

**SHORELINES HEARINGS BOARD  
STATE OF WASHINGTON**

COALITION TO PROTECT PUGET  
SOUND HABITAT,

Petitioner,

v.

PIERCE COUNTY, TAYLOR SHELLFISH,  
and SEATTLE SHELLFISH,

Respondents.

SHB No. 14-024

FINDINGS OF FACT, CONCLUSIONS OF  
LAW AND ORDER

Petitioner Coalition to Protect Puget Sound Habitat (Coalition) challenges Pierce County's approval of a shoreline substantial development permit (SSDP) for a geoduck farm in Pierce County. The Shorelines Hearings Board (Board) conducted a hearing on this appeal in Tumwater, Washington on March 2 through 5, 2015. The parties submitted written closing statements following the conclusion of the hearing.

The Board was comprised of Kay M. Brown, Presiding, Chair Joan M. Marchioro, and Members Thomas C. Morrill, Jennifer Gregerson, and Lily Smith.<sup>1</sup> Spokesperson Laura Hendricks represented the Coalition. Attorneys Samuel D. Plauche and Jesse De Nike represented Respondents Taylor Shellfish and Seattle Shellfish (Shellfish Companies). Attorney Cort O'Connor represented Pierce County. Based upon the evidence presented, the Board makes the following:

<sup>1</sup> The Board was unable to obtain a Shorelines Board county representative member that was both available to participate in this hearing and did not have to recuse due to conflicts. Therefore, this matter was heard by a five-member board.

1 **FINDINGS OF FACT**

2 A. The Haley Farm and farming practices

3 1.

4 On March 8, 2013, the Shellfish Companies submitted a Joint Aquatic Resources Permit  
5 Application (JARPA) for an 11-acre commercial geoduck farm on private tidelands located on  
6 the east shoreline of Case Inlet. The proposed new farm, called the Haley Farm, will be in the  
7 intertidal zone. The Haley Farm is located in the Rural Residential Environment under the  
8 Pierce County Shoreline Master Program (SMP), and is within the Key Peninsula Community  
9 Plan area. The proposed Farm is not located on a shoreline of statewide significance. Cooper  
10 Testimony, Booth Testimony, Exs. R-1, R-2, R-3, R-9, P-148.

11 2.

12 The Haley Farm consists of three parcels, two of which are owned by the Haley Beach  
13 Property Trust, and leased by the Shellfish Companies. The third parcel is owned by the  
14 Shellfish Companies. The Haley family owns over 50 acres of the abutting uplands, which are  
15 heavily forested and undeveloped except for one single-family residence. Washington State  
16 Parks owns upwards of 200 acres of tideland and uplands abutting to the north, northeast, and  
17 further east of the site, but the property is not currently a developed park. Excluding the Haley  
18 property, the closest residence abutting the shoreline is 2,000 feet away. Cooper Testimony,  
19 Exs. R-2, R-9, R-12, p. 5, P-148, p. 11.

1 3.

2 The beach at the Haley Farm site is gradually sloping. The lower portion is sandy and  
3 muddy while the upper portion is rockier. Shells exist throughout the beach. The uppermost  
4 portion of the beach is abutted by a medium to high bluff. The distance (fetch) from the site to  
5 the closest point on the opposite shoreline is over two miles. No eel grass, kelp, or rooted  
6 aquatic vegetation have been identified on the site. The beach does contain large numbers of  
7 sand dollars. Phipps Testimony, Cooper Testimony, Exs. P-148, p. 11, R-13, p. 26, R-24.

8 4.

9 The Haley Farm site is well-suited for geoduck aquaculture. It has the required substrate  
10 and beach topography. It also has clean water with limited pollution sources. There is no  
11 significant upland development in the area. The specific site requirements for geoduck farms are  
12 a limiting factor for geoduck aquaculture in Puget Sound. Cooper Testimony, Ex. R-13.

13 5.

14 The Shellfish Companies' crews will plant in the intertidal area on the Haley Farm  
15 between tidal elevations -4.5 to +2 as measured at mean lower low water (MLLW). Mr. Phipps,  
16 Geoduck Division Manager for Taylor Shellfish Company (TSF), anticipates that one cycle of  
17 geoduck cultivation on this site will take six years. Crews plant baby geoducks, referred to as  
18 "seed" that is obtained from a hatchery. A maximum of one-half of the site will be planted each  
19 year, using a combination of solid plastic tubes and flexible mesh tubes. The tubes measure 8-12  
20 inches long by 4-6 inches wide, are spaced 1 foot apart, and protrude 2-4 inches above the beach.  
21

1 The solid plastic tubes will be covered with a combination of either individual nets secured with  
2 bands or canopy netting covering multiple tubes secured with metal rebar with the exposed ends  
3 bent downward. The flexible mesh tubes do not require a net covering. An average of three  
4 geoducks are planted in each tube. The tubes and nets protect the baby geoducks until they reach  
5 an adequate depth and size to avoid predators. The tubes will be removed one to two years after  
6 planting, while the canopy nets remain until up to 2 ½ years after planting. As the proposed  
7 farm will initially be planted over a two-year period, different portions of the farm will be in  
8 different stages of planting, growing and harvesting throughout the life of the farm. Phipps  
9 Testimony, Exs. R-9, R-12, p. 6, P-148, pp. 12, 13.

10 6.

11 The geoducks are harvested using a hand-held water jet which is inserted into the beach  
12 next to the geoduck. The jet liquefies the substrate so that the geoduck may be removed. To  
13 avoid damaging the geoduck, the jet utilizes a high volume of water at a low pressure. A hose  
14 connects the jet to a gas-powered pump located on a vessel. The pump is located inside a noise  
15 insulated housing unit and has a muffler. Harvest may occur at low tide on the beach by beach  
16 crews or at high tide using divers. A typical harvesting event crew involves two members that  
17 harvest and one that bands the geoducks. The bands are used to keep the geoduck shells closed  
18 during transport. Harvest may occur during the day or the night, depending on the tides. When  
19 harvesting at night, the crews use headlamps. The vessel will also have a light. On the Haley  
20 Farm, all harvesting activities will be conducted from the water. The beach will not be used as a  
21

1 staging area and there will be no vehicles on the beach. Phipps Testimony; Exs. P-148, pp. 12,  
2 13; R-12. pp. 6, 7.

3 B. County review

4 7.

5 The County began its review of the Shellfish Companies' Haley Farm application in  
6 March 2013. The County reviewed the JARPA along with a State Environmental Policy Act  
7 (SEPA) checklist and a Pierce County Master Application, for fish and wildlife review and  
8 habitat assessment (Habitat Assessment). Exs. R-3, R-15, R-16. The County reviewed the  
9 application for compliance with the Shorelines Management Act (SMA) and SMP, as well as  
10 with SEPA. As part of its process, the County Senior Planner Ty Booth visited the site, provided  
11 notice to the public, and other local, state, federal and tribal governmental agencies, and received  
12 public comments. County Environmental Biologist David Risvold was assigned to participate in  
13 the County's review. He reviewed the Biological Evaluation prepared for the Haley Farm by  
14 Environ, the Shellfish Companies consultant, and the Habitat Assessment. Ex. R-13, R-16. He  
15 also visited the Haley Farm site. The County received many comments from the public. On  
16 April 15, 2014, the County SEPA Responsible Official issued a comprehensive nine-page  
17 Mitigated Determination of Non-significance (MDNS). The MDNS contained 11 conditions.  
18 Ex. R-4. It was appealed to the County Hearing Examiner (HEX) and a staff report was prepared  
19 for the hearing. Ex. R-1. The County staff also prepared a staff report for the HEX's review of  
20 the staff recommendation to approve the SSDP for the Haley Farm with additional conditions.  
21 The County staff proposed 11 additional conditions in addition to the 11 conditions imposed by

1 the MDNS. Ex. R-2. The staff reports address the comments the County had received on the  
2 Haley Farm Proposal. Booth Testimony, Risvold Testimony, Exs. R-1 through R-9, R-13, R-15,  
3 R-16.

4 8.

5 An additional step in the County review involved submitting the Haley Farm proposal to  
6 the Key Peninsula Advisory Commission (KPAC). KPAC is a group whose members are  
7 appointed by the Pierce County Council to make recommendations to the County. KPAC held a  
8 public meeting on August 19, 2014, and took testimony from members of the public. After the  
9 public testimony, KPAC voted to approve the proposal according to the staff recommendations  
10 with the conditions proposed by staff. Based upon the public testimony at the KPAC meeting,  
11 the County staff added an additional recommendation for a condition addressing public access to  
12 the site. Booth Testimony, Ex. R-18.

13 9.

14 The HEX held a public hearing on September 17 and 18, 2014. The HEX heard  
15 testimony from 23 interested parties and experts and reviewed numerous exhibits. Based on that  
16 information, the HEX issued a 40-page Report and Decision on October 21, 2014. The HEX  
17 concluded that the MDNS, as conditioned, was not clearly erroneous, and approved the SSDP  
18 with further conditions. The SSDP, which the Board is reviewing, contains 22 multi-part  
19 conditions. Ex. P-148.

10.

The approved SSDP does not contain an expiration date. Planting must start within two years of the effective date of the SSDP, and subsequent cycles of planting, cultivation and harvest do not require a new SSDP. Ex. P-148, p. 32. The County Senior Planner recommended that no expiration date be imposed, based on the County's past experience with geoduck farm permits. The County has encountered problems with expiration dates on geoduck farms, because even one cycle of geoduck cultivation can require more than the typical 5-year development period under an SSDP. Booth Testimony, Ex. R-2. The HEX accepted this recommendation and did not impose an expiration date. He did add a condition, however, that states:

The Proponent shall provide a status report to the County's Department of Planning and Land Services every two years listing all conditions of approval from this decision, noting actions taken by the Proponent to comply with each condition and any deviations from the conditions that have occurred. The first report shall be provided two years after the effective date of this permit.

