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Thurston County Board of Commissioners
2000 Lakeridge Drive SW
Olympia, WA 98502-1045

Dear Commissioners:

This letter is written on behalf of Protect Our Shoreline, a non-profit citizen environmental group based in Thurston County, regarding the legal question of whether shoreline substantial development permits are required for commercial geoduck operations in Thurston County pursuant to the Washington State Shoreline Management Act, Ch. 90.58 RCW. We appreciate your interest in this issue that is of such great importance to your constituents and hope that our analysis serves to inform you in dealing with the question at hand.

It is our opinion that the law requires that all commercial geoduck cultivation and harvesting operations obtain a shoreline substantial development permit, not just those that interfere with the normal public use of the surface of the waters as the 2007 Attorney General Opinion suggests.¹ Before we set out our analysis of the relevant legal provisions and case law, we provide you with a general overview of the substantial and significant adverse impacts that may result from commercial geoduck operations. Next, the legal analysis includes an outline of the relevant legal requirements of the Shoreline Management Act and a description of recent case law holding that commercial geoduck aquaculture activities require substantial development permits pursuant to the Act. Finally, an analysis is provided which demonstrates that commercial geoduck operations in Thurston County must all obtain substantial development permits, not just those that interfere with normal public use of the surface waters.

¹ The January 4, 2007 Attorney General Opinion (AGO 2007 No. 1) concludes that farm raised geoducks may require a substantial development permit under circumstances where the particular geoduck planting project causes substantial interference with normal public use of the surface waters. According to the AGO Opinion, projects that do not meet this description would not require a substantial development permit.

A. Industrial Geoduck Aquaculture has Adverse Impacts to the Shoreline Environment and Requires SEPA Review

1. The environmental impacts of industrial geoduck operations

Commercial geoduck cultivation and harvesting operations are essentially industrial farming operations located in the intertidal shoreline habitat. These operations convert natural beaches to agricultural use. The traditional shellfish aquaculture methods in some traditional shellfish growing areas have been replaced with new intensive shellfish aquaculture operations.

Geoduck aquaculture on private tidelands in Puget Sound, particularly in South Puget Sound, has been steadily growing over the last ten years. Geoduck operations are widespread in Totten Inlet, Eld Inlet, Henderson Inlet, Nisqually Reach, and Zangle Cove and are often on the most protected and sensitive coves. They are in low bank sandy beach areas, on tidelands that run in front of neighbors' upland properties, on tidelands owned by shellfish companies or absentee landlords and are targeted for state-owned tidelands. All of these operations have been installed without environmental review or public comment.

It is clear to ordinary observers that the proliferation of industrial geoduck farming operations has adverse effects to the shoreline environment and causes habitat destruction for local species, including eel grass, invertebrates, native shellfish populations, forage fish, and salmon. Thurston County citizens who share a priority of protecting the health of Puget Sound are concerned that the facilities contradict at least three of the eight goals of the newly formed Puget Sound Partnership which are to: 1) protect habitat, 2) restore habitat, and 3) preserve biodiversity and recover imperiled species (including salmon).

The new, intensive industrial shellfish farming methods, documented in the attached Washington State Geoduck Growers Environmental Codes of Practice (ECOP) are generally the same for all commercial geoduck operations and include extensive use of boats, barges, work crews, night-time maintenance, placement of polyvinylchloride (PVC) tubes or Vexar tunnels in the substrate, canopy nets or individual net tops on the PVC tubes, metal or PVC stakes and water jet harvesting. In the PVC tube method, 43,500 PVC tubes are installed per acre. In the Vexar tunnel method, 200 "very stiff plastic net (tunnels), like an oyster bag" are placed per acre, apparently with edges dug into the substrate to secure them.

Geoducks are harvested approximately four to six years after planting. The common method, called both "hydraulic harvesting" and "water jet harvesting" in the ECOP, uses a pressure jet to liquefy the tidelands in order to extract the geoducks. The liquefaction of the tidelands affects the surface vegetation (if any remains after the planting), affects the native shellfish populations and impacts

substrate composition up to three feet below the surface. It disturbs the natural layering of the substrate. Once the area is harvested, the area is replanted and the process begins again.

