendation for further attention to this area (i.e. a recommendation that WDFW adopt an adaptive management approach that is attentive to advances in science/knowledge in this area). However (D) is ripe for discussion in the guidelines. Holding pools certainly would have some impact based upon the site, scale, and length/timing of placement. Perhaps this and other like uses should be addressed as a form of emerging technology SSDP. Given that, experimentation in this industry should be promoted, but with reasonable limits as to scale and length of operations necessary to demonstrate technical viability, and so long as damage to ecological functions will not result. I am not sure that we as a committee have fully engaged this issue, and therefore I can't provide technical comments. As a result, I would prefer that this issue, and those we have yet to anticipate in this emerging area, be addressed via an Emerging Aquaculture SSDP review process. - (B. Harrison--Pacific County)

The extent and necessity of this practice has not been adequately explored by the SARC. I would lump this into an emerging issues category and manage it separately. For these guidelines and BMP's, I think DOE should stick to the basic geoduck aquaculture operation as it has been presented for the past year and a half. Related activities that fall outside the basic geoduck aquaculture framework can be appropriately managed through substantial development or conditional use permits. This could be codified within the guidelines. - (B. Reeves--WDNR)

Option 1. There should be an option for *de-minimus* standards for those farms that have nursery systems supporting that farm only. For larger nurseries that support off-site farms, there may be a need for additional review. - (D. Cooper--Taylor Shellfish)

General Statement. We haven't discussed this or had any evidence for or against. This is a nursery activity and will probably occur at a very limited number of sites and appears to be temporary. In general it should be limited in areas of critical significance and if it is significant enough to trigger a substantial development question, then deal with it there. - (E. Hurlburt--WDA)

Limits on area covered and rotation of pools around a site to allow recovery. - (J. Dickison--Squaxin Island Tribe)

Holding pools placed on the substrate should be limited to separate nursery facilities, and not at individual planting sites. - (K. Kyer--Tahoma Audubon)

Agree with PPS comments: There should be strict limits on areas where they are allowed. They should be prohibited within or near pocket estuaries used by salmon or forage fish or areas of eelgrass beds, native oysters and clams or areas known to attract seabirds, as identified in the baseline survey. An environmental suitability analysis should be required prior to permitting. Mitigation to avoid impacts to nearshore ecological processes and fish and wildlife should be required. - (K. Kyer--Tahoma Audubon)

All holding pools used in South Sound areas should be identified and locations limited. Holding pools should not be allowed in the pocket estuaries, bays, coves that are designated critical habitat, essential marine vegetation (including eelgrass) or forage fish spawning areas. An independent environmental review should be required prior to permitting. The use of tractors



should not be allowed in any pocket estuaries, bays, coves that are designated critical habitat for any reason. - (L. Hendricks--Gig Harbor)

Possible time limits and amount of area covered. - (W. Willets--Olympia)

Limits on area covered. - (Y. Gao--Makah Tribe)

**Slide 13** lists the six issues related to planting geoducks. The first two deal with where on a parcel geoducks may be planted. The next two deal with how the site is prepared before planting. The final two address the density of planting and timing of planting.

#### **Planting**

- **Selecting** the area of the site to be planted
  - A. Setbacks from sensitive habitat elements (kelp, eelgrass, other habitat features)
  - B. Setbacks, location on property/site
- **Preparing** site for planting
  - C. Pre-planting alterations to the site, rocks clearing, grading, etc.
  - D. Pre-planting harvest of wild shellfish
- **Other**
  - E. Planting density
  - F. Timing of planting

**Slide 14** addresses having setbacks or buffers between the property lines of the aquaculture site and either habitat features or adjacent land uses. The committee discussed using the term buffers instead of setbacks for these issues.

#### **Planting**

##### **A. Setbacks from sensitive habitat elements (kelp, eelgrass, etc.)**

- Note also addressed as a siting issue
- Guidelines Options
  1. *General statement*
  2. *Specific distances from habitat types*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

The guidelines should establish specific buffer distances from sensitive habitat elements, based on best available science. A precautionary approach should be used in the absence of science. Considering the need to maneuver rigid equipment such as water hoses and baskets, it would seem that minimum buffers should be at least 25 feet (this buffer was adopted as BMPs by shellfish farmers in Massachusetts). (C. Cook--P4PS)

As a general rule, I prefer the establishment of a BMP approach (much in keeping with the “Farm Plan” model used to influence/regulate other agricultural practices in the state), with a requirement that these BMPs/Farm Plans be based upon best available science, are geared to achieving no net loss of ecological functions, follow an established mitigation sequence, and adapt to emerging technology and new science. Re setbacks/buffers - general guidance that unless a survey is completed, or neighbor agreements allow for 0 lot line setback to an agreed upon boundary, some modest lot line setback (5’?) may be appropriate to avoid trespass. Site clearing should be minimized specific to GEODUCK PLANTING IN PUGET SOUND. Remember, aquaculture as a whole, much like all agriculture, involves disturbance of the land/sediment. It is the scale/intensity/siting/practices/etc. on the whole that often matter more than the specific. A shoreline permit application should require specific declaration of the amount of clearing & site preparation/wild shellfish removal/planting density etc., and should achieve the minimum disturbance necessary to farm, and that also (given the total package of impacts and mitigation) achieves no net loss of ecological functions. Also – timing should be geared to avoiding important fish windows. - (B. Harrison--Pacific County)

Include a general statement that restricts initial tube siting and placement to locations where sensitive habitat elements are absent or at some minimum density in the guidelines. Require local governments to identify which specific elements are sensitive in their area and how far to buffer. As we saw during the presentations, there is little consensus on what this distance should be for any given habitat element and that distance will likely vary by specific location and element. - (B. Reeves--WDNR)

Option 1. Guidelines could include a technical document and/or BMPs. Local jurisdiction can incorporate into their master programs provisions for protection of critical areas. Additionally, setbacks may not be the appropriate measure for critical areas. Buffers are the appropriate method for protection and are established based upon site-specific physical characteristics and scientific understanding. Additionally, there should adaptive management provisions for altering buffers through time as new science is applied. - (D. Cooper--Taylor Shellfish)

General Statement: There should be adequate buffers around critical habitats, which includes eelgrass and other fixed algae. These should be consistent with other shoreline activities and should recognize the probable adverse impacts of geoduck planting and harvest operations. - (E. Hurlburt--WDA)

General statement - (J. Dickison--Squaxin Island Tribe)

Agree with PPS comments: The guidelines should establish specific buffer distances from sensitive habitat elements, based on best available science. A precautionary approach should be used in the absence of science. Considering the need to maneuver rigid equipment such as water hoses and baskets, it would seem that minimum buffers should be at least 25 feet (this buffer was adopted as BMPs by shellfish farmers in Massachusetts). - (K. Kyer--Tahoma Audubon)

Specific distances from habitat types should be required by Ecology. We agree that buffers should be at least 25 feet. A precautionary approach should be taken to assure no net loss of ecological function, especially essential fish habitat including fish bearing streams. - (L. Hendricks--Gig Harbor)

#1 General statement, no specific distances. - (W. Willets--Olympia)

Specific distances from habitat types. - (Y. Gao--Makah Tribe)

**B. Setbacks, location on property/site**

- Guideline options
  1. *General statement*
  2. *Generic setbacks*
  3. *Setbacks based on adjacent use*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General statement would be adequate, local community should consider setback size similar to how considered for other uses, and to avoid the need to cross property lines. For example, minimum side setbacks for residential upland structures are often 5 feet, in consideration of the need to be able to perform maintenance in the side yard without stepping outside property boundaries. (C. Cook--P4PS)

As a general rule, I prefer the establishment of a BMP approach (much in keeping with the “Farm Plan” model used to influence/regulate other agricultural practices in the state), with a requirement that these BMPs/Farm Plans be based upon best available science, are geared to achieving no net loss of ecological functions, follow an established mitigation sequence, and adapt to emerging technology and new science. Re setbacks/buffers - general guidance that unless a survey is completed, or neighbor agreements allow for 0 lot line setback to an agreed upon boundary, some modest lot line setback (5’?) may be appropriate to avoid trespass. Site clearing should be minimized specific to GEODUCK PLANTING IN PUGET SOUND. Remember, aquaculture as a whole, much like all agriculture, involves disturbance of the land/sediment. It is the scale/intensity/siting/practices/etc. on the whole that often matter more than the specific. A shoreline permit application should require specific declaration of the amount of clearing & site preparation/wild shellfish removal/planting density etc., and should achieve the minimum disturbance necessary to farm, and that also (given the total package of impacts and mitigation) achieves no net loss of ecological functions. Also – timing should be geared to avoiding important fish windows. - (B. Harrison--Pacific County)

I support the addition of a survey or monument requirements within the guidelines, especially at the waterward boundary. This is already required for geoduck cultivation subtidally (Bush / Callow lands) but it should be broadly required for intertidal lands as well. - (B. Reeves--WDNR)

Should be dropped. There are sufficient civil options for redress if a boundary dispute arises. - (D. Cooper--Taylor Shellfish)

Drop. Trespass laws still apply to discourage activities on adjacent property. If adverse impacts (silt) are demonstrated to occur downstream, then some buffer/setback could be established. At this point there is insufficient evidence for this. - (E. Hurlburt--WDA)

Drop - (J. Dickison--Squaxin Island Tribe)

Agree with PPS comments: General statement would be adequate, local community should consider setback size similar to how considered for other uses, and to avoid the need to cross property lines. For example, minimum side setbacks for residential upland structures are often 5

feet, in consideration of the need to be able to perform maintenance in the side yard without stepping outside property boundaries. - (K. Kyer--Tahoma Audubon)

Setbacks in the tidelands should be the same as required for the upland property. Upon replanting, setbacks should be required for all growers. Growers should not be allowed to cross property lines onto adjacent properties. - (L. Hendricks--Gig Harbor)

No setbacks. DROP. - (W. Willets--Olympia)

Drop it. - (Y. Gao--Makah Tribe)

**Slide 15** has two issues related to how the site is prepared before planting of geoducks. The first issue is the degree to which the site can be excavated or re-graded and rocks or logs removed. The second issue is whether the grower should be encouraged or required to harvest shellfish from the site before planting. The committee agreed that the second issue should refer to “Respecting Tribal shellfish rights.”