Ex. P-148, p. 30.

11.

Condition 1.B. of the SSDP requires the Haley Farm to be subject to the most current version of the Pacific Coast Shellfish Growers Association Environmental Codes of Practice and the Washington State Geoduck Growers Environmental Codes of Practice (Environmental Codes of Practice). Ex. P-148, p. 31.

1 C. Near shore impacts

2 C.1 Beach clearing

3 12.

4 Petitioner contends that the Haley Farm will have impacts on near shore habitat,  
5 community, and composition. One contention is that beach clearing will be done in preparation  
6 for geoduck farming. Petitioner presented photographs that demonstrate that beaches are cleaned  
7 in preparation for shellfish aquaculture activities. Exs. P-135, P-40. Most, if not all, of these  
8 photographs, were from types of shellfish farming other than geoducks. Phipps Testimony. The  
9 approved SSDP contains conditions addressing the scope of permissible beach preparation  
10 activities on the Haley Farm. First, the SSDP states: “There shall be no modification of  
11 topography or sediment composition to improve conditions for geoduck.” Ex. P-148, Condition  
12 22(a), p.34. The SSDP goes on to state:

13 Tube placement and farming activities are to be done in a manner that precludes  
14 alteration of the shoreline’s natural features. Relocation of beach features (such  
15 as, but not limited to, logs and rocks) and wildlife (such as, but not limited to,  
16 sand dollars and sea stars) shall occur only where it is not feasible to work  
17 around them. Where the relocation of such features is unavoidable, they are to  
18 be relocated as minimally as possible. Where the applicant determines that  
19 relocation at other than minor, incidental levels is needed, the County shall first  
20 be contacted.

21 Ex. P-148, Condition 22(b), p.34.

Mr. Phipps testified that the intertidal zone on the Haley Farm will not require any beach  
preparation prior to planting geoducks. He testified that the planting site does not currently have



1 any rocks or driftwood, and that there are no trees that need to be moved. He testified that if  
2 wood floats into the site, planting can usually be done around it. Phipps Testimony.

3 13.

4 Petitioner also expressed concerns regarding sand dollars. While the Haley Farm does  
5 have large quantities of sand dollars, their numbers do not prohibit “planting through a bed”.  
6 This process involves crew members pushing sand dollars aside by hand as necessary a few  
7 inches to insert the tubes. Even if sand dollars are overturned during planting they are able to  
8 aggregate and right themselves. Some sand dollars may be damaged or killed, however, if they  
9 are under the sand and the tube is inserted on top of them. Chris Cziesla, a marine fisheries  
10 biologist with Environ, co-authored a report on the sand dollars on the Haley Farm. He testified  
11 that, based on observations of sand dollar populations at other existing geoduck farms including  
12 farms that are on their second cycle of planting, geoduck aquaculture does not have a significant  
13 impact on sand dollars. His conclusions include consideration of any impacts from harvesting as  
14 well as planting. While sand dollars may be covered by sand during harvest activities, sand  
15 coverage would not generally exceed the depth to which sand dollars routinely burrow in the  
16 sand. Cziesla Testimony; Phipps Testimony; Exs. R-13, p. 6; R-24.

17 C.2. Aquaculture gear

18 14.

19 Another potential cause of nearshore impact raised by Petitioner are impacts from the  
20 placement of PVC tubes, the use of canopy netting, and the maintenance of the netting.  
21 Petitioner’s near-shore expert Jim Brennan offered his professional opinion regarding a

1 multitude of impacts from aquaculture gear, including foot traffic on the beach during delivery  
2 and dragging of equipment, impacts from insertion of the tubes into the substrate, impacts from  
3 impediment to movement of water and reduction of area available for benthic fauna and a  
4 general alteration of physical structure and processes on the beach, potential for impacts to  
5 juvenile salmonids, loss of prey availability/feeding opportunities, modification to the food web,  
6 energetics, and nutrient exchange, risk of entanglement, and aesthetic impacts. Brennan  
7 Testimony, Ex. P-135. Most of Mr. Brennan's opinions were either not based on specific  
8 scientific literature, or were based on scientific literature that was either not specific to geoduck  
9 farming and/or pre-dated more specific geoduck research. Brennan Testimony, P-135.

10 15.

11 The Shellfish Companies relied primarily on the Washington Sea Grant Geoduck  
12 Research Program (Sea Grant) to refute Mr. Brennan's concerns. In 2007, the Washington State  
13 Legislature funded this research in response to the intensive political controversy regarding  
14 geoduck farming and its possible ecological changes to marine ecosystems. One of the Sea  
15 Grant studies, published in 2014, focused specifically on the question of the effects of geoduck  
16 aquaculture gear on benthic invertebrate communities. Ex. R-35. The authors of the study  
17 concluded that geoduck gear had little influence on benthic macroinvertebrates, resulted in an  
18 increased abundance of some transient macrofauna and decreased abundance of others, and that  
19 impacts did not persist after the gear was removed. A second Sea Grant study, also published in  
20 2014, looked at the effect of geoduck aquaculture on the Pacific staghorn sculpin. This study  
21 concluded that the structured phase of geoduck aquaculture initiated some changes to staghorn

1 sculpin ecology, however the general food web function of sculpin remained unchanged. Ex. R-  
2 36. While both studies were narrow in focus, did identify some changes, and contained  
3 limitations and suggestions for areas of future research, the Sea Grant study on the effects of  
4 geoduck gear is the most specific and relevant scientific information currently available on this  
5 subject. Monroe Testimony, Exs. R-23, R-35, R-36.

6 C.3. Harvest activities

7 16.

8 An additional area of potential near-shore impact identified by Petitioner's expert Mr.  
9 Brennan relates to harvest activities. Mr. Brennan offered his opinion that harvest activities will  
10 have a multitude of impacts including beach liquefaction, crushing of infauna/epifauna on the  
11 beach, changes in benthic community composition and soil structure, and siltation and impacts  
12 on water quality. Again, Mr. Brennan relies on older studies such as Willner 2006 and a Final  
13 Supplemental Environmental Impact Statement dated May 23, 2001, for a Washington  
14 commercial wild geoduck fishery to support his opinions. Brennan Testimony, Exs. P-135.

15 17.

16 A third Sea Grant study published in 2014 specifically evaluated ecological effects of the  
17 harvest phase of geoduck clam aquaculture on infaunal communities in South Puget Sound. Ex.  
18 R-34. The authors of the study concluded that there was scant evidence of effects on the  
19 community structure associated with geoduck harvest disturbances within cultured plots, and no  
20 indication of significant spillover effects of harvest on uncultured adjacent habitat. They also  
21 concluded that there was little evidence of harvest effects on infaunal biodiversity and

1 indications of modest effects on populations of individual infaunal taxa. While this study does  
2 not address all of the potential impacts Mr. Brennan testifies to, and contains limitations  
3 expressly stated by the authors, it is the most specific and relevant scientific information  
4 currently available on this subject. Munroe Testimony, Exs. R-23, R-34.

5 18.

6 The Board finds, based on the weight of the evidence, that the Petitioner failed to prove  
7 that the proposed Haley Farm, as conditioned by the approved SSDP, will cause adverse impacts  
8 on the nearshore environment as a result of beach clearing activities, use of aquaculture gear, or  
9 harvest activities.

10 D. Impacts to fish, birds, and from clam densities and parasites

11 D.1. Impacts to fish

12 19.

13 Petitioner offered testimony from Mr. Brennan to support its contention that the Haley  
14 Farm will impact fish. Mr. Brennan offers very general opinions that because nearshore fishes  
15 utilize nearshore habitats for feeding, reproduction, refuge and migration, alteration of these  
16 nearshore habitats can impact them. Further, he opines that, to the extent that fish use the areas  
17 for nurseries, the addition of structure could increase the risk of predation to juvenile fishes.  
18 Based on this general analysis he concludes that negative impacts to fish are likely. Brennan  
19 Testimony, Ex. P-135.

20.

A Biological Evaluation was prepared for the Haley Farm in August 2013, by Environ for the purposes of the federal consultation regarding listed species. Czesla Testimony, Ex. R-13. There are seven federally listed species of fish that are found in Pierce County that potentially occur in the action area. Of the seven, only two are likely to occur. The evaluation considers potential impacts to federally-listed species and forage fish. With regard to forage fish, only Surf Smelt have documented spawning habitat adjacent to the Haley Farm. Based on the tidal height where surf smelt spawning occurs, however, there is unlikely to be any spatial overlap between spawning and geoduck operations. In contrast, Pacific herring spawn within the tidal elevation at which the area of geoduck harvesting occurs. The closest documented herring spawning area, however, is almost 1 mile from the Haley Farm. Because there is a remote possibility that herring could spawn on aquaculture gear, the Biological Evaluation imposes a condition on the proposal that a Pacific Herring spawn survey must be conducted prior to specified activities during an approved work window. Ex. R-13, p. 49, Condition 8.2(1); Czesla Testimony.

21.

Based on a review of the Biological Evaluation, United States Fish and Wildlife (USFW) issued a letter to the Army Corp of Engineers (Corps) stating that the Haley Farm proposal is not likely to have an adverse effect on threatened or endangered species or critical habitats, as defined under the Endangered Species Act (ESA). The letter states that the project should be re-analyzed if new information reveals effects of the action on threatened or endangered species that were not considered. Czesla Testimony, Ex. R-6.

22.

National Marine Fisheries Services (NMFS) also reviewed the proposal for potential effects on essential fish habitat (EFH) pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Chris Cziesla, Environ, who has had experience with preparation of Biological Evaluation's for the Services review, testified that under the MSA, NMFS is charged with identifying "any impact" which reduces either the quality or quantity of EFH. Once an impact is identified, NMFS must make EFH recommendations. However, NMFS does have the authority to issue terms and conditions or disagree with the Biological Evaluation and call for a formal consultation if they think there will be significant impacts. Here, NMFS identified an impact, but not a significant one, and included conservation recommendations. NMFS, like USFW, also requires a new consultation if new information becomes available that affects the basis for NMFS's conservation recommendations. Cziesla Testimony, Ex. R-5, pp. 4-5.

