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**COMMUNITY PLANNING &
ECONOMIC DEVELOPMENT DEPARTMENT**

Creating Solutions for Our Future

Joshua Cummings, Director

TO: Thurston County Board of Commissioners

FROM: Thurston County Planning Commissioners Helen Wheatley (author), Derek Day, Joel Hansen, and Kevin Pestinger

DATE: August 8, 2022

SUBJECT: Minority Report on Thurston County Planning Commission Review of Updates to the Shoreline Master Program (SMP)

Honorable Commissioners:

At our work session dated August 3, 2022, the Planning Commission voted 5-3 to recommend approval of the Draft Shoreline Master Program (SMP). This minority report is respectfully submitted to explain why four members of the Planning Commission, including one member who was not present at the time of the vote, contend that this draft of the SMP should not be approved by the Board of County Commissioners without further revision.

We support the Draft SMP for the most part. We recognize that most of the draft revisions improve the capacity of the SMP to promote and enhance the public interest. We also recognize the urgency of applying these improved standards to our system of shoreline protections as soon as possible.

Unfortunately, some essential elements of the Draft SMP became less protective while under lengthy Planning Commission review. We draw particular attention to shoreline buffers. Planning Commissioners were provided an option to either decrease some Shoreline Environmental Designation (SED) buffers ("Option A"), or to decrease some and increase others ("Option B"). The Planning Commission supported policy choice "A." At a time when many other jurisdictions are expanding buffers in response to state guidelines and Best Available Science, Thurston County buffers for Rural Conservancy designations were reduced by 50%, or an astonishing 125 feet. This choice simply does not "reflect the policy goals of the act" (WAC 173.26.186). It is unsupportable.

The impacts of climate change, as well as the "most current, accurate and complete scientific and technical information available" should have been better considered for revision of the SMP.[1]

Thurston County is already working actively to incorporate climate change into its policies. The Thurston Climate Mitigation Plan was completed in 2020 to complement the Thurston Climate Adaptation Plan.

[1] Washington Department of Ecology, Shoreline Master Program (SMP) Handbook, Publication Number 11-06-010. 11/11; rev 6/17. Chapter 11.

The Thurston County Board of County Commissioners has further demonstrated its commitment to incorporate climate change into planning by participating on the Thurston Climate Action Steering Committee. We anticipate that revision to the Thurston County Comprehensive Plan under the Growth Management Act will include extensive integration of climate change policies. Therefore, many of the comments contained within this Minority Report reflect our position that revision to the SMP must reflect the most recent science available. It should support an adaptive management policy approach.

The Shoreline Master Program is a long and complex document. This report is divided into topical sections reflecting topics addressed in SMP chapters. The topical sections also incorporate references found in other parts of the SMP (e.g., appendices or definitions) or arising in multiple chapters.

TOPIC 1: VEGETATION CONSERVATION AND BUFFERS

Minority Position:

The proposed provisions are not protective enough to meet Shoreline Management Act (SMA) policy goals and prevent net loss.[2] Loss of native vegetation is a major component of the "inherent harm in uncoordinated and piecemeal development of the state's shorelines"[3] which the SMA was written to address. Vegetation policies of the Draft SMP should not be accepted as written. Failure to revise these standards will result in a noncompliant SMP.

Buffer widths must be increased significantly and strive to achieve 80% cumulative effectiveness. Setbacks should be regulated to support the functionality of entire buffer areas. Shoreline structures and uses should not result in Net Loss to ecosystem function or public access. They should protect health and safety, accounting for accelerating climate change. Restoration is recognized in the Draft SMP as a necessary condition to achieving No Net Loss; vegetation buffers of appropriate width should be recognized as sites with restoration potential.

Discussion

Buffers (see 19.400.120)

The Ecology SMP Handbook states: "Buffers and setbacks with vegetation conservation support a main tenet of the Shoreline Management Act (SMA) — '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.'"[4]

While buffers are a "sensitive topic for SMP updates,"[5] WAC 173-26 recognizes that the size of the buffer, its species composition and vegetation community contribute to ecological function. For example, to protect and maintain water quality for wetlands, "Removal of dissolved nutrients requires long retention times (dense vegetation and/or very low slope) and, more importantly, contact with fine

[2] WAC 173-26-186.8(b): "Local master programs shall include policies and regulations designed to achieve no net loss of those ecological functions."

[3] RCW 90.58, Shoreline Management Act.

[4] Ecology SMP Handbook, Chapter 11.