### Planting

#### C. Limitations on pre-planting alterations to the site, rock clearing, grading, etc.

- Guidelines options
  1. *General statement*
  2. *Specific limits on depth of excavation*
  3. *Specific limits on types of equipment.*
  4. *Require that rocks with algae or holdfasts be moved to the side of tubes*
  5. *Minimize removal of rocks*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

The guidelines should include standards that prohibit grading that changes shoreline profiles or removes natural epibenthic organisms and vegetation. The guidelines should minimize removal of rocks. The site should be fundamentally suitable for geoduck harvesting without the need for grading or rock removal. (C. Cook--P4PS)

Support 1, 4, 5 only, unless specifically limited to Geoduck operations in the sound – otherwise this may be outside the scope of this committee, and regardless, we have not researched/reviewed aquaculture practices as a whole (hope this issue doesn’t become a victim of mission creep beyond Geoduck) - (B. Harrison--Pacific County)

Include a general statement that limits pre-planting alteration in the guidelines. I support specific limits on depth of excavation and on the types of equipment that can be used within the BMP document. - (B. Reeves--WDNR)

Option 5. Minimize removal of rocks, logs, etc., to the extent feasible. A prescriptive requirement would be impossible to enforce. Additionally, there is no evidence that leaving or moving rocks, logs, etc., provides any additional services in a dynamic system. - (D. Cooper--Taylor Shellfish)

General statement. Grading and significant modification of the beach should be subject to existing restrictions and use of heavy equipment prohibited. It does not need special treatment just because geoducks may be planted. - (E. Hurlburt--WDA)

Minimize pre-planting alterations of a site - (J. Dickison--Squaxin Island Tribe)

Agree with PPS comments and SARC discussion: The guidelines should include standards that prohibit grading that changes shoreline profiles or removes natural epibenthic organisms and vegetation. The guidelines should minimize removal of rocks. The site should be fundamentally suitable for geoduck harvesting without the need for grading or rock removal. - (K. Kyer--Tahoma Audubon)

Tideland modification should not be allowed that alters the natural substrate, vegetation, organisms, natural gravel/rocks essential for forage fish and fish habitat. If the site needs to be altered, it is not suitable for this use. No tractors or dragging barges should be allowed. - (L. Hendricks--Gig Harbor)

Minimize pre-planting alterations of the sites. - (W. Willets--Olympia)

Limit pre-planting alterations to the site. - (Y. Gao--Makah Tribe)

**D. Requirement for pre-planting harvest (Consider Tribal shellfish rights)**

▪ Guideline options

1. *General Statement*
2. *Require agreements with appropriate tribes*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General statement about need to comply with tribal shellfish rights, but allow local government to decide if it needs written agreement. (C. Cook--P4PS)

Support 1. Tribes should receive notification. This issue is outside the scope of this process. SMPs should respect existing and future agreements. - (B. Harrison--Pacific County)

I support a general statement within the guidelines. - (B. Reeves--WDNR)

Should be dropped. Not relevant to guidelines and is addressed under court orders and DFW emerging fishery rules. - (D. Cooper--Taylor Shellfish)

Drop. Under state law, the clams, geoducks and oysters on a beach belong to the beach owner, with the exception of treaty rights. The harvest or lack thereof is the choice of the property owner, however, the method of harvest may be subject to permits from other agencies or the counties. - (E. Hurlburt--WDA)

Keep it to a vague policy level; this issue is already fully covered by federal court orders. It is inappropriate for the state to encourage local governments to intercede in this issue. - (J. Dickison--Squaxin Island Tribe)

This should be a given. - (K. Kyer--Tahoma Audubon)

Require tribal notification. - (L. Hendricks--Gig Harbor)

As stated in our last meeting there is already a court decision that covers this issue. - (W. Willets--Olympia)

Respecting tribal shellfish rights is requested by treaty rights and federal court orders. The issue should be clearly stated in the general statement. - (Y. Gao--Makah Tribe)

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**Slide 16** presents the issues of how many geoducks should be planted per square foot and whether there should be standards for when planting occurs. The more densely tubes and geoducks are planted, the more concentrated are environmental effects, including phytoplankton uptake, release of feces and pseudofeces and the ability of wild animals to use the habitat between tubes

Since planting involves fairly intense on-site activity, it could be scheduled to avoid times when forage fish or juvenile salmon are especially active at the site. Note that the general issue of whether workers should be on aquaculture sites at night or on holidays or weekends is address as an operational issue. This slide focuses on the possibility of ecological effects.

### **Planting**

#### **E. Standards for planting density (covers tube density)**

- Guidelines options
  1. *General statement*
  2. *Generic density limit*
  3. *Basis for site-specific limit?*
  4. *Differant for subtidal?*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General statement that requires consideration of overall carrying capacity of water body and flushing conditions of enclosed bays or inlets. Balance aerial extent with planting density to stay within carrying capacity. (C. Cook--P4PS) . - (K. Kyer--Tahoma Audubon)

Agree with PPS comments, recognizing the carrying capacity may be difficult to measure, and more scientific research is needed to better understand the carrying capacity of the entire Puget Sound and its individual bays, shorelines, inlets, etc: - (K. Kyer--Tahoma Audubon)

Intertidal density should be based on ecological carrying capacity, not production carrying capacity. Specific flushing scientific data of the area should be analyzed prior to approval of new geoduck farms and existing geoduck farms should be included in the analysis. As scientists noted in the SeaGrant symposium and is called for in the HB2220 legislation, cumulative impacts must be analyzed to protect other native species. - (L. Hendricks--Gig Harbor)

This should be based upon BMPs established following review of BAS, and site specific analysis of ecological functions and potential cumulative impacts. The answer is IT DEPENDS on where the proposed site is. - (B. Harrison--Pacific County)

I believe planting density is probably dependent on where the site is located. It will likely require a site specific evaluation of ecological function and cumulative impacts. Therefore, the BMP's should inform how to determine planting density. - (B. Reeves--WDNR)

This plate gets to, what I feel is, the key to this subject: site specific restrictions. It appears that certain locations, as a result of factors such as flushing patterns and rates, are more suitable to geoduck operations than are others. One area may be able to support a density of geoduck planting that would be unacceptable in another area. Other areas may not be compatible with geoduck (or aquaculture in general) at any density. It would be wonderful to refer to site-specific densities or, refer us to such guidance. (\*see also Discussion) - (D. Risvold--Pierce County)

\* Discussion. Density, harvest frequency, and relative amount of beach to be netted at any time are all factors involved in, what it appears to me, one the most important aspects of aquaculture regulation: scale. As with most forms of development, there appears to be a tipping point where impacts go from short-term/benign to long-term/irreversible. That point appears to be site specific and dependent upon the scale and intensity of the aquaculture operation. It would be helpful if we could make some reference to "scale" in our guidance. I'm not sure where we would look for that guidance - perhaps Sea Grant research will shed some light on this topic. - (D. Risvold--Pierce County)

Should be dropped. This is an industry determined standard based on several considerations, including, market, survival rate, bay, etc. There are no scientific standards that address this issue. - (D. Cooper--Taylor Shellfish)

Drop it. Planting density may be site specific and change as the technology of geoduck farming progresses. At this point there is no evidence that density has any effect on environmental impacts. - (E. Hurlburt--WDA)

Drop - (J. Dickison--Squaxin Island Tribe)

Drop this issue. - (W. Willets--Olympia)

Drop it. - (Y. Gao--Makah Tribe)

#### **F. Timing of planting to minimize fish and wildlife effects**

- Guidelines options
  1. *General statement*
  2. *In identified forage fish spawning areas, avoid planting during periods of spawning and incubation*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

In identified forage fish spawning areas, avoid planting during periods of spawning and incubation. Also consider migration time of juvenile salmon in areas where geoduck farms are permitted near natal streams or pocket estuaries. (C. Cook--P4PS) (K. Kyer--Tahoma Audubon)

Support 1 and 2 - as directed/recommended by WDFW - (B. Harrison--Pacific County)

Defer to WDFW - (B. Reeves--WDNR)

Option 1. Current guidelines address no net loss. - (D. Cooper--Taylor Shellfish)

There should be some reference to standard DFW timing restriction guidance. - (D. Risvold--Pierce County)

General statement. This is a factor where other species may be disrupted, such as a herring spawning area during spawning season. Again, this is an area where WDFW should exert authority as they would for other activities. - (E. Hurlburt--WDA)

Defer to WDFW as a management issue covered under an HPA - (J. Dickison--Squaxin Island Tribe)

Add third statement to include sensitive marine bird congregating and nesting areas and avoid operations that would disturb them during any sensitive period. - (K. Kyer--Tahoma Audubon)

According to Dan Penttila: "Protection of spawning habitats (critical habitat under Growth Management Act) is listed as part of No Net Loss; they are a habitat of importance under hydraulic code...Have had No Net Loss in the hydraulic code since mid-1970's. It is mentioned in the Growth Management Act under critical areas, agencies expect local jurisdictions to map and conserve forage fish spawning sites already there when formulating Critical Ordinances and Shoreline Master Programs. ....Really should focus on avoidance in the meantime until we have more information." "We don't know how to mitigate---recreate this habitat." "I would say avoidance is the way to avoid impacts to marine algae beds... And keep in mind that marine vegetation beds in absence of spawning events still have other value." Per SARC meeting notes of his presentation. - (L. Hendricks--Gig Harbor)

Based on Dan Penttila's expert advice as quoted above, guidelines should prohibit geoduck farming in designated spawning areas. It is common practice for geoduck farming to also include oyster bags and manilla clams with netting that consume a significant portion of the tidelands impacting sand lance, herring and smelt. Even after geoduck farming has been going on since 1995, Brian Phipps, the Taylor farm manager did not know if he was planting or harvesting in a forage fish area. (Per SARC meeting notes). It is too important to leave these decisions to grower's workers in the field that are not wildlife specialists. Migration patterns of salmon and other species must also be examined for impacts of geoduck operations. - (L. Hendricks--Gig Harbor)

General statement, WDFW should make the call. - (W. Willets--Olympia)

General statement. - (Y. Gao--Makah Tribe)

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**Slide 17** introduces the topic of predator exclusion devices and lists the two issues addressed in the next two slides. Excluding natural predators of geoducks while they are small is a key element that makes geoduck aquaculture viable. Tubes and nets are currently used but new methods may be developed. The slide notes that litter and debris issues associated with these devices are addressed in the operations section. The use of pesticides was mentioned at the



September Committee meeting. This is addressed in the operations section as “N. Pollution Prevention.”

**Predator Exclusion Devices**

- Tubes, Nets, Tunnels, Future Designs
  - A. Aesthetics
  - B. Coverage and Duration

Note: Debris is covered under Operations.

**Slide 18** addresses the visual aesthetics of predator exclusion devices. Guidelines options were taken from the notes of past Committee meetings.

**Predator Exclusion Devices**

**A. Aesthetics of materials used on site**

- Guidelines options
  1. *General statement*
  2. *Because planting tubes are least visible if they are not white, require tubes to be a muted color (not white).*
  3. *Require growers to use the best available tubes and nets that minimize visual impacts. Require a permit condition that specifies how growers will demonstrate this.*
  4. *Place tubes in straight rows or rectangular blocks*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

Prefer general statement to consider visual aesthetics based on local community concerns. (C. Cook--P4PS)

Again, the guidelines should promote BMPs for the least damaging predator exclusion products and should allow/promote the need for trials of emerging technologies to reduce environmental and aesthetic impacts - (B. Harrison--Pacific County)

Support 1 & 2. I would steer use/limitation of specific equipment based upon as assessment of the ecological impacts, rather than aesthetics. I defer to property owners whether rows or random placement of tubes is preferred. - (B. Harrison--Pacific County)

The materials used for predator exclusion devices and their duration of use should be decided based on least ecological impact. I would support a general statement to this effect in the guidelines. I also support including a general preference to use muted color tubes and remove as soon as possible within the BMP's. - (B. Reeves--WDNR)

I don't see how one quantifies this issue. It seems to also be location specific. Perhaps aesthetics should be established through the public review process. - (D. Risvold--Pierce County)

General statement about minimizing adverse biologic and aesthetic impacts and deal with it on a case by case basis. Color and placement is not relative if there aren't neighbors who object. Also, we don't want to restrict development of new methods. - (E. Hurlburt--WDA)

General statement to consider visual aesthetics based on local community concerns, and provide suggestions for recommendations to minimize conflict from communities that have previously addressed this issue. This could be 1, 2, and 4 and/or others. - (K. Kyer--Tahoma Audubon)

Plastics should not be allowed to be used in the intertidal or subtidal areas. - (L. Hendricks--Gig Harbor)

Should be dropped. Committee members representing homeowners indicated this was not an issue. - (D. Cooper--Taylor Shellfish)

Drop - (J. Dickison--Squaxin Island Tribe)

Non issue Drop. - (W. Willets--Olympia)

Drop it. - (Y. Gao--Makah Tribe)

**Slide 19** addresses the ecological effects of predator exclusion devices. Guidelines options were taken from the notes of past Committee meetings.