During the grow out phase of commercial geoduck aquaculture, the abnormally high density of a single bivalve species will change beach biology and dynamics.² Research also indicates that bivalves (such as geoduck) consume fish eggs, shrimp and crab larvae and copepods, thereby consuming the natural resource base and reducing on-site species diversity.³

In the low flushing inlets of South Puget Sound there is a significant question about the ability of the culture site to process the excrement produced by the animals. "Potentially adverse effects from both finfish and shellfish aquaculture facilities can result from excess deposition of fecal material that may overload the underlying sediments with particulate organic matter. Bacterial decomposition of this organic material can release more inorganic nutrients and in extreme situations cause sediment anoxia, thereby reducing the biomass and species diversity of benthic fauna."⁴

The planting methods create a physical obstruction and traps for native species. The netting also has been "shown to increase sedimentation"⁵ which in turn can cause irreversible changes in the ecosystem functions and nutrient cycling processes.⁶ Intensively farmed shellfish beds lower species richness, change bivalve composition, abundance and distribution, have greater accumulations of organic matter and silt, and simplify the benthic community, which may alter the ecology of the

² Heather Deal M.Sc., *Sustainable Shellfish, Recommendations for Responsible Aquaculture* (2005). <http://www.davidsuzuki.org/files/Oceans/Shellfish.pdf>.

³ Canadian Science Advisory Secretariat,, *Effect of Shellfish Aquaculture on Fish Habitat* (2006). http://www.dfo-mpo.gc.ca/csas/Csas/DocREC/2006/RES2006_011_e.pdf.

⁴ Dr. Roger I. E. Newell, University of Maryland Center for Environmental Science, *A framework for developing "ecological carrying capacity" mathematical models for bivalve mollusk aquaculture*, at 44 (2006). <http://www.fra.affrc.go.jp/bulletin/bull/bull19/07.pdf>.

⁵ Heffernan, et al., *A Review of the ecological implications of mariculture and intertidal harvesting in Ireland* (1999), www.protectourshoreline.org/studies/Review_Mariculture_Ireland.pdf.

⁶ Georgina Willner, *The Potential Impacts of the Commercial Geoduck (Panopea generosa) Hydraulic Harvest Method on Organisms in the Sediment and at the Water-Sediment Interface in Puget Sound*, (2006) www.protectourshoreline.org/ThesisGeoduckHarvestImpacts.pdf.

nearshore.⁷ "Nine of the 10 species listed as endangered or threatened within the Puget Sound region inhabit the nearshore."⁸

The water jet method of removing the geoduck may be economically ideal for the applicant, but it will be environmentally devastating for the shoreline because it causes intense habitat disruption and destabilizes the substrate, adversely impacting any native organisms. There are direct negative effects of disturbance from harvesting and of geoducks on eelgrass density.⁹ The attached letter, authored by Dr. Megan Dethier, Dr. Bill Matthews and Amy Leitman, raises important questions regarding geoduck aquaculture and other shellfish aquaculture impacts on nutrient cycling, species diversity, sediment stratification and other critical concerns.¹⁰

2. Impacts need further study for full understanding of environmental consequences

The impacts of commercial shellfish aquaculture on native geoduck populations, salmon habitat, sedimentation and erosion and endangered species such as Chinook Salmon and Steelhead Trout must be specifically considered and addressed prior to any project approval for planting and harvesting geoducks in each individual location in Thurston County. A requirement that commercial geoduck aquaculture operations obtain a substantial development permit would trigger much needed comprehensive environmental review of these impacts pursuant to the Washington State Environmental Act (SEPA), ch. 43.21C RCW.

The county must also take into account the cumulative impacts on native species and habitat that increase additively and perhaps exponentially when multiple parcels are put into production on large swaths of tideland as has happened already in Thurston County without benefit of any environmental review. WAC 297-11-060(4)(e). For example, the proposed DNR lease of state-owned tideland for

⁷ L. I. Bendell-Young, Department of Biological Sciences, Simon Fraser University, *Contrasting the community structure and select geochemical characteristics of three intertidal regions in relation to shellfish farming* (2006). <http://www.protectourshoreline.org/articles/07BendellShellfishCommunityStructure.pdf>.