[5] SMP handbook, Chapter 11.

roots in the upper soil profile." Removal of some pollutants, such as nitrogen, may rely more on the nature of the vegetation community than on buffer size.[6]

Vegetation, Ecological Function and Restoration

When determining buffers, WAC 173-26 Section 201(3)(d)(viii) directs local governments to "Identify how existing shoreline vegetation provides ecological functions and determine methods to ensure protection of those functions. Identify important ecological functions that have been degraded through loss of vegetation." It also states, "Consider the amount of vegetated shoreline area necessary to achieve ecological objectives." This is because No Net Loss can only be achieved with restoration of vegetation. Buffer widths must be sufficient to allow for a return of functionality based on vegetation even where the shoreline is currently degraded. This essential role of vegetation is a reason why, where necessary, shoreline jurisdictions may be extended to include land needed for effective buffers.

State recommendations on buffer widths are based on the concept of establishing protectiveness based on the distance needed to achieve a percentage of ecological function. There are different kinds of function which should be identified, as should the basis of scientific evaluation. The Department of Ecology assumes a general goal of 80% effectiveness, utilizing the FEMAT curve model to meet the requirements of the Shoreline Management Act.[7]

The Washington Department of Fish and Wildlife urges governments updating their Shoreline Management Programs to utilize both volumes of its Priority Habitats and Species (PHS) publications providing guidance on Best Available Science.[8] The riparian wetlands guidance for fish and aquatic species recommends prioritization of the "pollution removal function when appropriate;" and adoption of Site-Potential Tree Height (SPTH), based on potential tree height at 200 years, as "a scientifically supported approach if the goal is to protect and maintain full function of the riparian ecosystem." For

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[6] These two examples are from the Department of Ecology, Update on Weland Buffers: The State of The Science. (2013) Publication no. 13-06-11.

[7] See Washington Department of Ecology, Volume 1: A synthesis of the Science (2005); Volume 2: Guidance for Protecting and Managing Wetlands (2005); and Department of Ecology, Update on Wetland Buffers: The State of the Science (October 2013). Another Ecology BAS update publication is currently under review. Links to all three volumes are evaluable on the Department of Ecology website, "Best available science for wetlands."[https://ecology.wa.gov/Water-Shorelines/Wetlands/Tools-resources/Best-available-science.] FEMAT stands for Forest Ecosystem Management Team. As a complement to its guidelines to Critical Area wetlands, the Department of Ecology references these WDFW documents for Best Available Science (BAS) for riparian areas.

[8] PHS Riparian Ecosystems, Volume 1: Science Synthesis and Management Implications; and Riparian Ecosystems, Vol 2: Management Recommendations. Rentz, R., A. Windrope, K. Folkerts, and J. Azerrad. 2020. Habitat Program, Washington Department of Fish and Wildlife, Olympia.

For example, these volumes were referenced in WDFW comment on the City of Sequim 2020-2021 SMP Review: "These documents focus on the important habitat functions and values provided by freshwater riparian areas (in particular, around rivers and streams), and include, among other things, new guidance about viewing 'riparian management zones' as not simply buffers for streams and rivers, but as habitats in and of themselves." WDFW letter to Tim Woolett, Community Development Manager, City of Sequim, dated April 26, 2021. [https://www.sequimwa.gov/DocumentCenter/View/17912/WDFW-Public-Comment-City-of-Sequim-SMP-42621}

riparian ecosystems, the Washington Department of Fish and Wildlife recommends utilization of soil profiles to help delineate Riparian Management Zones for current protection and future restoration, observing that in western Washington the mean SPTH(200) ranges from 100 to 240 feet. [9]

Urban/shoreline residential buffers:

It should not be taken for granted that buffers in urban/residential areas can be relatively narrow. WAC 173-26-211(5)(f) requires that management policy for the Shoreline Residential environment assure no net loss of ecological functions. Vegetative buffers play a critical role in mitigating the effects of urbanization, including pollution and stormwater runoff. The impacts from hazards such as storm surges can cause greater harm in urban/shoreline residential areas; and the effects of episodes such as heat waves can be more exaggerated in developed areas of the shoreline.

Buffer protection of water quality and wildlife (especially fish) migration corridors is a strong consideration for urban/shoreline residential areas. [10] Yet the Draft SMP proposes to reduce the Marine Urban Conservancy buffer by 50%. This is backsliding in the protection of our shorelines and not based on science or common sense.

