

TO: Ron Buckholt  
Community Development Center  
Thurston Co Washington

2 December 2022

RE: Development project 2022103702

Mr. Buckholt,

We are writing in opposition to the proposed permit for aquaculture on parcel 93000100000. Please ensure that we are listed as interested parties, and notify us of any new documents, meetings, or other pertinent information concerning this application

We are both scientists, retired MDs, with a lifelong interest in protecting the environment. Ron has a B.S in Biology with an emphasis on wildlife including studies in Marine Invertebrate Zoology. Please read this carefully, as every paragraph here is pertinent.

This proposed development is unreasonable and should be denied for many reasons:

- The Shoreline Master Program (SMP) states a need for “little visible evidence of permanent structures and occupancy”. If you look at the attached photo, how can you possibly describe this as “little visible evidence.” The tide is out twice a day! While most of the tubes may be removed after two years (some are always lost into the environment), they will be back on the next cycle in as little as two more years. We would have to live with this visible disturbance long-term.



- Looking at the above photograph, can you imagine trying to land a boat on the shore or launch a kayak at low tide? This would be a major impact on recreational use, protected by the SMP.
- The SMP prohibits management of non-renewable resources which result in long-term, irreversible impacts on the natural character of the environment. Many scientific studies point to the growing danger of plastic and microplastics in our environment. <https://www.voanews.com/a/researchers-discover-microplastics-in-100-percent-of-people-studied/4625869.html>. The dangers of plastic debris towards wildlife in the environment are well known. There are currently no scientific studies of which we are aware that seriously assess the environmental impact of this massive immersion of PVC pipe into our Puget Sound marine environment. This is **not** an acceptable practice under the stated purposes of the SMP.
- This proposal for project 2022103702 includes the option to completely blanket the PVC tubes with huge screens, fastened to the beach by rebar. The entrapment of birds and other wildlife in these nets has been well documented, and this should **never** be allowed. [https://protectourshoreline.org/i\\_wildlife.html](https://protectourshoreline.org/i_wildlife.html)
- This proposal for project 2022103702 states pertaining to geoduck tubes “upper edge planted typically between +1’ – 0’.” This refers to tidal level. In actuality, we have heard reports from other Taylor projects that clams have been planted up to +6’ tide levels, which is a far greater area than stated. The application is inadequate because Taylor should have to explicitly state its intention as to exactly where it intends to plant. “Typically” is **not** an acceptable term in a tidelands use application and should be **not** be allowed
- According to the SMP, “the intent of Conservancy Environment Designation is to protect, conserve, and manage resources and valuable historic and cultural areas in order to ... achieve sustained resource utilization.”  
There is nothing about planting a geoduck farm that protects our shoreline. The practice of inundating the intertidal zone with a sea of PVC tubes followed by disruption of the beach ecosystem by the hydraulic guns used to harvest the clams is not sustainable in the environment. The process of geoduck aquaculture will wipe out the normal beach flora, introduce new and different flora, wipe that out, and then start all over again in a cyclic fashion. “Sustained yield” is NOT the same thing as sustainability for the environment. This plan is **not** compatible with the SMP.
- This permit for aquaculture has nothing in common with harvest of native geoduck. The use of intensive geoduck aquaculture (25 clams/square meter) is a relatively new technique. In “Effects of Geoduck Aquaculture on the Environment: A synthesis of Current Knowledge” published by Washington Sea Grant (UW) in 2008 it is stated

“There is a paucity of peer-reviewed information on *Panopea abrupta*” (geoduck). Since the life cycle of geoduck harvest is 5-8 years, there has been time for only two cycles of harvest since that study. As scientists, we know that it is **impossible** to prove long term recovery of the beach in 2 cycles, no matter what industry says. Studies to date have been predominantly on small plantations of geoduck, and have **not** been proven to be scalable to the very large projects like the one proposed here. This should not lie within the parameters of reasonable use until we know definitive answers about beach recovery related to these huge, intensive cultivation techniques. When in doubt, wait for the science.