⁸ Puget Sound Nearshore Project, *Why Is the Puget Sound Nearshore Significant?* (2003).

⁹ Sally Hacker, Univ. Oregon, Jenifer Ruesink, UW, *Scale-dependent and indirect effects of filter feeders on eelgrass* (2005)

¹⁰ Dr. Megan Dethier, Dr. Bill Matthews and Amy Leitman, *Concerns and Questions Relevant to Infaunal and Epibenthic Impacts of Geoduck Aquaculture* (March 14, 2007).

geoduck operations on Dickenson Point in Henderson Inlet is in an identified smelt spawning area.¹¹ This parcel is in the vicinity of several other large existing geoduck operations, presumably also in smelt spawning areas. The cumulative impacts of these operations would not be reviewed but for the requirements of SEPA. Cumulative impacts have never been considered in Thurston County because no shoreline permitting process has been established for geoduck aquaculture or any other type of shellfish aquaculture, other than through the vehicle of an "aquaculture district," a vehicle that to our knowledge has never been utilized.

B. Shoreline Substantial Development Permits Are Required for Commercial Geoduck Operations

As stated above, it our opinion that the law requires that all commercial geoduck cultivation and harvesting operations obtain a shoreline substantial development permit under RCW 90.58.140.¹² The permit requirement is not limited to only those operations that interfere with the normal public use of the surface waters as the 2007 Attorney General Opinion suggests. See AGO 2007 No. 1.

The AGO Opinion relies on illogical and gratuitous reasoning that results in an extremely narrow and incorrect interpretation of the Shoreline Management Act. The AGO recognizes that permits are required for substantial developments as that term is defined by the Act. To support a conclusion that geoduck planting, growing and harvesting operations are not always "developments," the AGO Opinion suggests that these operations do not ever involve the construction of structures; do not necessarily involve placement of obstructions; do not ever involve the use of drilling; do not involve removal of any sand, gravel or minerals; and do not necessarily interfere with normal public use of the surface waters. To the contrary, as a matter of course, the commercial geoduck operations involve all of these activities and are, therefore, "developments" requiring permits under the SMA.

1. The Shoreline Management Act

The citizens of Washington State adopted the Shoreline Management Act (SMA), ch. 90.58 RCW, through citizen initiative based on the finding that "the shorelines of the state are among the most

¹¹ Washington State Department of Natural Resource website. <http://www.dnr.wa.gov/htdocs/aqr/aquaculture/pdfs/dickenson.pdf>

¹² Such limitations may also be required to avoid liability under the Endangered Species Act. Courts have held local governments liable for adopting regulations that allow private parties to undertake activities that harm an endangered species. See Strahan vs. Coxe, 127 F.3d 155 (1997).

valuable and fragile of its natural resources and . . . there is great concern throughout the state relating to their utilization, protection, restoration, and preservation." RCW 90.58.020.

The State policy enunciated in the Act calls for restricting construction on the privately owned and publicly owned shorelines of the State to protect against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life. Id. The Act declared "that the interests of all the people shall be paramount in the management of shorelines of statewide significance." Id. That section further states "in the implementation of this policy, the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interests of the state and the people generally." Id.

The Shoreline Management Act explicitly requires that its provisions be broadly construed "in order to protect the State's shorelines as fully as possible." See RCW 90.58.900; Bellevue Farm Owners Association v. State of Washington Shorelines Hearings Board, 100 Wn. App. 341, 386, 997 P.2d 380 (2000); Buechel v. State Department of Ecology, 125 Wn.2d 196, 203, 884 P.2d 910 (1994); Hunt v. Anderson, 30 Wn. App. 437, 439, 635 P.2d 156 (1981). A liberal construction of the Act is also mandated by the State Environmental Policy Act. See RCW 43.21C.030(1) and RCW 43.21C.020(3).

All development within the shorelines of the State of Washington must be consistent with the Shoreline Management Act. If such development is a "substantial development" as that term is defined by the Act, then the developer must obtain a shoreline substantial development permit. Specifically, the Shoreline Management Act states:

- (1) A development shall not be undertaken on the shorelines of the state unless it is consistent with the policy of this chapter and, after adoption or approval, as appropriate, the applicable guidelines, rules, or master program.
- (2) A substantial development shall not be undertaken on shorelines of the state without first obtaining a permit from the government entity having administrative jurisdiction under this chapter.