The Ecology SMP Handbook states that "The Guidelines acknowledge the importance of urban areas. '…The importance of this vegetation, in terms of the ecological functions it provides, is often as great or even greater than in rural areas due to its scarcity.'"[11] The Washington Department of Fish and Wildlife observes that "while most riparian ecosystem studies are from non-urban settings, the principles are the same," and that "sometimes Riparian Management Zones in urban areas may be more important from a habitat standpoint because within urban areas, adjacent uplands are often even more degraded than the RMZs, which then are often the only remaining areas where habitat functions are provided. Thus, a key element to maintain in urban RMZs is connectivity, both in and along streams."[12]

Other Puget Sound jurisdictions are responding to guidelines on shoreline conservation by revising their urban shoreline buffers to be wider. For example, King County buffers for High Intensity and Shoreline Residential Environments are 115 feet, while buffers for all other shoreline environments are 165 feet. (KCC 21A.24) Pierce County currently requires a buffer of 75 feet for Shoreline Residential designations (except for Lake Tapps). The Draft SMP proposes a 50 foot buffer.

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[9] Washington Department of Fish and Wildlife. (Priority Habitat Species) Riparian Ecosystems, Vol 2: Management Recommendations. Chapter 2.2.2, Site-Potential Tree Height (SPTH) Background; and 2.3.5, Width Delineation Steps. https://wdfw.wa.gov/sites/default/files/publications/01988/wdfw01988.pdf.

[10] See the Thurston Climate Adaptation Plan. Appendix A: Science Summary (2018). It should be noted that migration corridors are not only relevant to salmon swimming up streams. The Science Summary observes that, according to a 2007 National Wildlife Federation study, there will be very significant loss of coastal habitat. Planning should account for the need to restore that habitat and enable wildlife to migrate to restored/rebuilt habitat. Echoing this analysis, the Puget Sound Partnership Leadership Council observes that 1.1 million acres, or 13% of the entire Puget Sound land area, is both ecologically important *and* under development pressure. (2021 State of the Sound: What are the Challenges to Progress?" https://stateofthesound.wa.gov/what-are-the-challenges-to-progress/)

[11] Ecology SMP Handbook, Chapter 11, p. 8 referencing WAC 173-26- Section 201(3)(d)(viii).

[12] Washington Department of Fish and Wildlife. (Priority Habitat Species) Riparian Ecosystems, Vol 2: Management Recommendations. Chapter 3.3. Here we read RMZ (Riparian Management Zone) as synonymous with shoreline riparian buffers.

Without a stated rationale, the current Draft SMP for Thurston County even decreases rural buffers by as much as 50%. The Ecology SMP handbook suggests buffers of 150 feet for rural residential development.[13]

Stream (riparian) buffers:

The Draft SMP matches the Ecology guideline of 250 feet only for Type S streams and other streams greater than 20 feet wide. The county's range of protection for other fish streams is 150 to 200 feet, but Ecology and WDFW do not make such a strong distinction between very large and smaller streams. The Department of Ecology recommends a Riparian Habitat Area width of 250 feet for Type "S" (Shorelines of the State) and all fish (Type "F") streams regardless of whether they are currently or just potentially used, and whether they flow all year or not. WDFW recommends that no distinction be made between streams that are currently fish-bearing or not fish-bearing. Again, the need for adaptation of climate change calls for a precautionary and restoration-based approach in order to avoid Net Loss.

Achieving balance: The Ecology SMP Handbook provides many examples of ways that jurisdictions have approached the challenges of establishing buffers for areas where there is a need for balance with human use such as residential shorelines. Where buffers are less than 80% effective because of the need for balance, other policies such as restoration with native vegetation or soft shoreline stabilization can be used to mitigate the inadequacy of the buffer. In terms of costs and benefits,[14] however, preserving ecosystem function and the ecosystem services they provide, is often the most effective option.

RECOMMENDATIONS

19.400.120 Vegetation Conservation

Standard Vegetation Conservation Buffers:
The Shoreline Environmental Designation (SED) buffer widths of the Draft SMP must be rejected. To account for climate change, shoreline buffers should be extended to allow for restoration of potential full effectiveness in priority habitat areas, regardless of shoreline designation. Buffer widths should be based on achieving 80% cumulative effectiveness and restoration as well as mitigation. At the very least, all suggestions for expanded buffers in the early draft of the revised SMP should be adopted to achieve optimum protection against Net Loss.[15]

The buffer widths for both Type "S" and Type "F" streams should be 250 feet.

Reduced Standard Buffers:

[13] Ecology SMP Handbook, Chapter 11, p. 28.
[14] "Consider the impacts of climate change adaptation recommendations on the region's economy, environment, and society; this includes all urban and rural communities – especially vulnerable residents – and the ecosystem benefits provided by natural systems." Thurston Climate Adaptation Plan, 3.3 Guiding Principles.
[15] Thurston County planning document, "Current and Proposed Shoreline Environmental Designation Buffers of the Shoreline Master Program "
https://www.thurstoncountywa.gov/planning/planningdocuments/Proposed%20Buffers%20Chart%202021.pdf

More protective standards should be retained from current SMP. (Shoreline Residential reduced standard buffer should be maintained at 60 foot marine; Rural Conservancy 150 feet marine; Natural 200 feet.)