#### **Predator Exclusion Devices**

##### **B. Restrictions on predator exclusion devices coverage and duration**

- Guidelines options
  1. *General statement*
  2. *Growers should remove tubes and nets as soon as they are no longer needed for predator exclusion. Specify how long tubes can be in the ground.*
  3. *Standards should be established for net sizes. Possible recommendation: Require permit conditions related to net sizes. (note bird interactions)*
  4. *Limit portion (percent) of the site covered at any time.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

The guidelines should address predator exclusion devices to ensure that interactions with birds and mammals will be minimized. The guidelines should recommend that net sizes be addressed in permits to ensure protection of wild birds and mammals. (C. Cook--P4PS)

Agree with PPS comments: The guidelines should address predator exclusion devices to ensure that interactions with birds and mammals will be minimized. The guidelines should recommend that net sizes be addressed in permits to ensure protection of wild birds and mammals. - (K. Kyer--Tahoma Audubon)

Again, the guidelines should promote BMPs for the least damaging predator exclusion products and should allow/promote the need for trials of emerging technologies to reduce environmental and aesthetic impacts - (B. Harrison--Pacific County)

Support 1, first sentence in 2, and a requirement that exclusion devices be designed to respect potential juvenile eagle interactions on a site specific basis. - (B. Harrison--Pacific County)

The materials used for predator exclusion devices and their duration of use should be decided based on least ecological impact. I would support a general statement to this effect in the guidelines - (B. Reeves--WDNR)

Option 2. This option should have the last sentence dropped as this is determined by farming needs. - (D. Cooper--Taylor Shellfish)

(4) Limit portion of site to be covered\* (\*see *Discussion*) - (D. Risvold--Pierce County)

\* *Discussion*. Density, harvest frequency, and relative amount of beach to be netted at any time are all factors involved in, what it appears to me, one the most important aspects of aquaculture regulation: scale. As with most forms of development, there appears to be a tipping point where impacts go from short-term/benign to long-term/irreversible. That point appears to be site specific and dependent upon the scale and intensity of the aquaculture operation. It would be helpful if we could make some reference to “scale” in our guidance. I’m not sure where we would look for that guidance - perhaps Sea Grant research will shed some light on this topic. - (D. Risvold--Pierce County)

General statement. This is probably the core issue. A general statement should encourage the development of methods to minimize adverse impacts and require removal and cleanup of nets, tubes, etc. when they are no longer needed. Data is lacking that would allow standards for densities and net sizes. - (E. Hurlburt--WDA)

General statement - (J. Dickison--Squaxin Island Tribe)

General statement. No specific time limits, net size or area covered. - (W. Willets--Olympia)

General statement. - (Y. Gao--Makah Tribe)

Standards should be established for net sizes, percentage of tidelands allowed to be covered, length of time in place and timing. - (L. Hendricks--Gig Harbor)

**Slide 20** presents options related to the harvesting of the mature geoducks. Current practice is to use water jets to soften the sediments and allow the geoducks to be removed. This is done at low tide so divers are not required. Ideas for guidelines were taken from DNR documents as well as past Committee meetings. At the September meeting buffers were suggested as an option to limit silt reaching neighboring properties.

**Harvest**

**A. Aesthetic and environmental effect of water jets (future methods?)**

▪ Guidelines Options

1. *General Statement*
2. *Standards for water pump design, operation, intakes, pressure*
3. *Turbidity management during harvest*
4. *Limit on frequency of harvest (X years?)*
5. *Limits on noise, if there are no general noise restrictions*

6. *In identified forage fish spawning areas, avoid harvest during periods of spawning and incubation.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General statement. There is no data at this point showing an adverse impact from the current harvest method. It is being used for subtidal harvest and has been subject to an EIS. Data is lacking for setting criteria on pump specifications. Turbidity has been alluded to many times, yet no data has been presented that this is a real problem. Noise should be consistent with other regulated shoreline activities. Harvest should be limited during spawning and other critical life stages if and when it has an adverse impact. Instead of regulating this under the SMA, including it under a WDFW Hydraulics Permit might be more appropriate. - (E. Hurlburt--WDA)

General statement - (J. Dickison--Squaxin Island Tribe)

General statement. - (W. Willets--Olympia)

General statement. - (Y. Gao--Makah Tribe)

General statement that SMPs should consider operational standards, including noise, turbidity management, and noise. Guidelines should state that local governments need to establish performance-based standards tailored to be compatible with the locations where they will be permitting geoduck aquaculture. For example, if local government is going to allow farms in areas where noise would not be a nuisance to adjacent properties or nesting birds, then noise limits may not be needed in that area. Likewise, if farms are going to be allowed adjacent to shorelines with residential development or nesting birds, then strict noise standards should be required. (C. Cook--P4PS)

In identified forage fish spawning areas, avoid harvesting with stingers and generators during periods of spawning and incubation. Also consider migration time of juvenile salmon in areas where geoduck farms are permitted near natal streams or pocket estuaries. (C. Cook--P4PS)

Agree with PPS comments- (K. Kyer--Tahoma Audubon)

We agree with Cyrilla's statements on this section. - (L. Hendricks--Gig Harbor)

I support 1, 5 and 6. I think the rest should be based upon BMPS developed in response to best available science/best practices, with adaptive management to respect emerging technologies & improved practices. - (B. Harrison--Pacific County)

I support a general statement in guidelines and site specific limits on noise and harvesting around forage fish habitat within the BMP's. - (B. Reeves--WDNR)

Option 1. General statement on minimization of potential effects. - (D. Cooper--Taylor Shellfish)

Option 2. Should be dropped. - (D. Cooper--Taylor Shellfish)

Option 3. Should be dropped. - (D. Cooper--Taylor Shellfish)

Option 4. Should be dropped. Frequency of harvest is dependent upon market, geoduck maturity, or other farming considerations. If aesthetic and environmental effects are addressed, then frequency should be not an issue. - (D. Cooper--Taylor Shellfish)

Option 5. Should be dropped. State or local noise standards apply. - (D. Cooper--Taylor Shellfish)

Option 6. Should be dropped. The only protected forage fish that physically overlaps with geoduck farming is herring. Herring spawn on protrusions on the substrate (i.e, tubes, nets, etc.). When tubes and other equipment are present, the geoduck are not mature enough for harvest. When geoduck are mature enough for harvest, there are no tubes and therefore, no herring spawn. - (D. Cooper--Taylor Shellfish)

(4) Limit on frequency of harvest\* (\*see *Discussion*) - (D. Risvold--Pierce County) – HarvA

\* Discussion. Density, harvest frequency, and relative amount of beach to be netted at any time are all factors involved in, what it appears to me, one the most important aspects of aquaculture regulation: scale. As with most forms of development, there appears to be a tipping point where impacts go from short-term/benign to long-term/irreversible. That point appears to be site specific and dependent upon the scale and intensity of the aquaculture operation. It would be helpful if we could make some reference to “scale” in our guidance. I’m not sure where we would look for that guidance - perhaps Sea Grant research will shed some light on this topic. - (D. Risvold--Pierce County)

**Slides 21 and 22** list the issues that have been collected under the heading of Operations because they apply throughout the life of the aquaculture option. A number of them are not unique to geoduck aquaculture or even shellfish aquaculture and the guidelines may suggest that local jurisdictions address them through general provisions rather than in a geoduck aquaculture program.

**Operations**

- A. Notifications to tribes
- B. Notifications to adjacent property owners
- C. Property marking
- D. Public access
- E. Access to site
- F. Staging of materials and equipment, parking
- G. Vessel access and mooring
- H. Lights
- I. Noise
- J. Hours of operation
- K. Debris and litter
- L. Site management
- M. Spill prevention
- N. Other pollution prevention

- O. Equipment maintenance
- P. Recordkeeping, reporting
- Q. Monitoring and adaptive management

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**Slide 23** addresses when a geoduck aquaculture operation should provide notifications to Tribal Governments. Notifications during the project approval process are listed later.

### **Operations**

#### **A. Notifying Tribes of operations**

- Guidelines Options
  1. *General statement*
  2. *Growers should provide notice to appropriate tribal governments before taking actions of interest to the tribes.*
  3. *Specific list of actions needing notice to Tribes*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General statement is preferred. (C. Cook--P4PS)

Good idea. Support 1 & 2 - (B. Harrison--Pacific County)

I support a general statement within the guidelines (Same as Planting – D above) - (B. Reeves--WDNR)

Most local jurisdictions will have their own code-based requirements for notification. As such, unless there are some glaring holes in local requirements that the committee members feel requires correction, DOE guidance should be provided in general terms. - (D. Risvold--Pierce County)

General statement. As soon as a project becomes subject to permits or agency actions, tribes should be notified of that action through the standard notification processes. - (E. Hurlburt--WDA)

General statement is preferred. - (K. Kyer--Tahoma Audubon)

General statement. - (L. Hendricks--Gig Harbor)

Drop it. - (Y. Gao--Makah Tribe)

Should be dropped. Not relevant to shoreline management. This is addressed by court orders and DFW emerging fishery rule. - (D. Cooper--Taylor Shellfish)

What is the intent? - (J. Dickison--Squaxin Island Tribe)

Isn't this also covered by the court decision? - (W. Willets--Olympia)

**Slide 24** deals with when a geoduck aquaculture operation should notify nearby property owners of operations. Again, notice during the local jurisdiction’s approval process is addressed as part of the approval system. The guidelines options were pulled from past Committee meetings. The question marks in option 4 are a request for clarification of how “nearby” might be defined. This is also an issue where a local government may have existing standards requiring notice to neighbors before construction or other practices that could be applied to aquaculture.

### **Operations**

#### **B. Notifying Shoreline Owners of operations**

- Guidelines Options
  1. *General statement*
  2. *Growers should provide advance notification to adjacent shoreline owners within a defined radius to explain when operations are going to occur and what noise can be expected.*
  3. *Explain duration of the work, and where to call with complaints*
  4. *Notify nearby shoreline properties five days before harvest (within 300’, three parcels either side, ???) or for planting or harvest.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

The guidelines for Puget Sound farms should require local governments to provide advance notification within a defined radius as part of the initial permitting process for allowing geoduck operations in a new location. It would make sense for growers to notify neighbors when they are harvesting or replanting as a courtesy, and to avoid potential conflicts. However, it should be up to the local government whether they want to require the grower to do this additional notification or not, and the extent of the area to be notified. Might be needed in some shoreline locations but not others, depending on what the adjacent land uses are. Commercial and industrial uses probably don’t need notification. But the entire area of a residential subdivision might need to be notified if there it might be affected by noise or other potential impacts. (C. Cook--P4PS)

Agree with PPS comments (italics added): The guidelines for Puget Sound farms should require local governments to provide advance notification within a defined radius (*from the perimeter of the work site*) as part of the initial permitting process for allowing geoduck operations in a new location. It would make sense for growers to notify neighbors when they are harvesting or replanting as a courtesy, and to avoid potential conflicts. However, it should be up to the local government whether they want to require the grower to do this additional notification or not, and the extent of the area to be notified. Might be needed in some shoreline locations but not others, depending on what the adjacent land uses are. Commercial and industrial uses probably don’t need notification. But the entire area of a residential subdivision might need to be notified if there it might be affected by noise or other potential impacts. - (K. Kyer--Tahoma Audubon)

Require same notification as per SSDP process in each County. Support 1, 2, 3 only. Harvest can be rationally expected following planting. Require that notification of planting, maintenance and harvesting techniques and general schedules be included in initial permit application notice provided in 1,2,3 - (B. Harrison--Pacific County)

HB 2220 specifies a notification requirement for DNR. The DOE should consider adopting similar language in the guidelines that applies to everyone. . . . . Consider requiring local jurisdictions to “notify all abutting landowners and any landowner within three hundred feet of the lands to be farmed prior to planting.” Local jurisdictions should also be required to explain duration of the work and where to call for complaints. - (B. Reeves--WDNR)

Option 2 is preferred. Additionally this should be a one-time notification only. - (D. Cooper--Taylor Shellfish)

Most local jurisdictions will have their own code-based requirements for notification. As such, unless there are some glaring holes in local requirements that the committee members feel requires correction, DOE guidance should be provided in general terms. - (D. Risvold--Pierce County)

Also, though I do think shoreline owners should have a means of finding out when harvest activity may take place, I’m not sure that the growers should have to send out notice before each and every harvest. That seems cumbersome and impractical. Perhaps notice could be provided only prior to the first harvest and the notice could provide a proposed schedule (identified as “Subject to Change”) along with a contact number people can use to find out more specifics. Alternately, perhaps the site itself could somehow be posted with operation and contact information. Finally, it would be handy for neighbors to be provided with the conditions of approval for the operation. It may not be possible to provide an actual hard copy, but, perhaps the harvest schedule document could provide reference to where the approval conditions can be found. - (D. Risvold--Pierce County)

General statement. The lack of advance notification has a major issue for new operations going into residential areas. Notification should describe the property and activities and what adjacent property owners can expect. How are other activities required to notify the public? - (E. Hurlburt--WDA)

On adjacent properties, explain duration of work and where to call for more information. - (J. Dickison--Squaxin Island Tribe)

Shoreline owners within a defined radius should be notified in advance of geoduck harvesting. - (L. Hendricks--Gig Harbor)

Growers should provide advance notification/information to adjacent shoreline owners. - (Y. Gao--Makah Tribe)

Drop. Other industries aren’t required to do so why this one? - (W. Willets--Olympia)

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**Slide 25** lists options related to marking the boundaries of geoduck aquaculture sites. The issue of an accurate survey of property lines is addressed later as part of an approval process. Options were taken from past Committee meetings. Options 2 and 3 are not very clear and clarifications would be appreciated by members who might support those options.