RCW 90.58.140.

2. Activities that constitute "substantial development" under the SMA

The authors of the SMA broadly define "development" as:

. . . a use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to this chapter at any state of water level.

RCW 90.58.030(3)(d). The Thurston County Shoreline Master Program repeats this same definition of "development." Shoreline Master Plan for the Thurston Region (1990) (hereinafter "Thurston County SMP").

"Substantial development" means any development of which the total cost of fair market value exceeds \$5,000 or any development, which materially interferes with the normal public use of the water or shorelines of the State. RCW 90.58.030(3)(e). Under the Shoreline Management Act "no 'substantial development' exists if there is not 'development' within the meaning of RCW 90.58.030(3)(d), because for there to be a 'substantial development,' there must first be a 'development.'" Cowiche Canyon Conservancy v. Bosley, 118 Wn.2d 801, 812, 828 P.2d 549 (1992).

3. Commercial geoduck aquaculture is a substantial shoreline development

The Washington Supreme Court has ruled that geoduck aquaculture and harvesting activities are "developments" under the Shorelines Management Act. Washington Shell Fish, Inc. v. Pierce County, 132 Wn. App. 239, 253, 131 P.3d 326 (2006). Washington Shell Fish Inc.(WSF) conducted planting, growing, and harvesting geoducks on a shoreline in Pierce County. Each year, WSF would plant geoduck seeds by pushing 6 to 12 inch long, 3 inch diameter, polyvinylchloride (PVC) pipe into the shoreline using rope to guide tube placement. Id. at 328. WSF then would place geoduck seeds into the PVC pipes, cover the pipes with netting, and pin and wire tie the netting to cover in place the geoduck seedlings. After six months, WSF would remove the netting and pipes to allow the geoduck seeds to grow naturally. When the planted geoducks matured five years later, divers would use high pressure water jets to harvest them from their burrows three or four feet down in the sand substrate. From a boat anchored offshore, the harvesters would dive down to the bottom, insert a water jet into the sand substrate next to the geoduck, use water jets to excavate the substrate around the geoduck and loosen its grip, and then pull the geoduck out of the sand. Id. In the process, loosened sand and silt would move around in the nearby saltwater. Id. Removal of each geoduck would leave an excavation pit in the sand substrate one and a half to two feet in diameter. Id.

The court held that the geoduck operation interfered with the normal public use of surface water. Id. at 250. The court noted that several witnesses testified that WSF left rope in the water where WSF had planted geoducks, and this rope would become entangled with people or non-geoduck harvest related objects. In addition, WSF divers harvesting geoducks placed markers on the water's surface that prevented the public use of that area. The court also noted that PVC planting pipes that WSF

inserted into the shorelines were up to 12 inches long, with their top portions protruding vertically out of the sand. In addition, according to one witness, WSF used up to four boats at a time to store the geoducks the divers harvested, one of which was a barge large enough to drag a buoy; these WSF boats further constricted the water surface open to public use. In those ways, the court found that WSF's activities prevented the general public from using areas of the water by posing a safety risk to the public and occupying shoreline water and thereby excluding others. As a result, the Court found that WSF engaged in "development" when it harvested and planted geoducks on the leased properties. *Id.* at 252. Having decided that the interference with public use was sufficient to meet the definition of "development," the court did not consider whether the operation met the definition in other ways too.

4. All commercial geoduck operations in Thurston County must obtain a substantial shoreline development permit

As is explained more fully below, the commercial geoduck aquaculture operations in Thurston County, like all commercial geoduck operations observed in South Puget Sound, not only interfere with normal public use of the surface of the waters but also involve the construction of structures; placement of obstructions; drilling; and the removal of sand, gravel, or minerals and therefore meet the statutory definition of "development" in multiple ways.

a. All commercial geoduck operations involve the construction of structures

Commercial geoduck operations require the installation of thousands of PVC tubes approximately one foot deep into the shoreline substrate. The question becomes, therefore, whether installation of these tubes constitutes a "use consisting of the construction . . . of structures." *See* RCW 90.58.030(3)(d). WAC 173-27-030(15) defines "structure" as "a permanent or temporary edifice or building, or any piece of work artificially built or composed of parts joined together in some definite manner." The Thurston County Shoreline Master Program defines structure as "anything constructed in the ground, or anything erected which requires location on the ground or water, or is attached to something having location on or in the ground or water." Thurston County SMP at 137.