In the draft SMP, 19.400.120.B4, a sentence is added to the Draft SMP that misconstrues the purpose of setbacks, which would include the 15 foot building setback mentioned here. Remove the sentence that states: "The building setback is to protect the buffer during construction and is no longer required after construction is completed."

Appendix B. Mitigation Options:
Because there are a variety of ecological functions performed by buffers, it should not be assumed that function is lost when impacts are on the "landward" side. Modify B(1)(D), and any other references to functions on the "landward" side, to include this modification: *"Provided that ecological function is not impaired,"* or language to that effect.
Mitigation:
Non-native vegetation does not perform the same ecological functions as native vegetation. The Draft SMP should be revised to disallow substitutions for native vegetation in plantings for mitigation.

TOPIC 2: CRITICAL AREAS

Minority Position:

The SMP should assure that critical areas within the shoreline are protected in a manner consistent with the Critical Areas Ordinance (CAO) of the Growth Management Act (GMA). We are concerned that there is insufficient consideration given to critical saltwater areas. We note that permitting of critical areas is treated differently in the Draft SMP from the CAO in an important respect: the application of the principle of Reasonable Use (which is highly protective of ecological function) is replaced by shoreline variances. Without some revision, the Draft SMP will likely result in net loss of shoreline critical areas and their functions.

Discussion

Critical areas are an essential tool of the GMA for preventing loss of environmental function. The Shoreline Master Program must perform the same protective role for critical areas within the shoreline. This means that the same principle of critical area protectiveness – that the purpose of a critical area is to provide environmental function, not balanced use -- should apply. The Department of Ecology even suggests that the SMP provides an opportunity to improve upon Critical Areas Ordinances (CAO) through application of updated science and by filling in CAO gaps and inadequacies. "In any case, the science used as the basis for SMP critical area provisions must be the most current available."[16]

Although existing shoreline land uses must be taken into account (especially for SMA-preferred shoreline land uses), WAC 173-26 (State Master Program Approval/Amendment Procedures and Master Program Guidelines) provides extensive guidance to assure that ecosystem function is the priority for shoreline critical areas (as defined under RCW 36.70A.030(6)) and including critical saltwater areas as fish and wildlife protection areas. Ecological function is also a priority for Shorelines of the State (RCW 90.58.020), where protection of statewide interest over local interest; preservation of the natural

[16] Department of Ecology. SMP Handbook. Chapter 18. Integration of Critical Areas Ordinances.

character of the shoreline; long term over short term benefit; and protection of the resources and ecology of the shoreline are prioritized (in that order) over other uses.

WAC 173-26-221 (2)(b) states, "The planning objectives of shoreline management provisions for critical areas shall be the protection of existing ecological functions and ecosystem-wide processes. The regulatory provisions for critical areas shall protect existing ecological functions and ecosystem-wide processes." The "full spectrum of planning and regulatory measures" should be applied to protecting critical areas within the shoreline; and human uses and values for critical areas should be promoted "provided that impacts to ecological functions are first avoided, and any unavoidable impacts are mitigated."

RECOMMENDATIONS

To make the critical areas guidance of WAC 173-26-221 clear, we recommend that Chapter 19.100.110, Purpose and Intent, be revised as follows:

Although critical areas in shoreline jurisdiction are identified and designated under the Growth Management Act (GMA), they must also be protected under the Shoreline Management Act (SMA). The Washington State Legislature has determined that local governments must adopt Programs that protect critical areas within shorelines at a level that assures no net loss of shoreline ecological functions (ESHB 1653 Sec. 2(4)). A local government may include its critical area ordinance in the shoreline master program, but ~~Although Washington's shorelines may contain critical areas,~~ the shorelines themselves are not critical areas by default as defined by GMA. The planning objectives of shoreline management provisions for critical areas shall be the protection of existing ecological functions and ecosystem-wide processes. The regulatory provisions for critical areas shall protect existing ecological functions and ecosystem-wide processes.

For Shoreline Environment Designations, Aquatic (19.200.135), we recommend that the guidelines for protecting critical saltwater habitats be better highlighted in the Management Policies (C). We suggest addition of the language, "*critical saltwater habitats require a higher level of protection due to the important ecological functions they provide. In order to protect and restore ecological functions, shoreland designations should be integrated effectively with protection and restoration of Aquatic critical saltwater habitats*. "(see WAC 173-26-221 (2)(c)(iii)(A)). [We note that the language on the need for a higher level of protection is incorporated into 19.400.115 Critical Areas D. Critical Saltwater Habitats, but only in the context of Moorage Structures.]