**Operations**

**C. Site boundary marking or identification**

- Guidelines options

1. *General statement*



2. *Use casenite (??) markers*
3. *Flexibility when property owners(?) and grower agree*
4. *Identify hazard area for boaters*
5. *Decide if markers are for life of project or not*
6. *Use durable materials, avoid rebar*
7. *Consider aesthetic issues and wildlife safety*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

(Good idea unless markers impact navigation) Support 1, 3, 4, and 6. 7 is too general to comment. No opinion on rest - (B. Harrison--Pacific County)

The guidelines should prescribe a minimal survey and property boundary delineation requirement but remain flexible when adjacent property owners are in agreement. The requirement to survey and monument the waterward boundary should be non-negotiable. As previously stated above, this is already required for geoduck cultivation subtidally (Bush / Callow lands) but it should be broadly required for intertidal lands as well. - (B. Reeves--WDNR)

Option 1. Local governments, within their shoreline master programs, can outline appropriate boundary marking provisions that are consistent with other types of activities. - (D. Cooper--Taylor Shellfish)

General statement. There are many ways to identify a boundary and the most appropriate may depend on the site. The markers themselves can become an issue. - (E. Hurlburt--WDA)

General statement - (J. Dickison--Squaxin Island Tribe)

For Puget Sound, markers are needed to document that growers are staying out of shoreline natural critical areas (eelgrass beds, fish habitat, etc identified in the baseline survey), regardless of whether property owners and growers agree. Local government and grower should mutually establish the type of markers to use, but it should be clear to any citizen as to where the boundaries are. This will avoid potential complaint calls as well as protect habitat critical areas. (C. Cook--P4PS)

Agree with PPS comments: For Puget Sound, markers are needed to document that growers are staying out of shoreline natural critical areas (eelgrass beds, fish habitat, etc identified in the baseline survey), regardless of whether property owners and growers agree. Local government and grower should mutually establish the type of markers to use, but it should be clear to any citizen as to where the boundaries are. This will avoid potential complaint calls as well as protect habitat critical areas. - (K. Kyer--Tahoma Audubon)

Permanent markers should identify the professionally surveyed area to be used as a farm to identify property lines and protect critical habitat areas. - (L. Hendricks--Gig Harbor)

Flexibility when property owners(?) and grower agree. - (Y. Gao--Makah Tribe)

Drop. This is up to the individual private property owners. - (W. Willets--Olympia)

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**Slide 26** reflects the issue of whether public access should be allowed on public or private tidelands used for geoduck aquaculture.

Operations

**D. Allowing public use/access of growing sites**

- Guidelines options
  1. *General statement*
  2. *Growers should be encouraged to allow public access to private tidelands.*
  3. *Growers leasing state aquatic tidelands should allow public access.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

Public access should be allowed on all public shorelines, except in situations to protect public safety. - (K. Kyer--Tahoma Audubon)

The Public Trust Doctrine requires access to public lands. - (L. Hendricks--Gig Harbor)

General statement. - (Y. Gao--Makah Tribe)

Should be dropped. - (D. Cooper--Taylor Shellfish)

Drop it! - (E. Hurlburt--WDA)

Drop - (J. Dickison--Squaxin Island Tribe)

DROP! NO WAY. - (W. Willets--Olympia)

I have no preference on this issue. (C. Cook--P4PS)

(is this needed/appropriate/legal on private property?) Support keeping recommendations general. Don't agree that public access to private tidelands can be addressed in this forum – I believe that there is state law and case law that already addresses the ability of local government to impose public access requirements on private land at time of permit issuance. - (B. Harrison--Pacific County)

Not sure that public access to private tidelands can be addressed through a revision to these guidelines. I'd defer to local BMP's. - (B. Reeves--WDNR)

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**Slide 27** addresses water and land access to a geoduck aquaculture site. Options were taken from past Committee meetings.

Operations

**E. Requirements for worker and equipment access to work on site**

- Guidelines Options
  1. *General statement*
  2. *Paths to geoduck growing tracts that cross private land need specific standards to avoid trespass, added noise and litter, or damage to property.*
  3. *Growers who abuse or damage private roads should be responsible for*

- repairs and the road owners should feel free to deny future use of their road.*
4. *Access across private lands or using private roads only with prior approval by the owner.*
  5. *Limit operations to avoid harm to established eelgrass beds or known forage fish spawning areas.*
  6. *Vessel operations should avoid propeller wash striking eelgrass or other attached vegetation.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

I support a general statement in the guidelines that “access across private lands or using private roads requires prior approval by the owner.” The BMP document should address limitations on operations to protect eelgrass and forage fish habitat (on site by site basis). - (B. Reeves--WDNR)

Option 1. Compliance with BMPs and Environmental Codes of Practice should address this issue. Civil options are available to redress potential disputes. - (D. Cooper--Taylor Shellfish)

I tend to think we only need a General Statement referencing that growers must have legal access to a site and that the means and location of access must not result in impacts to critical areas (or similar words). - (D. Risvold--Pierce County)

General statement. Access across private lands is subject to the owners approval or it is trespass. - (E. Hurlburt--WDA)

General statement - (J. Dickison--Squaxin Island Tribe)

General statement. Otherwise these are civil matters. - (W. Willets--Olympia)

General statement. - (Y. Gao--Makah Tribe)

The guidelines should include items 5-6, above. To ensure items 5 and 6 are enforced, adequate buffers of at least 25 feet should be required from eelgrass or other attached vegetation (identified in the baseline survey) for farms in Puget Sound. (C. Cook--P4PS)

4, 5, and 6 make sense if tempered with “where practicable” BMPs can address these issues - (B. Harrison--Pacific County)

Support all options. - (K. Kyer--Tahoma Audubon)

We agree with statements 3-6 and regulations should insure that growers cannot cross private land without a easement document that is recorded with the county. Regulations should insure that sensitive fish habitat is not disturbed (ie, marine vegetation, spawning areas, migration corridors). Buffers should be enforced. - (L. Hendricks--Gig Harbor)

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**Slide 28** presents two more issues related to access to the aquaculture site. One is parking and staging materials on land and the other deals with vessels. Options come from past Committee meetings.

## Operations

### F. Limits on landside parking and on-shore staging areas, require that they be above OHW

- Guidelines Options
  1. *General statement*
  2. *Growers should have to use designated staging and parking areas to minimize the footprint of impact.*
  3. *Staging and Parking should be located above OHW.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

Growers should describe their parking and staging plans in a Shoreline permit application (if required). Pertinent ecological functions that might be impacted should be identified. This should be determined on a case by case basis dependent upon the characteristics of the proposed site, scale and type of proposed operations, and analysis of likely cumulative impacts. - (B. Harrison--Pacific County)

I support a general statement in the guidelines that requires growers to “describe their parking and staging area plan” during the initial application for a shoreline permit. I also think this issue should be addressed within the BMP document so as to best protect ecologically sensitive habitats and ecological function on a site by site basis. - (B. Reeves--WDNR)

Option 1. Compliance with BMPs and Environmental Codes of Practice should address this issue. Civil options are available to redress potential disputes. - (D. Cooper--Taylor Shellfish)

General Statement - (E. Hurlburt--WDA)

General statement - (J. Dickison--Squaxin Island Tribe)

General statement. - (Y. Gao--Makah Tribe)

The guidelines should include items 2 and 3. - (K. Kyer--Tahoma Audubon)

The guidelines should include items 2 and 3. (C. Cook--P4PS)

Guidelines should include 2 and 3. Adjacent landowners must approve if private roads are to be used for commercial traffic and parking. - (L. Hendricks--Gig Harbor)

DROP - (W. Willets--Olympia)

### G. Limits on barge and vessel mooring—number, location, duration.

- Guidelines options
  1. *General statement*
  2. *Geoduck vessels should have defined limits for how long they can be moored at a site.*
  3. *No mooring in less than 18' mllw over submerged vegetation*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

Again, general guidelines are helpful to assist local governments to set standards based upon no net loss of ecological functions. Don't know the science behind the 18' mllw proposal. - (B. Harrison--Pacific County)

I support specific limitations described in the guidelines or the BMP document, provided limitations align with other activities already described within the SMP guidelines (i.e. these limitations should not be applicable to only geoduck aquaculture). - (B. Reeves--WDNR)

Option 1. This should be consistent with other mooring requirements. DNR has specific standards for mooring on state aquatic lands. Option 3 is not acceptable because in many cases it would preclude farm management. - (D. Cooper--Taylor Shellfish)

General statement. Temporary anchoring is generally outside the SMA's jurisdiction and is subject to so many variables (weather, substrate, depth contours, etc.) that seem to preclude reasonable restrictions. - (E. Hurlburt--WDA)

General statement - (J. Dickison--Squaxin Island Tribe)

General Statement. - (W. Willets--Olympia)

The guidelines should include item 3 to ensure impacts to submerged vegetation (as identified in the baseline survey) are minimized for farms in Puget Sound. (C. Cook--P4PS)

The guidelines should include item 3 to ensure impacts to submerged vegetation (as identified in the baseline survey) are minimized for farms in Puget Sound. - (K. Kyer--Tahoma Audubon)

Vessels should only be anchored in water on grower's site or state land lease and not for more than 3 days in any consecutive 30 day period. All vessels must be marked with navigation lights. Vessels must not be beached on the tidelands to minimize impacts to submerged vegetation. - (L. Hendricks--Gig Harbor)

Drop it. - (Y. Gao--Makah Tribe)

**Slide 29** has options to address effects from lights used during night operations.

### **Operations**

#### **H. Restrictions on lights**

- Guidelines Options

1. *General statement*
2. *Standards should be established for flood lights, head lamps, and other lighting used for geoduck operations.*
3. *Growers should use light shields, head lamps, and lighting devices that can be directed downward to minimize impacts.*
4. *Local jurisdiction should have a general program limiting impacts from lights in residential areas.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General Statement. - (W. Willets--Olympia)

General statement. - (Y. Gao--Makah Tribe)

General statement - (J. Dickison--Squaxin Island Tribe)

Option 1 with statement that industry will comply with BMPs and minimize potential impacts from light. - (D. Cooper--Taylor Shellfish)