A PVC tube or Vexar tunnel is clearly a "piece of work artificially built." Additionally, the PVC tubes or Vexar tunnels are obviously "joined together in a definite manner" in that they are planted in rows and sections to form discrete groupings. These are configurations that are "constructed in the ground." Canopy nets are used over the entire grouping of PVC tubes to hold them all together so they will not dislodge and become marine debris, and as predator exclusion devices. These nets "join" the tubes "together in a definite manner" as does the configuration itself. The entire configuration clearly constitutes the construction of a structure.

The AGO Opinion incorrectly concluded the geoduck operations do not involve the construction of structures. First, it incorrectly concluded that the PVC tubes themselves are not structures. The AGO Opinion completely disregarded that part of the definition that states that a "structure" is "any piece of work artificially built." It is that phrase in the definition that makes clear that the PVC tubes themselves are "structures." In addition, the opinion erred when it focused solely on the individual tubes and not on the entire configuration that is built into the ground. The evenly placed PVC tubes, the Vexar tunnels, combined with nets, rubberbands, and poles and *extent* of the area so configured, together form an artificially built piece of work that is undeniably a "structure."

b. All commercial geoduck operations involve the placement of obstructions

All commercial geoduck operations involve the placement of obstructions on the shorelines of Thurston County. The PVC tubes, Vexar and netting structures installed in a geoduck facility create a physical obstruction to not only the public's use of the area, but also to native plant, animal and fish species. They occupy large swaths of tidelands excluding other uses. For anyone who encounters a geoduck tube planting or a Vexar tunnel planting, it is an obvious obstruction to the use of the area. The public loses water access at low tide. Barges, rafts, boats, hoses, equipment and workers obstruct boaters and recreational users.

Predator exclusion tubes, tunnels and nets obstruct aquatic animals. Indeed, it is the *very purpose* of the predator exclusion devices to obstruct predators, e.g., wildlife, from occupying their normal habitat. Native species are also inadvertently trapped under predator exclusion netting and in the netting or by rubberbands. The entire facility is one large obstruction to native species in the tidelands.

The AG opines, among other things, that "[l]ocal government, as the primary administrator of the substantial development permit system, would determine whether a particular project involves placing obstructions" on a case-by-case basis. AGO 2007 No. 1 at 10, *citing* RCW 90.58.140(3); *Samuel's Furniture*, 147 Wn.2d at 455. This is not an appropriate reading of the Act for several reasons.

First, this distinction creates an imaginary commercial geoduck operation that simply does not exist. Every commercial geoduck operation places obstructions -- that is the very nature of these operations. The issue here is not only obstruction to the public use, it is also obstruction to the fish and animal use of the tidelands. There can be no question that the netting and tubes installed in each and every such operation places an obstruction when that is their very purpose.

Second, the suggestion that the County must determine whether or not a substantial shoreline development permit is required on a case-by-case basis is completely unworkable and not consistent with the SMA mandate to protect shorelines as fully as possible. Without a permit requirement, there

is no process in place for the County to make this judgment. Thurston County cannot collect the detailed evidence and police every shoreline to determine whether a particular commercial geoduck operation on any given shoreline area will place obstructions along that shoreline. The AG does not state how the primary administrator of the substantial development permit system will determine if a substantial development permit is required. This cannot actually be done without invoking a permitting system itself which identifies where proposed and existing commercial geoduck farms are located. Lack of a permitting process leaves the responsible authority liable for allowing the activity, but without a method of regulating it or even being aware of it and County planners have stated in writing as of August, 2006, they were not aware of any commercial geoduck operations on Thurston County shorelines. Yet these operations have been in existence since the mid 1990's.