In the Goal of Chapter 19.300.105, Critical Areas and Ecological Protection, we recommend clarification of the prioritization of ecological function for both critical areas and Shorelines of the State by revising the language as follows:

Goal: Protect and conserve shoreline natural resources, including protection of critical areas (Title 24 and Chapter 17.15 TCC, as referenced in 19.400.115), including critical saltwater habitats, ~~while accommodating reasonable and appropriate uses which will assure, at a minimum,~~ to assure no net loss to shoreline ecological functions and processes.

An additional Policy (SH-15) should be included for critical saltwater habitats with wording such as, "Critical saltwater habitats should be protected and restored according to the principles of WAC 173-26-

221." Here we reference WAC 173-26-221 (2)(c)(iii)(B)[17] which provides amble guidance on how local governments can do their part to assure that their saltwater habitats support a healthy Puget Sound ecosystem.

[17] WAC 173-26-221 (2)(c)(iii (B) **Principles.** Master programs shall include policies and regulations to protect critical saltwater habitats and should implement planning policies and programs to restore such habitats. The inclusion of commercial aquaculture in the critical saltwater habitat definition does not limit its regulation as a use. Reserving shoreline areas for protecting and restoring ecological functions should be done prior to reserving shoreline areas for uses described in WAC **173-26-201** (2)(d)(i) through (v). Planning for critical saltwater habitats shall incorporate the participation of state resource agencies to assure consistency with other legislatively created programs in addition to local and regional government entities with an interest such as port districts. Affected Indian tribes shall also be consulted. Local governments should review relevant comprehensive management plan policies and development regulations for shorelands and adjacent lands to achieve consistency as directed in RCW **90.58.340**. Local governments should base management planning on information provided by state resource agencies and affected Indian tribes unless they demonstrate that they possess more accurate and reliable information.

The management planning should include an evaluation of current data and trends regarding the following:

- Available inventory and collection of necessary data regarding physical characteristics of the habitat, including upland conditions, and any information on species population trends;
- Terrestrial and aquatic vegetation;
- The level of human activity in such areas, including the presence of roads and level of recreational types (passive or active recreation may be appropriate for certain areas and habitats);
- Restoration potential;
- Tributaries and small streams flowing into marine waters;
- Dock and bulkhead construction, including an inventory of bulkheads serving no protective purpose;
- Conditions and ecological functions in the near-shore area;
- Uses surrounding the critical saltwater habitat areas that may negatively impact those areas, including permanent or occasional upland, beach, or over-water uses; and
- An analysis of what data gaps exist and a strategy for gaining this information.

The management planning should address the following, where applicable:

- Protecting a system of fish and wildlife habitats with connections between larger habitat blocks and open spaces and restoring such habitats and connections where they are degraded;
- Protecting existing and restoring degraded riparian and estuarine ecosystems, especially salt marsh habitats;
- Establishing adequate buffer zones around these areas to separate incompatible uses from the habitat areas;
- Protecting existing and restoring degraded near-shore habitat;
- Protecting existing and restoring degraded or lost salmonid, shorebird, waterfowl, or marine mammal habitat;
- Protecting existing and restoring degraded upland ecological functions important to critical saltwater habitats, including riparian and associated upland native plant communities;
- Improving water quality;
- Protecting existing and restoring degraded sediment inflow and transport regimens; and
- Correcting activities that cause excessive sediment input where human activity has led to mass wasting.

Local governments, in conjunction with state resource agencies and affected Indian tribes, should classify critical saltwater habitats and protect and restore seasonal ranges and habitat elements with which federal-listed and state-listed endangered, threatened, and priority species have a primary association and which, if altered, may reduce the likelihood that a species will maintain its population and reproduce over the long term.

Local governments, in conjunction with state resource agencies and affected Indian tribes, should determine which habitats and species are of local importance.

The management planning principles for critical saltwater habitats enumerated in WAC 173-26-221 should also be better utilized to identify a longer and more effective list of potential hazards to critical saltwater habitats than those provided in Draft SMP 19.400.115 Critical Areas D, Critical Saltwater Habitats.

19.400.115. Critical Areas (permitting):
The Department of Ecology suggests keeping a record of Critical Areas decisions through the SMP update process, including "Why critical areas regulations in the SMP are different from those in the CAO (if they are)."[18] The impacts of those differences should be tracked to assure that shoreline permitting is no less protective than the CAO. The Department of Ecology advises governments to assume that "local officials will approve administrative buffer reduction requests in the majority of cases. The impacts to ecological functions resulting from buffer reductions must be evaluated accordingly." [19] We support adoption of the adaptive management concept by robust permit monitoring, as well as utilizing Ecology guidelines on data trends to track.