23.

The impact identified by NMFS, as stated in its letter, was:

[T]he proposed action would adversely affect EFH by periodic small impacts to the benthic community, alteration to the substrate in the form of tubes and canopy netting, and increases in suspended sediments.

R-6, p. 4.

NMFS recommended the following conservation measure:<sup>2</sup>

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<sup>2</sup> NMFS made two recommendations, but the second was not the subject of testimony at the hearing.

1 Altered Substrates- Minimize alteration to the substrate as much as practical  
2 (e.g. use predator exclusion nets that attach to individual tubes instead of canopy  
3 netting to reduce alteration of the intertidal substrate and habitat; use flow-  
4 through mesh style tubing.

5 Ex. R-5, p. 5.

6 24.

7 In response to this recommendation, the Shellfish Companies modified their proposal to  
8 include smaller areas of canopy netting, more use of PVC tubes with individual net caps, and  
9 some areas of mesh tubes which completely replace the PVC tubes and canopy netting. The  
10 Shellfish Companies explained that they did not completely substitute mesh tubes for PVC tubes  
11 or canopy netting on the entire site because the efficacy of mesh tubes has not been fully  
12 confirmed. In Mr. Cziesla's opinion, the project now meets the goals of NMFS's  
13 recommendation. Cziesla Testimony; Phipps Testimony; Exs. R-1, p. 9, R-9.

14 25.

15 The County's Environmental Biologist David Risvold also considered the question of  
16 impacts to fish from the Haley Farm. He testified that he had exchanged e-mails and had  
17 conversations with Washington State Department of Fish and Wildlife (WDFW) in the past  
18 regarding a different proposal for clams and oysters in Dutcher's Cove, which is north of the  
19 Haley Farm. On that proposal, the WDFW habitat biologist had expressed concerns regarding  
20 the use of canopy netting and harvesting activities that could impact migrating salmon at that  
21 site. Mr. Risvold testified that he considered those comments in relation to the Haley Farm. He  
concluded that the reduction in the area to be covered in canopy netting mitigated WDFW's

1 concerns with netting. Furthermore, because the Haley Farm is on an exposed shoreline and not  
2 in an enclosed area like Dutcher's Cove, the concerns regarding potential impact from harvest  
3 activities on migrating salmon were not present. Risvold Testimony, Ex. P-39.

4 D.2. Impacts to birds and wildlife

5 26.

6 Petitioner contends that the Haley Farm will negatively impact birds and wildlife. While  
7 near-shore expert Mr. Brennan considered impacts to birds and marine mammals and concluded  
8 that there would be impacts, he also concluded that the impacts would not be significant. The  
9 general impacts he identified were risk of entanglement from nets, beach disturbance and  
10 changes to prey species abundance. Anecdotal evidence was presented demonstrating occasional  
11 incidents of entanglement of birds. Exs. P-40, P-135, P-137. A representative from Pierce  
12 County Audubon Society (Audubon) also testified that Audubon had concerns regarding the  
13 Haley Farm's potential impacts to birds. Kirkland Testimony. These potential impacts included  
14 entanglement, ingestion of plastics, impacts on prey availability, and beach preparation activities.  
15 Both the Audubon representative and the Shellfish Companies' wildlife and bird specialist Chris  
16 Hanson, testified regarding a 2013 study on impacts of geoduck farms on sea ducks. The  
17 Audubon representative stated that the study supported the conclusion that the geoduck industry  
18 adversely impacts seaducks. However, the Shellfish companies' expert testified that the study  
19 evaluated four species of seaducks, and only one demonstrated a statistically significant decline  
20 in abundance near "large farms" which were defined as farms greater than 25 acres. The study



1 showed that two of the species benefited from the geoduck farms. Kirkland Testimony, Hansen  
2 Testimony, Brennan Testimony.

3 27.

4 The Shellfish Companies presented the testimony of Craig Hansen from Environ, and an  
5 expert report prepared by Environ on behalf of the Shellfish Companies addressing bird  
6 interactions with geoduck gear and operations. Both the report and Mr. Hansen acknowledge  
7 that risk of entanglement is identified in the scientific literature; however there are only rare  
8 examples of this occurring with netting used in geoduck operations. One study conducted from  
9 2001 to 2005 in Baynes Sound, an estuary that contains 152 acres of predatory netting, resulted  
10 in no reports of entanglement by diving ducks. Most net entanglement incidents involve fishing  
11 nets, which have a greater risk of causing entanglement because they hang vertical in the water  
12 column, and are typically made of clear, thin plastic. Scientific literature also supports the  
13 conclusion that disturbance is a negative factor for certain species. For species that avoid  
14 structure, the temporary placement of geoduck gear for two to three years out of a seven year  
15 cycle would likely result in temporary displacement. However, given the generally large range  
16 of birds' foraging habitat (a bald eagle has an average territory radius of 1.6 miles from nest  
17 sites), and the scale of the proposed Haley Farm, the displacement would not be considered  
18 significant. Hansen Testimony, Ex. R-19.

19 28.

20 The Biological Evaluation that was performed for the Haley Farm considered possible  
21 impacts to marbled murrelets, bald eagles, and marine mammals. Both the Biological Evaluation

1 and the subsequent review by NMFS concluded that potential impacts to these species were not  
2 significant. Hansen Testimony, Exs. R-6, R-13.

3 D.3 Impacts from clam density, genetics, diseases and parasites

4 29.

5 Petitioner's near-shore expert Mr. Brennan identified potential risks from the Haley Farm  
6 based on clam density, genetic risks, diseases, and parasites. He also identified a high risk to  
7 water quality from biodeposition of feces and pseudofeces and release of cysts. He also testified  
8 that the clam densities on the Haley Farm do not occur naturally, and that this creates  
9 competition for food and space resources and increased risk of disease and parasite transmission.  
10 He also stated that the selection of brood stock for farmed geoduck is not the same as natural  
11 selection, and is likely to result in lower genetic variability, and that there is a risk that the  
12 farmed geoduck will breed with wild stocks. There is little, if any, literature on these topics  
13 specific to geoduck farming. Mr. Brennan indicated that while he identified these risks as  
14 causing impact, he concluded that the impacts were, at most, "possibly significant." Brennan  
15 Testimony, Ex. P-135.

16 30.

17 The Shellfish Companies presented the testimony of Dr. Davis, the fisheries biologist in  
18 charge of the TSF hatchery and broodstock programs, to respond to Mr. Brennan's testimony.  
19 He testified that geoducks, despite their large body size, filter water at low rates; that they are filter  
20 feeders that eat plankton, although they can occasionally ingest zooplankton; and that they are  
21 cultivated in relatively low densities compared to other shellfish. Therefore, he maintains they will

1 not deplete food resources. He also testified that concerns regarding genetics are addressed through  
2 careful hatchery practices regarding brood stock. TSF uses brood stock that comes from the wild  
3 animals in the area. TSF also focuses on achieving wide genetic variability. Finally, Dr. Davis  
4 testified that with regard to disease and parasites, the industry is highly regulated by the Department  
5 of Health and WDFW to ensure public health and safety. Dr. Davis testified that in his opinion,  
6 water quality would be enhanced by geoduck farming because geoducks remove excess nutrients  
7 from the water. Davis Testimony, Exs. R-71, R-48.

8 31.

9 The Board finds, based on the weight of the evidence, that the Petitioner has failed to  
10 prove that the Haley Farm proposal, as conditioned in the SSDP, will have an adverse impact on  
11 fish, birds, and wildlife.

12 E. Impacts to sediments

13 32.

14 Petitioner, through its coastal geologist Jim Johannessen, raised concerns regarding impacts  
15 from potential sediment transport and compaction caused by geoduck aquaculture at the Haley Farm.  
16 These concerns were countered by geomorphologist Dr. Osborne, the Shellfish Companies expert.  
17 Both scientists had visited the site and performed sediment sampling, and concluded that the  
18 intertidal area of the Haley Beach consists of fine sands, with a component of very fine sands and  
19 fines. Both scientists agree that the strongest winds at Haley Beach come from the south and  
20 therefore stronger wave action is to the north. They also agree that some sediment will be released  
21 during removal of PVC tubes and harvest. The primary disagreements between these two experts are  
how much sediment will be released, how significant the amount is in the overall site sediment

1 budget, and how far the sediment will travel. Johannessen Testimony, Osborne Testimony, Exs. P-  
2 133, R-22.

3 33.

4 Mr. Johannessen opined that the Polyvinyl chloride (PVC) tubes and netting could cause an  
5 accumulation of sediment that would be released when the gear is removed and during harvest. He  
6 testified that major sediment events occur at these times, with harvest having the larger sediment  
7 impact. In support of this conclusion he provided aerial photography showing sediment plumes  
8 following geoduck harvests. Mr. Johannessen estimated that 975 cubic yards of sediment  
9 (approximately 201 cubic yards/acre<sup>3</sup> based on a 5.5 acre area of tubes and a 4.5 acre area under nets  
10 and between tubes) would be released when the tubes and nets are removed, and another 22,183  
11 cubic yards (approximately 4,033 cubic yards per acre based on an area of 5.5 acres) during harvest.<sup>4</sup>  
12 He concludes that some amount of sediment would be transported north and could reach Haley  
13 Lagoon, which is located one-fourth of a mile to the north of the Haley Farm, and even Dutcher's  
14 Cove, which is located one mile north. Mr. Johannessen does not offer any specifics regarding how  
15 much sediment would reach these areas. Johannessen Testimony, Ex. P-133.

16 34.

