PLANNING COMMISSION WORK SESSION AGENDA
Monday, March 25, 2024 - 6:00 PM
Council Chambers, 169 SW Coast Hwy, Newport, Oregon 97365

All public meetings of the City of Newport will be held in the City Council Chambers of the Newport City Hall, 169 SW Coast Highway, Newport. The meeting location is accessible to persons with disabilities. A request for an interpreter, or for other accommodations, should be made at least 48 hours in advance of the meeting to Erik Glover, City Recorder at 541.574.0613, or e.glover@newportoregon.gov.

All meetings are live-streamed at https://newportoregon.gov, and broadcast on Charter Channel 190. Anyone wishing to provide written public comment should send the comment to publiccomment@newportoregon.gov. Public comment must be received four hours prior to a scheduled meeting. For example, if a meeting is to be held at 3:00 P.M., the deadline to submit written comment is 11:00 A.M. If a meeting is scheduled to occur before noon, the written comment must be submitted by 5:00 P.M. the previous day.
To provide virtual public comment during a city meeting, a request must be made to the meeting staff at least 24 hours prior to the start of the meeting. This provision applies only to public comment and presenters outside the area and/or unable to physically attend an in person meeting.

The agenda may be amended during the meeting to add or delete items, change the order of agenda items, or discuss any other business deemed necessary at the time of the meeting.

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1. CALL TO ORDER

Bill Branigan, Bob Berman, Jim Hanselman, Gary East, Braulio Escobar, John Updike, Marjorie Blom, Dustin Capri, and Greg Sutton.

2. NEW BUSINESS

2.A Review of Draft Comprehensive Plan Amendments to Implement the Estuary Management Plan.

Memorandum
Updated Yaquina Bay and Estuary Section of the Comprehensive Plan
Yaquina Bay Estuary Management Plan (August 2023 Draft)
Existing Yaquina Bay and Estuary Section of the Comprehensive Plan
Mark Arnold Testimony 1.22.24
Mark Arnold Testimony 3.11.24

3. UNFINISHED BUSINESS

3.A Planning Commission Work Program Update.

PC Work Program 3-21-24

4. ADJOURNMENT

City of Newport

Community Development Department

Memorandum

To: Planning Commission/Commission Advisory Committee

From: Derrick Tokos, Community Development Director

Date: March 21, 2024

Re: Review of Draft Comprehensive Plan Amendments to Implement the Estuary Management Plan

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Attached is a draft set of amendments to the Yaquina Bay and Estuary Section of the Newport Comprehensive Plan. The changes have been developed in consultation with the Department of Land Conservation and Development, and Meg Reed, a Coastal Policy Specialist with the Department is planning to attend the work session.

Please take a moment to review the updated Comprehensive Plan Section and its associated policies. The draft estuary management plan and the existing Comprehensive Plan language are enclosed for reference. Also enclosed is the testimony that Mark Arnold submitted in January and March. I'll be prepared to walk through the changes and look forward to your feedback.

For your April 8th work session, I am planning to bring back a further refined version of the updated Comprehensive Plan Section, addressing feedback from this meeting, along with an initial set of zoning code changes for your review.

Attachments
Updated Yaquina Bay and Estuary Section of the Comprehensive Plan
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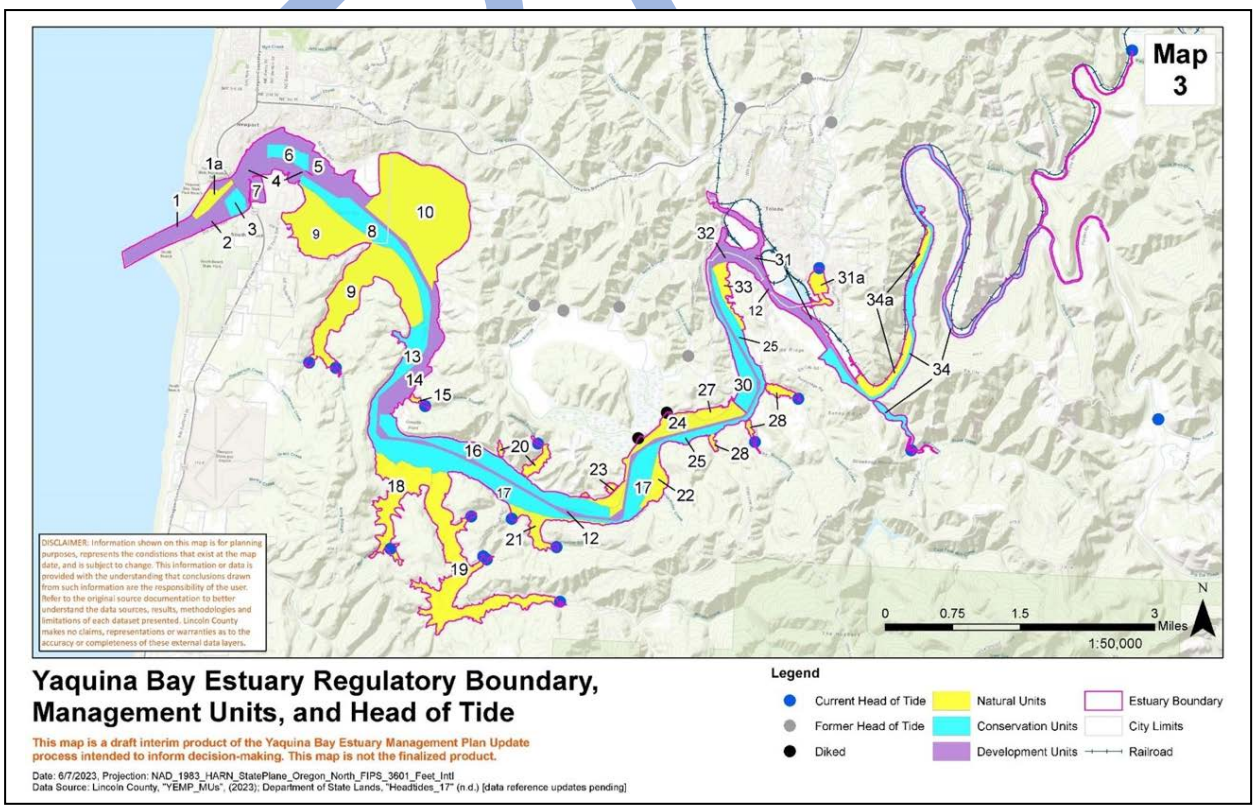
YAQUINA BAY
AND ESTUARY SECTION

Introduction:

The purpose of Statewide Planning Goal 16: Estuarine Resources and all estuary management plans is "to recognize and protect the unique environmental, economic, and social values of each estuary and associated wetlands; and to protect, maintain, where appropriate develop, and where appropriate restore the long-term environmental, economic, and social values, diversity and benefits of Oregon's estuaries." Yaquina Bay is one of three estuaries on the Oregon coast designated a deep-draft development estuary with a deep-water navigation channel and turning basin federally authorized by the United States Army Corps of Engineers.

The Lincoln County Estuary Management Plan is a special area management plan that governs estuarine resource conservation and development decisions in all the estuaries within Lincoln County, including Yaquina Bay. The City of Newport incorporates the relevant policy provisions of that plan here in its Comprehensive Plan and the applicable implementing measures are placed in its Municipal Code. Alterations and uses within estuarine areas are regulated. The boundary of the estuary is estuarine waters, tidelands, tidal marshes and submerged lands up to the line of Mean Higher High Water (MHHW) or the line of non-aquatic vegetation, whichever is further landward. The jurisdictional extent of the estuary extends upstream to the head of tide. (See Figure 1. Yaquina Bay Regulatory Extent and Head of Tide Map). Adjoining shorelands are subject to separate, coordinated land use regulations.

Figure 1. Regulatory Boundary, Estuary Management Unit Classifications, & Head of Tide



Yaquina Bay provides habitat and ecosystem services that benefit and support the local economy and community. Ecosystem services are positive benefits that ecological systems, habitats, or wildlife provide to humans. Yaquina Bay's estuary provides ecosystem services to nearby residents and the City of Newport that include mitigation of the impacts of flooding due to storm surges, improvements in water quality through vegetation and substrate filtration, and improvements in air quality through plant photosynthesis and respiration. The cultural significance of this area as well as opportunities for recreation are also considered important ecosystem services. In addition, much of the local economy is built upon productive seafood and fish harvesting and processing such as Dungeness crab which require eelgrass and other estuarine habitats for their lifecycle. The sequestration and storage of carbon by the estuary's subtidal and intertidal plants benefits residents of the State of Oregon and beyond by helping attenuate carbon dioxide contributions to climate change and its projected impacts. There are many ecosystem services Yaquina Bay provides to people in addition to the examples provided here.

Resource Inventories:

Inventories have been conducted to provide information necessary for designating estuary management units and their associated uses and policies. These inventories provide information on the nature, location, and extent of physical, biological, social, and economic resources in sufficient detail to establish a sound basis for estuarine management and to enable the identification of areas for preservation and areas of development potential.

Inventories include maps and sourced spatial data on the following resources and information: ecological estuarine data using the Coastal Marine and Ecological Classification Standard (CMECS), port facilities and tide gates, current estuary planning extent, historical estuarine boundaries and vegetation, head of tide, sea level rise projections, landward migration zone projections, and restoration sites. The information contained in the management unit descriptions and resource capability assessments is based on factual base material drawn from these comprehensive resource inventories. The rationale for permitted use decisions and management classifications is contained in these brief factual base summaries; for detailed resource information and a bibliography of documents included in the inventory, the XYZ section/document should be consulted.

Climate Change Vulnerabilities:

Climate change considerations were assessed and integrated into the estuary management plan for Yaquina Bay. As proposed alterations in the estuary have the potential to be in place for decades, impacts from climate change can jeopardize their continued use and potentially lead to negative outcomes that could threaten the unique environmental, economic, and social values of Yaquina Bay. The following are projected climate change impacts for the Yaquina Bay:

- Sea Level Rise: Global sea level rise is projected to increase Yaquina Bay's Mean Higher High Water mark by a range of 0.8 to 6.1ft by 2100.[1] There is a lot of uncertainty due to the unknowns around greenhouse gas emissions into the future. After 2000 years of relative stability, average global sea levels have risen about 8 inches in the last 100 years.[2]

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[1] Sweet, W.V., et al. 2022. Global and Regional Sea Level Rise Scenarios for the United States: Updated Mean Projections and Extreme Water Level Probabilities Along U.S. Coastlines. NOAA Technical Report. National Oceanic and Atmospheric Administration, National Ocean Service, Silver Spring, MD.

[2] U.S. Global Change Research Program. 2009. Global climate change impacts in the United States: a state of knowledge report. New York: Cambridge University Press.

- Estuary Acidification: More acidic estuary waters are likely, as open ocean waters are projected to be acidic enough to dissolve the biogenic carbonate shells of shellfish by 2100.[3] As the ocean absorbs CO2, its pH is lowered and becomes more acidic. “Since 1750, the pH of seawater has dropped significantly (about 0.1 globally). That means water is about 1 ¼ times more acidic today.”[4]
- Heat and Drought: Warmer summers with more extreme heat days and periods of drought are anticipated. The average annual temperature in Oregon increased by 2.2 degrees Fahrenheit from 1895 to 2019.[1] Projected average daily temperatures for the City of Newport and the broader Yaquina Bay region are expected to be 3-4 degrees higher by 2050 (NOAA Climate Explorer 2022).
- Precipitation: More rain in fewer and bigger storms instead of snow during winter months at higher elevations are anticipated. Despite an expected overall increase in winter precipitation, the past 50 years have documented a 60% or greater reduction in snow water recorded annually on April 1st for Columbia River tributaries.[5]

These climate change impacts are expected to create secondary effects such as increased risk to and prevalence of forest fires, bay and riverine flooding, loss of protected habitats and species, loss and landward migration of coastal habitats, loss of fisheries habitat relied upon by the local fishing economy, loss of eelgrass and other macrophytes due to heat waves , stress on endangered fish, destabilizing infrastructure in and on the Bay, erosion and accretion changes, sediment and nutrient loading, and many more. Potential cumulative impacts of alterations and development activities were considered and integrated into the policies and requirements of the Estuary Management Plan for Yaquina Bay.

Estuary Management Sub-Areas:

Due to the size and complexity of the Yaquina Bay estuary system, an additional tier of policy has been established at the sub-area level. The sub-area policies are intended to provide general planning guidance at a geographic scale between the overall management policies and the individual management unit level.

For this purpose, the estuary has been divided into seven sub-areas, each representing a common set of natural and anthropogenic features. (See Figure 2. Yaquina Bay Sub-Areas) These sub-areas provide a basis for describing in broad terms how different reaches of the estuary presently function and are used, and to identify considerations in planning for future use and conservation. Each sub-area is described in terms of its existing character, its major committed uses, and its existing and potential conflicts. Policies are established for each sub-area for the purpose of guiding the establishment of management unit designations and specific implementation measures.