We suggest that Chapter 19.500, Permit Provisions, Review, and Enforcement, make specific reference to consideration of Best Available Science, No Net Loss and Cumulative Impacts in the standards for shoreline variances, permits and approvals involving critical areas.

TOPIC 3: AQUACULTURE

Minority Position:

The relationship between aquaculture and ecosystem function, especially for critical areas and considering the unknown long-term impacts of large-scale commercial geoduck production, have been concerns raised in public comment. Climate change looms very large for both the aquaculture industry and the shoreline ecosystem in which it takes place. The SMP should exercise a more precautionary stance in assessing potential hazards related to aquaculture and adjust its policies accordingly.

Discussion

Aquaculture is an activity of statewide interest and a preferred use. The history of aquaculture along Thurston County shorelines goes back to time immemorial. Despite the Treaty of Medicine Creek, the passage of the Bush Act and Callow Act in 1895 saw a selloff of county tidelands to private shellfish growers. According to the 2017 US Census of Agriculture, Thurston mollusk aquaculture sales generated over $38 million in value. It is a significant agricultural industry for the county with complex regulation and oversight. The Shoreline Master Program has a limited role and must not contradict other laws and regulations, but this does not mean that the county should not regulate aquaculture as a use.

Local governments shall protect kelp and eelgrass beds, forage fish spawning and holding areas, and priority species habitat identified by the department of natural resources' aquatic resources division, the department of fish and wildlife, the department, and affected Indian tribes as critical saltwater habitats. Comprehensive saltwater habitat management planning should identify methods for monitoring conditions and adapting management practices to new information.

[18] Department of Ecology. SMP Handbook, Chapter 18. Integration of Critical Areas Ordinances.

[19] Department of Ecology. SMP Handbook, Chapter 18.

The category of aquaculture encompasses a broad range of activities, including commercial ventures growing product for human consumption and sale; cultivation of shellfish for personal use; restoration and enhancement of native stock; and even raising aquatic plants and seeds, and research on ecological impacts and new technologies. It includes hatcheries raising eggs and smolt. Aquaculture can be located in the water, or on shorelines.

The SMP can refer to specific forms of aquaculture in its regulations. The earlier Draft SMP refers to finfish net pens as well as geoduck aquaculture, but has now removed Section 3, Additional Standards for Net Pens (Fish net pens and rafts).

Issues raised during Public Comment regarding the environmental impacts of aquaculture include:

- Protection of forage fish habitat and ecological function. A contentious issue locally is damage by aquaculture hydraulic harvesting (see *Protect Zangle Cove v. Dept of Fish & Wildlife*[20]), and other practices, including the uncertainties related to the percentage and locations of conversion of natural habitat to aquaculture.
- Impacts of pollution, especially the intensive use of plastics in geoduck aquaculture.
- The hazardous nature of marine net pen aquaculture.
- Given the many unknowns regarding long term environmental impacts of commercial-scale aquaculture, especially commercial geoduck aquaculture,[21] the value of frequent monitoring to avoid net loss of ecological functions.

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[20] *Protect Zangle Cove v. Dep't of Fish & Wildlife*, 17 Wn. App. 2d 856, 488 P.3d 894, 2021 Wash. App. LEXIS 1416, 17 Wn. App. 2d 856, 488 P.3d 894, 2021 Wash. App. LEXIS 1416

[21] Monterey Bay Aquarium's Seafood Watch gives Pacific geoduck aquaculture operations a "yellow—good alternative" score of 6.14 out of 10 based on scientific review of impacts associated with effluent, habitats, wildlife and predator interactions, chemical use, feed production, escapes, introduction of nonnative organisms, disease, source stock, and general data availability. Compared to other bivalve shellfish aquaculture, "research into geoduck aquaculture, which is a relatively young industry, is comparably thinner. Science and management have generally not kept pace with industry…but both science and management have made recent strides. …Some gaps in information remain (including related to the Effluent, Habitat, Chemicals, Disease, and Predators and Wildlife criteria." In large part because of the extensive use of plastics in geoduck aquaculture, the Seafood Watch score for effluent is only 6.

The Seafood Watch score for Habitat is 6.8 because of the value of natural habitats and the loss of ecosystem services through conversion and disturbance. "Habitats appear to be maintaining some functionality but uncertainty remains – such as how habitat is affected over multiple, repeated farm cycles, repeated farm cycles, the extent of impacts when considered cumulatively with other human uses of the same environment." In short, the long term and cumulative impacts of expanding commercial geoduck aquaculture are still unknown. Two significant categories of concern are "Escapes" and "Wildlife Interactions." "Reproduction by a broadcast-spawning, native bivalve tht produces up to 40 million eggs per year in an open aquaculture system – and where it co-occurs in proximity to wild populations of the same species – seems to pose inevitable risk [of homogenizing gene pools]."