The shellfish industry argues that the system should be a "complaint driven system...where complainants can go in and try to demonstrate that a particular farm interferes with the normal use of the surface waters."¹³ This is not adequate because once the geoduck or other shellfish aquaculture operation is in place, and property owners complain, the industry will argue that it is already there and to remove it would cause undue financial hardship, an argument they have already used and which is difficult for the responsible authority because of implied liability of that authority for allowing the activity in the first place. A complaint-driven system does not protect shorelines to the fullest extent possible.

Additionally, the AG opinion would treat every commercial geoduck operation as discrete and to be evaluated only by itself, rather than in a context of other commercial geoduck operations or within a particular siting context related to environmental concerns. This also does not conform to the SEPA requirements cited previously and does not protect the shorelines to the fullest extent possible.

c. All commercial geoduck harvest operations involve the use of drilling

The Shoreline Master Act lists "drilling" as one of the definitions of "development." The AG states that "[t]he term 'drilling' is commonly defined in terms of creating a hole. See Merriam-Webster online Dictionary, Drill, '2 a(1): to bore or drill a hole in (2): to make by piercing action <drill a hole>.'" The AG disqualifies the placement of tubes as "drilling" saying "while tubes could be creatively described as being 'drilled into' the substrate, no hole is created. The tube is a temporary barrier protecting the juvenile clam."

The PVC tube may not be a "drill," but the water jet device, as it is used in geoduck harvest, is certainly a "drill." The description of water jet harvesting in the Washington State Geoduck Growers

¹³ Email from Billy Plauche, Buck Gordon, Attorneys at Law, to Thurston County (February 28, 2007).

Environmental Codes of Practice (ECOP) clearly indicates that it involves piercing the substrate to create a hole: "the nozzle is inserted next to the geoduck siphon" and "the average size hole produced is about 1/3 cubic feet" in deep water harvest. The intertidal harvest "drilling" according to the ECOP, is even more severe, as "the harvester will not harvest geoduck one at a time producing single holes but will systematically emulsify the substrate with the water jet."

Mining technology information states that "one of the fundamental processes in mining is the liberation of minerals from the *in situ* rock mass." It goes on to say that a "... method of rock breakage...is the application of high pressure water jets" and that "a rock surface can be significantly damaged or cut by a water jet at high pressure."¹⁴

The purpose in using a water jet in mineral mining is to damage or fracture the rock surface so as to extract the minerals contained within the rock. The purpose in using a water jet in geoduck harvest is to liquefy (damage or fracture) the sediment so as to extract geoducks. The use in geoduck harvesting is thus comparable both in the purpose of the technique and the technique itself. As in mining for minerals, the purpose of the water jet drilling on the tideland is the liberation or extraction of a resource, in this case, cultured geoducks. The Pacific Coast Shellfish Growers Association states that commercial geoduck harvesters pump large volumes of seawater at low pressure to loosen the sand and release the geoducks.¹⁵ The ECOP allows water jet pressure up to 100 psi. Whether the industry uses the term, "emulsify," as in the ECOP submitted to Thurston County in August, 2006, or more recent terms such as "loosen" or "soften," the technique and the effect of the technique are the same: disruption of the sediment in order to extract the geoduck by drilling a hole, a hole which the geoduck harvester actually sinks into, often up to his waist, while harvesting. See attached Powerpoint PDF slideshow.

The AG concludes that "disruption of the substrate around a geoduck, considered in isolation, cannot be legally distinguished from general clam digging or raking." But the AG errs in not taking into account the method used in geoduck aquaculture, which is "drilling." It is clear from the ECOP that the very definition of water jet harvesting of geoducks in intertidal areas involves thousands of geoducks, not just one. The purpose of water jet harvest is to extract approximately 90,000 geoduck per acre or some 19-23 geoducks per square yard. According to the ECOP, water jet harvest is a highly efficient method of extraction and "100 geoducks per hour can be harvested with this method." On the other hand, the ECOP states that the hand digging method "can be a very difficult and time

¹⁴ PC Hagan, *The cuttability of rock using a high pressure water jet.*
http://www.mines.unsw.edu.au/Puglications/publicatoins_staff/Paper_Hagan_WASM_1992.htm.

¹⁵ Pacific Coast Shellfish Growers Association, *Geoduck Farming Is Good for Washington State.*

consuming effort since geoducks are buried so deeply (36") in the substrate." The Washington State Department of Fish and Wildlife website as of July 8, 2007 describes hand-digging a single geoduck as nearly as difficult as "climbing Mt. Rainer."