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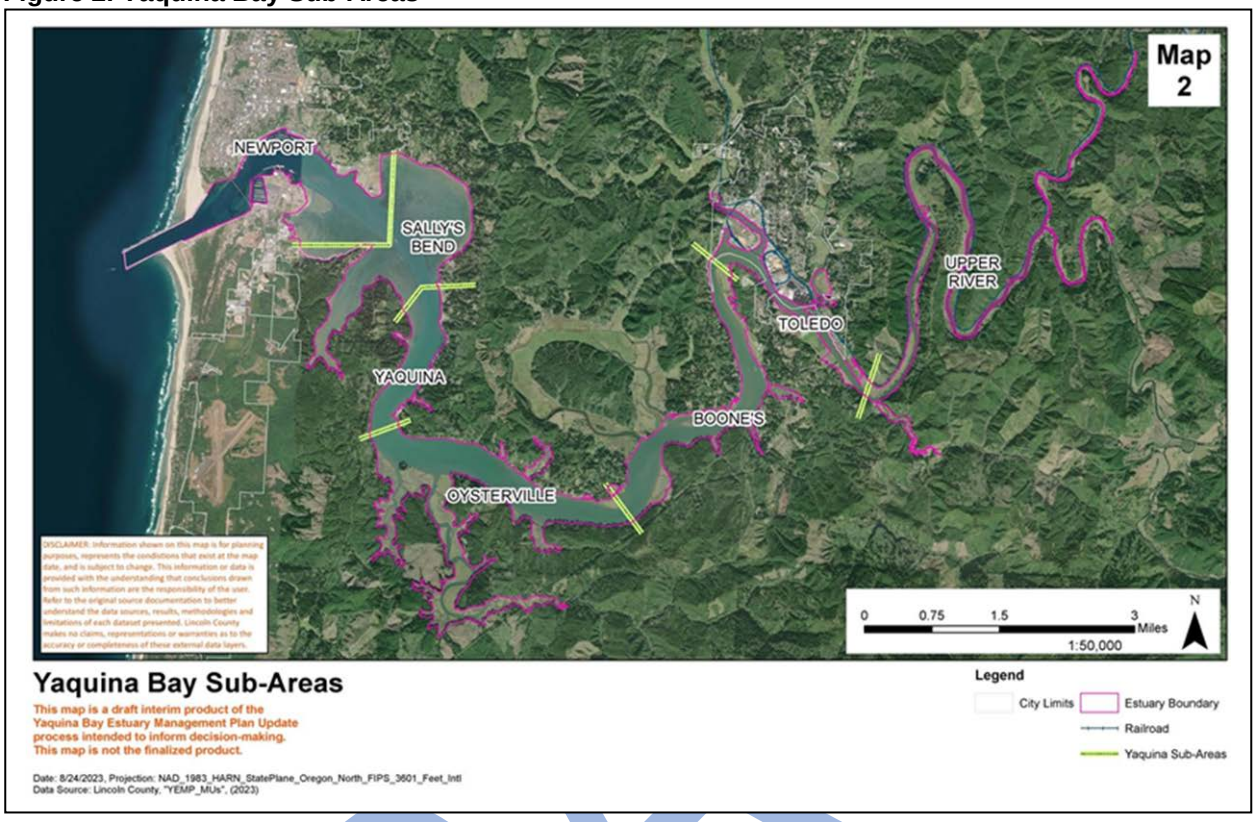
[3] Feely et al. 2008. Barton, A, B. Hales, G. G. Waldbusser, C. Langdon, R.A. Feely. 2012. The Pacific oyster, Crassostrea gigas, shows negative correlation to naturally elevated carbon dioxide levels: Implications for near-term ocean acidification effects. Limnology and Oceanography, 57(3): 698-710.

[4] Feely, R. A, C. L Sabine, J. M Hernandez-Ayon, D. Ianson, and B. Hales. 2008. Evidence for upwelling of corrosive “acidified” water onto the continental shelf. Science 320, no. 5882: 1490.

[5] Oregon Department of Fish and Wildlife: The Oregon Conservation Strategy Fact Sheet Climate Change and Oregon’s Estuaries (YEAR)

[6] Front. Mar. Sci., 01 April 2022. Differential Responses of Eelgrass and Macroalgae in Pacific Northwest Estuaries Following an Unprecedented NE Pacific Ocean Marine Heatwave. Sec. Coastal Ocean Processes Volume 9 - 2022. https://doi.org/10.3389/fmars.2022.838967

Figure 2. Yaquina Bay Sub-Areas



Sub-area policies are intended to serve as general guidance for overall spatial planning; they are not applicable approval criteria for individual project or permit reviews. The criteria applicable to individual land use decisions for estuarine development proposals are as set forth in pertinent implementing land use regulations. The Newport sub-area is the only sub-area that is within the Newport Urban Growth Boundary.

Newport Sub-Area:

The size and complexity of the Yaquina Bay estuary required the bay to be divided into seven sub-areas, each representing a common set of natural and human-related features. Sub-areas provide a basis for describing how different areas of the estuary presently function and how they should be planned to function in the future. Each sub-area is described in terms of its existing character; its major committed uses; its existing and potential conflicts; and its climate vulnerabilities. The City of Newport contains the Newport sub-area of Yaquina Bay, which is a high intensity use area. It is the hub of commercial fishing, deep water shipping and research, and tourist related commercial activities on Yaquina Bay. Adjacent shorelands are urban in character and the shoreline is mostly continuously altered throughout the sub-area. Aquatic area alterations within the sub-area are extensive. Major alterations include dredging, jetties and other navigation improvements, intertidal fills, and numerous in-water structures, including docks, piers, wharfs, and breakwaters. As a fully serviced urban area near the harbor entrance and with shoreland access to the deep-water navigation channel, the Newport sub-area represents the most important portion of the estuary for water dependent development.

Important natural resources within the sub-area include eel grass and algal beds, shellfish beds and fish spawning and nursery areas.

> Major Committed Uses. The sub-area contains a mix of water dependent, water related, and non-water related uses. Industrial uses are concentrated at McLean Point (Northwest Natural's liquid natural gas tank and the Port of Newport's International Terminal) and along the Newport bayfront. A recreational marina and a number of non-water related, tourist-oriented commercial uses also occur along the Newport bayfront. Major uses in the South Beach area include the Oregon State University (OSU) Hatfield Marine Science Center, the South Beach Marina recreational complex, the NOAA Marine Operations Center - Pacific facility and the Oregon Coast Aquarium. Many entities residing in the South Beach area provide experiential educational opportunities for tens of thousands of students and families every year. The sub-area takes in the major components of the authorized Corps of Engineers navigation project, including the jetties, the main navigation channel and turning basin, the boat basins, and related navigation improvements. Recreational use in the sub-area, including sport fishing, crabbing, clamming, diving, and boating, is heavy. In some years, a limited commercial herring fishery occurs within the sub-area.

> Existing and Potential Conflicts. Several conflicts exist within the sub-area. Conflicts have developed between tourist-oriented commercial uses and water dependent commercial and industrial uses along the Newport bayfront. These conflicts involve both competition for available space as well as use conflicts (e.g., traffic, parking, etc.) between established users. As demand accelerates for both types of uses, conflicts may worsen. In the past, competition between recreational and commercial vessels for moorage has been a problem; however, the opening in 1980 of approximately 500 moorage spaces designed to accommodate recreational vessels at the South Beach Marina has largely alleviated this conflict. The maintenance and redevelopment of water dependent uses in the sub-area will necessitate development in aquatic areas, posing a potential conflict with the protection of natural resources in some portions of the sub-area.

> Climate Vulnerabilities. The following list contains potential vulnerabilities to climate change that this sub-area of the estuary may experience over the coming years. These vulnerabilities shall be considered during reviews of proposed activities or uses in this sub-area as applicable:

- Increased shoreline erosion due to changes in sediment transport or deposition patterns or increased intensity of storm surges;
- Increased frequency and extent of storm surge flooding due to sea level rise risking the integrity and hindering the use of critical infrastructure;
- Increased risk of jetty or breakwater failures due to sea level rise and storm surge;
- Increased risk of loss of structural integrity to underground or submerged infrastructure due to higher water tables from sea level rise;

- Increased risk of sea level rise submerging port, marina, and other moorage infrastructure;
- Increased risk of structural failure of boat ramp and recreation facilities due to sea level rise and storm surge;
- Increased frequency and extent of storm surge flooding due to sea level rise of bay-adjacent industrial and waste treatment sites increasing risk of structural damage and pollution events;
- Increased risk of toxic leaks from erosion and destabilization of submerged sewer, natural gas and other pipes and utility lines due to changes in sediment transport and deposition patterns;
- Aquaculture and recreational shellfish losses due to ocean acidification and dissolution of oyster shells;
- Loss of suitable habitat conditions for eelgrass, Sitka spruce swamps, or other critical species and habitats due to sea level rise, warming waters, or increased downstream sedimentation;
- Extended use of salt marshes, eelgrass beds, tidal channels and other cool water refugia habitats for juvenile salmonids and forage fish such as herring, anchovies, and smelt due to warmer upriver temperatures in the mid-summer to early fall;
- Increased use of productive estuary habitats by marine birds during periods of low food abundance in the ocean, which are associated with marine heat waves and climate-driven changes in ocean processes;
- Increased use of Yaquina Bay habitats by migratory birds as other regional habitats become unsuitable for climate-related reasons (i.e. climate-related shifts in breeding, migration, and overwintering ranges);
- Increased risk to current dredging regime or location of navigation channels as erosion and accretion patterns change due to sea level rise and storm surge.

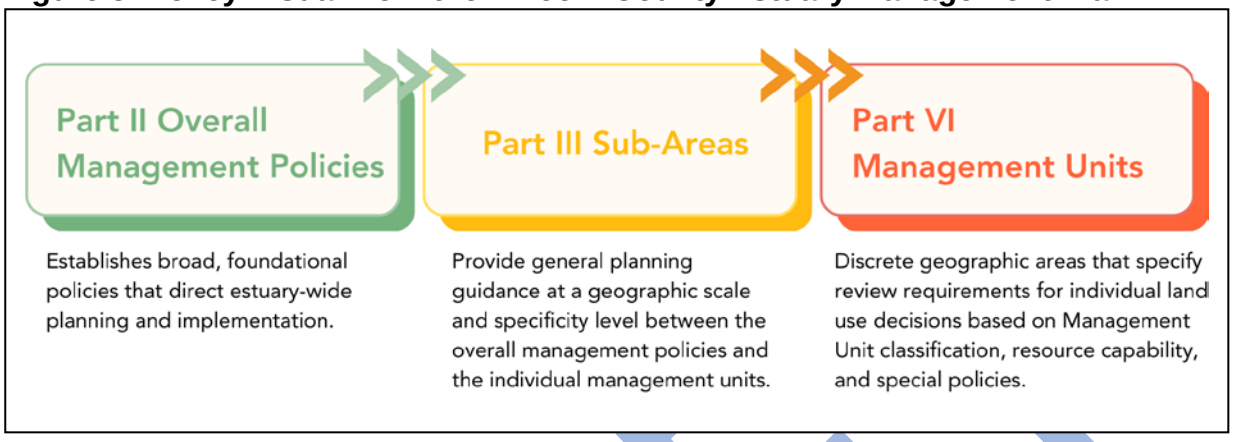
Estuary Policy Framework and Coordination:

The Lincoln County Estuary Management Plan provides an overall, integrated management scheme for Yaquina Bay. Elements of the Estuary Management Plan that the City of Newport incorporates into its Comprehensive Plan are those that apply inside the Newport Urban Growth Boundary. Proposed amendments to this section and its implementing provisions should be coordinated with Lincoln County to promote a common understanding and consistent application of the Estuary Management Plan.

This section contains comprehensive provisions for guiding estuarine development and conservation activities, from broad overall policies to site specific implementing measures. The planning and decision-making framework for Yaquina Bay within the City of Newport is contained within a concept of descending levels of policies: Overall Management Policies to Sub-Area Policies to individual Management Units. Each level of policy and the size of

the area to which those provisions apply is smaller and more specific than the preceding level, ending with site specific guidelines at the management unit scale.

Figure 3. Policy Visual from the Lincoln County Estuary Management Plan.



Individuals or entities seeking to alter or use the estuary should consult the specific management unit(s) encompassing the site and the applicable estuary zoning requirements in the Newport Municipal Code.

Newport Sub-Area Estuary Management Units:

A management unit is a discrete geographic area defined by biophysical characteristics and features within which particular uses and activities are promoted, encouraged, protected, or enhanced, and others are discouraged, restricted, or prohibited. This is the most specific policy level and is designed to provide specific implementing provisions for individual project proposals. Each unit is given a management classification of Natural, Conservation, or Development (defined below). These classifications are based on the resource characteristics of the units as determined through an analysis of resource inventory information. The classification carries with it a general description of intent and a Management Objective. Each management unit objective is implemented by its applicable Estuary Zoning District in the Municipal Code, which specifies uses and activities that are permitted or conditionally permitted within the unit. Many management units also contain a set of Special Policies that relate specifically to that individual unit.

The management unit classification system consists of three management classifications: Natural, Conservation and Development. The classifications are defined below in terms of the general attributes and characteristics of geographic areas falling into each category. The management objective and permissible uses and alterations for each classification are also specified.

Natural Management Units

Natural Management Units are those areas that are needed to ensure the protection of significant fish and wildlife habitats; of continued biological productivity within the estuary; and of scientific, research, and educational needs. These shall be managed to preserve

the natural resources in recognition of dynamic, natural, geological, and evolutionary processes. Such areas shall include, at a minimum, all major tracts of salt marsh, tideflats, tidal swamps, and seagrass and algal beds.

Management Objective: To preserve, protect and where appropriate enhance these areas for the resource and support values and functions they provide.

The following uses are permitted in Natural Management Units:

a. undeveloped low-intensity water-dependent recreation;
b. research and educational observation;
c. navigational aids, such as beacons and buoys;
d. protection of habitat, nutrient, fish, wildlife and aesthetic resources;
e. passive restoration measures;
f. dredging necessary for on-site maintenance of existing functional tidegates and associated drainage channels and bridge crossing support structures;
g. riprap for protection of uses existing as of October 7, 1977, unique natural resources, historical and archeological values; and public facilities; and
h. bridge crossings.

Where consistent with the resource capabilities of the area and the purpose of this management unit, the following uses may be allowed:

a. aquaculture which does not involve dredge or fill or other estuarine alteration other than incidental dredging for harvest of benthic species or removable in-water structures such as stakes or racks;
b. communication facilities;
c. active restoration of fish and wildlife habitat or water quality and estuarine enhancement;
d. boat ramps for public use where no dredging or fill for navigational access is needed;
e. pipelines, cables and utility crossings, including incidental dredging necessary for their installation;
f. installation of tidegates in existing functional dikes;
g. temporary alterations;
h. bridge crossing support structures and dredging necessary for their installation.

In Natural Management Units, a use or activity is consistent with the resource capabilities of the area when either the impacts of the use on estuarine species, habitats, biological productivity and water quality are not significant, or the resources of the area are able to assimilate the use and activity and their effects and continue to function in a manner to protect significant wildlife habitats, natural biological productivity, and values for scientific research and education.