General statement that lights near residential areas should be kept to a minimum and bright lights not be directed towards shore. - (E. Hurlburt--WDA)

Limitation of wattage to what is reasonable to accomplish the task and use of devices that direct lighting downward seems like a practical approach. - (B. Harrison--Pacific County)

Standards should be established for lighting used for geoduck operations, and all other shoreline activities, to minimize impacts to adjacent uses and species that are sensitive to it (such as herring). (C. Cook--P4PS)

I support specific limitations described in the guidelines or the BMP document, provided limitations align with other activities already described within the SMP guidelines (i.e. these limitations should not be applicable to only geoduck aquaculture). - (B. Reeves--WDNR)

Agree with PPS comments: Standards should be established for lighting used for geoduck operations, and all other shoreline activities, to minimize impacts to adjacent uses and species that are sensitive to it (such as herring). - (K. Kyer--Tahoma Audubon)

Night time harvesting activity should not be allowed in residential neighborhoods. Dive harvesting during the day has been a viable alternative according to past documents filed with Pierce County. - (L. Hendricks--Gig Harbor)

**Slide 30** lists options for addressing noise and effects on neighbors.

**Operations**

**I. Restrictions on noise**

▪ Guidelines Options

1. *General statement*
2. *Noise standards should be established for geoduck operations, with emphasis on equipment and workers. Standards might include locational standards.*
3. *Committee should look at noise situations that are comparable, and see what we can learn from those situations.*
4. *State noise standards offer a starting point for discussing noise standards for geoduck operations. Standards may vary depending on whether the area is residential, commercial, or another zone. The current residential noise standard is 55 dBA at 200 yards.*
5. *Growers should monitor their noise levels and report noise levels.*
6. *Local jurisdiction should have a general program limiting impacts from lights*

*in residential areas.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General Statement. - (W. Willets--Olympia)

General statement. - (Y. Gao--Makah Tribe)

General statement - (J. Dickison--Squaxin Island Tribe)

Defer to state standards. Support maintenance of state standards, with recognition that emerging technology may allow for noise levels quieter than state standards (and should where and when practical – and therefore the support of the BMP based farm plan with adaptive management approach). - (B. Harrison--Pacific County)

I support specific limitations described in the guidelines or the BMP document, provided limitations align with other activities already described within the SMP guidelines (i.e. these limitations should not be applicable to only geoduck aquaculture). - (B. Reeves--WDNR)

General Statement about minimizing noise. Set maximum dBA limit on equipment used at night that is consistent with other comparable activities. - (E. Hurlburt--WDA)

Support item 4, also consider need to protect nesting birds from noise impacts. (C. Cook--P4PS)

Agree with PPS comments: Support item 4, also consider need to protect nesting birds from noise impacts. - (K. Kyer--Tahoma Audubon)

No night time harvesting activity. We support #4 for impacts to residents and nesting birds. Noise standards need to take into account that noise travels further over water. - (L. Hendricks--Gig Harbor)

Should be dropped. - (D. Cooper--Taylor Shellfish)

**Slide 31** considers restrictions for when work occurs at a geoduck aquaculture site.

### **Operations**

#### **J. Limits on work on-site (time of day, frequency, weekends)**

##### ▪ Guidelines Options

1. *General statement*
2. *Growers should sit down with adjacent shoreline property owners and seek solutions that meet the growers’ desire to harvest at certain times and the shoreline homeowners’ desire to limit disruptive aquaculture operations.*
3. *On a case-by-case basis, permits could limit hours of operation.*
4. *Criteria should be identified that would trigger a limit operational hours. Evaluation criteria might link to noise levels, light levels, debris volumes, distance from residences, and public access.*
5. *In identified forage fish spawning areas, avoid on-site operations during periods of spawning and incubation*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General Statement. - (W. Willets--Olympia)

General statement. - (Y. Gao--Makah Tribe)

I support item 5, and local governments may also consider establishing limits based on local conditions, adjacent land use. (C. Cook--P4PS)

Support 3 driven by analysis of information gathered in 4. Also support requirement for analysis of factors that would impact 5 and BMPs/standards to implement 5 based upon BAS and analysis of site specific data. - (B. Harrison--Pacific County)

I support specific limitations described in the guidelines or the BMP document, provided limitations align with other activities already described within the SMP guidelines (i.e. these limitations should not be applicable to only geoduck aquaculture). - (B. Reeves--WDNR)

A combination of 1, 2 and 3 that could limit days/hours of operation on weekends of holidays in residential areas. (At some point we should define ‘residential area.’) Number 5 is a different issue. - (E. Hurlburt--WDA)

Work out operations timing with adjacent property owners. - (J. Dickison--Squaxin Island Tribe)

Guidelines should address adjacent property owner concerns, public access, and limiting use conflicts. Local governments may also consider establishing limits based on local conditions, adjacent land use. - (K. Kyer--Tahoma Audubon)

No night time harvesting. Day time harvesting should be limited to the same weekday hours as the current wild geoduck DNR standards that were designed to minimize impacts. Forage fish spawning areas should be avoided, therefore not needing unqualified personnel to determine the impacts on forage fish spawning areas. During the weekend, children are more likely to be present and their safety must be a consideration. - (L. Hendricks--Gig Harbor)

Should be dropped. Industry complies with BMPs and ECOP that sufficiently address these points. Other bullet points are addressed in other requirements. - (D. Cooper--Taylor Shellfish)

**Slide 32** lists options related to debris and litter management.

**Operations**

**K. Requirements for debris management, including patrolling adjacent shorelines.**

▪ Guidelines Options

1. *General statement*
2. *Growers should be required to use and maintain equipment and devices so that they do not break free and drift or move away from the site to become litter.*
3. *Growers should label, brand, or mark their tubes and nets so debris problems can be solved at the source.*
4. *Establish a standard for reducing, managing, and penalizing net, tube, and fastener litter and debris.*



5. *Because rubber bands in the environment are a concern, require alternatives to rubber bands or require growers to use attachments that do not easily break and become litter.*
6. *Growers should recover all litter or debris.*
7. *Standards should not prevent innovation and better ways to eliminate and reduce litter or debris. Standards should describe the required “performance” or outcome (some call this a “performance standard”).*
8. *Local governments should be a “clearinghouse” for litter reporting that includes alerts to growers of the specific location of litter that has been seen.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

I support a general statement in the guidelines that “no materials should escape from the farm. Every effort must be made to ensure that tubes, nets, and fasteners do not wash off the farm area.” Specific provisions relevant to geoduck aquaculture on the issues of spill prevention/response, air/water/sediment pollution, and equipment maintenance should be described in the BMP document. - (B. Reeves--WDNR)

Aquaculture should be responsible for monitoring/clean up of debris. Support general statements in the guidelines in support of achieving 2, 3, 7, & 8. Growers should be responsible for management of their materials. I hope the guidelines will foster innovation and direct adaptive management in this area. - (B. Harrison--Pacific County)

General Statement. No specific language except for picking up litter and being responsible for their litter. - (W. Willets--Olympia)

I support items 2-8. (C. Cook--P4PS)

Options 1, 2, and 6. Option 6 should state “Growers should recover litter and debris to the extent feasible.” Compliance with these options addresses the issue sufficiently. Additionally, the industry has responded to the debris issue and has reduced debris from geoduck farming to minimal levels. Compliance with ECOP and BMPs will further reduce the need for additional requirements or provisions. - (D. Cooper--Taylor Shellfish)

I support items 2-8. - (K. Kyer--Tahoma Audubon)

We agree on 2,3,4,6,7. Rubber bands should not be allowed as they are harmful to marine life. Local governments should not be required to be debris monitors. A performance bond should be required. - (L. Hendricks--Gig Harbor)

Growers should recover all litter or debris. - (Y. Gao--Makah Tribe)

6. Growers should be responsible for debris and litter that they produce. This also creates an incentive for them to minimize litter and to mark their equipment without future rules. - (E. Hurlburt--WDA)

Number 6, and provide a contact number to adjacent property owners to report problems. - (J. Dickison--Squaxin Island Tribe)

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**Slide 33** lists options related to maintaining the geoduck aquaculture site and training workers.

**Operations**

**L. Requirements for site maintenance, worker training**

▪ Guidelines Options

1. *General statement*
2. *Bundle materials for later pick-up and to prevent small items from leaving site.*
3. *Have a sanitation BMP appropriate to the scale of the operation.*
4. *Remove unneeded materials from the beach as soon as possible.*
5. *Train workers about importance of taking care of the nearshore environment while working.*
6. *Other employee training requirements.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General statement - (J. Dickison--Squaxin Island Tribe)

General Statement. - (W. Willets--Olympia)

Option 1 and adherence to Environmental Codes of Practice or BMPs. Options 2 through 6 are adhered to as industry standards. - (D. Cooper--Taylor Shellfish)

Support general statement that includes items 3 and 5. (C. Cook--P4PS)

Support 3, 4, and especially 5 - (B. Harrison--Pacific County)

A general statement about employee education that includes all of the above, as well as minimizing noise, light, disruption, etc.; being friendly, courteous and kind, etc. and minimizing environmental impacts. Most of this should be taken care of by requiring clean up of litter and debris. - (E. Hurlburt--WDA)

Options 2-6 are building toward BMPs. - (K. Kyer--Tahoma Audubon)

Materials should not be stored for more than 24 hours with no storage occurring within shoreline buffer areas. Growers should be responsible for providing adequate sanitation and garbage facilities and identifying those facilities in their site plan. - (L. Hendricks--Gig Harbor)

Remove unneeded materials from the beach as soon as possible. - (Y. Gao--Makah Tribe)

I would like to see a general requirement that the operators must have with them onsite a copy of all permits or approvals issued. - (D. Risvold--Pierce County)

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**Slide 34** addresses pollution from geoduck aquaculture options, including preventing spills of fuel and oil and preventing other types of pollution. Use of pesticides is addressed here under water pollution.

**Operations**

**M. Spill prevention and response requirements**

- Guidelines options
  1. *General statement*
  2. *Require spill prevention and response plan*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

Follow USCG and or DOE rules. Support reference to compliance with USCG and other existing marine spill prevention and planning rules - (B. Harrison--Pacific County)

Specific provisions relevant to geoduck aquaculture on the issues of spill prevention/response, air/water/sediment pollution, and equipment maintenance should be described in the BMP document. - (B. Reeves--WDNR)

Have a spill plan. Note that the Coast Guard has an incentive plan to reduce spills – a \$10,000 fine. - (E. Hurlburt--WDA)

Require spill prevention and response plan. (C. Cook--P4PS)

Require spill prevention and response plan - (J. Dickison--Squaxin Island Tribe)

Require spill prevention and response plan. - (K. Kyer--Tahoma Audubon)

Require spill prevention and response plan. Performance bond should be required. - (L. Hendricks--Gig Harbor)

#2 Require spill prevention and response plan. - (W. Willets--Olympia)

Require spill prevention and response plan. - (Y. Gao--Makah Tribe)

Should be dropped. Compliance with Environmental Codes of Practice, BMPs, and Coast Guard requirements should address this issue. - (D. Cooper--Taylor Shellfish)

**N. Air, water and sediment pollution**

- Guidelines options
  1. *General language*
  2. *Specific requirements*
  3. *Prohibition of spraying of pesticides and herbicides*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General statement. - (W. Willets--Olympia)

A general statement about minimizing all of the above. Pesticide, herbicide, and other chemical use is pure speculation and would require an EPA label for that use (there are none for clams), have a water quality modification permit from WDOE, etc. Also, what is sediment pollution? - (E. Hurlburt--WDA)

General statement, noting additional permitting requirements for certain activities like the use of pesticides - (J. Dickison--Squaxin Island Tribe)

Specific provisions relevant to geoduck aquaculture on the issues of spill prevention/response, air/water/sediment pollution, and equipment maintenance should be described in the BMP document. - (B. Reeves--WDNR)

Specific requirements. - (Y. Gao--Makah Tribe)

The guidelines should prohibit spraying of pesticides and herbicides. (C. Cook--P4PS)

Application of pesticides and herbicides should not be allowed. - (K. Kyer--Tahoma Audubon)

All pesticides and herbicides should be prohibited in the guidelines. - (L. Hendricks--Gig Harbor)

Drop this issue as it represents mission creep at its most extreme. This issue is out of the context of the mission of SARC and is regulated by other statutes and fed and state agencies (i.e. WSDA and EPA). SARC is not the forum for this discussion - (B. Harrison--Pacific County)

Should be dropped. There is no evidence of pollution resulting from geoduck farming activities. - (D. Cooper--Taylor Shellfish)

**Slide 35** deals with equipment maintenance. Some aspects might be covered under a spill prevention plan under issue M above.