- According to the SMP, “preferred uses are non-consumptive”. In what way is the imbedding of approximately 100,000 pvc tubes onto each acre of the intertidal portions of our beaches non-consumptive? For the proposed 3.6 acre coverage, that is over **360,000 tubes**. This is utilization at an extreme level, which requires years for the beach to recover to its natural state.
- While an individual may own a piece of tidelands, they **do not own the water** that flows over it, and do not have a right to use that water inappropriately. The shellfish industry likes to advertise that clams filter and clean water. We all want clean water, but clean water does not mean **pure** water. Our marine waters are teeming with live including zooplankton and phytoplankton which are essential for everything that lives there. When shellfish filter water, they extract these nutrients to grow. There is great concern among scientists about excess consumption of these nutrients from intensive aquaculture. What is left for the other sea life that must survive on the same food chain? A geoduck plantation like the one proposed grows (5 geoduck/tube x 25 tubes/square meter x 4047square meters/ acre x 3.6 acres =) **1,821,150 clams** on just one short beach? It is unlikely that this will be the only geoduck farm in Henderson Inlet, if this permit is approved. Do we have the science to say that this would be sustainable? We believe the answer to be no.
- There is well known scientific evidence of disruption of wild salmon stocks by hatchery programs, and significant steps have been taken over the years to try to arrest the decline of native salmon stocks with poor results. Everyone knows about the plight of endangered Orcas that depend on Chinook salmon for their very survival. The current system of hatchery rearing of geoduck may well be parallel to salmonids. There is currently no significant body of research that I am aware of that address the potential alteration of native geoduck stocks by these massive hatchery programs. Have no doubt, the seeds from these planted clams will implant and grow throughout Puget Sound where native geoduck have always grown. There are already rumors of diminishing size of geoducks in these plantations. Are we poisoning the genetics of our native stocks? Nobody knows, but we see approval of these farms for the sole profit of industry.

- Under RCW 90.58.020. Legislative Findings – State policy enunciated – use preference is stated “The legislature finds that the shorelines of the state are among the most valuable and fragile of its natural resources and that there is a great concern throughout the state relating to their utilization, protection, restoration, and protection. Unrestricted construction on the... shorelines of the state is not in the best public interest.” This proposed utilization by Taylor Shellfish clearly violates this philosophy codified by our state legislators and should not be allowed. The fact that that this philosophy has been repeatedly violated in the past, gives no right for it to be violated again for the personal gain of a few individuals.
- “Permitted uses of the shorelines of the state shall be designated and conducted in a manner to minimize, insofar as practical, **any** resulting damage to the ecology and environment of the shoreline and **any** interference with the public’s use of the water”. In what way is this proposed development minimal?
- Taylor industries produces a product for export, predominantly to China. An accepted figure appears to be 95% of the product exported. It is true that there is some tax revenue provided to communities where Taylor Shellfish has its main business, as well as mainly low-pay jobs. These benefits do not include the Henderson Inlet area, where there are no land-based facilities to my knowledge. If you find a geoduck for sale in the Puget Sound region, you will find it very expensive. Taylor sells them for \$60 each. <https://buy.taylorshellfishfarms.com/clams-mussels-geoduck/geoduck>. In China, they are reported to sell for as much as \$300 each. Make no mistake, Taylor Shellfish, formerly a small family operation, is now a growing **international** company, and is making a huge profit off of our waters. Was this the intent of the legislature when they revised the Bush Act in 2002 to allow commercial geoduck farming on Bush Oyster Lands? I believe it was the intention of the shellfish industry lobby, and that legislators were likely largely unaware of the type of geoduck aquaculture that they were potentially authorizing. This law should be reviewed and amended.
- The people around Henderson Inlet are in a special tax district, expressly developed to improve the water quality in Henderson Inlet. We’ve all supported this with our pocketbooks. Taylor seeks to capitalize on these efforts, which they did not participate in. Their plantation will not improve water quality, and will very likely harm it. This is inherently unfair to the landowners in the entire Henderson Inlet watershed.
- There are still many challenges to water quality in Henderson Inlet. Runoff from Long Lake and Woodland Creek is an issue. We have the health of the Woodard Bay protected area to be concerned about with its large harbor seal population. Our waters are frequented by myriads of birds, coho and endangered Chinook salmon, as well as protected cutthroat trout. Native smelt return to spawn on our beaches, and in recent months we have been visited by Orcas, a humpback whale and porpoises. To date, there has been almost no commercial geoduck aquaculture in the Inlet. Considering the extensive Bush Act tidelands in the Inlet, permitting this large project would be the first

step toward extensive, industrial level development of Henderson similar to what we see now in Totten Inlet. This is not in-keeping with preserving our heritage of wildlife. There are currently 700 active shellfish permits in Washington State, and these now cover 1/3 of our coastal lands. Geoduck farming doesn't feed our people, and we don't need it.

These reasons are only a sampling of the issues surrounding the proposed project by Taylor Shellfish. There is near universal opposition to this permit from everyone to whom we have spoken, and we will be speaking with a great many more people over the coming months. It is our intention and the intention of many others to **Protect Henderson Inlet**.

We who live on and near the shores of Henderson Inlet respectfully ask that you deny this permit,

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