17 Dr. Osborne also calculated the amount of sediment to be released and arrived at significantly  
18 smaller numbers than Mr. Johannessen, 72 cubic yards (55 cubic meters per acre) for tubes and nets,  
19 and 790 cubic yards (604 cubic meters per acre) for harvest.<sup>5</sup> He testified that Mr. Johannessen's

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20 <sup>3</sup> The Board calculated the "per acre" number from Mr. Johannessen's total number and the number of acres it was  
based on, to facilitate comparison with Dr. Osborne's calculations.

21 <sup>4</sup> Mr. Johannessen also includes an additional amount for sorting and resuspension.

<sup>5</sup> The Board provided the equivalent United States measurement system number to facilitate comparison with Mr.  
Johannessen's numbers.

1 numbers were much larger because Mr. Johannessen failed to take into account sediment bed  
2 porosity when performing sediment transport calculations, and over-estimated the area of disturbance  
3 during harvest. Osborne Testimony, Ex. R-22.

4 35.

5 Dr. Osborne compared his numbers to the overall baseline sediment transport regime at the  
6 Haley Site, which he estimated through the use of modeling to be 17,940 cubic yards (13,716 cubic  
7 meters) for 4,921 feet (1500 meters) of beach. This number represents the amount of sediment  
8 mobilized on an annual basis on this beach. Dr. Osborne also compared his numbers regarding  
9 sediment release during harvest to the amount of sediment mobilized during a one-year storm event.  
10 He arrived at the one-year storm event number through modeling using site specific bathymetry,  
11 measured water levels, currents, waves, and turbidity and sediment characterization. His conclusion  
12 is that the amount of sediment transported during a one-year storm event is more than four times  
13 greater than that caused by a geoduck harvest, and occurs over a much larger area. Osborne  
14 Testimony, Ex. R-22.

15 36.

16 Dr. Osborne also disagreed with Mr. Johannessen's conclusion that sufficient sediment  
17 would reach Haley Lagoon and Dutcher's Cove to cause adverse impacts. Dr. Osborne modeled  
18 sediment transport at the Haley site and concluded that sediment plumes remain close to the site. He  
19 testified that while it was conceivable that some particles of sediment from harvest could move to  
20 Haley Lagoon and Dutcher's Cove, there was no reason to believe that the amount would be  
21 significant. Osborne Testimony, Ex. R-22.

1 37.

2 Another area of potential impact identified by Mr. Johannessen is loss of compaction of  
3 sediment during harvest caused by use of the water jet, which could make the sediments more subject  
4 to erosion. Mr. Johannessen's scientific support for this theory rests on studies of dredging literature,  
5 not literature related to geoduck harvesting. Dr. Osborne and Mr. Phipps both testified that  
6 fluidization caused by water jet harvest is temporary and fills in over a couple of tide cycles. Mr.  
7 Johannessen acknowledged that he had never been to a geoduck site during or after a harvest.  
8 Johannessen Testimony, Osborne Testimony, Phipps Testimony, Exs. P-133, R-22.

9 38.

10 The Board finds, based on the weight of the evidence, that Petitioner has failed to prove  
11 that the proposed Haley Farm, as conditioned by its applicable SSDP, will cause other than  
12 temporary impacts from sediment transport.

13 F. Plastics

14 39.

15 The potential impacts raised by Petitioner from plastics as a result of geoduck  
16 aquaculture fall into two categories: (1) marine debris<sup>6</sup> and (2) microplastics. On the topic of  
17 marine debris, Petitioner presented testimony from Captain Charles James Moore, an expert  
18 through experience and independent research, on plastic marine debris. His evidence included  
19 testimony regarding the growing problem of marine debris in the world oceans, the role that  
20 plastics play in marine debris, and the characteristics of different types of plastics. As to the

21 \_\_\_\_\_  
<sup>6</sup> Entanglement in nets is addressed in Findings of Fact Numbers 14, 15, and 27, *supra*.

1 characteristics of different types of plastics, he testified that polyvinyl chloride (PVC), which is  
2 the plastic used in the rigid geoduck tubes, tends to sink, whereas high density polyethylene  
3 (HDPE), the plastic used in geoduck mesh nets, tubes and canopy nets, tends to float. Moore  
4 Testimony, Ex. P-137. Capt. Moore also presented data in the form of an e-mail from a WDFW  
5 research scientist relating to estimates of aquaculture debris. The data was based on a bottom  
6 trawl survey conducted in 2005 in South Puget Sound. Ex. P-137. The e-mail stated that bottom  
7 trawl survey estimates of aquaculture debris in South Puget Sound indicate that there are 61,600  
8 items of netting and 21,600 tubes in the South Puget Sound. Ex. P-137. In addition, Petitioner  
9 presented an activity log from another TSF geoduck farm ("Stratford Meyer") documenting that  
10 in April of 2012, 307 tubes were recovered that had been released in a storm event. Ex. P-119, p.  
11 4. Moore Testimony.

12 40.

13 The Shellfish Companies responded to the e-mail from WDFW with testimony from their  
14 fish expert Chris Cziesla. He opined that the data relied upon by Capt. Moore is misleading.  
15 The WDFW survey conducted 48 trawls and found only 12 tubes total. His opinion is that this  
16 data was extrapolated inappropriately across the entire south Puget Sound, explaining the large  
17 numbers. Mr. Cziesla also presented data from a more recent WDFW trawl that found only one  
18 tube total. Cziesla Testimony, Ex. P-137.

19 41.

20 The Shellfish Companies presented testimony pertaining to the aquaculture practices that  
21 will be used on the Haley Farm to minimize the creation of marine debris. The Haley Farm will

1 use a combination of PVC tubes and flexible mesh tubes. TSF geoduck division manager Brian  
2 Phipps testified that flexible mesh tubes almost never come loose. PVC tubes will be covered  
3 with canopy nets or have individual net caps. Canopy nets have proven effective in containing  
4 loose tubes. Tubes with individual net caps will be pulled as soon as any net caps start to loosen.  
5 Additionally, the SSDP contains a special condition requiring gear to be secured and tubes and  
6 nets to be removed as soon as geoducks are not vulnerable to predators. Phipps Testimony, Ex.  
7 P-148, p. 31 (Condition 1.F).

8 42.

9 Mr. Phipps testified that storm events that cause tube loss such as that documented at the  
10 Stratford Meyer Farm are rare, and that most tubes wash up next to the planting area where the  
11 grower can collect them. He testified that the April 2012 log demonstrates that the growers  
12 patrol for released gear and comply with permit conditions to minimize marine debris. He did  
13 not provide evidence regarding how many tubes in total had escaped from the Stratford Meyer  
14 Farm. The Haley Farm SSDP contains a special condition requiring weekly patrols of tidelands  
15 within a half mile of the farm, subject to the land owner's permission. During those patrols, all  
16 geoduck debris must be collected regardless of its source. Patrols to search for and collect  
17 geoduck debris must also be conducted within a day following a severe storm event. Phipps  
18 Testimony, Ex. P-148, p. 31 (Condition 1.I).

19 43.

20 Mr. Phipps also testified that data from biannual cleanups of garbage from south sound  
21 beaches indicates that there is a not a current debris problem in Puget Sound from the shellfish



1 industry. The shellfish industry started these cleanups in approximately 2005. In 2006, they  
2 collected approximately 55 cubic yards of debris, with about 15 percent coming from the  
3 shellfish industry. Last year, they collected 42 yards of debris, and found only one geoduck tube.  
4 All forms of marine debris are removed during these cleanups, and the vast majority of the debris  
5 is not from aquaculture. Phipps Testimony, Exs. R-46, R-67.

6 44.

7 Petitioner also raises concerns regarding microplastic pollution from geoduck gear.  
8 Microplastics are any piece of plastic less than 5 millimeters in size. Schoof Testimony. Mr.  
9 Moore opined that geoduck gear will break in pieces and the pieces will be released into the  
10 environment as microplastic pollution. He relied on a published scientific article that concluded  
11 that HDPE, the material used to make geoduck nets and mesh tubes, degrades when exposed to  
12 sunlight on land. The article also states that HDPE degrades more slowly when only exposed to  
13 sunlight in surface sea water. He also relied on pictures of PVC tubes in place on geoduck farms  
14 that are cracked, covered with barnacles, or have plastic slivers on their edges; pictures of  
15 various types of aquaculture gear with frayed edges; and scientific articles and pictures related to  
16 ingestion of plastics by various types of sea life. Moore Testimony, Ex. P-137.

17 45.

18 In response, the Shellfish Companies presented the testimony of Dr. Schoof, an expert  
19 toxicologist. She testified that while the Haley Farm may release small amounts of  
20 microplastics, the impact would be insignificant. She based her opinion in part on a sediment  
21 study from the Foss geoduck farm conducted in 2011. The Foss Farm is a 12-acre ten-year-old

1 geoduck farm. The sediment study found no plastics in the farm sediments tested. Ex. R-69. In  
2 her expert opinion, the exposure pathway is extremely limited. Ex. R-79. Geoduck gear poses a  
3 minor risk because it is not heavily exposed to ultraviolet degradation, which both Captain  
4 Moore and Dr. Schoof agree is the primary mechanism to create microplastics. Geoduck gear is  
5 exposed for only about 13 percent of daylight hours and is removed when it is no longer needed.  
6 Schoof Testimony, Ex. R-89. Geoduck gear is also surrounded by a layer of organic material  
7 that provides additional protection from ultraviolet degradation. Cziesla Testimony. Overall,  
8 Dr. Schoof concludes that aquaculture is a very small potential contributor to microplastics in  
9 comparison to land based sources. Schoof Testimony, Ex. P-137.

10 46.