See Monterey Bay Aquarium. Seafood Watch. "Farmed Pacific Geoduck *Panopeo generosa.* Washington State, United States and British Columbia, Canada, On-Bottom Culture, Aquaculture Standard Version A3.1." December 5, 2016. https://seafood.ocean.org/wp-content/uploads/2016/12/Clams-Farmed-Pacific-Geoduck-Washington-State-USA-and-British-Columbia-Canada-2016.pdf

RECOMMENDATIONS

19.300.130 Shoreline Use and Site Planning:
Aquaculture is mentioned several times in this subchapter. Policy SH-30 should add language that aquaculture is a preferred use when consistent with no net loss to ecological function (accounts for cumulative impacts), in addition to the current language of "prevention of damage to the environment."
Policy SH-31: Delete "Therefore, some latitude should be given when implementing the regulations of this section, provided that potential impacts on existing uses and shoreline ecological functions and processes should be given due consideration." Add language that adaptive management incorporates monitoring. The county should prioritize developing robust monitoring for adaptive management.
Policy SH-32: Shoreline ecological functions are not defined in the Definitions section of the SMP. Therefore, the language here should include benthic/substrate as well as shoreline ecological functions and processes.
Policy SH-33: Change "should" to "shall": Aquaculture "shall" not be permitted where it would result in a net loss of shoreline ecological functions, etc. Projects "shall" not negatively impact critical saltwater habitats.

19.600.115.A(4). Aquaculture Environment Designations Permit Requirements: exemptions from SDP requirements:
We are concerned that there may be no scientific basis for providing this exemption. The potential environmental impacts of these uses should make them subject to the highest standard of regulation.

Net Pens:
At a minimum, 19.600.115.B.3, Additional Standards for Net Pens, should be restored. It was deleted from the Draft SMP on the grounds that there is currently no Net Pen fish culture in Thurston County. The Washington Department of Natural Resources has yet to finalize its position on Net Pens, making omission of regulation in Thurston County unnecessarily foolhardy.

Buffers in marine saltwater: The County should establish aquatic buffers to separate commercial aquaculture from beds of eelgrass and macroalgae or other critical habitats. It should also consider establishing setbacks to reduce risk of encroachment of aquaculture and its impacts on neighboring properties.

19.600.115.B. Application Requirements:

Include a statement that projects requiring CUPs and variances shall be assessed for cumulative impacts. According to the Ecology SMP Handbook, "there have been cases in which the Shorelines Hearings Board has reversed a local government SDP decision for not addressing cumulative impacts."

Commercial shellfish farmers should demonstrate that they meet the Environmental Codes of Practice of the Pacific Coast Shellfish Growers Association.

19.600.115.C(2)

(c) The current language states that "All subsequent cycles of planting and harvest shall not require a new CUP." Because the long-term impacts of large scale commercial geoduck aquaculture are unknown, there should be a limit placed on cycles.

(d) Consider modifying the allowance of a single CUP for multiple sites, in order to require a separate CUP where there is potential impact on critical areas.

For geoduck aquaculture, Thurston County should follow the lead of Pierce County and require a financial guarantee to assure the full and environmentally sound removal of PVC tubing post-use.

TOPIC 4: MOORING STRUCTURES, OVERWATER STRUCTURES AND ACTIVITIES (19.600.160)

Minority Position:

While it does the bare minimum of adopting state regulatory language, the Draft SMP is not as protective against No Net Loss as it should be.

Discussion

Mooring structures can create direct negative impacts on shorelines ecological function, but they can provide positive local impacts for humans. The interests of the state are primarily in preserving ecological function while local interests are partially reflected in water-based uses. For this reason, federal and state regulations are largely concerned with reducing the impacts of mooring structures.

The final Draft SMP removes the original 19.600.160.C(3) through (7) and substitutes the following paragraph:

"Mooring structures are subject to review and approval under the state Hydraulic Code Rules. Pilings, piers, floats, boat launching ramps, rails and lifts, buoys and anchors approved under this Program shall conform to the standards of this Program and requirements of the Hydraulic Code Rules in 220-660-WAC, as amended."