Conservation Management Units

Conservation Management Units shall be designated for long-term uses of renewable resources that do not require major alteration of the estuary except for the purpose of restoration. These areas shall be managed to conserve their natural resources and

benefits. These shall include areas needed for maintenance and enhancement of biological productivity, recreational and aesthetic uses, water quality, and aquaculture. They shall include tracts of significant habitat smaller or of less biological importance than those in Natural Units above, and recreational or commercial oyster and clam beds not included in Natural Units above. Areas that are partially altered and adjacent to existing development of moderate intensity that do not possess the resource characteristics of natural or development units shall also be included in this classification.

While the general purpose and intent of the conservation classification are as described above, uses permitted in specific areas subject to this classification may be adjusted by special policies applicable to individual management units to accommodate needs for natural resource preservation.

Management Objective: To conserve, protect and where appropriate enhance renewable estuarine resources for long term uses and to manage for uses that do not substantially degrade the natural or recreational resources or require major alterations of the estuary.

Permissible uses in conservation areas shall be all those allowed in Natural Units above except temporary alterations. Where consistent with the resource capabilities of the area and the purposes of this management unit, the following additional uses may be allowed:

a. high-intensity water-dependent recreation, including boat ramps, marinas and new dredging for boat ramps and marinas;
b. minor navigational improvements;
c. mining and mineral extraction, including dredging necessary for mineral extraction;
d. other water-dependent uses requiring occupation of water surface area by means other than dredge or fill;
e. aquaculture requiring dredge or fill or other alteration of the estuary;
f. active restoration for purposes other than those listed in 1(d);
g. temporary alterations.

In a Conservation Management Unit, a use or activity is consistent with the resource capabilities of the area when either the impacts of the use on estuarine species, habitats, biological productivity and water quality are not significant or that the resources of the area are able to assimilate the use and activity and their effects and continue to function in a manner that conserves long-term renewable resources, natural biologic productivity and aesthetic values and aquaculture.

Development Management Units

Development Management Units shall be designated to provide for navigation and other identified needs for public, commercial, or industrial water dependent uses, consistent with the level of development or alteration allowed by the overall Oregon Estuary Classification. Such areas shall include deep-water areas adjacent or in proximity to the shoreline, navigation channels, sub-tidal areas for in-water disposal of dredged material and areas of minimal biological significance needed for uses requiring alteration of the estuary.

While the general purpose and intent of the development classification are as described

above, uses permitted in specific areas subject to this clarification may be adjusted by special policies applicable to individual management units to accommodate needs for natural resource preservation.

Management Objective: To provide for water dependent and water related development. Permissible uses in areas managed for water-dependent activities shall be navigation and water-dependent commercial and industrial uses.

The following uses may also be permissible in development management units:

a. dredge or fill, as allowed elsewhere in the plan;
b. navigation and water-dependent commercial enterprises and activities;
c. water transport channels where dredging may be necessary;
d. flow-lane disposal of dredged material monitored to assure that estuarine sedimentation is consistent with the resource capabilities and purposes of affected natural and conservation management units;
e. water storage areas where needed for products used in or resulting from industry, commerce and recreation;
f. marinas.
g. Where consistent with the purposes of this management unit and adjacent shorelands designated especially suited for water-dependent uses or designated for waterfront redevelopment, water-related and non-dependent, non-related uses not requiring dredge or fill; mining and mineral extraction; and activities identified in Natural and Conservation above, shall also be appropriate.

The overall classification scheme for management units is described above. Each individual management unit within the Newport Sub-Area is given a number and a more detailed and specific description. Each management unit description includes:

- the management classification (natural, conservation or development) of the unit and a summary rationale for the classification;
- a description of the spatial boundaries of the unit;
- a summary of the natural resource characteristics of the unit;
- a description of major uses and alterations present in the unit;
- a management objective which provides an overall statement of priorities for management of the unit;
- permitted uses within the unit, both those that are deemed consistent with the resource capability of the unit, and those uses that will require case-by-case resource capability determinations;
- special policies specific to the unit which serve to clarify, or in some cases further limit, the nature and extent of permitted uses.

It is important to note that the text descriptions are the regulating boundary of the management units. Maps and GIS data layers used by the City are a representation of those boundaries. In case of any doubt, the text descriptions should be used to resolve any boundary confusion. Each individual management unit within the City of Newport is described below.

Management Unit 1

> Description: Management Unit 1 consists of the area between the navigation channel and the north jetty, west of the west boundary of the Highway 101 right-of-way, excepting the area described as Management Unit 1A (see description for Management Unit 1A). Natural resources of importance include shellfish beds, fish spawning and nursery areas, and wildlife habitat. Of special importance are areas used by ling cod for spawning. Primary uses in the area are medium and shallow draft navigation and recreation (angling, boating, diving and surfing). Alterations include the north jetty, riprapped shoreline east of the jetty, navigation aids, and piling dolphins at the base of the bridge columns. (See maps for location of resources and uses)

> Classification: Development. This unit has been classified as Development in order to provide for maintenance and repair of the north jetty, a navigation improvement that may require periodic major alterations. Other than providing for alterations necessary to maintain navigation, management of Unit 1 should conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

> Resource Capability: As a development management unit, permissible uses in Management Unit 1 are not subject to the resource capability test.

> Management Objective: Management Unit 1 shall be managed to provide for maintenance and repair of the north jetty as necessary to maintain the functionality of the deep-water channel. Otherwise, this unit shall be managed to conserve shellfish beds, fish spawning and nursery areas, and other natural resources.

> Special Policies: Major alterations in Management Unit 1 shall be limited to jetty and other navigation improvements necessary to maintain the authorized federal navigation channel. However, uses should minimize disturbance of important natural resources identified in this unit.

Management Unit 1a

> Description: Management Unit 1A consists of the intertidal and subtidal area west of the west boundary of the Highway 101 right-of-way (Yaquina Bay Bridge), lying between the navigation channel and the north shore. Along the north jetty, Unit 1A extends up to 50 lineal feet waterward from the base of the north jetty. Unit 1A is bounded on the west by MLLW, and on the east by the Highway 101 right-of-way. Natural resources of importance include shellfish beds, fish spawning and nursery areas, and wildlife habitat. Of special importance is a major algal bed. Primary uses in the area are medium and shallow draft navigation and recreation (angling, boating, diving and surfing). Alterations include the riprapped shoreline east of the jetty, navigation aids, and piling dolphins at the base of the bridge column.

> Classification: Natural. This unit has been classified as Natural in order to protect the natural resources of the unit and limit alterations to low intensity activities similar to those now existing in the unit.

> Resource Capability: The major algal bed in this unit is a sensitive habitat area of special value. Other habitats, while of major importance, are less susceptible to disturbance from minor alterations. Low intensity alterations such as pilings, dolphins and riprap have occurred in this area in the past without significant damage to resource values. Similar activities of this nature in conjunction with the uses contemplated in Unit 1a will constitute minor alterations consistent with the resource capabilities of the area.

> Management Objective: Management Unit 1a shall be managed to preserve natural resources.

> Special Policies: The algal bed within Management Unit 1A as defined by the Oregon Department of Fish and Wildlife Habitat Classification Map shall be preserved.

Management Unit 2

> Description: Management Unit 2 contains the area between the south jetty and the navigation channel, extending from the channel entrance east to the spur jetty. From the spur jetty east to the Yaquina Bay Bridge, Unit 2 includes the aquatic area between the south jetty and Mean Low Water (MLW). Natural resources of importance include shellfish beds, algal beds, eel grass beds, fish spawning and nursery areas and waterfowl habitat. Major uses in the unit are shallow draft navigation and recreational activities, including fishing, diving and boating. Alterations in the area include the south jetty, the spur jetty and groins, and navigation aids.

> Classification: Development: This unit has been classified as Development in order to provide for the maintenance and reconstruction of navigation improvements, including the south jetty and the spur jetty and groins, which may require major alterations.

> Resource Capability: As a development management unit, permissible uses in Management Unit 2 are not subject to the resource capability test. However, uses should minimize disturbance of important natural resources identified in this unit.

> Management Objective: Management Unit 2 shall be managed to provide for the maintenance and repair of the south jetty and associated navigation improvements. Major alterations shall be limited to those necessary to provide for these uses. Otherwise, this unit shall be managed to conserve shellfish beds, algal beds, fish spawning and nursery areas and other natural resources.

> Special Policies: Major alterations in Management Unit 2 shall be limited to jetty, groin and other navigation improvements necessary to maintain the functionality of the authorized federal navigation channel. However, uses should minimize disturbance of important natural resources identified in this unit.

Management Unit 3

> Description: Management Unit 3 consists of the area between the navigation channel and MLW along the south shore, from the spur jetty east to the west boundary of

the Highway 101 right-of-way. The area has several important natural resources, including tideflats, eelgrass beds, significant shellfish beds, important fish spawning and nursery areas, and important waterfowl habitat. Major uses within the unit are shallow draft navigation and recreation (clam digging, fishing, boating). Some minor commercial shellfish harvest takes place in the unit. Alterations include navigation aids, dolphins, and riprapped shorelines.

> Classification: Conservation: This unit has been classified as conservation in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

> Resource Capability: Management Unit 3 has significant intertidal area, and important shellfish beds. Existing alterations are minor in nature. Further minor structural alterations such as pilings and dolphins would be consistent with the existing character and resource capability of the area.

> Management Objective: Management Unit 3 shall be managed to conserve natural resources of importance.

> Special Policies: Major clam beds are located within Management Unit 3. These clam beds shall be protected.

Management Unit 4

> Description: Management Unit 4 is the Corps of Engineers authorized deep-water federal navigation channel, up to and including the turning basin at McLean Point. This unit includes the 40-foot-deep, 400-foot-wide entrance channel; the 30-foot-deep, 300-foot-wide bay channel, and the turning basin. Natural resources within the unit include fish spawning and nursery areas, and important shellfish beds. Major uses within the unit include navigation (shallow, medium and deep draft), recreation (fishing, crabbing, and boating) and some limited commercial harvest. Alterations include pilings, navigation aids, submerged crossings and the Yaquina Bay bridge crossing. Of special importance is the maintenance dredging of the federally authorized navigation channel and turning basin. Management Unit 4 is an area of diverse marine influenced habitats, including some major shellfish beds.

> Classification: Development. This unit has been classified as development, to provide for the dredging and other alterations required to maintain the deep-water navigation channel and turning basin.

> Resource Capability: As a development management unit, authorized uses are not subject to resource capability requirements. The area is periodically dredged for maintenance of the federally authorized navigation channel and turning basin, and resources present are subject to this regular disturbance.

> Management Objective: Management Unit 4 shall be managed to protect and maintain the authorized navigation channel and turning basin for deep-draft navigation.

> Special Policies: None.

Management Unit 5

> Description: Management Unit 5 consists of the area between the north shore of the bay and the navigation channel, from the west boundary of the Highway 101 right-of-way east to McLean Point. It includes the Port of Newport commercial moorage basins (Port Docks 3, 5 and 7, and the north marina breakwater), the developed waterfront in the Newport urban area, and the Port of Newport's international terminal facilities at McLean Point. Natural resources of importance include tideflats, eelgrass and shellfish beds, and fish spawning and nursery areas. This portion of the estuary is used intensively for shallow and medium draft navigation, moorage of small and large boats, and for recreation. Other significant uses include the Port of Newport's international terminal operation, research activities, the U.S. Coast Guard Station, seafood processing plants and infrastructure, and mixed-use development along the historic Newport bayfront. The shoreline and aquatic areas are extensively altered with riprap, bulkheads, piers and wharves, the north marina breakwater, pilings, floating docks, periodic maintenance dredging and other activities.

> Classification: Development. This unit is classified as development to provide for the port's development needs in support of navigation, commercial fishing and other water dependent and mixed uses along the urban waterfront.

> Resource Capability: Management Unit 5 is the most extensively altered area in the estuary. Maintenance and redevelopment of existing facilities in this area, along with new development, will result in further alterations, including major dredging and construction activities. As a development management unit, these authorized uses within Management Unit 5 are not subject to resource capability requirements.

> Management Objective: Management Unit 5 shall be managed to provide for the development of port facilities and other water-dependent uses requiring aquatic area alterations. Water-related and non-related uses not requiring dredge or fill may be permitted consistent with the unique mixed-use character of the Newport waterfront.

> Special Policies: Important shellfish beds are located in Management Unit 5, in particular the ODFW designated shellfish preserve on the north side of the north marina breakwater, as described in OAR 635-005-0290(7). Adverse impacts on these shellfish beds from development shall be minimized.

Due to the limited water surface area available and the need for direct land to water access, alternatives (such as mooring buoys or dry land storage) to docks and piers for commercial and industrial uses are not feasible in Unit 5. Multiple use facilities common to several users are encouraged where practical.

Management Unit 6

> Description: Management Unit 6 consists of the area south of the north marina breakwater, extending from MLW south to the navigation channel. Unit 6 is bounded on the west by a north-south line extending from the west end of the breakwater to the navigation

channel, and on the east by a north-south line extending from the east end of the breakwater to the navigation channel. Unit 6 contains both intertidal and subtidal area with a number of important resource characteristics. Significant habitat areas include eelgrass and shellfish beds, fish spawning and nursery areas, and waterfowl habitat. Major uses in the unit include recreation (fishing, boating, crabbing and clamming), medium and shallow draft navigation, and some limited commercial harvest activities. Alterations within the unit include pilings and navigation aids.

> Classification: Conservation. This unit has been classified as conservation in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

> Resource Capability: Management Unit 6 is a mostly sub-tidal area near the upper end of the marine subsystem. It supports a variety of important resources that could be adversely impacted by major fill, removal or other aquatic alterations. Important uses in the unit such as navigation and recreation require a largely unobstructed surface area. For these reasons, alterations consistent with the resource capability of this unit are limited to minor structural alterations such as pilings and dolphins. Any fill or removal activities should be evaluated on a case-by-case basis.

> Management Objective: Management Unit 6 shall be managed to conserve natural resources and to provide for uses compatible with existing navigation and recreation activities.

> Special Policies: The shellfish beds south of the north marina breakwater as defined by the publication "Sub-tidal Clam Populations: Distribution, Abundance and Ecology" (OSU Sea Grant, May 1979) are considered a resource of major importance. Adverse impacts on this resource shall be avoided or minimized.