11 The Board finds that the condition on the SSDP requiring the Shellfish Companies to  
12 patrol the tidelands for plastic partly mitigates for the potential impacts from plastic debris.  
13 However, in light of the Stratford Meyer Farm log indicating the escapement of at least 307 PVC  
14 tubes after a storm event, the Board finds that for the Shellfish Companies to ensure they are  
15 fully mitigating the potential impacts of plastic debris, the Shellfish Companies must keep a  
16 record of the total number of PVC tubes, net caps, mesh tubes, and canopy nets they place on the  
17 Haley Farm site, and how many of those pieces of geoduck gear they remove through farming  
18 practices or collect from beach patrols.

1 47.

2 The Board finds based on the weight of the evidence that the Petitioner has failed to  
3 prove that the SSDP, as conditioned including an additional condition requiring an inventory of  
4 gear, will cause impacts due to plastic debris or microplastic pollution.

5 G. Aesthetics, public access, and property values

6 48.

7 Both Petitioner and the Shellfish Companies presented evidence from experienced real  
8 estate agents concerning the potential for geoduck aquaculture to impact property values. The  
9 real estate agents frequently handle sales of waterfront property, and they offered contradictory  
10 opinions regarding whether the presence of geoduck aquaculture in the vicinity of a house affects  
11 its sale value. Neither agent had done any formal market analysis. Jensen Testimony,  
12 Macfarlane Testimony. One owner of property about 1/3 mile southwest of the Haley Farm also  
13 testified regarding his concerns regarding impacts to his property value from the Farm. Smith  
14 Testimony.

15 49.

16 There were a number of reasons offered for why geoduck aquaculture may not have an  
17 impact on property values near Haley Farm. For four years out of a six-year farming cycle,  
18 geoduck gear will not be present on the Haley Farm. Even when the gear is present, it is  
19 completely submerged and invisible for the vast majority of daylight hours. Phipps Testimony,  
20 Cooper Testimony. The uplands adjacent to the Haley Farm are heavily forested, and primarily  
21 owned by the state and the Shellfish Companies. The residential parcels to the south of the

1 Haley Farm are high bank, and therefore do not afford views of the Haley Farm. Macfarlane  
2 Testimony.

3 50.

4 The Petitioner's lay witnesses expressed concerns that geoduck farming at the Haley  
5 Farm would interfere with the public's access to the beach and neighboring land owned by state  
6 parks in the vicinity of the Farm. The land owned by state parks has not been formally opened as  
7 a park and has limited public access and use. One witness testified that his family owns property  
8 adjacent to the Haley Farm, and that he walks the beach in that area. TSF spokesperson Diane  
9 Cooper testified that TSF allows the public to access its tidelands when it is the owner.  
10 However, if TSF is not the owner, the owner can choose to prohibit public access. Here, the  
11 Shellfish companies do not intend to exclude members of the public from accessing the Haley  
12 Farm site for recreational activities consistent with their farming operations. Cooper Testimony,  
13 Smith Testimony, Booth Testimony.

14 51.

15 The Board finds based on the weight of the evidence that the Petitioner has not proven  
16 that the Haley Farm will have an adverse impact on aesthetics, public access, and property  
17 values.

18 H. Cumulative Impacts

19 52.

20 There are several aquaculture farms along the west shore of Key Peninsula. The closest  
21 in the County to the proposed Haley Farm is a manila clam/oyster farm 4300 feet to the north in

1 Dutcher's Cove. The closest geoduck farm is the Taylor Stratford Farm. Pierce County has no  
2 pending aquaculture applications between the County line to the north and Herron Island to the  
3 south. The closest Washington State Wildstock Geoduck fishery is 358 acres in size and is  
4 located between Dutcher's cove and Herron Island. The fishery involves the harvest of wild  
5 geoducks with harvest jets, but does not involve gear. Aquaculture also occurs on the west shore  
6 of Case Inlet outside of Pierce County including Stretch and Harstine Island. Overall, in 2013,  
7 when the Biological Evaluation was prepared for the Haley Farm, there were 35 shellfish leases  
8 in Case Inlet. Case Inlet is long, and approximately 2 miles wide in the area of the Haley Farm.  
9 Booth Testimony, Exs. R-4, R-13.

10 53.

11 The Corps in consultation with the USFWS took a broader look at impacts from shellfish  
12 aquaculture in Washington State in 2007 and 2012 when it issued Nationwide Permit (NWP) 48.  
13 NWP 48 is a permit applicable to the entire United States issued under Section 404 of the federal  
14 Clean Water Act. Nationwide permits are used to authorize activities that have minimal  
15 individual and cumulative adverse effects on the aquatic environment. 77 Fed. Reg. 10184. The  
16 current NWP 48 issued in 2012 expires March 18, 2018. After that time, additional authorization  
17 will be required to continue farming activities authorized under that permit. Czesla Testimony,  
18 Exs. R-13, R-38, R-39, P-128.

19 54.

20 As part of NWP 48's initial issuance, NMFS and USFW (the Services) issued  
21 programmatic biological opinions for all shellfish aquaculture activities in 2009. Exs. R-38, 39.

1 The Services concluded that the authorized activities were not likely to adversely affect listed  
2 species. A supplement was prepared by the Corps, Seattle District in 2012 which is specific to  
3 Washington. In this document the Corps concludes that the terms of the NWP 48 and the  
4 regional conditions added by the Seattle District ensure that activities authorized under the NWP  
5 48 permit will not have an individual and cumulative adverse effect on the aquatic environment.  
6 The Haley Farm must comply with NWP 48 and the additional regional conditions. Czieszla  
7 Testimony, Exs. P-128, R-38, R-39.

8 55.

9 The Petitioner presented maps based on information that was obtained from 2012 through  
10 2014 data from the Corps showing proposed shellfish farms in Case Inlet. Based on this  
11 information Mr. Johannessen concluded that there were 23 proposed aquaculture farms in Case  
12 Inlet. He did not have any information beyond what was provided by the Corps. TSF  
13 spokesperson Ms. Cooper testified based on past experience that this mapping information from  
14 the Corps tends to be inaccurate. The Petitioner also presented an e-mail from the Corps dated  
15 December 10, 2013, in which the Corps stated they had only two pending applications in all of  
16 Pierce County for geoduck farms. Cooper Testimony, Johannessen Testimony, Exs. P-160, P-  
17 133.

18 56.

19 The Board finds that the testimony from Pierce County that they have no pending  
20 aquaculture applications between the County line to the north and Herron Island to the south to  
21

1 be the most reliable information regarding foreseeable future aquaculture farming in Case Inlet  
2 in the vicinity of the proposed Haley Farm.

3 57.

4 All of Petitioner's experts opined generally that, in addition to the individual impacts they  
5 perceived from the Haley Farm, the Farm in combination with other aquaculture farms would  
6 either likely cause cumulative impacts to the environment, or at least raise enough of a question  
7 regarding such impacts, that the potential for cumulative impacts should be studied further.

8 Johannessen Testimony, Brennan Testimony, Moore Testimony, Exs. P-137, P-135, P-133.

9 Petitioner's experts expressed concern that because the SSDP does not contain an expiration date  
10 it allows for repeated cycles of geoduck farming activity, and that these repeated cycles will  
11 result in additive or synergistic effects. Brennan Testimony, Ex. P-135. The Petitioner also  
12 relies on the South Puget Sound Salmon Recovery Plan (Plan), which was prepared by the South  
13 Sound Puget Sound Recovery Group, a technical advisory group. Petitioner's expert Jim  
14 Brennan testified that the plan was submitted to NMFS in 2005. The Plan, Draft Version Two,<sup>7</sup>  
15 dated May 2005 identifies shellfish aquaculture as a "human-induced stressor" for Puget Sound,  
16 and the Plan's authors hypothesize that "shellfish aquaculture reduces productivity, abundance,  
17 spatial structure, and diversity of salmon populations." Brennan Testimony, Exs. P-135, P-158.

18 58.

19 The County, in its SEPA process, had most, if not all, of the information that was  
20 presented to the Board regarding impacts from the proposed Haley Farm individually and

21 \_\_\_\_\_  
<sup>7</sup> The final version of the Plan is not in the record.

1 cumulatively with other aquaculture in the vicinity of the farm. In its MDNS, the County  
2 recognized that the cultivation process on the farm will be “repeated indefinitely.” Ex. R-4, p. 4.  
3 In a summary of its analysis, the County stated:

4 [D]etailed studies have been conducted regarding geoduck and/or geoduck  
5 related issues. More studies would be extremely valuable including, but not  
6 limited to, topics such as long term impacts, cumulative impacts of multiple  
7 abutting farms, and farms in smaller water bodies. However, at this point, it  
8 appears that many impacts from geoduck farms are temporary, insignificant,  
9 and/or indistinguishable from natural levels of disturbance.

10 Ex. R-4, p 4.

11 59.

12 The Board finds, based on the weight of the evidence in the record that the Petitioner has  
13 failed to prove that there will be adverse impacts from the Haley Farm, along with other existing  
14 aquaculture and reasonably foreseeable aquaculture in the vicinity of the Haley Farm.

15 60.

16 Any Conclusion of Law deemed to be a Finding of Fact is hereby adopted as such.

## 17 CONCLUSIONS OF LAW

18 1.

19 The Board has jurisdiction over the parties and the subject matter in this case pursuant to  
20 RCW 90.58.180. The Board considers the scope and standard of review of the appealed action  
21 de novo, unless otherwise required by law. WAC 461-08-500(1). The Petitioner has the burden  
of proof. WAC 461-08-500(3).



2.

The Petitioner appealed the County's approval of this SSDP to the Board. The pre-hearing order entered in this case identified the following issues for hearing:

1. Is the approved SSDP consistent with the Shoreline Management Act, Ch. 90.58, WAC Ch. 173-27, the State Environmental Policy Act (SEPA) and SEPA rules, and the goals and policies of the Pierce County Shoreline Master Program (PCC Title 20)?

