



PROTECT HENDERSON INLET
Preserve and restore

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30 May, 2023

To Thurston County Planning Department, Attn Andrew Deffobis
Subject: Comments about Shoreline Master Program update

Dear Mr. Deffobis,

I appreciate the extension of the comment period for the proposed updated Thurston County Shoreline Master Program. As a new organization, Protect Henderson Inlet (PHI) is actively engaged in learning about the issues that affect Henderson Inlet and the greater Salish Sea. There *are* many areas of interest and concern, and there is a lot to absorb and learn about the process. I know you that are aware that many of these issues are quite complex, but probably none are more so than the effects of **aquaculture** on our environment. Through this letter, I would like to make the county aware of the position of PHI with regard to aquaculture. I hope these comments will help the committee to understand the will of the people and to reshape the SMP into something that will better serve us while protecting our valuable shorelines.

First, let me state clearly that PHI is supportive of aquaculture in general. Oysters and clams have been cultivated in Northwest waters for thousands of years, and we recognize the rights of tribes to continue that practice. I am friends with several commercial oyster growers and see them as hard-working people who are inspired by their work of raising quality food for the people. Many of the members of PHI grow small quantities of oysters on their own beaches, myself included. That said, not all growers are sufficiently concerned with the impact of their practices, as I will explain. While we are supportive of the practice of growing shellfish on Puget Sound beaches, we are also highly critical of some of the methodology of doing so, which we believe is significantly impactful. We are especially opposed to the methods being used for geoduck cultivation. I am purposefully not addressing citizens concerns about the negative visual impact and limitation of beach access produced by aquaculture, as I think the County is already well aware of these significant issues.

In your SMP Fact sheet #5, you make these statements:
“Washington law considers aquaculture an activity of statewide interest, that with proper management can result in long-term benefits to shorelines.”

This is a misstatement - I challenge you to describe any commercial aquaculture operation that results in long-term benefit to the shoreline. There is always negative impact, which is why the federal, state and county governments must have mitigation requirements for these operations. We accept some negative effects for the benefits that are provided which ideally include profits to business, taxes for government, jobs, and food that we can eat. We require our county government to use good judgement in determining which compromises are reasonable.

“Aquaculture is considered a preferred use when consistent with control of pollution and prevention of damage to the environment.”

This is a key statement: Since the County and State take the responsibility for issuing permits, it follows that they are also responsible for ensuring that permit holders do not pollute or damage the environment. This represents a huge problem, because Thurston County has accepted the arguments from large commercial shellfish growers that their activities have no significant impact on the environment without requirement of substantial proof. I will explain here why this is a mistake.

Furthermore, the County has no program in place to assess for compliance with permit requirements. I recently discussed this issue with Kraig Chalem, Compliance Unit Supervisor in the Thurston County Planning Office, who confirmed that the county relies on self-reporting by the industry, having no resources for actual inspection. I will substantiate that this lack of oversight is being abused by the industry.

In November of 2020, you personally received this communication from Diani Taylor, counsel for Taylor Shellfish.

<https://s3.us-west-2.amazonaws.com/thurstoncountywa.gov.if-us-west-2/s3fs-public/2023-02/cped-board-pc-written-comments-received-for-12.02.2020-final.pdf>

The Planning Commission was apparently considering policies encouraging the phasing out of plastics, questioning the impact of aquaculture practices on native species, and raising concern about permit compliance. These were and are highly appropriate concerns, and you were right to consider them. However, it appears that the Commission accepted the arguments put forward in the multipage documents from Taylor’s own consultants without further study. They also seem to have accepted the statements made by Ms Taylor that assert that existing science substantiates their methods of geoduck aquaculture. Unfortunately, their communication is full of self-serving misinformation. Let me explain why I say this, and why the Committee should take a second look at this information.

I am a scientist by training, now retired, with an undergraduate degree in Biology which included Marine Invertebrate studies. I am also an MD and practiced medicine in Washington State for several decades. My science experience does not make me an expert in all things marine, but it does give me sufficient expertise to critique existing science, and I would like to

share my assessments with the Committee. Taylor cited three scientific papers as supporting their methodology for planting and harvesting geoduck, arguing that their methods pose no significant environmental risk. Taylor's assertions are incorrect. Keep in mind, we are considering a relatively new method of aquaculture, developed by The University of Washington in the 1990s and subsequently given over to industry. It involves dense planting of hatchery geoduck in 6" diameter plastic tubes implanted in the beach with eventual harvest after 5-7 years by hydraulic liquefaction of the beach strata. There actually isn't a lot of in-depth science to be viewed. In a nutshell, these honestly prepared and peer-reviewed articles are all based on limited data collected well over a decade ago, each one describing its own significant limitations, and all calling for long-term, cumulative impact studies. The most commonly cited article by Dr. P Sean McDonald, published in 2015 (Effect of Geoduck Aquaculture Gear on Resident and Transient Microfauna...etc), is self-described as a "first look" study. In spite of all the scientists in all of these papers recommending cumulative impact analysis, there have been NO follow-up studies on the impact of geoduck aquaculture on our beaches. In this, the most extensive of the three studies, less than 20% of the identified species were tracked. By the way, they didn't even include the common sand-dollar *Dendraster excentricus* (there are thousands on my own beach), which we have reports of disappearance after geoduck cultivation.