Management Unit 7

> Description: Management Unit 7 consists of the aquatic area between the navigation channel and the south shore, from the west boundary of the Highway 101 right-of-way east to the small boat pier at the Hatfield Marine Science Center. It includes the South Beach Marina, the NOAA Marine Operations Center, and the OSU Hatfield Marine Science Center facilities. The majority of the unit is sub-tidal and includes eelgrass and shellfish beds, and fish spawning and nursery areas. Major uses in the area are deep, medium and shallow draft navigation, moorage, recreation and some limited commercial harvest. Alterations include pilings, piers and wharves, breakwaters, floating docks, riprap, and periodic dredging.

> Classification: Development. This unit has been classified as development to provide for water dependent uses, including the NOAA Marine Operations Center, the South Beach Marina and OSU Hatfield Marine Science Center facilities.

> Resource Capability: Management Unit 7 is classified for development; therefore, authorized uses are not subject to resource capability requirements.

> Management Objective: Management Unit 7 shall be managed to provide for water dependent development compatible with existing uses. Non-water dependent uses not requiring dredge or fill may be permitted consistent with adjacent coastal shorelands designations.

> Special Policies: Eelgrass beds, shellfish beds, and fish spawning and nursery areas are located within Management Unit 7. Adverse impacts of development on these resources shall be avoided or minimized.

Due to the limited water surface area available and the need for direct land to water access, alternatives (such as buoys and dry land storage) to docks and piers for commercial and industrial uses are not feasible in Unit 7. Multiple use facilities common to several users are encouraged where practical.

Management Unit 8

> Description: Management Unit 8 is a sub-tidal area between the navigation channel and the intertidal flats of the Idaho Point/King's Slough area. It contains significant habitat areas, including eelgrass and shellfish beds, fish spawning and nursery areas, and waterfowl habitat. Uses within the unit consist of medium and shallow draft navigation, commercial harvest and recreation. Existing alterations are limited to navigation aids.

> Classification: Conservation. This unit has been classified as conservation in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

> Resource Capability: Management Unit 8 is an important resource area. Shallow portions of this sub-tidal unit support eelgrass beds; major shellfish beds are also located in this area. Alterations in this area are limited to navigation aids (pile supported). Similar minor structural alterations such as pilings and dolphins are consistent with the resource capabilities of this area.

> Management Objective: Management Unit 8 shall be managed to conserve and protect natural resources such as eelgrass and shellfish beds.

> Special Policies: None.

Management Unit 9

> Description: Management Unit 9 includes the Idaho Flats tideflat between the Marine Science Center and Idaho Point, all of King Slough, and the intertidal area upriver from the mouth of King Slough known as Racoon Flat. This is one of the largest tideflats in the estuary with a number of natural resource values of major significance, including eelgrass beds, shellfish beds, low salt marsh, fish spawning and nursery areas and waterfowl habitat. The area is used extensively for recreational purposes, primarily angling, clamming and waterfowl hunting. A private boat ramp (formerly the site off a small marina) is present at Idaho Point. The intertidal flat area west of Idaho Point is in public ownership

(State of Oregon Board of Higher Education). Most of the intertidal area of King Slough is privately owned and was used historically for log storage. There is a small, low intensity aquaculture operation (tipping bag oyster culture) on the east side of King slough. A substantial portion of the Racoon Flat intertidal area along the west shore above the mouth of King Slough is owned by the Yakona Nature Preserve and Learning Center. Alteration to the unit is minimal, with a few scattered pilings and limited areas of riprapped shoreline.

> Classification: Natural. As a major tract of tideflat, this unit has been classified natural in order to preserve the natural resources of the unit.

> Resource Capability. Management Unit 9 is a highly sensitive area with resource values of major importance to the estuarine ecosystem. In order to maintain resource values, alterations in this unit shall be kept to a minimum. Minor alterations which result in temporary disturbances (e.g., limited dredging for submerged crossings) are consistent with resource values in this area; other more permanent alterations will be reviewed individually.

> Management Objective. Management Unit 9 shall be managed to preserve and protect natural resources and values.

> Special Policies. Limited maintenance dredging and other maintenance activities may be permitted for the maintenance of the existing boat ramp in Management Unit 9. Expansion of this use or establishment of new marina uses is not permitted.

Major portions of Management Unit 9 are held in private ownership. Because the preservation of critical natural resources requires that uses in this area be severely restricted, public or conservation acquisition of these privately owned lands is strongly encouraged.

Management Unit 10

> Description. Management Unit 10 includes the Sally's Bend area between Coquille Point and McLean Point and bounded on the south by the authorized federal navigation channel. Much of this unit is owned by the Port of Newport. A number of minor alterations are present, including pilings and riprap along the shoreline.

The unit consists of one of the largest tideflats in the estuary, with a number of natural resource values of major significance including eelgrass beds, shellfish and algal beds, fish spawning and nursery areas, and wildlife and waterfowl habitat. The historically large eelgrass meadow present in MU 10 has become much smaller over time, indicating a significant loss of habitat. Eelgrass and associated habitat make this area extremely important for Endangered Species Act (ESA) listed fish species, commercially important fisheries species, recreationally important clams, and migratory birds. It is recognized as “Essential Fish Habitat” under the Magnuson–Stevens Fishery Conservation and Management Act. Additionally, a significant area in the middle of MU 10 is utilized by pinnipeds (seals and sea lions) as a haul out region, which are species supported under the Marine Mammal Protection Act. Recovering populations of native Olympia oysters have also been surveyed at the South corner of the management unit off Coquille Point.

Uses in the area are limited to shallow draft navigation, recreational use, and some minor commercial harvest of clams. The Sally's Bend recreational clamming area in this unit is the largest in Yaquina Bay. There are no public boat launches or other recreational infrastructure to access the water via boat, but public access is available at the NW Natural Gas plant on the West side and Coquille Point to the East. An Olympia oyster restoration project was initiated by ODFW in 2021, on the state-owned tidelands region of MU 10 (on the southern corner).

> Classification: Natural. As a major tract of tideflat with eelgrass beds, this unit has been classified natural in order to preserve natural resources in the unit.

> Resource Capability: Management Unit 10 is similar in character and resource values to Management Unit 9. Due to the importance and sensitive nature of the resources in this area, permitted alterations shall be limited to those which result in only temporary, minor disturbances (e.g., several submerged crossings have been located in this area). More permanent alterations will be reviewed individually for consistency with the resource capabilities of the area.

> Management Objective: Management Unit 10 shall be managed to preserve and protect natural resources and values.

> Special Policies: Because this unit is suitable for native oyster re-establishment and restoration efforts are underway, impacts to existing Olympia oysters shall be avoided.

Deepening and widening of the federal navigation channel and turning basin into this management unit, which would impact the significant ecosystems within Sally's Bend, shall be avoided.

Mitigation and Restoration

The mitigation provisions of Statewide Planning Goal 16: Estuarine Resources require that appropriate sites be designated to meet anticipated needs for estuarine resource replacement required to compensate for dredge or fill in intertidal or tidal marsh areas. These sites are to be protected from uses that would preempt their availability for required mitigation activities. Mitigation sites have been selected from among the restoration sites identified in the Lincoln County Estuary Management Plan for Yaquina Bay (see Figure 4 below). All of these sites have been evaluated as potential mitigation sites based on the following criteria:

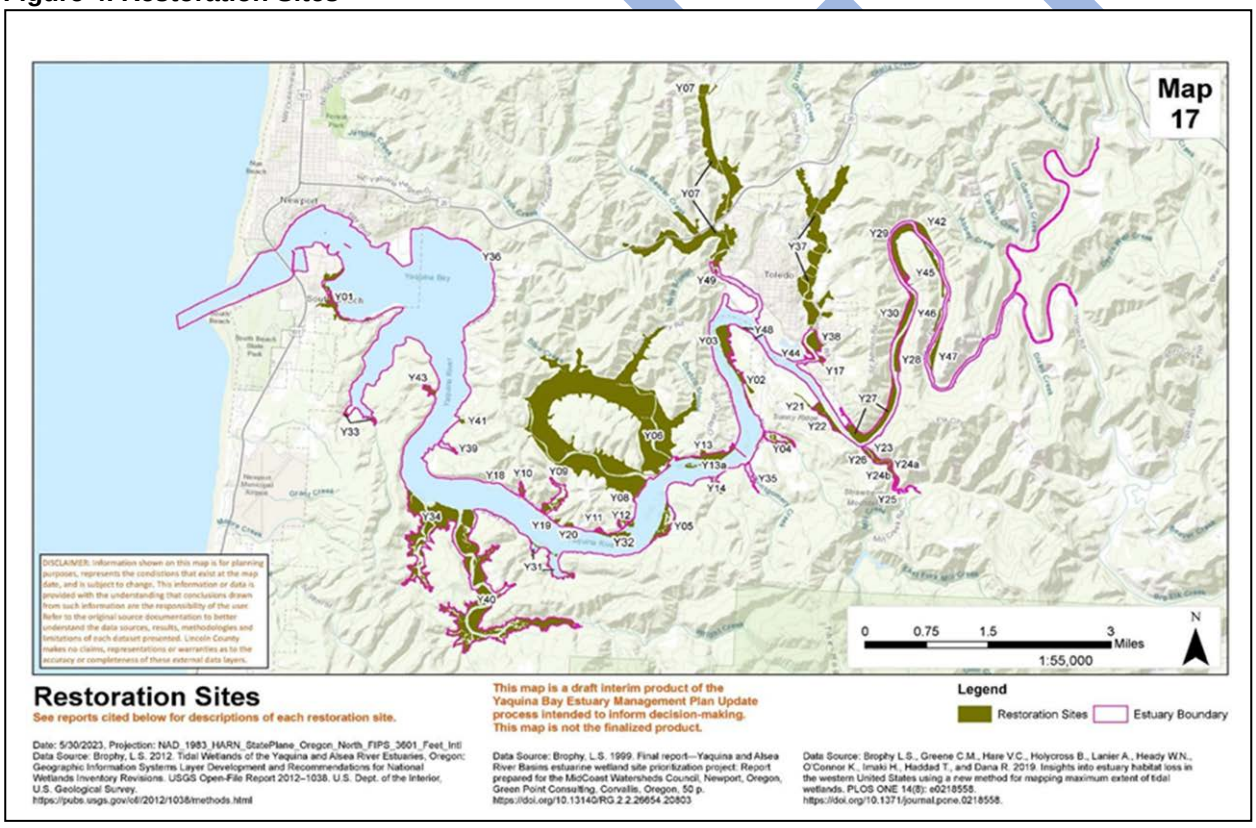
1. Biological Potential: Sites have been evaluated in terms of their similarity of habitat to areas likely to be altered or destroyed by future development activities; or, alternatively, sites were chosen which may provide resources that are in greatest scarcity compared to their past abundance or distribution. This evaluation has been based on an analysis of each site relative to a general assessment of probable foreseeable mitigation needs in each estuary, as well as past alterations or losses.

2. Engineering or Other Technical Constraints: Sites have been evaluated in terms of the type and magnitude of technical limitations that need to be overcome to accomplish restoration or enhancement. Sites with fewer constraints were considered more appropriate for use as mitigation sites.

3. Present Availability: The probable availability of each site during the original planning period has been evaluated. This evaluation was based primarily on the presence or absence of existing conflicting uses and ownership factors that might influence availability (e.g., public versus private ownership).

4. Feasibility of Protecting the Site: An assessment of each site has been done to determine the likelihood that an overriding need for a preemptive use will arise during the planning period. Sites for which no conflicting uses are anticipated are considered most desirable from the standpoint of ensuring future availability through protective zoning or other means.

Figure 4. Restoration Sites



Mitigation Needs and Sites

Future mitigation needs in Yaquina Bay will most likely be generated by dredge and fill activities in intertidal flat areas in the Newport and Toledo sub-areas and possibly in the Yaquina sub-area. Almost all of the tidal marsh areas in Yaquina Bay are protected by Natural Management Unit designations, so projects involving dredge and/or fill in tidal marsh areas are unlikely.

Opportunities for restoration or enhancement in intertidal flat or shore areas in Yaquina Bay are limited. For this reason, the mitigation sites listed below were selected for the opportunities they provide for restoration primarily of tidal marsh, a historically diminished resource. The matching of sites to individual dredge or fill projects will be accomplished as part of the Oregon Department of State Lands Removal-Fill permit process.

It is important to note that the identification and protection of the following sites is intended to reserve a supply of sites and ensure their availability for estuarine resource replacement as required by Goal 16. This list in no way precludes the use of other appropriate sites or actions to fulfill Goal 16 mitigation requirements as determined by the Department of State Lands. The identified sites are from the following publication: Brophy, L.S. 1999. Final Report: Yaquina and Alsea River Basins Estuarine Wetland Site Prioritization Project (for the MidCoast Watersheds Council). The site numbers correspond to the sites visualized in Figure 4. All sites are outside of the jurisdiction of the City of Newport.

Site # (Brophy, 1999)	**Protective Mechanism**
Y18	Coastal Shorelands (C-S) Overlay (significant wetland)
Y19	Estuary Management Unit (16)
Y20	C-S Overlay (significant wetland)
Y11	Estuary Management Unit (23)
Y30	C-S Overlay (significant wetland)
Y31	Estuary management Unit (21)
Y6	C-S Overlay (significant wetland)

Implementation

To implement the policies and standards of the Lincoln County Estuary Management Plan for Yaquina Bay, the City of Newport shall, at a minimum:

- Specify permissible uses for individual management units consistent with the Management Classification requirements of Part IV of the Lincoln County Estuary Management Plan for Yaquina Bay;
- Provide for the application of review standards set forth in Part II, Part IV and Part V in accordance with applicable procedural requirements; and
- Establish a requirement to assess the impacts of proposed estuarine alterations in accordance with Statewide Planning Goal 16, implementation requirement 1 and Part II of Lincoln County Estuary Management Plan for Yaquina Bay.
- Impact Assessment Requirements
- Unless fully addressed elsewhere in this chapter, actions that would potentially alter the estuarine ecosystem shall be preceded by a clear presentation of the impacts of the proposed alteration. Impact Assessments are required for dredging, fill, in-water structures, shoreline protective structures including riprap, log storage, application of pesticides and herbicides, water intake or withdrawal and effluent discharge, flow lane disposal of dredged material, and other activities that could affect the estuary's physical processes or biological resources.