2. Has the Pierce County comprehensive plan and/or the County's zoning ordinances been incorporated into the SMP, such that the Shoreline Hearings Board has jurisdiction over whether the approved SSDP is consistent with the Pierce County's comprehensive plan and its zoning ordinances? If so, is the SSDP consistent with the incorporated provisions?

3. Does the approved SSDP adequately protect private property rights? (The Petitioner is not basing this argument on any constitutional theory, since the board lacks jurisdiction over constitutional arguments.)

4. Was the County Hearing Examiner impartial despite having a son that works in the shellfish industry? (This issue is stated in the list of issues to preserve the issue on appeal. Evidence and argument will not be taken on this issue before the SHB.)

3.

The Shellfish Companies filed a motion to dismiss individual petitioners and to dismiss Issue 2, which was granted by the Board. Order Granting Motion to Dismiss Clayton Smith and Steve Beard as Parties, and to Dismiss Issue 2 (Jan. 30, 2015). The appeals then proceeded to a four day evidentiary hearing on the remaining issues for hearing (Issues 1 and 3), in which the Board heard testimony from 21 witnesses, including 12 experts.

4.

Shoreline development in Washington must be consistent with the policies and procedures of the SMA, its associated regulations, and the applicable local SMP. RCW

1 90.58.140(1); WAC 173-27-150. The Petitioner, as the appealing party, has the burden to prove  
2 the SSDP issued for the Haley Farm, with all of its conditions, is inconsistent with the SMA and  
3 the County's SMP adopted under the SMA.

4 5

5 Aquaculture is encouraged in Washington in numerous ways. The Washington Shellfish  
6 Initiative announced on December 9, 2011, states that "Shellfish are critical to the health of  
7 Washington's marine waters and the state's economy." Ex. R-43. The SMA and Ecology's  
8 shoreline rules identify a preference for water-dependent uses of the shoreline, with aquaculture  
9 being a "desired and preferred water-dependent use of the shoreline." RCW 90.58.020, WAC  
10 173-26-241(3)(b). The Board has upheld various permits for aquaculture involving geoducks as  
11 consistent with this standard. *See Coalition to Protect Puget Sound Habitat v. Thurston County*,  
12 SHB No. 13-006c, p. 30, CL 6 (*citing Longbranch*, p. 23, CL 12).

13 6

14 The SMP encourages use of shoreline areas for aquaculture. PCC 20.24.020(A)(1). The  
15 SMP gives priority for aquaculture uses to shoreline areas that have the prerequisite qualities in  
16 order to protect the county's aquaculture potential. PCC 20.24.020(A)(10). The proposed Haley  
17 Farm is located in the Rural-Residential shoreline environment. Aquaculture is allowed in this  
18 shoreline environment, with geoduck aquaculture "permitted outright" subject to obtaining a  
19 SSDP. PCC 20.24.030.

There is a balance inherent in the SMA, its associated regulations, and the PCC that, while seeking to encourage aquaculture, also seeks to prevent damage to the shoreline environment, and avoid interference with recreational use. The SMA “contemplates protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary rights incidental thereto.” RCW 90.58.020.

## 8.

The PCC specifically requires protection for the shoreline environment from aquaculture as follows:

Aquaculture development shall not cause extensive erosion or accretion along adjacent shorelands.

PCC 20.24.020.A.2.

Aquaculture operations shall be conducted in a manner which precludes damage to specific fragile areas and existing aquatic resources. These operations shall maintain the highest possible levels of environmental quality and compatibility with native flora and fauna.

PCC 20.24.020.A.3.

The PCC also recognizes that impacts on navigation and recreation can be minimized:

Conflicts between the aquaculture use and the navigational access of current upland residents, and intense recreational boating, commercial fishing, and other commercial traffic can be minimized.

PCC 20.24.020.A.5.

1 9.

2 In a previous case concerning a permit for a geoduck farm in Pierce County, the Board  
3 discussed the balance in the SMA between allowing for aquaculture and protecting the  
4 environment:

5 The SMA does not prohibit development of the shorelines but instead provides  
6 for permitted uses that are “designed and constructed in a manner to minimize,  
7 insofar as practical, any resultant damage to the ecology and environment of the  
8 shoreline area and any interference with the public’s use of the water.” RCW  
9 90.58.020; *Jarvis v. Kitsap County*, SHB No. 08-001 (Findings of Fact and  
10 Conclusions of Law and Order, July 7, 2008) at 22. The importance of geoduck  
aquaculture to the State was recently restated in the Washington Shellfish  
Initiative announced on December 9, 2011. Absent substantial evidence to  
support Petitioners’ assertions of negative impacts, the Board concludes that  
Petitioners failed to meet their burden of showing that the SDP is inconsistent  
with either the SMA or the Pierce County SMP.

11 *Coalition to Protect Puget Sound Habitat v. Longbranch Shellfish, LLC*, SHB No. 11-019, CL 16  
12 (2012).

13 10.

14 In a more recent appeal involving a geoduck farm permit in Pierce County the Board  
15 denied an SSDP due to a lack of sufficient environmental protections and noted that there were  
16 key differences between the proposed farm and prior approved geoduck farms in Pierce County.  
17 *Coalition to Protect Puget Sound Habitat v. de Tienne*, SHB No. 13-016c (Findings of Fact,  
18 Conclusions of Law, and Order, January 22, 2014). Key factors for the Board were that the de  
19 Tienne Farm was proposed to be located over a continuous swath of eelgrass, it was in proximity  
20 to known herring spawning grounds, and there was specialized recreational use of the area for  
21 windsurfing. *Id.* at FF 13. The proposed de Tienne Farm would also have been the first subtidal

1 commercial geoduck farm in Pierce County and the first geoduck farm in Henderson Bay.

2 Finally, the location of the geoduck farm would have been on a shoreline of statewide  
3 significance. The Board reversed the County's approval of the SSDP on the basis of lack of  
4 adequate protection for eelgrass. *Id.* at CL 14, 15.

5 11.

6 Each shoreline appeal must be based on its own merits. *De Tienne*, SHB No. 13-016c, at  
7 FF 13. The Haley Farm is intertidal, not subtidal; it is not the first geoduck farm in the area; it is  
8 not located on a shoreline of significance; and it does not have eel grass. The most unique  
9 feature regarding the Haley Farm is its size. The Haley Farm is 11 acres, which is the largest  
10 geoduck farm that has been reviewed by the Board. To mitigate potential impacts related to farm  
11 size, the Shellfish Company will plant only one half of the site each year and will employ  
12 multiple types of tubes to protect the baby geoducks. This approach will result in portions of the  
13 farm being in different stages of planting, growing, and harvesting throughout the life of the  
14 farm, and portions of the site having different combinations of PVC tubes with individual nets,  
15 PVC tubes with canopy netting, and mesh tubes with no netting.

16 A. Petitioner failed to prove that the SSDP violates the SMA and SMP or will impact  
17 property values (Issues 1 and 3)

18 12.

19 Issue 1 is a broadly stated issue that alleges the proposed Haley Farm, as approved by the  
20 County, violates SEPA, the SMA, and the SMP. For sake of clarity, the Board has divided this  
21

1 issue into two parts. This section, Part A, will analyze the Petitioner's claims under the SMA  
2 and SMP. The Petitioner's claims based on SEPA will be analyzed in Part B, *infra*.

3 13.

4 The Petitioner contends that the Haley Farm will cause adverse impacts from beach  
5 clearing, use of aquaculture gear, harvest activities, sediment disturbance, plastic debris and  
6 microplastics pollution in violation of the SMA and SMP. The Petitioner asserts that clam  
7 density associated with geoduck farming and the genetics of farm-raised geoducks will result in  
8 diseases and parasites, and that fish, birds, wildlife, aesthetics values, public access, and property  
9 values will all be adversely impacted in violation of the SMA and SMP. The Petitioner also  
10 claims that the Haley Farm will cause cumulative impacts in violation of the SMA. As noted in  
11 the findings of fact, the Board has found that the petitioner has failed to meet its burden of proof  
12 factually on all of these claims.

13 14.

14 The Board concludes that the Haley Farm SSDP is appropriately conditioned to restrict  
15 beach clearing activities that would cause impacts in violation of the SMA and SMP. While  
16 some individual sand dollars may be damaged or killed, the only scientific analysis presented at  
17 the hearing supports the conclusion that impacts to the sand dollar population at Haley Beach  
18 will be temporary and insignificant.

19 15.

20 There was little new or site specific evidence presented to the Board pertaining to impacts  
21 from geoduck gear and harvest in this hearing. Both of these topics have been extensively

covered in prior cases. See *Longbranch Shellfish, LLC*, SHB No. 11-019 (2012); *Taylor Shellfish*, SHB No. 13-006c (2013); *de Tienne*, SHB No. 13-016 (2014). The only unique issue for the Haley Farm pertaining to gear and harvest is the Farm's 11-acre size. The approach being proposed for use on the Haley Farm, which is to split the farm in half and plant only 5.5 acres at a time, and in the 5.5 acres planted at one time to use a combination of types of gear so that the amount of area covered in canopy nets is reduced, appropriately addresses the potential for additional impacts caused by the Farm's larger area. This approach also reduces the size of the area harvested at any one time. The Board concludes that the Petitioner has failed to prove that the proposed use of gear and harvest activities on the Haley Farm violate the SMA and SMP.

16.

The most site specific evidence presented to the Board pertaining to impacts on fish from the Haley Farm supports the conclusion that the Farm will not violate the SMA and SMP because of impacts to fish. The Biological Evaluation supports this conclusion, as do the letters from the services. The proposed planting approach, which reduces the amount of canopy netting used, also supports this conclusion. Finally, the setting of the Haley Farm, in a wide area of Case Inlet, as contrasted to enclosed area like Dutcher's Cove, supports this conclusion. The Board concludes that the Petitioner has failed to prove that the Haley Farm will violate the SMA and the SMP.

17.