**Operations**

**O. Equipment maintenance**

- Guidelines options
  1. *General statement*
  2. *Specific requirements to maintain equipment to prevent air or water pollution or excessive noise.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General statement ok. (C. Cook--P4PS)

Option 1. General statement regarding BMPs and ECOP should address this issue. - (D. Cooper--Taylor Shellfish)

General statement - (J. Dickison--Squaxin Island Tribe)

General statement ok. Are equipment maintenance issues covered elsewhere under the business operations? - (K. Kyer--Tahoma Audubon)

General Statement. - (W. Willets--Olympia)

General statement. - (Y. Gao--Makah Tribe)

Specific provisions relevant to geoduck aquaculture on the issues of spill prevention/response, air/water/sediment pollution, and equipment maintenance should be described in the BMP document. - (B. Reeves--WDNR)

Annual maintenance records should be required. - (L. Hendricks--Gig Harbor)

Drop. How do you define and then regulate maintenance? Beyond that, if the equipment is operated consistent with preventing noise, air/water pollution, etc. what would be the public interest in how well it runs? - (E. Hurlburt--WDA)

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**Slide 36** lists options for local jurisdictions to require geoduck aquaculture operations to keep records and make reports to the local jurisdiction.

### **Operations**

#### **P. Required recordkeeping and reporting**

- Guidelines Options
  1. *General Statement*
  2. *Specific requirements*
    - *Planting events*
    - *Placing and removing predator exclusion devices*
    - *Harvesting*
    - *Site inspections, debris collection*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General statement ok. (C. Cook--P4PS)

General statement. - (Y. Gao--Makah Tribe)

General statement. It would be prudent for any business to document such things. The questions are if this should be mandatory, subject to public inspection, etc.? - (E. Hurlburt--WDA)

General statement ok. - (K. Kyer--Tahoma Audubon)

I support a general record keeping requirement within the guidelines that speaks to the need to document planting events, placing and removing predator exclusion devices, harvesting, site inspections, and debris collection. - (B. Reeves--WDNR)

Require growers to keep detailed planting/harvesting records Support - (B. Harrison--Pacific County)

Tube and net inventory should be tracked to insure debris control. Geoduck planting and harvesting records should be required. - (L. Hendricks--Gig Harbor)

Should be dropped or Option 1. Local jurisdictions will not be able to enforce as these activities take place at all times throughout the year and are dependent upon farming needs and good husbandry. This can be addressed in initial notification to adjacent property owners of potential

activities that may occur and the general timeframes necessary to accomplish those activities. - (D. Cooper--Taylor Shellfish)

Drop - (W. Willets--Olympia)

Drop - (J. Dickison--Squaxin Island Tribe)

**Slide 37** lists options related to monitoring, performance measures and adaptive management.

### **Operations**

#### **Q. Monitoring, Performance Measures, Adaptive Management**

- Guidelines Options

1. *General Statement*

2. *Specific performance measures, monitoring and process for taking corrective actions.*

**“Do you think we should drop this issue, modify this issue, pick one of the listed options or pick a new option?”**

General statement. - (W. Willets--Olympia)

General statement. - (Y. Gao--Makah Tribe)

Option 1. See attached language on adaptive management in industry proposed guidelines. “In light of the ongoing scientific research related to geoduck farming, geoduck proposals or farm plans shall include a monitoring and adaptive management program that provides a method for incorporating results of ongoing scientific studies into farm management practices.” - (D. Cooper--Taylor Shellfish)

General statement. Consider adaptive management on an industry-wide basis rather than each individual operation. - (J. Dickison--Squaxin Island Tribe)

General support for integrating monitoring and adaptive management into local permits - (B. Harrison--Pacific County)

I support integration of monitoring and adaptive management into the local permitting process and I believe that a formal adaptive management framework should be part in the guidelines for geoduck aquaculture. - (B. Reeves--WDNR)

Support item 2, include standards for baseline survey that allow for monitoring over time. (C. Cook--P4PS)

I would like DOE to provide a list of baseline study items, along with a qualifying statement re: “Further baseline studies, sampling, etc. may be required at the discretion of the local jurisdiction depending upon the nature of the proposal and adequacy of available information” (or similar words). The Whatcom County SMP has a pretty comprehensive list of baseline study items that could be used for our purposes. - (D. Risvold--Pierce County)

I’m not sure what sort of performance measures could be provided other than general cautions referencing “baseline environmental conditions”. Again, perhaps Sea Grant studies will

demonstrate the degree to which baseline conditions may be exceeded. - (D. Risvold--Pierce County)

Support item 2, include standards for baseline survey that allow for monitoring over time. - (K. Kyer--Tahoma Audubon)

Adaptive management cannot take place without baseline information, monitoring and enforcement. There is not adequate independent baseline information available at this time on small scale or large scale impacts of the proposed expansion. At this time, there is no entity that has the budget for monitoring or enforcement. - (L. Hendricks--Gig Harbor)

What does this mean? - (E. Hurlburt--WDA)

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**Slide 38** introduces the third major topic related to how local shoreline programs address geoduck aquaculture application and approval processes. The bullets on the slide attempt to list the characteristics you might want in an application and approval process. Some options are presented in later slides. Note that the questions posed to the Committee for these slides are different than in the prior topic.

**Section III--Required approvals and application process**

- Elements of a local site-specific approval process:
  - Document local/state approval of a geoduck aquaculture operation under SMA
  - Provide for public and adjacent landowner notice
  - Allow for enforcement of local SMP requirements
  - Allow adaptive management
  - Ensure compliance with other required approvals
  - Provide for bonding

**“Do you think these are the appropriate elements of a local application and approval process? Should elements be added or taken off this list?”**

Add: ensure compliance with growth management act regarding ensuring no net loss of eelgrass and kelp beds, fish and wildlife habitat areas. Special emphasis on maintaining Puget Sound health. (C. Cook--P4PS)

Provide for public and adjacent landowner notice at time of permit application - (B. Harrison--Pacific County)

Allow for enforcement of local SMP requirements by local governments - (B. Harrison--Pacific County)

Allow adaptive management Not only allow, but encourage/require where/when reasonable - (B. Harrison--Pacific County)

Ensure compliance with other required approvals - (B. Harrison--Pacific County)

Provide for bonding Limit to refundable performance bond equal to cost of removal of tubes/nets and site restoration - (B. Harrison--Pacific County)

I support all of the above. - (B. Reeves--WDNR)

See attached industry proposed guidelines which address most of the above points. Compliance with other approvals is currently required. - (D. Cooper--Taylor Shellfish)

These should be consistent with other activities. Bullet by bullet: - (E. Hurlburt--WDA)

Document local/state approval of a geoduck aquaculture operation under SMA.-- I'm not sure how you document approval under SMA when making application for SMA approval. - (E. Hurlburt--WDA)

Provide for public and adjacent landowner notice -- Yes. The lack of notification has created problems when a farm is moving into a new area. - (E. Hurlburt--WDA)

Allow for enforcement of local SMP requirements -- Doesn't any approval automatically allow enforcement of its provisions? - (E. Hurlburt--WDA)

Allow adaptive management -- Yes. We've agreed (I think) that permitted activities may be eased or restricted based on the outcome of Sea Grant and other studies and experience. - (E. Hurlburt--WDA)

Ensure compliance with other required approvals -- My understanding is that a permit under the SMA would be the final approval so all other state or federal permits would be obtained in advance. This is different that ensuring compliance which is the responsibility of the issuing agency. - (E. Hurlburt--WDA)

Provide for bonding -- Bonding is usually insurance in case something adverse happens and the amount is assessed accordingly. What is the bonding for? - (E. Hurlburt--WDA)

Tone it down. For example, local governments should not be tasked with ensuring compliance with other required approvals. - (J. Dickison--Squaxin Island Tribe)

Support PPS comments: Add: ensure compliance with growth management act regarding ensuring no net loss of eelgrass and kelp beds, fish and wildlife habitat areas. Special emphasis on maintaining Puget Sound health. - (K. Kyer--Tahoma Audubon)

Ecology must enforce the no net loss of ecological function as the Corp of Engineers will only look at this issue on a national basis. Local jurisdictions have already stated during this committee process that they do not have the resources for baseline studies, monitoring or enforcement which is required for adaptive management. - (L. Hendricks--Gig Harbor)

General statement. Private land owners can require bonding if they want but why counties? - (W. Willets--Olympia)

The last two elements should be taken off. - (Y. Gao--Makah Tribe)

**Slide 39** lists options for notification requirements during the application process.

#### **Approval Process Notifications**

- SARC discussed notification options:
  1. *If no shoreline permit is required, then notification of exemption.*
  2. *Initial responsibility for notification should be on local government.*
  3. *Ongoing work/operations have different notification needs.*
  4. *Fact sheet should list activities and timelines.*



5. Clarify who initial notification should go to:
  - a. Adjacent property owners
  - b. Property owners within 300 feet
6. Record aquaculture permit so future landowners are aware

**“Is this list appropriate? Is something missing or are some of the numbered items unnecessary? Is more detail needed?”**

Ok with list. (C. Cook--P4PS)

Ongoing work/operations have different notification needs, if any. General agreement with above - (B. Harrison--Pacific County)

See attached industry proposed guidelines which address most of the above points. - (D. Cooper--Taylor Shellfish)

This is #24 revisited. Let’s follow the notification procedure for other shoreline activities and not create a new process. Notification is for the creation of the farm, not for each activity. If no Shoreline permit is required, does the county have authority to require notification? - (E. Hurlburt--WDA)

Change 5b to 1000 feet. - (K. Kyer--Tahoma Audubon)

The grower along with the local jurisdiction should be responsible to notify landowners within 1,000 ft of the site the timeline of the major phases of the operation. - (L. Hendricks--Gig Harbor)

Sounds fine to me. - (Y. Gao--Makah Tribe)

Whatever - (J. Dickison--Squaxin Island Tribe)

Drop. - (W. Willets--Olympia)

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**Slide 40** lists information that could be required during the application for local approval. These requirements may be in addition to the normal process for the local approval process.

**Application**

- Site information—ownership, boundaries, physical and biological characterization, surrounding uses, historic public access, etc.
- “Farm Plan”, including information on seed, predator exclusion, access, planting and harvest cycle, types and duration of predator exclusion devices, etc.