The Impact Assessment requirement does not by itself establish any approval threshold related to impacts. The purpose of the Impact Assessment is to provide information to allow local decision makers and other reviewers to understand the expected impacts of proposed estuarine alterations, and to inform the application of relevant approval criteria (e.g., consistency with resource capabilities).

The Impact Assessment need not be lengthy or complex. The level of detail and analysis should be commensurate with the scale of expected impacts. For example, for proposed alterations with minimal estuarine disturbance, a correspondingly simple assessment is sufficient. For alterations with the potential for greater impact, the assessment should be more comprehensive. In all cases, it should enable reviewers to gain a clear understanding of the impacts to be expected. The Impact Assessment shall be submitted in writing to the local jurisdiction and include information on:

1. The type and extent of alterations expected;
2. The type of resource(s) affected;
3. The expected extent of impacts of the proposed alteration on water quality and other physical characteristics of the estuary, living resources, recreation and aesthetic use, navigation and other existing and potential uses of the estuary;
4. The expected extent of impacts of the proposed alteration must reference relevant Climate Vulnerabilities as described in applicable sub-area(s) for the management unit(s) where the alterations are proposed (applicants are encouraged to document the use of any applicable data and maps included in the inventory such as sea level rise and landward migration zones) when considering future:
   a. long term continued use of the proposed alteration
   b. water quality and other physical characteristics of the estuary,
   c. living resources,
   d. recreation and aesthetic use,
   e. navigation, and
   f. other existing and potential uses of the estuary;
5. The methods which could be employed to avoid or minimize adverse impacts; and
6. References, information, and maps relied upon to address (1) through (5) above.

Local Review Procedures

Statewide Planning Goal 16 establishes a number of discretionary standards that apply to the review of proposed estuarine development activities. These standards are in turn incorporated into this estuary management plan, specifically in Parts II, IV, V, VI of the Lincoln County Estuary Management Plan for Yaquina Bay.

City approval of estuarine alterations subject to one or more discretionary review criteria is a “permit” as defined in ORS 215 and ORS 227 and subject to the procedural requirements of ORS 227.160 to 227.186. In compliance with statutory procedural requirements, all proposals for estuarine alterations subject to Goal 16, Implementation Requirement 2, or subject to findings of consistency with the resource capabilities of the area, shall be reviewed in accordance with either Type II procedure (decision without a hearing subject to

notice), or Type III procedure (public hearing), as specified in the applicable jurisdiction's land use regulations.

State and Federal Regulation

Most development activities in estuarine aquatic areas are subject to regulation by one or more state and federal agencies. These regulatory requirements derive from state and federal statutes, and these authorities are discrete and independent from the provisions of the Lincoln County Estuary Management Plan and this Comprehensive Plan. State and federal regulatory requirements are therefore additive to the policies and implementation requirements of the Lincoln County Estuary Management Plan and this Comprehensive Plan. That is, the authorization of uses and activities through the City of Newport does not remove the requirement for applicants to comply with applicable state and federal regulatory requirements. Likewise, state and/or federal approvals of estuarine development activities do not supersede or pre-empt the requirements of Newport's plan and implementing regulations. For detailed information regarding state and federal regulatory programs involved in estuarine alterations, users should contact the relevant agency.
State and Local Coordination

Under ORS Chapter 197, state agencies are required to conduct their activities (including the issuance of permits and other authorizations) in a manner that complies with the statewide planning goals and is compatible with local comprehensive plans and land use regulations. To address this requirement, each state agency has developed and adopted a state agency coordination (SAC) program that has been approved by the Land Conservation and Development Commission. The SAC sets forth the procedures each agency will employ to assure that agency actions comply with the statewide planning goals and are compatible with local plans and regulations.

For state agencies with regulatory authority over estuarine development, the primary mechanism for ensuring compatibility with local estuary plan requirements is the Land Use Compatibility Statement (LUCS). Applicants for Removal-Fill permits, waterway authorizations, water quality certifications and most other state agency authorizations are required to obtain from the local land use authority a LUCS that certifies that the proposed use or activity complies with local land use requirements or that specifies local land use approvals are required to establish compliance. In general, state agencies will not begin their permit review until compatibility with local planning requirements is certified by the local jurisdiction.

Exceptions

With Ordinance No(s), the City of Newport took two exceptions to Goal 16/"Estuarine Resources." The first is for a seawater outfall line in conjunction with the Oregon Coast Aquarium. The second is for storm water drainage and outfall for the portion of South Beach that naturally drains into Management Unit 9-A.

(Existing Language to be Retained)

Yaquina Bay Shorelands:

This section summarizes inventory information about the shorelands adjacent to Yaquina Bay. Identification of the shorelands boundary was based upon consideration of several characteristics of the bay and adjacent uplands. Resources shown on the Yaquina Bay Shorelands Map within the bay-related portion of the shorelands boundary include:

> Areas subject to 100-year floods as identified on the Flood Insurance Rate Map (FIRM).

> Significant natural areas, adjacent marsh, and riparian vegetation along the shore.

> Points of public access to the water.

> Areas especially suited for water-dependent uses.

> Dredged material disposal sites (for a more detailed discussion of dredged material disposal sites, see the amended Yaquina Bay and River Dredged Material Disposal Plan[13]).

Several of the Goal 17 inventory topics for coastal shorelands do not appear in the legend for the Yaquina Bay Shorelands Map either because they do not occur (coastal headlands) or are not directly associated with it (geologic hazards). However, the report

and mapping of hazards by RNKR Associates is included in the Newport Comprehensive Plan inventory.[14] The historic and archaeological resources of the Yaquina Bay Shoreland have been identified in the historical section of this document.

The Yaquina Bay Bridge is the major aesthetic landmark on Yaquina Bay. Views associated with the ocean have relegated the river scenes to secondary importance.[15] The Visual Resource Analysis of the Oregon Coastal Zone classified the whole of Yaquina Bay as an area with a "less obvious coastal association" than the ocean beaches or Yaquina Head.[16]

[13] Wilsey & Ham, Yaquina Bay and River Dredged Material Disposal Plan, 1977.
[14] RNKR Associates, Environmental Hazard Inventory: Coastal Lincoln County, Oregon, 1978.
[15] Wilsey & Ham, Yaquina Bay Resource Inventory, 1977.
[16] Walker, Havens, and Erickson, Visual Resource Analysis of the Oregon Coastal Zone, 1979.

Flooding

Areas of 100-year floods along Yaquina Bay (Zone A), as shown on the Flood Insurance Rate Map for the City of Newport (effective April 15, 1980), are included on the Yaquina Bay Shorelands Map. This line represents base flood elevation of 9 or 10 feet, depending upon the location.

The City of Newport has adopted flood plain management regulations that have been approved by the Federal Emergency Management Agency (FEMA). The regulations include provisions that meet the requirements of the National Flood Insurance Program.

Significant Natural Areas

The Oregon Natural Heritage Program identified two significant natural areas on Yaquina Bay within the Newport UGB. These areas are mostly within the boundaries of Estuarine Management Units 9-A and 10-A. However, the shore adjacent to these management units also contains riparian vegetation and marshland.[17] These significant shoreland and wetland habitats and adjacent wetlands, including riparian vegetation, are shown on the Yaquina Bay Shorelands Map on page XXX.

Public Access Points

The Yaquina Bay Shorelands Map identifies points of public access to the water for purposes of boating, clamming, fishing, or simply experiencing the bay environment. In addition to those points, there are several points identified in the Inventory of Coastal Beach Access Sites published by Benkendorf and Associates.[18] That document is hereby included within this Plan by reference.

Areas Especially Suited for Water-Dependent Uses

There are several shoreland areas in the Newport UGB that are especially suited for water-dependent uses (ESWD). The shoreland areas especially suited for water-dependent recreational uses within the Newport UGB are virtually all on the ocean as described in the Ocean Shorelands Inventory. Suitable sites for water-dependent commercial and industrial uses exist on both the north and south shores of Yaquina Bay. Some of the water-dependent commercial areas, such as the marina sites, also have a recreational aspect. The port development section of this element will discuss the ESWD sites in more detail.

[17] Wilsey & Ham, Yaquina Bay Resource Inventory, 1977.
[18] Benkendorf and Associates, Inventory of Coastal Beach Access Sites, 1989.

The factors which contribute to special suitability for water-dependent uses on Yaquina Bay Shorelands are:

> Deep water (22 feet or more) close to shore with supporting land transport facilities suitable for ship and barge facilities;

> Potential for aquaculture;

> Potential for recreational utilization of coastal water or riparian resources;

> Absence of steep slopes or other topographic constraints to commercial and industrial uses next to the water;

> Access or potential for access to port facilities or the channel from the shorelands unobstructed by streets, roads or other barriers.

The first three factors are stated in Goal 17. Protected areas subject to scour that would require little dredging for use as marinas do not exist in Newport. The last two factors are based upon analysis of the characteristics of Yaquina Bay and its shorelands.

There are three areas within the Yaquina Bay Shorelands that have been identified as ESWD based on the five factors listed above. The degree and nature of the suitability for water-dependent uses varies both within and among these areas; consequently, a flexible approach to evaluate proposed uses in these areas on a case-by-case basis will be necessary.

The ESWD areas are noted below with applicable factors from the above list in parentheses, beginning with the east end of the original plat of Newport and proceeding clockwise around the bay. (See the Yaquina Bay Shorelands Map on page XXX for locations.)

1.) The Port of Newport's commercial boat basin facilities and parking lot/storage area lie between the bayfront on the west and the Embarcadero Marina and parking area on the east. This area lies entirely to the south of Bay Boulevard (factors 3, 4 and 5).

This area is largely developed or committed to port facilities, including docks, port offices, and a parking area. This is the port area devoted to berthing commercial fishing boats. There is development potential for changes in the port's facilities to meet the changing needs of the commercial fishing industry. While the total number of vessels has declined, their size and diversity is increasing. Some vessels in the 70 to 100 foot class routinely fish as far away as the north Alaskan coast. Uses outside or on the fringes of the port area that do not conflict or interfere with commercial fishing needs could be acceptable and appropriate.

2.) The other area on the north side of the bay especially suited for water dependent uses is part of the McLean Point fill area, including Sunset Terminals and the LNG tank. Only that land with close proximity to the deep water channel is included.

This area is entirely south of the western portion of Yaquina Bay Road (factors 1, 4 and 5).

This area has existing facilities and future development potential for a variety of water-borne transportation, shipping and storage activities in conjunction with fish processing, marine industry, and bulk shipping of limestone, logs, and lumber, liquefied natural gas, or other commodities. A variety of industrial uses would be desirable on the landward side of the terminal facilities.

3.) On the south side of the bay, the OSU Marine Science Center's dock facilities, the Ore-Aqua commercial salmon hatchery, and the land immediately adjacent to the South Beach Marina are especially suited for water-dependent uses (factors 2, 3, 4 and 5), and will also serve the needs of workers and visitors to the area.

This area is only partly developed. Additional water-related and non water-related developments associated with the existing South Beach Marina, the OSU Marine Science Center, and port development as identified in the port development plan are envisioned for the areas landward of this ESWD area. These facilities further

the public's enjoyment and understanding of the coastal environment, and resources are most desirable.

Port Development Plan:

The City of Newport's Urban Renewal Agency and the Port of Newport contracted with CH2M HILL of Corvallis to prepare an update of the port development element of the city's Comprehensive Plan (already mentioned in this section).

The first part of the port development plan is an executive summary of the entire plan. That section is repeated here.

Executive Summary

Industry Demands: The waterfront property bordering historic and scenic Yaquina Bay is used for a wide variety of activities. This diversity of uses contributes to the vibrancy of the Newport area. However, there is a tension between the various industries using the waterfront property as they compete for space to grow and expand their respective activities. The primary industries vying for use of bay front property are:

- Commercial shipping
- Commercial fishing
- Research and education
- Tourism

Commercial shipping provides the justification for continued federal participation in harbor and navigation channel maintenance activities. The channels not only provide access to the deep draft shipping lanes of the Pacific Ocean but also make Yaquina Bay a favored harbor for a large commercial fishing fleet, which in turn attracts many tourists to the bay front to observe off-loading and processing of the catch. Research and education activities support the commercial fishing industry and also attract visitors to the area. The combined presence of the Hatfield Marine Science Center and the deep draft navigation channel draws large ocean research vessels into the harbor for supplies, repairs, and to provide floating exhibitions open to the public. Thus, these major industries are all linked together.

Two hundred and fifty acres along the estuary are zoned for water-related or water-dependent use, and it is important to balance the needs of all to provide balanced growth in the local economy. The current needs of each of these industries are discussed below.

> The commercial shipping industry requires additional staging areas and needs to reserve room for future expansion. Additions of a dedicated shipper or a second export commodity, such as wood chips or other forest products, is the type of activity that could generate the need for additional berths.

> Commercial fishing activities are restricted by lack of moorage, service and work docks, and upland support area for storage and repair work. Competition between ports often leads to marketing support facilities at rates that do not meet debt service in the name of economic development and job creation. This is done to attract commercial fishing vessels to a port because of the financial impact one of these boats can make on the local economy. Each boat is, in essence, an independent business, and the boats are increasingly being operated in a business-like manner.

> Research and education requirements are fairly straightforward: room for expansion and maintenance of the environmental parameters upon which they depend (e.g., water quality in the vicinity of seawater intake facilities).

> The tourism industry relies on the continued presence of the fishing fleet and access to the variety of activities that may be enjoyed along the waterfront, in addition to room for expansion.

<u>Potential Development of Bay Front Areas</u>: Parking is in short supply. Retail merchants, tourists, and commercial fisherman alike put this shortage at the forefront of their needs. Access to the bayfront could be enhanced by a multi-level parking structure with a capacity for approximately 400 vehicles. This would not solve all parking shortages nor completely eliminate congestion; however, construction of such a facility would provide the opportunity to establish one-way traffic along the bay and restrict all but commercial and emergency vehicles from the lower reach of Bay Boulevard.

The lower bayfront offers the potential for cold storage facilities, ice making and

selling facilities, receiving docks and buying stations, and transient moorage space. If the now vacant Snow Mist site is not used for these activities, then it may be appropriate to allow other short-term uses. This should be permitted only if the short-term use allows easy conversion to the proposed primary use upon demonstrated need and demand for such a facility.