You may review my detailed critiques of these articles at www.protecthendersoninlet.org under the drop-down menu "Science." I encourage the committee to take a few minutes to read my analyses and consider hiring its own independent experts to review the science. This will allow you to make the correct decisions about how you will allow aquaculture to proceed. The committee should NOT accept Taylor's biased comments about this science without independent review.

I also reviewed the rather extensive comments by Taylor's plastics experts, and found them to be partly correct, but full of misinformation and mis-statement. You may read my comments in this letter to the Planning Department, also posted to the PHI website:

<https://protecthendersoninlet.org/letter-to-thurston-county-potential-impact-of-plastics-in-henderson-inlet/>

While the detail is too much to cover in this letter, I will mention one of the most egregious mis-statements and offenses by Taylor concerning plastics. It is well accepted that plastics break down in the environment shedding microplastics, especially from exposure to UV light, and Taylor does not dispute this. Their arguments that their plastics are somehow not subject to this effect fall flat when you look at the photograph (within the above link) that I took in Henderson Inlet this year showing a barge of used geoduck tubes which had sat exposed to sunlight for many months. When I confronted Bill Dewey Taylor Shellfish at the Shellfish Growers Conference at Alderbrook (March 2023) about their lack of protection for their plastics including open storage on in land piles on their properties, he said that they "should take a look at that". I do believe his statement that Taylor "doesn't want to hurt the environment," but without a compliance program from the County requiring them to monitor and protect the plastic, they will continue this poor practice. The County SHOULD NOT ISSUE THESE PERMITS

without a functioning compliance program. **A compliance program should be outlined in the SMP.**

Many citizens like me are becoming alarmed at the impact of plastics on the environment, and fear that microplastics may become the next scourge after climate change. Let me be clear – we are not talking about small volumes of plastics here. One acre of geoduck production requires implanting approximately 40,000 tubes or 20 tons of plastic in the beach (feel free to fact-check my numbers - I confirmed this with friend Jim Gibbons who has 1.5 million geoduck growing in South Puget Sound). These will be cycled through many plantings over a period of decades with open storage in-between use, and with significant losses to the environment over time. While the presence of cultivated geoduck on the beach *may* be benign, the methodology used by industry is potentially malignant. It should not be allowed without careful scrutiny, regardless of past practices.

An additional environmental impact from the current methodology of geoduck aquaculture which is completely unstudied is the potential impact of hatchery geoduck implants on wild geoduck stocks. I spoke about this with Dr. Henry Carson, head geoduck scientist of the WA State Department of Fish and Wildlife, who confirmed that it is concerning, and that the genetic impact should be looked at. Unfortunately, there is currently no funding for this research that I am aware of. In essence, there is the possibility that the same deleterious effects that we have seen from hatchery salmon on wild stocks could be replicated in geoduck.

In summary, I hope you will take your responsibilities seriously as you revise the SMP with regard to permitting of aquaculture permits. The concerns of PHI about Geoduck are:

1. Lack of robust science that establishes the current methodology of commercial geoduck cultivation, including invasive harvest techniques, as being environmentally sound
2. Lack of requirement for the shellfish industry to find environmentally safe alternatives to the massive use of plastics in the marine environment, especially in geoduck cultivation, but also in oyster production
3. Lack of any effective program in Thurston County for monitoring of permit compliance, especially related to the misuse of plastics by shellfish growers
4. Lack of mitigation requirements for the shellfish industry such as participation in Olympia oyster and eelgrass restoration projects, reduced intensity of plantings, and research of alternate harvest methods.
5. Issuance of permits allowing planting of millions of hatchery geoduck in South Puget Sound without a clear understanding of the impact on wild geoduck genetic stocks.

I believe that reasonable compromises can be found on many issues if we make the effort, and that we, the people are the ultimate beneficiaries of that effort. If you do not currently have a clear understanding of the science surrounding these decisions, I strongly urge you to take more time to evaluate the data before approving revision of the SMP. If there is some way that I can assist you in understanding these issues, I am at your disposal.

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