**“Do these statements cover the information appropriate to the application process? Is some of this unnecessary or is important information missing?”**

For new geoduck or expansion of existing footprint, require a baseline survey of all fish and wildlife critical areas (including, but not limited to: kelp and eelgrass, salmon, forage fish, marine birds). Application should clearly specify what actions will take place, potential impacts to natural habitats and wild species, and mitigation to ensure no net loss. (C. Cook--P4PS)

I support development of a BMP based “farm management plan” for local government and public review and comment. However, the process should not be designed to be so cumbersome as to allow dissatisfied public members to tie projects up in unending process review. Local governments should be directed to establish thresholds for what Geoduck activities do not require an application, versus those that require an exemption, a SSDP, a conditional use and/or a variance. Each County SMP should determine its own thresholds, however, guidance from the state re what factors should be considered in setting these thresholds would be helpful. - (B. Harrison--Pacific County)

I support the concept of requiring applicants proposing Geoduck operations (above a certain threshold) to provide an assessment of ecological functions on sites proposed for Geoduck aquaculture, and full disclosure of seed characteristics, planting density and timing, site preparation methods, predator exclusion methods, access plans, ongoing maintenance plans, and harvest timing and methods. - (B. Harrison--Pacific County)

As mentioned previously in the General Guideline Development section, I support the use of a BMP / Adaptive Management Approach to managing geoduck aquaculture. I believe that local jurisdictions should specify what information they need to make a decision on whether to permit or exempt. So, defer to local SMP's. - (B. Reeves--WDNR)

Site information is appropriate for notification to local jurisdictions. Farm planning should not be construed as prescriptive requirements. It should be considered in a general sense only because farming needs may change over time and the grower needs flexibility to respond to those changes. These changes may be a result of market fluctuations, external environmental pressures, or technical improvements. - (D. Cooper--Taylor Shellfish)

The application should provide a very detailed description of the proposed activity. Comments such as “oyster and manila clams may also be harvested” are not acceptable. - (D. Risvold--Pierce County)

Again, be consistent with what is required for other applications. Beyond that we have specifically discussed identifying critical habitats as defined by WDFW, the SMP, WDOE or others; surveying the site for attached algae; etc. Then a draft farm plan (draft because it is likely to be modified during the permit process). Final approval would require proof that other agencies with jurisdiction have also approved the project. - (E. Hurlburt--WDA)

Agree with PPS comments: For new geoduck or expansion of existing footprint, require a baseline survey of all fish and wildlife critical areas (including, but not limited to: kelp and eelgrass, salmon, forage fish, marine birds). Application should clearly specify what actions will take place, potential impacts to natural habitats and wild species, and mitigation to ensure no net loss. - (K. Kyer--Tahoma Audubon)

All geoduck operations or the increase of an existing farm must submit a baseline survey of all fish and wildlife essential information including but not limited to: marine vegetation, salmon, forage fish, marine birds, native beach life. A detailed plan must be included. A professional survey must also be included in the application. - (L. Hendricks--Gig Harbor)

Okay. - (Y. Gao--Makah Tribe)

Excessive - (J. Dickison--Squaxin Island Tribe)

Too Restrictive. - (W. Willets--Olympia)

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**Slide 41** lists the approval options discussed in the following slides.

**Approval Options**

- A. Shoreline Substantial Development Permit
  - B. Conditional Use Permit
  - C. Exemption statement
  - D. Enforcement on a complaint basis
  - E. Document other approvals
  - F. Posting a Bond
- 

**Slide 42** looks at the option of using a Shoreline Substantial Development Permit (SDP) as the local approval process. The slide notes that the Attorney General Opinion addressing this issue says that a SDP may not always be required.

**Approval Options**

**A. Shoreline Substantial Development Permit**

- Guidelines Options
  1. *Call for SDPs in all cases*
  - Case-by-case factors that trigger a SDP*
- Note that the AGO says it depends on site-specific conditions.

**“When should Substantial Development Permits be required?”**

Shoreline Development Permits should be required for all geoduck operations. The AG point was only an opinion, is not binding and did not include the opportunity for citizens to provide relevant science or documentation. - (L. Hendricks--Gig Harbor)

The AGO offers the conditional use permit as an option, and suggests it be considered as part of SMP updates. For Puget Sound, either an SDP or conditional use permit should be required for new geoduck operations or expansion of existing operations beyond existing footprints. Replanting of same crop may not need new permit, so long as in existing footprint. Change of crop should require new review. (C. Cook--P4PS)

Agree with PPS comments: The AGO offers the condition use permit as an option, and suggests it be considered as part of SMP updates. For Puget Sound, either an SDP or conditional use permit should be required for new geoduck operations or expansion of existing operations beyond existing footprints. Replanting of same crop may not need new permit, so long as in existing footprint. Change of crop should require new review. - (K. Kyer--Tahoma Audubon)

This should be determined by the local government/County SMP. Each county should develop standards for the scale/type of Geoduck activities that trigger no permit, an exemption, a SSDP, a CUP, or a variance. DOE guidance as to the process by which local governments establish these categories of permit review would be helpful. - (B. Harrison--Pacific County)

As outlined in the AGO, shoreline substantial development permits shall be required when operations substantially interfere with normal public use of the surface of state waters. Other provisions may apply. - (D. Cooper--Taylor Shellfish)

My only comment pertains to the need to obtain a Substantial Development (SD) permit. I tend to err on the side of regulatory flexibility and, as such, hesitate to say that a SD application should be required without exception. However, having said that, it seems unlikely that one could propose any aquaculture operation and not be required to apply for a SD. The fair market value trigger is pretty low. - (D. Risvold--Pierce County)

When there is a substantial development – large fixed structures, activity adversely affecting critical habitats, etc. - (E. Hurlburt--WDA)

Go with the AGO - (J. Dickison--Squaxin Island Tribe)

AGO - (W. Willets--Olympia)

Follow guidelines options. - (Y. Gao--Makah Tribe)

Defer to local SMP's - (B. Reeves--WDNR)

**Slide 43** considers the option of requiring conditional use permits for geoduck aquaculture. Under the Shoreline Management Act, conditional use permits must be approved by Ecology. The slide notes that the current Ecology guidelines say that development in critical saltwater habitat should be treated as a conditional use.

#### **Approval Options**

##### **B. Conditional Use Permit**

- Local jurisdictions are required to have a conditional use permit program
- Uses that are not subject to a substantial development permit may be required to get conditional use approvals in some environments or critical areas.

1. *Development in designated critical saltwater habitat is a conditional use—but Geoduck Aquaculture isn't always development*

#### **“When should conditional use permits be required for geoduck aquaculture?”**

Because the state wants to recover Puget Sound by 2020, then the SMP guidelines should ensure new or expanded geoduck farms do not harm Puget Sound water quality or fish and wildlife and their habitat. If local governments clearly designate ahead of time in their SMP updates specifically which shorelines are suitable for geoduck farming from both an environmental protection and land use compatibility standpoint, and the SMP provides clear standards to ensure that environmental impacts will be minimized and mitigated, and DOE approves the SMP update, then perhaps requiring SDPs will be sufficient. If alternatively, local government SMPs choose to allow geoduck farming on every shoreline, and then determine the suitability of specific shorelines in terms of environmental impacts on a case by case basis, then a conditional use permit should be required. (C. Cook--P4PS)

Agree with PPS comments: Because the state wants to recover Puget Sound by 2020, then the SMP guidelines should ensure new or expanded geoduck farms do not harm Puget Sound water quality or fish and wildlife and their habitat. If local governments clearly designate ahead of time in their SMP updates specifically which shorelines are suitable for geoduck farming from both an environmental protection and land use compatibility standpoint, and the SMP provides clear standards to ensure that environmental impacts will be minimized and mitigated, and DOE

approves the SMP update, then perhaps requiring SDPs will be sufficient. If alternatively, local government SMPs choose to allow geoduck farming on every shoreline, and then determine the suitability of specific shorelines in terms of environmental impacts on a case by case basis, then a conditional use permit should be required. - (K. Kyer--Tahoma Audubon)

Ecology should be involved in assuring no net loss whether it is with a shoreline development permit or a conditional use permit. - (L. Hendricks--Gig Harbor)

This should be determined by the local government/County SMP. Each county should develop standards for the scale/type of Geoduck activities that trigger no permit, an exemption, a SSDP, a CUP, or a variance. DOE guidance as to the process by which local governments establish these categories of permit review would be helpful. - (B. Harrison--Pacific County)

Defer to local SMP's - (B. Reeves--WDNR)

Conditional Use permits should not be required for aquaculture as it is currently practiced. Sufficient oversight currently exists within the Shoreline Management Act, Army Corps of Engineers (ESA and MSA review), State Environmental Policy Act, and Departments of Health and Fish Wildlife requirements. - (D. Cooper--Taylor Shellfish)

If I understand this, a geoduck farm that avoids or has not adverse impact on critical habitats and spawning areas would not be subject to a critical use permit. - (E. Hurlburt--WDA)

Whenever all other uses under SMA jurisdiction within 1 mile of the site have been required to obtain Conditional use permits. - (J. Dickison--Squaxin Island Tribe)

Only when bulkheads, docks or pilings are planned to be put in. - (W. Willets--Olympia)

Local jurisdictions are required to have a conditional use permit program. - (Y. Gao--Makah Tribe)

**Slide 44** considers the option of having local jurisdictions review and approve geoduck aquaculture operations by determining they are exempt from a Shoreline Substantial Development Permit. Uses of the shoreline have to be consistent with the requirements of the local shoreline master program regardless of whether a Substantial Development Permit is required. Some jurisdictions have procedures to issue an approval that a use is consistent with the local master program.

#### **Approval Options**

##### **C. Approval as Exempt**

###### ▪ Guidelines Options

1. *Local jurisdiction issues a finding that a substantial development permit is not required and the use is consistent with the SMP provided the requirements in the SMP are followed.*
2. *Local jurisdiction issues a finding that a permit is not required provided a list of site-specific requirements are met. Could include a specific duration for the approval.*

**“Should this approach be used for geoduck aquaculture and, if so, how detailed should the approval be?”**

Support the above - (B. Harrison--Pacific County)

Defer to local SMP's. However, I support a process that requires local jurisdictions to 1) issue a finding that a substantial development permit is not required and the use is consistent with the SMP provided the requirements in the SMP are followed, or 2) issue a finding that a permit is not required provided a list of site specific requirements are met (and specific duration for the approval). - (B. Reeves--WDNR)

Either option is acceptable provided specific requirements do not preclude flexibility in farming and/or unduly restrict the activity. See attached industry proposal for guidelines on approval duration. - (D. Cooper--Taylor Shellfish)

This seems appropriate if the guidelines preclude activities that trigger the Substantial Development Permit. If critical habitats are avoided, harvest methods have minimal impact, neighborhood and public concerns are addressed through notification, public meetings, etc., then this looks like the best option. This would be particularly true if the use of pipes and nets were replaced by more benign methods. Then the SDP would be triggered by activities that went beyond those allowed by the guidelines, such as building permanent structures, grading with mechanical equipment, etc. - (E. Hurlburt--WDA)

Works for me - (J. Dickison--Squaxin Island Tribe)

Little detail. - (W. Willets--Olympia)

Okay. - (Y. Gao--Makah Tribe)

If SMPs allow geoduck farming to take place in nearshore critical areas (forage fish spawning areas, salmon migration and rearing areas, Puget Sound kelp and eelgrass beds) then the local review and approval must include compliance with critical areas regulations. That means provide a baseline survey indicating known locations of those areas, determine potential impacts to those areas, and require mitigation where needed. Can that all be effectively achieved with a shoreline exemption? If not, then some other permit mechanism is needed. (C. Cook--P4PS)

Agree with PPS comments: If SMPs allow geoduck farming to take place in nearshore critical areas (forage fish spawning areas, salmon migration and rearing areas, Puget Sound kelp and eelgrass beds) then the local review and approval must include compliance with critical areas regulations. That means provide a baseline survey indicating known locations of those areas, determine potential impacts to those areas, and require mitigation where needed. Can that all be effectively achieved with a shoreline exemption? If not, then some other permit mechanism is needed. - (K. Kyer--Tahoma Audubon)

All geoduck operations should require a permit. Puget Sound is a fluid environment and there are no walls between those counties that protect their shorelines and those who are not heeding the advice of the scientists who attended the SeaGrant Symposium regarding scale and cumulative impacts. Critical area regulations must be enforced to assure no net loss. - (L. Hendricks--Gig Harbor)

**Slide 45** addresses the situation where the local jurisdiction would not approve a geoduck aquaculture operation when it is established but would require the operation to comply with provisions of the local shoreline master program if the jurisdiction receives a complaint. This is how uses that don't require a SDP (or fail to apply for one) are often addressed now.

