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To:

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Comments re: final portions of YBEMP draft plan and 4-24-23 advisory committee meeting

Thank you for the opportunity to comment on the most recent draft materials of the Yaquina Bay Estuary Management Plan. We appreciate the degree to which past comments made by Oregon Shores and other advisory committee members have been reflected in evolving drafts of the plan, and the transparency with which you have indicated how you have responded to substantive comments. The following comments are organized according to the relevant sections.

There are also some general process comments at the end. But we will state our conclusion at the outset. This Tier 1 process, however valuable, is only the beginning of what is needed to create a comprehensive, long-term plan for the Yaquina Bay estuary. The hard work of developing an adaptive plan for climate resilience, restoration, habitat migration, and species protection, has yet to be done. We understand that Willamette Partnership's responsibility extends only to the end of Tier One. But we urge that the resulting Tier 1 plan contain within itself the seed of its further development by incorporating a clear commitment to continue with Tier 2 and, where needed, advocacy for legislative or regulatory changes that may be required as a Tier 3.

#### Part 1- Introduction:

While this section explains the purpose of the document well, it should be made clear in the background section that the original intention of estuary management plans was to conserve natural resources. The goal of incorporating resource inventories in the plan is to use them to make appropriate decisions regarding uses of the estuary. It should be clear why resource data is collected and how resource inventories are used to inform decisions.

Furthermore, in the most recent update, it was explained that maps were updated to reflect current conditions, but it is not clear how the new map data was used to inform the planning process (because maps were created at the end of the update).

The new climate change section provides a good summary of the potential climate-induced threats to Yaquina Bay. However, the description of ocean acidification is a little too simplified. Ocean acidification is not just an increase in acidification, but a reduction in the buffering capacity of seawater and altered carbonate chemistry due to absorption of anthropogenic CO<sub>2</sub>; pH is one way to measure this change in ocean chemistry, but functionally lowered pH is not the only problem for marine animals. For example, shell-building organisms have a difficult time building shells of calcium-carbonate because fewer carbonate ions are available. This is a stressor happening now, whereas excess carbonic acid dissolving shells is a more extreme scenario that could occur by 2100, as stated in this section. However, I would default to any description George Waldbusser, Burke Hales, or other ocean acidification researchers at Hatfield Marine Science Center may have to offer.

#### Appendix definitions:

Overall, good additions. The same comment on ocean acidification applies. We would suggest rephrasing to: “The decreased buffering capacity, altered carbonate chemistry, and reduced pH of the ocean over an extended period of time, caused primarily by the uptake of carbon dioxide (CO<sub>2</sub>) from the atmosphere.”

The definition of climate change could be more descriptive, to differentiate between climate and weather and emphasize human involvement. For example: “The increasing changes in the overall average weather patterns over a long period of time, including precipitation, temperature, and wind patterns, as a consequence of human activities that alter the atmospheric composition.”

The definition of temporary alterations is not consistent with the DSL definition, which could cause inefficiencies in the usability of the plan/permitting process. According to the DSL removal-fill guide, “Temporary impacts are defined as those that are rectified within 24 months of initiating the impact,” as opposed to the three-year definition provided in the appendix section. This is an important distinction, and we suggest deferring to the DSL definition to standardize.

#### Part VII- Mitigation and Restoration:

While there are solid improvements to this section in terms of adding more clarity, a handful of areas ought to be revised further.

First, it is concerning that mitigation is referred to as an off-set technique to allow habitat destruction to occur in select regions of the estuary, so long as restoration is happening elsewhere. Mitigation should refer to techniques to minimize destruction of habitat to begin with. Although it is important to keep language consistent with Goal 16, inconsistencies in relation to other state and federal regulatory processes add further complexity and limited usability for users seeking permits to dredge or alter the estuary. In order to rectify this conflict in language and

remain consistent with Goal 16, we would strongly suggest including the Goal 16 definition of offsetting impacts to intertidal or marsh areas **in addition to** “project design features or other measures that serve to avoid, reduce, or compensate for adverse impacts of any type of aquatic area alteration.” This expanded definition is particularly important to improve the definition of mitigation considering all the cumulative impacts and threats to estuarine ecosystems outlined in the climate change sections of this plan. Minimizing further damage and stress is more crucial than ever, particularly considering that opportunities for restoration are limited (as stated) and have only been applied to wetlands, and not eelgrass meadows or tidelands.

Furthermore, the limitations and challenges of restoration should be noted in this section. Restoration of some estuarine habitats is an extremely difficult, time-consuming, labor-intensive, and expensive process that cannot completely return a degraded area to its original state and function. Restoration success is also condition-dependent. For example, habitats like eelgrass are not easily restored if conditions for growth are altered too much. The language of this section makes it sound as though it is easy to engineer ecosystems and replace estuarine resources. Given that this is not the case, this sets a dangerous path for the ecosystem integrity of Yaquina Bay.

It is also unclear if the mitigation strategy is 1:1 “replacement of resources.” For example, if an eelgrass meadow is dredged to expand the navigation channel, is that impact “mitigated” by restoration of a wetland or restoration of another equivalent eelgrass meadow? This is an important distinction to make because wetlands and eelgrass meadows do not offer the same ecosystem services or host the same species.