State and Federal interes in regulating mooring structures

The Hydraulic Code Rules are not the only regulatory consideration for Mooring Structures and Overwater Structures. The SMP Handbook lists US Army Corps of Engineers; Washington Department of Fish and Wildlife; and Washington Department of Natural Resources as other agencies that review permits for piers and docks. For example, some local governments include USACE Regional General Permit standards (RGPs) in their SMPs. For another example, DNR rules for lease holders includes a provision for avoiding impacts to forage fish habitat and to avoid existing native vegetation attached to or rooted in the substrate.

The Ecology SMP Handbook states: "Shoreline Master Programs should include policies and regulations regarding piers, docks and other overwater and in-water structures. SMPs will not be adequate if they only refer to and rely on state and federal agency documents, such as the Army Corps of Engineers Regional General Permits.

"The shoreline inventory and characterization should inform where overwater structures such as piers and docks may be allowed. Portions of the shoreline may not be appropriate for these overwater structures due to impacts to shoreline ecological functions, navigation, and aesthetics. In some areas, water levels are low, so moorage facilities need to be very long to reach adequate depth for boats. In

other areas, wave and wind action will damage or destroy moorage facilities." (To this we add that climate change will be reflected in greater impacts of moorage structures to the shoreline.)

Furthermore, "….The SMP should state the shoreline environment designations where these structures can be built and establish policies and regulations for construction, repair and maintenance, and redevelopment. SMP language should be clear and precise. If a permit is appealed, the Shorelines Hearings Boards and the courts will review the SMP to determine whether the proposal is consistent with it."

The SMP Handbook lists the principles to be implemented according to the SMP guidelines (WAC 173-26-231):

- Allow structural shoreline modifications only where necessary to support or protect an allowed primary structure or legally existing shoreline use.
- Reduce adverse effects of and limit shoreline modifications in number and extent.
- Allow only modifications appropriate to the type of shoreline and environmental conditions for which they are proposed.
- Assure that shoreline modifications individually and cumulatively do not result in a net loss of ecological functions,
- Base SMP provisions on scientific and technical information and a comprehensive analysis of drift cells or reach conditions.
- Plan to enhance impaired ecological functions while accommodating permitted uses.

The environmental impacts of specific concern are light, wave energy, substrates, and water quality, as well as habitat loss and/or fragmentation. There are also impacts on navigation, including issues such as fetch, the distance from shoreline to opposite shoreline; and on public access to other water-oriented activities.

RECOMMENDATIONS

The deleted Draft SMP code should be reinstated that includes non-Hydraulic Code language such as: "New or replacement pilings shall be driven only during construction windows approved by WDFW…"; "Mooring buoys shall have a helical anchor with a mid-line float and be located in water at least sixteen feet deep to minimize impacts to the substrate and aquatic vegetation…"; and ""Floats shall be suspended at all times a minimum of one foot above the substrate…" The deleted draft language also states: "Mooring buoys and/or anchors shall not be used for moorage of live aboard vessels." Clearly, the striking of such language makes the SMP less protective.

The guidelines of the Ecology SMP Handbook should be fully incorporated, most notably that shoreline designation must be supplemented with consideration of specific shoreline environmental conditions, and cumulative impacts.

19.600.160

A. Environment Designations Permit Requirements. Natural (a). Single use and joint/public use docks (marine water) should be prohibited in this designation in order to protect sensitive habitats.

B. Application Requirements: Add deleted draft paragraph stating “Demonstration that alternative types of moorage, including buoys, are not adequate or feasible.” Buoys are preferable for reducing impacts.
C. Development Standards: It would be more protective to state specifically that the requirements of WAC 220-660-140 and 380 shall be met, particularly since it addresses “fish life concerns.” There is too much ambiguity in the language in C(3) that “Mooring structures are subject to review and approval under the state Hydraulic Code Rules.” Also, under C(1)(r): Replace “salmon bearing lakes” with just “lakes.”

Section C(3) should directly incorporate WAC 220-660 into the SMP, rather than merely referencing it, so that the rules on Pilings, Piers, Floats, etc. are available within the SMP itself. If the whole of Title 24 TCC is incorporated (Appendix E), then by the same principle, members of the public should be able to easily access the language on moorage structures without a separate search of the WACs.

19.600.160.C.2.(d) Add: “In habitat adjacent to documented forage fish spawning areas with spawning seasons of six months or longer, an intertidal forage fish spawning survey conducted by a qualified biologist shall be required.” (See WAC 220-660-340)

Thank you for your consideration. We recognize that it is past time to approve and implement a revised SMP. We have focused on those areas where improvements to the Draft SMP will enhance its protectiveness against Net Loss, especially in the face of climate change. We are happy to speak with you further if you have any questions about our concerns.

Sincerely,

Helen Wheatley
Derek Day
Joel Hansen
Kevin Pestinger