Thus comparing water jet harvest to general clam digging or raking is inaccurate using the industry's own definitions. The water jet drilling method is used in all commercial geoduck harvest operations as a matter of course, thus "drilling" is always an aspect of commercial geoduck aquaculture, making geoduck aquaculture a "development."

d. All commercial geoduck operations involve the removal of materials

In his opinion, the Attorney General states: "...if sediment is disrupted during harvest, only a minimal amount of sediment is actually removed with the clam. This minimal amount of materials removed does not comport with a reasonable interpretation of the statutory language concerning "removal of materials." See Black's Law Dictionary 464 (8th ed. 2004), '*de minimis non curat lex*' (the law does not concern itself with trifles.)" The AG does not state where his information about the amount of sediment removed comes from nor does he back up his claim that it is a minimal amount.

However, the Washington State Geoduck Growers Environment Codes of Practice (ECOP) state that "the beach level will be lowered about 1-2 inches by the harvest." Thus, based on the statements of the geoduck growers themselves, the amount of material lost or displaced to another area of the beach amounts to some 134 to 268 cubic yards of material per acre, the equivalent of 13 to 26 dump trucks of material. If we take into account the fact that growers drill into the beach area not just once during the harvest, but make as many as 12 to 15 passes to get every last geoduck,¹⁶ then it is clear that the amount of material removed from the site is not a "trifle."

Therefore commercial geoduck aquaculture involves "removal of sand, gravel, or minerals" and is thus a "development."

e. All commercial geoduck operations interfere with normal public use of surface waters

All commercial geoduck operations interfere with normal public use of surface waters. The very existence of the structure precludes the use of the shoreline by recreational users, fishers, boaters, and other normal public activities.

¹⁶ Department of Natural Resources, *Geoduck Clam Research and Management, Pacific Shellfish Institute Component Deliverable 3* (2004).

As discussed above, the PVC tubes, Vexar, netting, stake and rebar structures create a physical obstruction to the public's use of the surface waters. Their presence simply excludes other uses. When the tide is low, but not lower than the lowest elevation of the geoduck planting structure and not higher than the highest elevation of the geoduck planting structure, then the water level falls in the midst of the geoduck operation and any use of the surface water at that juncture is precluded. Enormous barges, multiple boats, men with water jet hoses and crews of workers obstruct boaters and recreational users. When large swaths of tideland are converted to this type of agricultural use as has already happened in Thurston County, the practical consequence is that these surface water areas are effectively made off limits to the public. See attached Powerpoint PDF slideshow.

Additionally, since geoduck operators frequently leave stakes that become encrusted with barnacles on the tidelands as markers, hazards exist for boaters, kayakers, swimmers and water-skiers which caution against using the waters in these locations, another effective prohibition to access of public waters. Canopy netting can float upward with the tide creating a hazard for boaters and swimmers. If the grower marks the area as off-limits to the public with bouys, as was the case in Wash Shell Fish, then the grower has interfered with the public use of surface waters. If the grower does not mark the area for hazards, he/she has created an irresponsible hazard to the public since the structure and netting may not be visible underneath the water.

Groupings of property owners "share" the beach in each particular neighborhood and there is a common attitude that access to the beach for multiple shoreline property owners in the same vicinity is one of a shared resource and not a "no trespassing" issue. The tidelands of Thurston County are not neat and straightforward extensions of the upland property boundaries. Often the tideland boundaries are at an angle to the upland boundaries, and thus a commercial geoduck operation on one neighbor's tideland can be directly in front of another neighbor's upland residence and beach, cutting off access to the water at low tide. Shoreline residents typically do not fence their tideland properties. However all this changes with the installation of geoduck farms and there are subsequent adverse consequence for the community related to use of the surface waters and water access.

5. The AG opinion is incorrect and unworkable

For all the reasons discussed in our analysis of the AGO opinion we believe that the opinion is both incorrect and unworkable. With respect to the construction of structures, placement of obstructions, drilling, removal of any sand, gravel, or minerals and interference with the public's use of surface waters, all commercial geoduck operations present the same or closely similar facts related to their operations of planting and harvesting. This is evidenced by the Washington State Geoduck Growers Environmental Codes of Practice that describe the basic activities of the operations and is frequently cited by the industry as broadly accepted by the geoduck grower community.