The area from Port Dock 5 to the Embarcadero should be dedicated, primarily, to the needs of the commercial fishing industry. However, some current uses, such as long term storage for crab pots and cod pots, are not appropriate considering the limited amount of upland area along the waterfront. The potential for major redevelopment of this area has been identified. This would enhance public enjoyment of the waterfront in addition to expanding facilities for the commercial fishing fleet.

The project requires filling of public tidelands between Port Docks 3 and 5. This would provide space for a waterfront park area with a good view of the commercial fishing activities at Port Dock 5. Bay Boulevard could also be widened to provide additional street-side parking and one-way traffic lanes along this section. The remaining land would be converted to more efficient gear staging and short term storage, parking dedicated to the commercial fishermen, and marine retail lease space. A boardwalk running from Port Dock 3 to the Embarcadero would also allow tourists visual access to the activities of the fleet while maintaining the physical separation necessary for public safety.

Other elements of the overall development of this area's potential include relocating the U.S. Army Corps of Engineers' breakwater to expand the commercial fishing moorages. Realignment of the Port docks would also be considered, along with replacing the original Port Dock 3 transient moorage facility.

The benefits of this major redevelopment project will be limited if more moorage and long term gear storage facilities are not developed elsewhere. The Fishermen's Investment Company site offers the necessary land for long term gear storage, service and work docks, permanent and transient moorage for boats up to 300 feet in length, and marine industrial lease facilities. Developing this facility would be strategic for the Port. Then, the Port Dock 7 fill area could be completely redeveloped for more appropriate uses.

The port's International Terminals facility has the capability for minor expansions of cargo staging areas, or possibly for the addition of facilities for barges or commercial fishing vessels. However, available land limits the potential for growth at this location.

McLean Point has the largest parcel of undeveloped property on the lower bay. This property is privately owned, and plans for development have not been announced. It would be well suited for a wide variety of uses such as:

- Boat haulout and marine fabrication
- Gear storage and staging
- Service and work docks
- Fish receiving, buying and processing facilities

- Moorage
- Commercial shipping terminals
- Surimi processing

This undeveloped parcel of land is critical to the overall development of the lower bay. If it is not developed, then the Port of Newport should consider buying or leasing the property with the intent to develop it to meet the needs of the shipping or fishing industries.

The South Beach peninsula serves as the home for many recreational boaters and for the research and education community. Potential developments that are attractive to the long term use of this area include moorages for research vessels, continued expansion of the Marine Science Center, and continued development at the Newport Marina at South Beach complex.

Idaho Point offers limited potential for development. Possibly a small boat haulout facility servicing the smaller commercial fishing boats could be developed. The shallow channel to the area, its small land area suitable for development, and its isolation from other businesses and support facilities severely limit the potential for developing a major haulout facility.

Development Restrictions: Limited funding and environmental regulations will be the most likely restrictions to developing the identified projects. Projects that should be developed in the next five years are those without major environmental restraints or that are fairly small in scale. Other projects should be developed later, as market conditions dictate or as funds become available. Construction on the waterfront is not inexpensive, and foundation conditions along the north side of Yaquina Bay are complicated by a very dense Nye mudstone formation, locally called "hardpan."

GOALS AND POLICIES
YAQUINA BAY AND ESTUARY

Goal: To recognize and balance the unique economic, social, and environmental values of the Yaquina Bay Estuary.

Policy 1: Balanced Use of Estuary. The City of Newport shall continue to ensure that the overall management of the Yaquina Bay Estuary shall provide for the balanced development, conservation, and natural preservation of the Yaquina Bay Estuary as appropriate in various areas.

Policy 2: Cooperative Management. The city will cooperate with Lincoln County, the State of Oregon, and the Federal Government in the management of the Yaquina Bay Estuary.

Policy 3: Use Priorities. The Yaquina Bay Estuary represents an economic resource and provides vital ecosystem services of regional importance. The overall management of the estuary shall ensure adequate provision for protection of the estuarine ecosystem, including its biological productivity, habitat, diversity, unique features and water quality, and development, consistent with its overall management classification – deep-draft development – and according to the following general priorities (from highest to lowest). The prioritization of management policies is not intended to reduce or alter the tribal trust responsibilities of the federal government:

a) Uses which maintain the integrity of the estuarine ecosystem;

b) Water dependent uses requiring an estuarine location;

c) Water related uses which do not degrade or reduce natural estuarine resources and values;

d) Non-dependent, non-related uses that do not alter, degrade, or reduce estuarine resources or values and are compatible with existing and committed uses.

Policy 4: Natural Resources. The Yaquina Bay Estuary supports a variety of vitally important natural resources that also support the major economic sectors of Newport and the surrounding area. The overall management of the estuary shall include adequate provision for both conservation and preservation of natural resources. This will include consideration of culturally important tribal resources.

Policy 5: Riparian Vegetation. Riparian vegetation shall be protected along the Yaquina Bay shoreland where it exists. The only identified riparian vegetation within the UGB is that shoreland vegetation adjacent to Management Unit 9 A. This vegetation shall be protected by requiring a fifty (50) foot setback from the high water line for any development in the area. Adjacent public roads may be maintained as needed.

Policy 6: Recreational Resources. The Yaquina Bay Estuary represents a recreational resource of both local and statewide importance. Management of the estuary shall protect recreational values and ensure adequate public access to the estuary. This will include consideration of culturally important tribal resources.

Policy 7: Dredging and/or filling in the estuary shall be allowed only:

a.) if required for navigation or other water dependent uses that require an estuarine location or if specifically allowed by the applicable management unit requirements of this plan; and

b.) if a need (e.g., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights or tribal

cultural resources or practices; and

c.) if no feasible alternative upland locations exist; and

d.) if adverse impacts are minimized.

e.) other uses and activities which could alter the estuary shall only be allowed if the requirements in b., c., and d. are met.

Policy 8: All restoration projects should serve to revitalize, return, replace or otherwise improve estuarine ecosystem characteristics. Examples include restoration of biological productivity, fish or wildlife habitat, other natural or cultural characteristics or resources, or ecosystem services that have been diminished or lost by past alterations, activities or catastrophic events. In general, beneficial restoration of estuarine resources and habitats, consistent with Statewide Planning Goal 16, should be facilitated through implementing measures.

Policy 9: Newport Sub-Area. The primary objective in the Newport sub-area shall be to manage the development of water dependent uses, including but not limited to deep draft navigation, marine research, and commercial fishery support facilities. In general, non-water related uses shall not occupy estuarine surface area. However, limited non-water related uses may be permitted in keeping with the scenic and historic bayfront community on the north side of the sub-area. Adverse impacts of development on natural resources and established recreational uses shall be minimized. Land uses of adjacent shorelands should be consistent with the preferences and uses of other sub-areas.

Policy 10: Bayfront Uses. The city shall encourage a mix of uses on the bayfront. Preference shall be given to water-dependent or water-related uses for properties adjacent the bay. Nonwater-dependent or related uses shall be encouraged to locate on upland properties.

Policy 11: Water-Dependent Zoning Districts. Areas especially suited for water-dependent development shall be protected for that development by the application of the W-1/"Water-Dependent" zoning district. Temporary uses that involve minimal capital investment and no permanent structures shall be allowed, and uses in conjunction with and incidental to water-dependent uses may be allowed.

Policy 12: Solutions To Erosion and Flooding. Nonstructural solutions to problems of erosion or flooding shall be preferred to structural solutions. Where flood and erosion control structures are shown to be necessary, they shall be designed to minimize adverse impacts on water currents, erosion, and accretion patterns. Additionally, or cobble/pebble dynamic revetments in MU 8 and 9-A to be allowed, the project must demonstrate a need to protect public facility uses, that land use management practices and nonstructural solutions are inadequate, and the proposal is consistent with the applicable management unit as required by Goal 16.

Policy 13: Impact Assessment. Impact Assessments are required for dredging, fill, in-water structures, shoreline protective structures including riprap, log storage, application of pesticides and herbicides, water intake or withdrawal and effluent discharge, flow lane disposal of dredged material, and other activities that could affect the estuary's physical processes or biological resources.

The Impact Assessment need not be lengthy or complex. The level of detail and analysis should be commensurate with the scale of expected impacts. For example, for proposed alterations with minimal estuarine disturbance, a correspondingly simple assessment is sufficient. For alterations with the potential for greater impact, the assessment should be more comprehensive. In all cases, it should enable reviewers to gain a clear understanding of the impacts to be expected. The Impact Assessment shall be submitted in writing to the local jurisdiction and include information on:

a.) The type and extent of alterations expected;

b.) The type of resource(s) affected;

c.) The expected extent of impacts of the proposed alteration on water quality and other physical characteristics of the estuary, living resources, recreation and aesthetic use, navigation and other existing and potential uses of the estuary;

d.) The expected extent of impacts of the proposed alteration must reference relevant Climate Vulnerabilities as described in applicable sub-area(s) for the management unit(s) where the alterations are proposed (applicants are encouraged to document the use of any applicable data and maps included in the inventory such as sea level rise and landward migration zones) when considering future:

    1.) long term continued use of the proposed alteration

    2.) water quality and other physical characteristics of the estuary,

    3.) living resources,

    4.) recreation and aesthetic use,

    5.) navigation, and

    6.) other existing and potential uses of the estuary;

e.) The methods which could be employed to avoid or minimize adverse impacts; and

f.) References, information, and maps relied upon to address (1) through (5) above.

Policy 14: Alteration of the Estuary. Uses and activities other than dredge and fill activity which could alter the estuary shall be allowed only:

a.) If the need (i.e., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights;

b.) If no feasible alternative upland locations exist; and

c.) If adverse impacts are minimized.

Policy 15: Resource Capability Determinations - Natural Management Units. Within Natural Management Units, a use or activity is consistent with the resource capabilities of the area when either the impacts of the use on estuarine species, habitats, biological productivity, and water quality are not significant or the resources of the area are able to assimilate the use and activity and their effects and continue to function in a manner to protect significant wildlife habitats, natural biological productivity, and values for scientific research and education. In this context, "protect" means to save or shield from loss, destruction, injury, or for future intended use.

Policy 16: Resource Capability Determinations - Conservation Management Units. Within Conservation Management Units, a use or activity is consistent with the resource capabilities of the area when either the impacts of the use on estuarine species, habitats, biologic productivity, and water quality are not significant or the resources of the area are able to assimilate the use and activity and their effects and continue to function in a manner which conserves long term renewable resources, natural biologic productivity, recreational and aesthetic values, and aquaculture. In this context, "conserve" means to manage in a manner which avoids wasteful or destructive uses and provides for future availability.

Policy 17: Temporary Alterations in Natural and Conservation Management Units. A temporary alteration is dredging, filling, or other estuarine alteration occurring over no more than three years which is needed to facilitate a use allowed by the Comprehensive Plan and the Permitted Use Matrices of the Zoning Ordinance. The provision for temporary alterations is intended to allow alterations to areas and resources that would otherwise be required to be preserved or conserved.

Temporary alterations include:

> Alterations necessary for federally authorized navigation projects (e.g., access to dredged material disposal sites by barge or pipeline and staging areas or dredging for jetty maintenance);

> Alterations to establish mitigation sites, alterations for bridge construction or repair, and for drilling or other exploratory operations; and

> Minor structures (such as blinds) necessary for research and educational

observation.

Temporary alterations require a resource capability determination to insure that:

> The short-term damage to resources is consistent with resource capabilities of the area; and

> The area and affected resources can be restored to their original condition.

YAQUINA BAY ESTUARY MANAGEMENT PLAN

August 2023

DRAFT

NOT ADOPTED

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PART I - INTRODUCTION

Proposed revisions as part of the 2023 update

Overview

The Lincoln County Estuary Management Plan (Plan) is a special area plan, as defined by the federal Coastal Zone Management Act (CZMA), that governs estuarine resource conservation and development decisions in four major estuaries (Yaquina Bay, Alsea Bay, Siletz Bay, and Salmon River estuaries), and three minor estuaries (Big Creek, Beaver Creek, and Yachats River estuaries). The Plan is administered at the local level by Lincoln County, the City of Lincoln City, the City of Newport, the City of Toledo, the City of Waldport, and the City of Yachats for areas within their respective jurisdictions. As prescribed by Oregon Statewide Planning Goal 16: Estuarine Resources, the Plan regulates alterations and uses within estuarine areas, which are defined as estuarine waters, tidelands, tidal marshes and submerged lands up to the line of Mean Higher High Water (MHHW) or the line of non-aquatic vegetation, whichever is further landward. For purposes of this plan, the jurisdictional extent of estuaries extends upstream to the head of tide. (See Figure 1. Yaquina Bay Regulatory Extent and Head of Tide Map). Adjoining shorelands are subject to separate, coordinated land use regulations. The original Plan was adopted in 1982. The Yaquina Bay portion of the Estuary Management Plan was comprehensively updated in 2023.