The weight of the evidence presented at the hearing supports the conclusion that the Haley Farm will not violate the SMA and SMP because of impacts to birds and wildlife. While

1 the scientific literature identifies a risk of entanglement from nets generally, the evidence  
2 presented does not support the conclusion that geoduck nets specifically present a significant  
3 risk. Furthermore, the proposed planting approach, which reduces the amount of canopy netting  
4 used, mitigates for the size of the farm. The SSDP is appropriately conditioned to preclude any  
5 potential for impacts to Herring stock. The Board concludes that the Petitioner has failed to  
6 prove that the Haley Farm will violate the SMA and SMP because of impacts to birds and  
7 wildlife.

8 18.

9 The site specific evidence presented to the Board regarding potential impacts from clam  
10 density, genetics, diseases, and parasites did not demonstrate that the Haley Farm will violate the  
11 SMA and SMP. Here again, the only unique issue for the Haley Farm pertaining to these  
12 impacts stems from its 11-acre size, which is mitigated by the planting and harvest regime. The  
13 petitioner failed to meet its burden of proof regarding impacts from clam density, genetics,  
14 diseases, and parasites caused by the Haley Farm. The lack of evidence presented to the Board  
15 on this point by the Petitioner, coupled with the presence of a separate regulatory scheme aimed  
16 at addressing health impacts from aquaculture, supports a conclusion that the Haley Farm will  
17 not violate the SMA and SMP because of potential impacts of this type.

18 19.

19 The Board is persuaded by the testimony of Dr. Osborne that the sediment likely to be  
20 released as a result of operations at the Haley Farm would not be significant when compared to  
21 the baseline sediment transport regime at the Haley Site. The Board is also persuaded that the



1 amount of sediment potentially transported to Haley Lagoon and Dutcher's Cove would not be  
2 enough to cause adverse impacts. The Board is not persuaded by the Petitioner's evidence that  
3 the use of water jets during harvest will cause any lasting changes in beach sediment. Therefore,  
4 the Board concludes that the Petitioner has failed to meet its burden of proof that impacts from  
5 sediment from the Haley Farm will cause violations of the SMA and SMP.

6 20.

7 The weight of the scientific evidence presented on microplastics does not support the  
8 petitioner's contention that microplastics pollution from the gear proposed on the Haley Farm  
9 will cause violations of the SMA and SMP. However, like the County, the Board is concerned  
10 about the problem of geoduck gear escaping the Haley Farm and becoming marine debris. Given  
11 the escapement level documented by the Stratford Meyer Farm log, the Board concludes that in  
12 addition to the condition requiring the Shellfish Companies to patrol the tidelands, the evidence  
13 supports the need to add a further condition to the SSDP that requires the Shellfish Companies to  
14 do an inventory of gear that is placed and subsequently recovered on the Haley Farm. This will  
15 help ensure that marine debris associated with the Haley Farm is minimized and will provide  
16 much better information regarding the actual level of escapement of geoduck gear into the  
17 environment.

18 Condition 22(O) of the SSDP requires the Shellfish companies to maintain a log of  
19 farming activities. Ex. P-148, p.36. An inventory of gear that is placed and recovered should be  
20 completed as a part of maintaining the already required log of farming activities. With this  
21

1 additional condition, the Board concludes that the Petitioner has failed to meet its burden of  
2 proof that the SSDP violates the SMA and SMP because of impacts from plastics.

3 21.

4 The Board concludes that the weight of the evidence presented at the hearing does not  
5 support the petitioner's contention that the Haley Farm will impact property values. Moreover,  
6 the Petitioner has failed to provide a legal argument that connects this assertion with a violation  
7 of the SMA or SMP. Therefore, the Board concludes that the Petitioner has failed to meet its  
8 burden of proof that the SSDP violates the SMA and SMP because of impacts to property values.  
9 Additionally, the Petitioner has failed to present any legal analysis on Issue number 3 (protection  
10 of private property rights) and therefore the Board concludes that the Petitioner has waived this  
11 issue.

12 22.

13 The Petitioner has provided scant evidence and even less legal argument regarding the  
14 impact of the Haley Farm on public access. The Washington Supreme Court has held that  
15 shellfish growers farming on private tidelands, whether owned or leased, are entitled to exclusive  
16 possession and control of such tidelands and the shellfish grown on them. *State v. Longshore*,  
17 141 Wn.2d 414, 424-429, 5 P.3d. 1256 (2000). A shellfish grower's right to exclusive  
18 possession includes the right to exclude the public from such tidelands when they are not  
19 submerged. *Wilbur v. Gallagher*, 77 Wn.2d 306, 314, 462 P.2<sup>nd</sup> 232 (1996). However, the  
20 evidence in the record supports the conclusion that the Shellfish Companies intend to allow  
21 access to their tidelands at Haley Farm for recreational purposes, consistent with their farming

1 activities. The Board concludes that the Haley Farm will have little impact on the current legal  
2 access to the beach in the area, and therefore does not violate the SMA or SMP.

3 23.

4 The Board has held in past cases that it may consider cumulative impacts resulting from  
5 the approval of an SSDP pursuant to the SMA and local SMP, separate from SEPA. The Board  
6 has established factors to consider in making the determination of whether a cumulative impacts  
7 analysis is appropriate. *De Tienne*, SHB No. 13-016, pp. 54, 55. These factors are:

- 8 1. Whether a shoreline of statewide significance is involved;
- 9 2. Whether there is potential harm to habitat, loss of community use, or a significant  
degradation of views and aesthetic values;
- 10 3. Whether a project would be a “first of its kind” in the area;
- 11 4. Whether there is some indication of additional applications for similar activities in the  
area;
- 12 5. Whether the local SMP requires a cumulative impacts analysis be completed prior to  
the approval of an SSDP;
- 13 6. The type of use being proposed, and whether it is a favored or disfavored use.

14 Based on the Board’s findings of fact, and the conclusions it has reached herein, none of  
15 these factors are present in this appeal. Therefore the Board concludes that a cumulative impacts  
analysis was not necessary under the SMA and SMP.

16 B. Petitioner failed to prove that County erred in issuing an MDNS under SEPA for the Haley  
17 Farm (Issue 1)

18 24.

19 When challenging a County’s SEPA decision, the appealing party has the burden to show  
20 that the County’s threshold determination is clearly erroneous. In the present case, the Board can  
21 invalidate the County’s decision to issue an MDNS only if it is firmly convinced that the County

1 has made a mistake. *Sisley v. San Juan County*, 89 Wn.2d 78, 84, 569 P.2d 712 (1977); *Moss v.*  
2 *City of Bellingham*, 109 Wn. App. 6, 13, 31 P.3d 703 (2001), *rev. denied* 146 Wn. 2d  
3 1017(2002). SEPA requires an environmental impact statement (EIS) only for “major actions  
4 having a probable significant, adverse environmental impact.” *Boehm v. City of Vancouver*, 111  
5 Wn. App. 711, 718, 47 P.3d 137 (2002); RCW 43.21C.031(1). The Board must accord  
6 substantial weight to the county’s decision to issue a negative threshold determination and not  
7 require an EIS. 111 Wn. App at 718; RCW 43.21C. 090.

8 25.

9 An impact is “probable” if it is likely or reasonably likely to occur. It is distinct from  
10 impacts that “merely have a possibility of occurring, but are remote or speculative.” WAC 197-  
11 11-782. In reviewing whether an impact is “significant,” it must have a reasonable likelihood of  
12 more than a moderate adverse impact on environmental quality. Significance involves both  
13 context and intensity. WAC 197-11-794.

14 26.

15 To establish the inadequacy of conditions imposed by the County on a project under  
16 SEPA, the Petitioner must present actual evidence of a probable significant adverse impact from  
17 the project that has not been adequately addressed by the County’s negative threshold  
18 determination. See *McQuarrie v. Seattle*, SHB No. 08-033 (Order on Summary Judgment, April  
19 27, 2009, at 15). For the MDNS to survive judicial scrutiny, the record must demonstrate that  
20 environmental factors were considered in a manner sufficient to amount to *prima facie*  
21 compliance with the procedural requirements of SEPA and that the County’s decision to issue

1 the MDNS was based on information sufficient to evaluate the proposal's environmental impact.  
2 *Wenatchee Sportsmen Ass'n v. Chelan County*, 141 Wn.2d 169, 176, 4 P.3d 123 (2000);  
3 *Anderson v. Pierce County*, 86 Wn. App. 290, 302, 936 P.2d 432 (1997). Furthermore, the  
4 mitigation measures must be reasonable and capable of being accomplished. *Anderson* at 302;  
5 RCW 43.21C.060.

6 27.

7 Petitioner's primary SEPA challenge is that the County failed to consider cumulative  
8 impacts under SEPA.<sup>8</sup> The SEPA statute and the Department of Ecology's (Ecology) SEPA  
9 rules require consideration of cumulative impacts. See *Quinault Indian Nation v. City of*  
10 *Hoquiam*, SHB No. 13-012c (Amended Order on Summary Judgment, Dec. 9, 2013). The more  
11 difficult legal question, however, is what are the "cumulative impacts" that should be considered.  
12 The SEPA statute and Ecology rules do not contain a definition of "cumulative impacts." In the  
13 absence of a definition, the Board has concluded that it is appropriate to look to the federal  
14 definition for guidance. *Id.* p. 21 n. 10, citing *Pub. Util. Dist. No. 1 of Clark Cnty. v. Pollution*  
15 *Control Hearings Bd.*, 137 Wn. App. 150, 158, 151 P.3d 1067, 1070 (2007). The regulations  
16 interpreting the federal counterpart to SEPA, the National Environmental Policy Act define  
17 cumulative impact as:

18  
19  
20  
21

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<sup>8</sup> The Board has already addressed Petitioner's contention that a cumulative impacts analysis was required under the SMA. See Section A, *supra*. It is important to recognize the distinction between the cumulative impacts analysis that may be required for an SSDP under the SMA and SMP based on a specific list of factors, See *Longbranch Shellfish, LLC*, SHB No. 11-019 (2012); *Taylor Shellfish Company, Inc. v. Thurston County*, SHB No. 12-012 (2013); *Taylor Shellfish*, SHB No. 13-006c (2013); *de Tienne*, SHB No. 13-016 (2014), and the consideration of cumulative impacts under SEPA, which is always required when making a SEPA threshold determination.