#### Map inventory and uses:

We welcome the announcement that an online spatial mapping tool is being developed to help the advisory group and members of the public understand the resource inventory and MU information referred to in the document. We endorse the idea of another advisory group meeting being planned to allow members to comment on previous materials once the map viewer is available. However, there are some concerns with the map products at present and particularly the process in which these maps are used in planning.

First, natural resource inventories are not being used to inform county planners in this update process. Natural resource inventory information was not provided until the end of the planning process and was not used by planners to re-evaluate EMU classifications and ensure they are still appropriate based on modern inventories, nor were uses of the estuary updated to reflect the current state of Yaquina Bay. Natural resource inventories are an essential part of the estuary management plan and should be used and updated regularly based on new resource data/information provided by ODFW and other relevant agencies.

When the plan is updated again at a later date, with EMUs re-evaluated, as we contend it must be, this process will require a thorough inventory of natural resources. The current update of map

inventories of natural resources should include, at a minimum, all endangered, protected, and managed species, and critical habitat. Missing resource inventories in the current draft include:

\*species of concern (including eelgrass, nesting birds, salmon and steelhead runs, sturgeon, and other species identified in the Oregon Conservation Strategy)

\*shellfish (including oysters, clams, and crabs)

\*national wetlands inventory

\*maximum historical eelgrass extent

It would also be informative to include historical data in these maps to show how resources have shifted over time and gain perspective on how well the EMP is working to protect natural resources. Such information will help to inform future update priorities and help manage dynamic resources, such as eelgrass (which changes distribution frequently).

Also important are map inventories that will help the county planners and prospective users evaluate risk and to help identify priorities for mitigation/restoration. These include:

\*tsunami inundation

\*public/state/federal land ownership zones and private tidelands

\*flood zones

Additionally, the usability of some of the maps is somewhat hindered by the color scheme chosen. In particular, the CMECS biotic and substrate maps have colors that are indistinguishable shades of brown and green, which makes it difficult to determine what biota is present in each region of the bay. A wider range of colors would greatly assist the viewer's ability to interpret the maps.

#### Part XI-Plan updates:

This section is a valuable addition to the plan, clarifying the update process and the conditions under which an update might occur in the future. We commend the stated intention to incorporate adaptive management to improve the planning process going forward.

However, in order for adaptive management to be meaningfully conducted, this section would require a more specific plan and objective. Adaptive management is typically cyclic, and incorporates a system to monitor the success of a plan, analyze and re-evaluate the plan based on lessons learned, and then adapt the plan accordingly. Rather than assume the EMP will be adaptively updated when needed or in response to an urgent need, it would be beneficial to schedule next phases for evaluating and updating different portions of the plan to ensure such work is accomplished proactively. It would also be wise to consider how often maps should be updated to reflect current conditions (i.e. every five years).

There are several sections of the Yaquina Bay EMP that were not updated in this 2023 revision, but require updating to meet the challenges of the climate/biodiversity crisis and adapt allowable uses to the current conditions of the bay. These sections were identified in the Needs and Gaps Assessment as Tier 2 revision: Estuarine Use Standards, Future Development Sites, and the Dredge Material Disposal Plan. Estuaries are some of the most dynamic ecosystems on earth, so it would be highly inappropriate to manage such a system for another 40 years using resource information from 1983. Now that the work has been done to update these resource inventories, it should be a high priority to re-evaluate estuarine uses and EMUs based on this new data and continue comprehensively updating the EMP.

Furthermore, new science has been developed surrounding topics like dredging and aquaculture. For instance, research shows that dredge material may be used to mitigate sea level rise, and that some aquaculture techniques add restoration benefits, meaning that further climate solutions can be incorporated into the remaining outdated sections of the plan, if re-evaluated in depth.

In order for the YBEMP to be truly comprehensive and adaptive, this XI section should include a roadmap for necessary future updates to occur, starting with the missing sections that were not addressed in the current update, and with triggers for updates incorporated in the plan.

We urge that the final draft of this plan conclude with an explicit, strong recommendation that the EMP update process continue on to Tier 2. This second phase would include updates to the three sections mentioned above that were identified in the Needs and Gaps Assessment. It would include fully revisiting all EMU boundaries in light of up-to-date resource data. It would include a full restoration plan. It would include the plan for updating that would make it adaptive. And it would include a strategy for meeting the very difficult challenge of enabling upslope migration of habitats.

The last item points to a further need. If current regulations concerning estuary management plans do not permit considering estuarine and adjacent shorelands together by connecting Goal 16 to Goal 17, and do not permit consideration of other relevant goals (notably 5 and 7), the current plan should point to this as an urgently needed Tier 3 initiative. Current management of estuaries for habitat protection, water quality, resource conservation, and maintenance of infrastructure; and, even more so, long-term management for resilience in the face of climate change; require holistic plans that incorporate the entire historical footprints of estuaries and their watershed connections. Pointing the way to this kind of comprehensive planning should be the final, crucial product of this Tier 1 plan.

Thank you again for carefully considering all of our comments. We appreciate the hard work you have done to greatly improve the Yaquina Bay Estuary Management Plan.