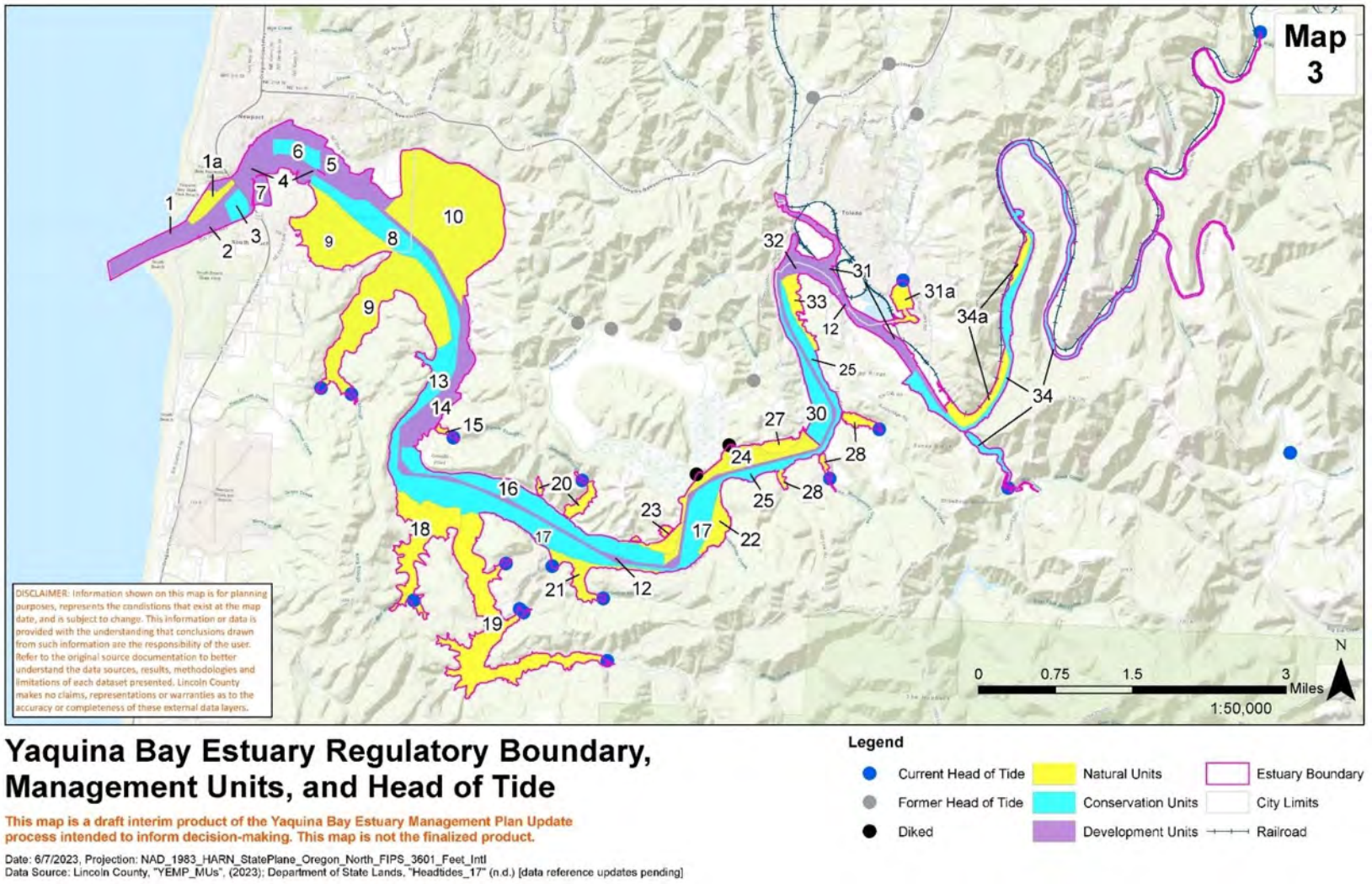


Figure 1. Regulatory Boundary, Estuary Management Unit Classifications, & Head of Tide

Original Lincoln County Estuary Management Plan

In 1976, the State of Oregon adopted Statewide Planning Goal 16: Estuarine Resources, which requires coastal jurisdictions to develop and adopt estuary management plans in compliance with the Goal's requirements. In addition to coastal Statewide Planning Goals 17-19, the adoption of Goal 16 supported the State of Oregon in meeting the requirements of the federal Coastal Zone Management Act of 1972. These goals and their adherence through local Comprehensive Plans ensures the continued approval of Oregon's Coastal Management Program, which is a networked program of all cities, counties, and state agencies within Oregon's Coastal Zone and administered through the Department of Land Conservation and Development.

Statewide Planning Goals interact with each other to varying degrees. In particular, Goal 17 - Coastal Shorelands, outlines planning and management requirements for the lands bordering estuaries. It should be noted that while these two Goals are immediately adjacent to each other, in Lincoln County Goal 16 is administered through the estuary management plan whereas Goal 17 is administered through the zoning code.

The purpose of Goal 16 and all estuary management plans is "to recognize and protect the unique environmental, economic, and social values of each estuary and associated wetlands; and to protect, maintain, where appropriate develop, and where appropriate restore the long-term environmental, economic, and social values, diversity and benefits of Oregon's estuaries." Plans are paired with mapped resource inventories describing physical, biological, social, and economic conditions. Four major estuaries and three minor estuaries are within the jurisdiction of Lincoln County. Of the major estuaries, Salmon River, Siletz Bay and Alsea Bay are of primary importance as recreation areas, while Yaquina Bay is one of three major development estuaries on the Oregon Coast with a deep water navigation channel and turning basin federally authorized by the United States Army Corps of Engineers and a major port. In many ways, the County's estuaries serve as a focal point for the local economy.

In 1982, Lincoln County adopted the Lincoln County Estuary Management Plan to manage the increasing number of demands placed on its estuaries by an expanding economic base and growing population. A major goal of the Plan is to reduce conflict between the various groups that seek to use the resources of the estuary and the agencies responsible for managing those resources.

Responsibilities for making decisions about the use of the land and water resources of estuarine areas fall to a wide variety of local, state, and federal agencies. Each agency that has some authority uses a plan or follows codified regulations to make management decisions. The cities and county have comprehensive plans; the U.S. Army Corps of Engineers, U.S. Fish and Wildlife

Service, U.S. Environmental Protection Agency, Oregon Department of Fish and Wildlife, Oregon Department of State Lands, and other state and federal agencies each have their own regulations. The result is that the process for making decisions and obtaining permits can be confusing, uncertain, and often frustrating for the individuals involved.

The development of the original Estuary Management Plan was brought about through the combined efforts of local government, concerned citizens, industry and state and federal agencies working within the framework of the Statewide Planning Goals and the Oregon Coastal Management Program. The emphasis of this program is to resolve conflicts over use and development of coastal resources through the development of coordinated comprehensive plans. As an element of these coordinated comprehensive plans, the Estuary Management Plan represents an overall management scheme for the resources of the estuaries which reflects not only local interests, but also incorporates the concerns of affected state and federal agencies.

The final decisions contained in this Plan often reflect considerable compromise made by all parties involved. While it was not possible to completely satisfy all participating interests, the concerns and viewpoints of all interests were thoroughly considered. A sincere effort was made to balance the sometimes conflicting needs to preserve dwindling natural resources and provide needed opportunities for economic growth and stability.

2023 Update to the Yaquina Bay Component of Lincoln County Estuary Management Plan

The original Plan, adopted in 1982, was based on the economic, demographic, and environmental conditions at the time. A lot has changed since 1982, not just in Yaquina Bay and the economic and demographic composition of the communities in the region, but also how people use and value its waters and ecosystems. To guide the update of the Yaquina Bay component of the Lincoln County Estuary Management Plan, a Steering Committee was formed consisting of representatives of DLCD, Lincoln County, the Cities of Newport and Toledo, the Ports of Newport and Toledo, and the Confederated Tribes of Siletz Indians. In addition to updating the Plan to address current conditions, technologies like Geographic Information Systems (GIS) have been utilized to improve the usability of the Plan. The Plan's original hand-drawn maps have been replaced by GIS mapping which more accurately depicts important planning and regulatory boundaries. Updates to the resource inventory maps were completed and informed updates to applicable Plan Parts such as VI-Management Units. As described in Goal 16's guidelines, "the strong relationship between estuaries and adjacent coastal shorelands, the inventories and planning requirements for these resources should be closely coordinated." The 2023 update completed this by updating maps describing the current physical, biological, social, and economic conditions, as well as updates to the Restoration Site List (see Figure 3) and Landward Migration

Zone maps 17 and 21 respectively also that describe coastal shorelands that could become within the estuary's regulatory extent due to sea level rise or restoration activities.

Another major aspect of the update was the incorporation of information and concerns that have emerged since the Plan was originally adopted. This includes incorporating climate change considerations in the planning of proposed alterations in Yaquina Bay as well as descriptions of Tribal rights and access for cultural practices.

As in during the original Plan adoption, the update has involved public participation and groups who value a healthy Yaquina Bay for the habitat and ecosystem services it provides and the local economy and livelihoods it supports. Ecosystem services are positive benefits that ecological systems, habitats, or wildlife provide to humans. Yaquina Bay's estuary provides ecosystem services to nearby residents and the Cities of Newport and Toledo that include mitigation of the impacts of flooding due to storm surges, improvements in water quality through vegetation and substrate filtration, and improvements in air quality through plant photosynthesis and respiration. The cultural significance of this area as well as opportunities for recreation are also considered important ecosystem services. In addition, much of the local economy is built upon productive seafood and fish harvesting and processing such as Dungeness crab which require eelgrass and other estuarine habitats for their lifecycle. Lastly, the sequestration and storage of carbon by the estuary's subtidal and intertidal plants benefits residents of the State of Oregon and beyond by helping attenuate carbon dioxide contributions to climate change and its projected impacts. Note that this is not intended to be an exhaustive list of all of the myriad of ecosystem services Yaquina Bay provides to people.

How to Use the Plan

The Estuary Management Plan provides an overall, integrated management scheme for estuarine aquatic areas in Lincoln County. Lincoln County retains overall responsibility for development and coordination of the Estuary Management Plan for estuaries in the county except for Depoe Bay, which is wholly within the jurisdiction of the City of Depoe Bay. City comprehensive plans incorporate relevant portions of the Estuary Management Plan. Amendments to any element of the Plan will be coordinated by Lincoln County with the affected cities, ports, State and Federal agencies.

The Plan contains comprehensive provisions for guiding estuarine development and conservation activities, from broad overall policies to site specific implementing measures.

The planning and decision-making framework of the Estuary Management Plan is contained within a concept of descending levels of policies: Overall Management Policies to Sub-Area Policies to individual Management Units. Each level of policy and the size of the area to which

those provisions apply is smaller and more specific than the preceding level, ending with site specific guidelines at the management unit scale.

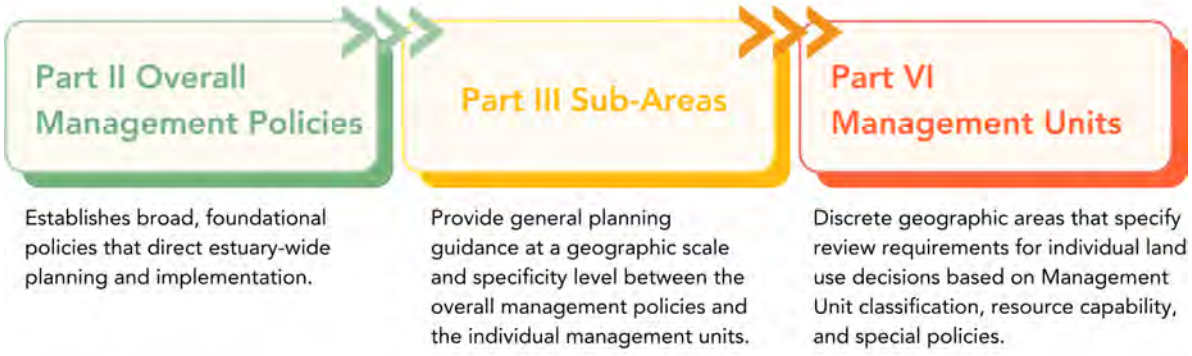


Figure 2. Policy Visual

Estuary and estuary-adjacent property owners or agencies seeking to alter or use the estuary should consult the individual management unit(s) encompassing their properties. To determine the permissibility of a proposed alteration or use of the estuary, consult the classification of the relevant Management Unit(s), the Estuary Zoning Districts which describe the permitted and conditional, uses or activities applicable to each Classification(s), and consult the applicable jurisdiction (city or County) to discuss the proposed project.

In the Estuary Management Plan, three levels of policy are established:

Overall Management Policies (Plan Part II)
Overall estuary management policies are established for the entire county. These policies are very broad and general in nature and are designed to say, in essence, that "...this is how we expect to manage uses and activities within the estuary..." and "...this is what we expect to achieve through this management...".

Sub-Area Policies (Plan Part III)
The size and complexity of the Yaquina Bay estuary required a second level of policy; the Sub-Area Policy. The estuary has been divided into seven sub-areas, each representing a

common set of natural and human-related features. Sub-areas provide a basis for describing how different areas of the estuary presently function and how they should be planned to function in the future. Each sub-area is described in terms of its existing character; its major committed uses; its existing and potential conflicts; and its climate vulnerabilities. Policies are established for each sub-area on the management of the sub-area's natural resources and on development within the sub-area. These policies serve to guide the establishment of management unit designations and specific implementation measures.

Management Units (Plan Part VI)

The third level of policy in the Estuary Management Plan is the Management Unit. This is the most specific policy level and is designed to provide specific implementing provisions for individual project proposals. Each unit is given a management classification (defined in Part IV) of Natural, Conservation, or Development. These classifications are based on the resource characteristics of the units as determined through an analysis of resource inventory information. The classification carries with it a general description of intent and a Management Objective. Each management unit objective is implemented by its applicable Estuary Zoning District (see Part X - Implementation) which specifies uses and activities that are permitted or conditional within the unit. Many management units also contain a set of Special Policies that relate specifically to that individual unit.

In addition to the three basic policy levels, the Estuary Management Plan also contains a number of other sections, each with a specialized role in guiding overall estuary management.

Estuarine Use Standards (Plan Part V)

This part of the Plan has detailed development standards for 14 categories of uses and activities (structures, dredging, etc.). These standards will be applied to all new uses and activities within the estuaries as a part of the Plan implementation process. This part of the Plan was not revised during the 2023 update.

Restoration and Mitigation (Plan Part VII)

This section includes a general description of restoration, its relation to mitigation as required by Oregon Law, and an overall policy concerning restoration. It includes a general assessment of estuarine mitigation needs and an identification of sites to be protected in fulfilling the mitigation planning requirements of Goal 16. The list of potential restoration sites and projects in the estuaries has been updated and moved to Appendix E as a document and in the spatial inventory as Figure 2. Restoration Sites.