1 [T]he impact on the environment which results from the incremental impact of  
2 the action when added to other past, present, and reasonably foreseeable future  
3 actions regardless of what agency (Federal or non-Federal) or person undertakes  
such other actions. Cumulative impacts can result from individually minor but  
collectively significant actions taking place over a period of time.

4 40 C.F.R. § 1508.7. This definition, referred to as the “reasonably foreseeable” standard, has  
5 been construed and applied in several federal court cases. *N. Plains Res. Council, Inc. v. Surface*  
6 *Transp. Bd.*, 668 F.3d 1067, 1078 (9th Cir. 2011); *Envtl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 451  
7 F.3d 1005, 1014 (9th Cir. 2006). Use of the reasonably foreseeable standard is consistent with  
8 the SEPA statute and rules. *See* RCW 43.21C.031 (mandating preparation of an EIS for major  
9 actions having a *probable* significant environmental impact), WAC 197-11-782 (defining  
10 “probable” to mean “reasonably likely to occur” as opposed to being “remote or speculative”).

11 28.

12 The Board does not agree with the County and the Shellfish Companies that “impacts of  
13 future proposals must be cumulatively assessed only when the subject project would be a  
14 necessary antecedent for future projects.” Shellfish Companies Response Brief, p. 22, lines 13-  
15 16. *See also*, County closing brief, p. 1, 2. The Board has previously rejected this same analysis,  
16 holding that it muddies the distinction between “cumulative impacts” and “connected actions.”  
17 *See Quinault Indian Nation v. City of Hoquiam*, SHB No. 13-012c, pp. 19-23 (Amended Order  
18 on Summary Judgment, Dec. 9, 2013). The Board declines to revisit its holding in *Quinault* in  
19 this case. Therefore, the Board concludes that the County’s SEPA MDNS must ensure that  
20 impacts from the Haley Farm, when added to the existing aquaculture activities in the area and  
21

1 reasonably foreseeable future activities, will not cause probable significant adverse  
2 environmental impacts.

3 29.

4 Despite the County's assertions that it did not do a formal "cumulative impacts analysis,"  
5 based on the evidence before it the Board concludes that the County did consider cumulative  
6 impacts from the proposed Haley Farm, when added to other past, present, and reasonably  
7 foreseeable future actions. The County considered other existing aquaculture sites along the  
8 west shore of Key Peninsula. It took note of the closest sites to the proposed Haley Farm. It  
9 considered the fact that it had no pending aquaculture applications between the County line to  
10 the north and Herron Island to the south. The county reviewed the Biological Evaluation, which  
11 contains an assessment of "cumulative, interrelated, and interdependent effects." Ex. R-13, pp.  
12 43-47. It also had the information from the Services pertaining to NWP 48's issuance and  
13 reissuance. Based on this evidence, the Board concludes that the County considered cumulative  
14 impacts from the Haley Farm, when added to other past, present, and reasonably foreseeable  
15 future actions.

16 30.

17 The Petitioner has a high burden to show that the County's MDNS was clearly erroneous.  
18 The Board must be firmly convinced that the County made a mistake when it issued the MDNS,  
19 before the Board can overturn it. In reviewing all of the evidence in the record from this hearing  
20 including the ten page MDNS, with its 11 conditions; the SSDP, with 11 more additional  
21 conditions; the process of review undertaken by the County including presentations to the KPAC

1 and an open record hearing before the HEX; the federal agencies' review under the ESA and  
2 MSA; and the evidence presented by the Petitioner at this hearing, the Board is not convinced  
3 that the MDNS was clearly erroneous. With regard to consideration of cumulative impacts, the  
4 Board concludes that the County did the minimum necessary to meet the requirements of SEPA.  
5 The County could have required a carrying capacity analysis for aquaculture in Case Inlet, as  
6 suggested in the Biological Evaluation. *See* Ex. R-13, pp. 43-45. It could have required  
7 "extremely valuable" studies on topics such as long term impacts, cumulative impacts of  
8 multiple abutting farms, and farms in smaller water bodies, to enable it to make a more thorough  
9 consideration of the potential for cumulative impacts from aquaculture in Case Inlet. *See* Ex. R-  
10 4, p. 4. However, in the face of the County's decision to issue the MDNS without this additional  
11 information, and considering all of the other information it had, the Board is not firmly  
12 convinced that the County made a mistake in issuing its MDNS without requiring this additional  
13 information. *See* WAC 197-11-335 ("The lead agency shall make its threshold determination  
14 based upon information reasonably sufficient to evaluate the environmental impact of a proposal  
15 (WAC 197-11-055(2) and 197-11-060(3))"). Therefore, the Board affirms the County's MDNS  
16 and denies Petitioner's SEPA claims.

17 C. Duration of the SSDP

18 31.

19 An issue was raised at the hearing regarding the County's authority to limit the duration  
20 of an SSDP. Ecology's shoreline rules state that authorization to conduct development activities  
21



1 shall terminate five years after the effective date of a shoreline permit. WAC 173-27-090(3).

2 However, the rules also provide that:

3       Upon a finding of good cause, based on the requirements and circumstances of  
4       the project proposed and consistent with the policy and provisions of the master  
5       program and this chapter, local government may adopt different time limits from  
6       those set forth in subsections (2) and (3) of this section as a part of action on a  
7       substantial development permit.

8 WAC 197-11-090(1).

9 32.

10       The County HEX has the authority pursuant to PCC 18.150.060 to impose an expiration  
11       date on a permit. County staff recommended, however, that no expiration date be imposed.

12       Based on past experience staff have found that imposing an expiration date on an SSDP for a  
13       geoduck farm is problematic because even one cycle of geoduck cultivation can require more  
14       than the typical 5 year period. The County's decision not to impose an expiration date is  
15       consistent with rules from Ecology, which are applicable to updated shoreline master programs.<sup>9</sup>

16       These rules state that while new geoduck farms must be permitted through a conditional use  
17       permit, subsequent cycles of planting and harvest shall not require a new conditional use permit.

18 WAC 173-26-241(3)(b)(iv)(B).

19 33.

20       The Board concludes that because of the length of the cultivation cycle for geoduck  
21       farms, the County's decision not to impose an expiration date on the Haley Farm SSDP complies  
22       with the SMA and the PCC, and it is consistent with Ecology's rules that apply to other SMPs.

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<sup>9</sup> The SMP applicable to the Haley Farm has not yet been updated.

1 Further, the Board notes that just because the SSDP does not contain an expiration date does not  
2 mean the County lacks authority to revisit the permit.

3 The County has authority to revoke or modify an SSDP based on non-compliance with  
4 the conditions of the permit, or if the use under the permit is being exercised in a manner that is  
5 detrimental to the public health or safety, or constitutes a nuisance. PCC 18.150.050.D, E. The  
6 County should have sufficient information concerning the operation of Haley Farm to determine  
7 whether additional measures are required concerning the operation of Haley Farm.

8 The Shellfish Companies are required to provide the County with a status report every  
9 two years as to all actions taken to comply with each condition in the SSDP. Ex. P-148,  
10 Condition 1(A), p.30. The Shellfish Companies are also required to maintain and provide the  
11 County with a log of all complaints received by the Shellfish Companies concerning their  
12 operations. *Id.*, Condition 1(L), p. 31. The Shellfish Companies are required to maintain a log  
13 of farming activities. *Id.*, Condition 22(O), p. 36. The Shellfish Companies will also be required  
14 to maintain an inventory of gear that is placed on-site for farming activities and recovered from  
15 the site. All of these conditions should provide useful information for the County when  
16 reviewing the Haley Farm SSDP in light of its authority to revoke or modify permits.

17 34.

18 As conditioned, the SSDP for Haley Farm meets the balance inherent in the SMA, its  
19 associated regulations, and the PCC that seek to encourage aquaculture while preventing damage  
20 to the shoreline environment. As scientific knowledge pertaining to geoduck aquaculture  
21 improves, the Board is hopeful that this knowledge will provide additional benefits to the

environment and will be applied to the Haley Farm operation either voluntarily by the Shellfish Companies; through new ESA consultations required based on new information pertaining to the Farm's impact on listed species or critical habitat; through applicable Department of Health or WDFW regulations for the protection of health; or, if necessary, through the County's enforcement authority under PCC 18.150.050.E.

35.

Any finding of fact deemed to be a conclusion of law is hereby adopted as such. Based upon the foregoing Findings of Fact and Conclusions of Law, the Board enters the following:

**ORDER**

Pierce County's MDNS for the Haley Farm is affirmed. The County's decision approving the SSDP for the Haley Farm is affirmed with the following additional condition:

Aquaculture gear placed on the Haley Farm shall be inventoried by the Shellfish Companies prior to its placement into use on the farm, and at the time of removal from use on the Haley Farm. This reporting shall include the total quantity and type of gear installed during planting, the quantity and type of any gear collected during the required weekly beach patrols, and the type and quantity of gear removed by the Shellfish Companies during the cultivation cycle. This log shall be made available to the County every two years, and at any other time upon request.

1 SO ORDERED this 15th day of May, 2015.

2  
3 **SHORELINES HEARINGS BOARD**

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5  
6 KAY M. BROWN, Presiding

7  
8 JOAN M. MARCHIORO, Chair

9  
10 TOM C. MORRILL, Member

11  
12 JENNIFER GREGERSON, Member

13  
14 LILY SMITH, Member