### Approval Options

#### D. Enforcement on a complaint basis

- Guidelines Options

1. *If a complaint is filed, the local jurisdiction contacts the grower to ensure that the Shoreline Master Program requirements are followed.*

### **“Should this approach be used for geoduck aquaculture?”**

This option is unacceptable in terms of environmental protection. Local governments need to make sure that nearshore critical areas (Puget Sound kelp and eelgrass beds, forage fish spawning areas, salmon migration and rearing areas) are being protected prior to allowing new activities. To establish only a complaint driven approach to protecting critical areas protection is inconsistent with the GMA as well as the state's goal to recover Puget Sound by 2020. (C. Cook--P4PS)

Strictly complaint driven enforcement leads to unequal treatment - (B. Harrison--Pacific County)

Should be dropped. - (D. Cooper--Taylor Shellfish)

We're past this option. The issue is too hot and too risky for the farmer who could invest significant capital and time and then be prevented from harvesting. It also discourages public notice and discourse prior to establishing the farm. Also, this may be the only mechanism for knowing how many farms there are and where they are. - (E. Hurlburt--WDA)

NO - (J. Dickison--Squaxin Island Tribe)

Agree with PPS comments: This option is unacceptable in terms of environmental protection. Local governments need to make sure that nearshore critical areas (Puget Sound kelp and eelgrass beds, forage fish spawning areas, salmon migration and rearing areas) are being protected prior to allowing new activities. To establish only a complaint driven approach to protecting critical areas protection is inconsistent with the GMA as well as the state's goal to recover Puget Sound by 2020. - (K. Kyer--Tahoma Audubon)

This option is unacceptable in regards to protections for adjacent shoreline owners and the environment. - (L. Hendricks--Gig Harbor)

NO - (W. Willets--Olympia)

Add 2.) periodic or random monitoring to include site visits by enforcement officers during different phases of operations. - (K. Kyer--Tahoma Audubon)

Defer to local SMP's - (B. Reeves--WDNR)

**Slide 46** is not a separate local approval process but addresses whether the local jurisdiction should require a geoduck aquaculture operation to obtain other legally required approvals and whether the grower should provide documentation to the local jurisdiction.

### Approval Options

#### E. Require documentation of other approvals

- Guideline options
  1. *General statement*
  2. *Require grower to document and maintain certification by Health for shellfish sanitation*
  3. *Require grower to document having a valid Corps permit*

**“Should local jurisdictions require that growers have other required approvals and, if so, what documentation should be required? Are there other approvals that should be added to this list?”**

I believe that many local permits do require demonstration of compliance with other state/fed agencies. Doesn't hurt to add language to this effect - (B. Harrison--Pacific County)

By all means add language to the guidelines that requires compliance with other state and federal agencies. - (B. Reeves--WDNR)

As stated above, my understanding from other Shorelines activities is that the Shoreline approval is the last approval issued. It permits, licenses or other approvals are required by WDFW, DOH, DNR, ACOE, etc., these must be obtained before the Shorelines permit becomes valid. This can be a problem in coordinating the different agency approvals, but at least there is one agency that confirms that they have all been obtained if they are pertinent to the Shoreline approval. Once the SMA approval is issued though, it is the individual agencies that enforce their permits, not the county of WDOE. - (E. Hurlburt--WDA)

The local jurisdiction should require documentation that all other required approvals have been met. In no way should this relieve the local jurisdiction from performing its duties to protect critical areas under the GMA and the SMA. - (L. Hendricks--Gig Harbor)

Local jurisdictions should monitor Health certification status and should be required to undertake effective enforcement action against adjacent property owners whenever an exceedance of water quality standards is measured. - (J. Dickison--Squaxin Island Tribe)

Require grower to document and maintain certification by Health for shellfish sanitation. - (Y. Gao--Makah Tribe)

It should be up to the local government whether it requires other approvals. However, the local government should not rely on other agencies to perform its obligation to provide critical areas protections under the GMA and SMA. (C. Cook--P4PS)

Agree with PPS comments: It should be up to the local government whether it requires other approvals. However, the local government should not rely on other agencies to perform its obligation to provide critical areas protections under the GMA and SMA. - (K. Kyer--Tahoma Audubon)



The question of what other approvals should be added to the list is inappropriate. These requirements are established by the agency consistent with their rules and regulations, not by WDOE. If we think that another agency should have a permitting role, such as WDFW having greater authority over the planting of geoducks to prevent possible disease and genetic concerns, then we should make that a recommendation to the legislature after consultation with the agencies. - (E. Hurlburt--WDA)

Should be dropped. - (D. Cooper--Taylor Shellfish)

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**Slide 47** covers the issue of whether local jurisdictions should require growers to post bonds.

### **Approval Options**

#### **F. Require the posting of a Bond**

##### ▪ Guidelines Options

1. *Legally define when and how bond is called.*
2. *Define activities that would be covered under a bond.*

*Note that State lands have specific leasing section that references bonds.*

### **“When should bonds be required?”**

A bond should be posted that not only can be used for debris collection, but also environmental damage assessed from the baseline study information. - (L. Hendricks--Gig Harbor)

If bonds are required, I would suggest limiting them to a refundable performance bond, tied to the cost of predator exclusion device removal/debris removal, restoration, etc. - (B. Harrison--Pacific County)

Defer to local SMP's. When state owned aquatic lands are involved, defer to DNR on bonding issues to avoid duplication. - (B. Reeves--WDNR)

No opinion. (C. Cook--P4PS)

Should be dropped. - (D. Cooper--Taylor Shellfish)

As stated on #38, what is the bond for? DNR has bonding requirements because they are the landlord and the farmer is a tenant and the bond is like a damage deposit to cover cleanup and other charges. Most of these farms will be on private land and bonding for the same reason would be absurd. A bond for cleanup of farm-related litter from adjacent beaches might be appropriate, but how would the amount be calculated, where would it apply and is it the best way to achieve the objective? - (E. Hurlburt--WDA)

For every shoreline property owner. - (J. Dickison--Squaxin Island Tribe)

Include bonds as options in the guidelines. - (K. Kyer--Tahoma Audubon)

To be decided between private land owner and grower. - (W. Willets--Olympia)

Define activities that would be covered under a bond. - (Y. Gao--Makah Tribe)

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**Slide 48** lists some other ways Ecology could amend the existing guidelines to better address geoduck aquaculture. Number 1, definitions, is something Ecology will need to address in the rule process. Number 2 was discussed by the Committee at prior meetings. The current guidelines don't call for local jurisdictions to make periodic reports. Item 3 is just another way to put conditions relating to predator exclusion devices and growing pools into the state guidelines. The existing section on shoreline modifications has detailed advice on things like docks and bulkheads.

#### **IV--Other Guidelines Issues**

Ecology could consider other changes to the existing guidelines for local shoreline master programs related to geoduck aquaculture:

1. *Definitions of terms related to aquaculture*
2. *Requirements for local jurisdictions to maintain information on geoduck aquaculture, provide reports to the public covering locations, acreages, monitoring results, litter statistics, ??*
3. *Adding predator exclusion devices and holding pools to the Shoreline Modifications section of the guidelines.*

#### **“What recommendations should the Committee give to Ecology on these issues?”**

Support all 3 options. For number 2, information should be maintained by state, and available upon request from the public for all public and private property. Local jurisdictions could report this to a state agency that is then responsible for compiling and tracking the information – Puget Sound Partnership?? - (K. Kyer--Tahoma Audubon)

I support incorporation of item 1 and 3. (C. Cook--P4PS)

Not enough info here to evaluate #1. I think SARC needs to spend time on specific definitions if this is the direction we chose. Definitions are too important to respond to this general statement (could be a big deal or a little deal depending on the scope of the definitions). Defer to growers and property owners re 2. I am concerned about 3. What is the point if these issues are addressed in BMPs/adaptive management etc.? Feels like mission creep again. Shoreline modifications are generally more permanent and/or have a greater impact than an 18 month net placement. - (B. Harrison--Pacific County)

I would avoid defining terms because we already have too many conflicting definitions to deal with. As for 2 and 3, defer to local SMP's. - (B. Reeves--WDNR)

Other Comments: The shellfish industry has proposed shoreline guidelines that we believe adequately address geoduck aquaculture and allow for new science and technology to be incorporated in to master programs. It is our recommendation that we provide a technical document that helps local governments understand new practices and current scientific understanding. This technical document can be updated as needed. - (D. Cooper--Taylor Shellfish)

Have we discussed guidelines? Guidelines should resemble DNR's BMPs, have procedures for notification and consultation with agencies, etc. Data collection and reporting in 2. isn't part of guidelines. - (E. Hurlburt--WDA)

Aquaculture terms need to be very specific in terms of species grown, equipment used and new innovative methods or practices. While innovative practices may produce greater profits for the operator, they may be more destructive to the native species. Changing species can be very important to the ecology of a site depending on the specific species characteristics. - (L. Hendricks--Gig Harbor)

Local jurisdictions can only evaluate the social and environmental considerations for their own area. Only Ecology has the authority to provide guidelines that protects the ecological system that runs like a common thread throughout Puget Sound. - (L. Hendricks--Gig Harbor)

Washington Fish and Wildlife should have a greater role as a consultant that provides information and their expertise. It does not make sense that this agency has no authority in the aquaculture decisions, especially when it seems that a hydraulic permit should be required for this activity as it fits the definition. - (L. Hendricks--Gig Harbor)

As far as adjacent landowners, I still do not feel we have addressed the issue of aquaculture encroaching on residential neighborhoods with industrial operations. It is one thing to have oysters or clams distributed naturally on tidelands as was the practice when the Shoreline Management Act was written. It is another issue to say that industrial operations that now involve tubes, nets, rebar, liquefying the substrate and geoduck seed pools were part of the vision to be moving into residential areas and displacing the native species that lived there. - (L. Hendricks--Gig Harbor)

Definitions of terms specifically related to geoduck aquaculture. - (Y. Gao--Makah Tribe)

### **Other Comments:**

Have we defined a geoduck farm? What if a property owner wants to plant some geoducks on his beach for his recreational use? Are 5 acres a farm and 1/10 acre a garden? - (E. Hurlburt--WDA)

We are still requesting a report that shows the locations by parcel number of all geoduck operations and other aquaculture sites in Puget Sound. There is no way that density, scale and cumulative impacts can be addressed without this information. No new geoduck operations should be approved and existing geoduck operations should halt re-planting until this information is received, reviewed and integrated into a comprehensive aquaculture plan. Ecology along with local jurisdictions and stakeholders need to determine where aquaculture sites are in the best interest of Puget Sound, not just continue to allow industry to state where they want to expand. - (L. Hendricks--Gig Harbor)

I would ask SARC to consider establishing guidelines that respect the existing standards (and preferred use status) pertaining to aquaculture, the existing state and local partnership and structure that has been developed over several decades, and the goals and principles of the "new" SMP guidelines that are yet to be implemented in most counties. These guidelines are based upon counties completing an inventory of existing resources and developing standards based upon no net loss of ecological functions. As we stray out of that context, we risk confusion and

contradiction. No net loss is best determined on a case by case basis, with respect for cumulative impacts that extend beyond property lines. I support BMPS based upon BAS, applied within a comprehensive “farm plan” approach to permitting, with a commitment to research and a willingness to adapt to changing conditions, science and technology. - (B. Harrison--Pacific County)

Zoning for aquaculture activities is problematic - (J. Dickison--Squaxin Island Tribe)