Suggesting that Thurston County decide on a case-by-case basis whether a substantial development permit is required for a commercial geoduck operation without the benefit of a process to do so, is simply irrational, and places the County in an untenable position, restricting the County's ability to protect the shorelines as fully as possible.

Commercial geoduck aquaculture requires a substantial shoreline development permit process in order to preserve the natural character of the tidelands to the fullest extent possible under the Shoreline Management Act and to afford the public its right to the enjoyment of the physical and aesthetic qualities of the natural shoreline through the ability to make public comment and appeal in a permitting process.

6. The Thurston County Shoreline Master Program is inconsistent in relation to substantial shoreline permitting requirements for aquaculture

The Thurston County Shoreline Master Program, Section II-7(c), under Aquaculture Activities, authorizes the creation of an Aquaculture District through a substantial shoreline development permit process. Yet the County has not been requiring that individual commercial geoduck operations obtain a substantial shoreline development permit. Ironically, many of the geoduck operations in Thurston County involve multiple parcels (as many as 32) leased from property owners in the same vicinity, yet no permit is required. This appears to be both inconsistent and favorable to the interests of the shellfish industry in that they can establish what would normally be considered an "aquaculture district" without having to go through a substantial shoreline development process, thereby bypassing both environmental review and public comment. Additionally, individual operations of any size that are not labeled as an "aquaculture district" do not currently involve any permit process. Thus the "aquaculture district" provision is unused because it presents an impediment to the industry that can be easily ignored. Once the operations are established, the industry claims they are "vested" in perpetuity to use those tidelands for aquaculture purposes.

Under the Shoreline Management Act, as discussed above, Thurston County must implement a substantial shoreline development permitting process for all shellfish aquaculture operations, not just for operations that are virtually grouped together under the label, "aquaculture district."

D. Conclusion

In conclusion, there can be little question that under the Shoreline Management Act, commercial geoduck operations and other intensive shellfish aquaculture operations are "developments" and therefore require a shoreline substantial development permit. Any interpretation otherwise flies in the face of the intent and policy of the Shoreline Management Act.

The Shoreline Management Act of 1971 states that:

The legislature finds that the shorelines of the state are among the most valuable and fragile of its natural resources and there is great concern throughout the state relating to their utilization, protection, restoration, and preservation...The legislature further finds that...unrestricted construction on the privately owned or publicly owned shorelines of the state is not in the best public interest... There is, therefore, a clear and urgent demand for a planned, rational, and concerted effort, jointly performed by federal, state, and local governments, to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines. RCW 90.58.020

Today, in 2007, the highest authorities in our State government are even more urgently concerned with the state of health of Puget Sound and the fragile tidelands, and propose habitat restoration and protection as two of their highest goals along with a coordinated effort to save Puget Sound. So it is inconceivable that responsible State or County authorities would allow expansion of intensive new technologies of shellfish aquaculture without the "planned, rational and concerted effort" to protect the shorelines and preserve their natural character. A "planned, rational and concerted effort" requires a process for assessing environmental impacts, siting, use conflicts and both cumulative and additive effects, in short, a substantial shoreline development permit application process.

Thank you for your consideration. We look forward to your response.

Very truly yours,

BRICKLIN NEWMAN DOLD, LLP

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Claudia M. Newman

CMN:DAB:psc

Enclosures: Powerpoint PDF slideshow
Washington State Geoduck Growers Environmental Codes of Practice
Concerns and questions relevant to infaunal and epibenthic impacts of geoduck
aquaculture

cc: Protect Our Shoreline
Jeff Fancher, Thurston County Prosecuting Attorney
Donald Krupp, Thurston County Administrator
Michael Welter, Director, Planning Services
Mike Kain, Manager, Planning Services

Thurston County Commissioners
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Roger Giebelhaus, Planning Services
Jay Manning, Director, Department of Ecology
Sen. Karen Fraser
Rep. Sam Hunt
Rep. Pat Lantz