Future Development Sites (Plan Part IX)

This part of the Plan includes a summary of projected development needs and a summary of potential development sites. Its purpose is to address concerns which are presently beyond the

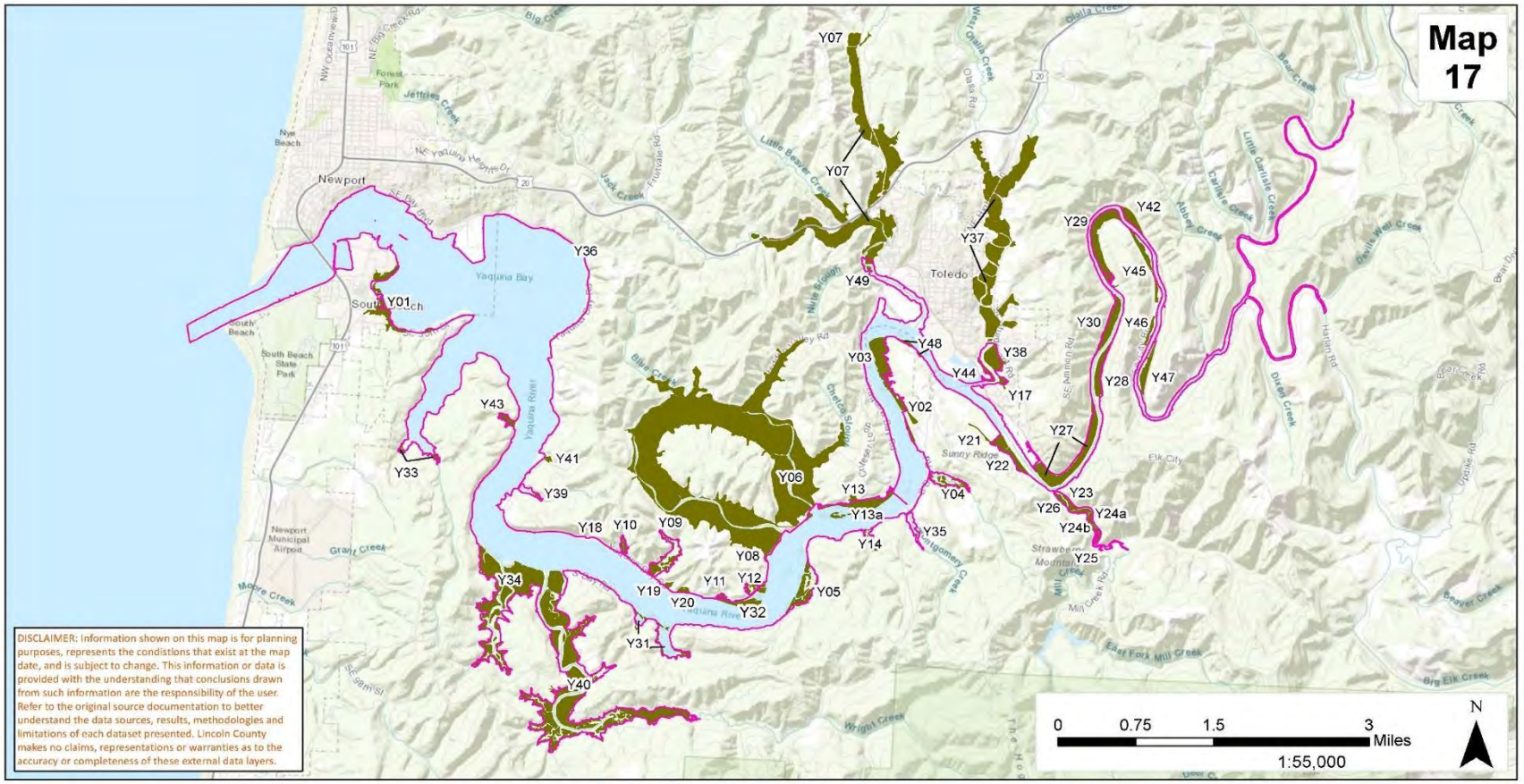
scope of the specific management unit framework to provide general, long-term direction to future development. This part of the Plan was not revised during the 2023 update.

Plan Implementation (Plan Part X)

This section of the Plan provides the administrative procedures for implementing the Plan's substantive requirements. It describes required local land use review procedures and specifies the content of local land use regulations necessary to implement the Plan and comply with Goal 16 requirements. Also included is a general description of the principal state and federal regulatory authorities involved in estuarine activities and development.

Dredge Material Disposal Plan

The Lincoln County Dredged Material Disposal Plan is a companion document to the Estuary Management Plan. It describes the location and procedures for use of dredged material disposal sites. Dredging needs over the next 20 years were estimated and sites located to handle the disposal of the material. This part of the Plan was not revised during the 2023 update as the disposal of dredged material in estuarine areas is regulated by the United States Army Corps of Engineers and the Oregon Department of State Lands.



Restoration Sites

See reports cited below for descriptions of each restoration site.

This map is a draft interim product of the Yaquina Bay Estuary Management Plan Update process intended to inform decision-making. This map is not the finalized product.

Legend

Restoration Sites | Estuary Boundary

Date: 5/30/2023, Projection: NAD_1983_HARN_StatePlane_Oregon_North_FIPS_3601_Feet_Intl
Data Source: Brophy, L.S. 2012. Tidal Wetlands of the Yaquina and Alsea River Estuaries, Oregon: Geographic Information Systems Layer Development and Recommendations for National Wetlands Inventory Revisions. USGS Open-File Report 2012–1038. U.S. Dept. of the Interior, U.S. Geological Survey.
https://pubs.usgs.gov/of//2012/1038/methods.html

Data Source: Brophy, L.S. 1999. Final report—Yaquina and Alsea River Basins estuarine wetland site prioritization project: Report prepared for the MidCoast Watersheds Council, Newport, Oregon, Green Point Consulting, Corvallis, Oregon, 50 p.
https://doi.org/10.13140/RG.2.2.26654.20803

Data Source: Brophy L.S., Greene C.M., Hare V.C., Holycross B., Lanier A., Heady W.N., O'Connor K., Imaki H., Haddad T., and Dana R. 2019. Insights into estuary habitat loss in the western United States using a new method for mapping maximum extent of tidal wetlands. PLOS ONE 14(8): e0218558.
https://doi.org/10.1371/journal.pone.0218558.

Figure 3. Restoration Sites

Resource Inventories

As part of Lincoln County's Comprehensive Plan, detailed resource inventories of the County's estuarine areas have been adopted. Inventories have been conducted to provide information necessary for designating estuary uses and policies. These inventories provide information on the nature, location, and extent of physical, biological, social, and economic resources in sufficient detail to establish a sound basis for estuarine management and to enable the identification of areas for preservation and areas of exceptional potential for development.

Inventories include maps and sourced spatial data on the following resources and information: Coastal Marine and Ecological Classification Standard (CMECS), port facilities and tide gates, current planning extent, historical estuarine boundaries and vegetation, head of tide, sea-level rise projections, landward migration zone projections, and restoration sites. More information on CMECS data and what the various features (e.g.: substrate types, wetland types, etc.) can be found in Appendix G – CMECS Data Descriptions. The information contained in the Plan's management unit descriptions and resource capability assessments is based on factual base material drawn from these comprehensive resource inventories. The rationale for permitted use decisions and management classifications is contained in these brief factual base summaries; for detailed resource information and a bibliography of documents included in the inventory, the Lincoln County Comprehensive Plan Inventory should be consulted.

Climate Change and Vulnerabilities

As part of the 2023 update to the Plan, climate change as a management consideration has been incorporated throughout the Plan, including Plan Parts I Introduction, III Sub-Areas, VII Mitigation and Restoration, X Implementation, and to the spatial inventories. As proposed alterations in the estuary have the potential to be in place for decades, impacts from climate change can jeopardize their continued use and potentially lead to negative outcomes that could threaten the unique environmental, economic, and social values of Yaquina Bay.

The long-term shifts in temperatures and weather patterns globally indicate a changing climate.[1] Shifts in climate can be natural, but since the 1800s, human activities have been the primary driver of climate change. Heat reflected off the earth from the sun is staying in our atmosphere at a higher rate than it was centuries ago due to the increased presence of greenhouse gases, equating to higher average annual global temperatures. Higher surface temperatures contribute to shifts in meteorologic conditions. Those conditions allow for "greater droughts, flooding events, extreme storms, extreme heat, extreme polar vortex events, increased melting of land ice, and others."[1,2]

[1] United Nations Intergovernmental Panel on Climate Change (IPCC): Definition of Climate Change (2022)
[2] University of California at Davis: Climate Change Terms and Definition - Polar Vortex (2022)

However, increased temperatures are only one of many changes projected to impact Yaquina Bay and the people, species, and ecosystems that call this area home.

The following are projected climate change impacts for the Yaquina Bay:

Global sea level rise is projected to increase Yaquina Bay's Mean Higher High Water mark by a range of 0.8 to 6.1ft by 2100.[3] There is a lot of uncertainty due to the unknowns around greenhouse gas emissions into the future. After 2000 years of relative stability, average global sea levels have risen about 8 inches in the last 100 years.[4]

More acidic estuary waters are likely, as open ocean waters are projected to be acidic enough to dissolve the biogenic carbonate shells of shellfish by 2100.[5] As the ocean absorbs CO_2, its pH is lowered and is more acidic. "Since 1750, the pH of seawater has dropped significantly (about 0.1 globally). That means water is about 1 ¼ times more acidic today."[6]

Warmer summers with more extreme heat days and periods of drought. The average annual temperature in Oregon increased by 2.2 degrees Fahrenheit from 1895 to 2019.[1] Temperature increases local to the City of Newport, OR and the broader Yaquina Bay region are projected for an average daily temperature of 3-4 degrees higher by 2050 (NOAA Climate Explorer 2022).

More rain in fewer and bigger storms instead of snow during winter months at higher elevations. Despite an expected overall increase in winter precipitation, the past 50 years have documented a 60% or greater reduction in snow water recorded annually on April 1st for Columbia River tributaries.[7]

[3]Sweet, W.V., et al. 2022. Global and Regional Sea Level Rise Scenarios for the United States: Updated Mean Projections and Extreme Water Level Probabilities Along U.S. Coastlines. NOAA Technical Report. National Oceanic and Atmospheric Administration, National Ocean Service, Silver Spring, MD.

[4] U.S. Global Change Research Program. 2009. Global climate change impacts in the United States: a state of knowledge report. New York: Cambridge University Press.

[5] Feely et al. 2008. Barton, A, B. Hales, G. G. Waldbusser, C. Langdon, R.A. Feely. 2012. The Pacific oyster, Crassostrea gigas, shows negative correlation to naturally elevated carbon dioxide levels: Implications for near-term ocean acidification effects. Limnology and Oceanography, 57(3): 698-710.

[6] Feely, R. A, C. L Sabine, J. M Hernandez-Ayon, D. Ianson, and B. Hales. 2008. Evidence for upwelling of corrosive "acidified" water onto the continental shelf. Science 320, no. 5882: 1490.

[7] Oregon Department of Fish and Wildlife: The Oregon Conservation Strategy Fact Sheet Climate Change and Oregon's Estuaries (YEAR)

Planning for Projected Impacts and Secondary Effects

Lincoln County's estuaries and communities are facing unprecedented challenges from changing ocean and climate conditions. The overall management of each estuary will consider the principles in Oregon's Climate Adaptation Framework including embracing flexibility in uncertainty, recognizing that climate change is a 'stress multiplier', and acknowledging that impacts will not be borne equally by all people in a community.

These climate change impacts are expected to create secondary effects such as increased risk to and prevalence of forest fires, bay and riverine flooding, loss of protected habitats and species, loss and landward migration of coastal habitats, loss of fisheries habitat relied upon by the local fishing economy, loss of eelgrass and other macrophytes due to heat waves[8], stress on ESA-listed fish, destabilizing infrastructure in and on the Bay, erosion and accretion changes, sediment and nutrient loading, and many more.

As in the original Plan adoption, potential cumulative impacts of alterations and development activities were considered during plan development. The 2023 update to the Plan also includes a section on Climate Vulnerabilities (Part III) to inform required Impact Assessments (Part X). The development of Climate Vulnerabilities for each sub-area and integration of those into Impact Assessments was added to further assess potential impacts, interactions, and secondary effects of proposed alterations and activities within Yaquina Bay under future conditions.

> **Plan Part III - Sub-Areas** includes Climate Vulnerabilities for each sub-area within the estuary that describe anticipated secondary effects specific to each sub-area.
>
> **Plan Part X - Implementation** includes updates to the Impact Assessment process to ensure that proposed alterations consider potential interactions with the Climate Vulnerabilities in applicable sub-area(s).
>
> **Appendix D - Climate Vulnerabilities** is the full list of all climate vulnerabilities included in Plan Part III - Sub-Areas.

[8] Front. Mar. Sci., 01 April 2022. Differential Responses of Eelgrass and Macroalgae in Pacific Northwest Estuaries Following an Unprecedented NE Pacific Ocean Marine Heatwave. Sec. Coastal Ocean Processes Volume 9 - 2022. https://doi.org/10.3389/fmars.2022.838967

PART II – OVERALL MANAGEMENT POLICIES

Proposed revisions as part of the 2023 update

Overall Management Policies

1. Lincoln County's estuaries represent an economic resource and provide vital ecosystem services of regional importance. The overall management of each estuary shall ensure adequate provision for protection of the estuarine ecosystem, including its biological productivity, habitat, diversity, unique features and water quality, and development, consistent with the Overall Oregon Estuary Classification and according to the following general priorities (from highest to lowest). The prioritization of management policies within this plan is not intended to reduce or alter the tribal trust responsibilities of the federal government:
    a. Uses which maintain the integrity of the estuarine ecosystem;
    b. Water dependent uses requiring an estuarine location;
    c. Water related uses which do not degrade or reduce natural estuarine resources and values;
    d. Non-dependent, non-related uses that do not alter, degrade or reduce estuarine resources or values and are compatible with existing and committed uses.

2. Lincoln County's estuaries support a variety of vitally important natural resources that also support the major economic sectors of the County. The overall management of each estuary shall include adequate provision for both conservation and preservation of natural resources. This will include consideration of culturally important tribal resources.

3. Lincoln County's estuaries represent a recreational resource of both local and statewide importance. Management of each estuary shall protect recreational values and ensure adequate public access to the estuary. This will include consideration of culturally important tribal resources. This will include consideration of access to culturally important tribal resources.

4. Dredging and/or filling shall be allowed only:
    a. if required for navigation or other water dependent uses that require an estuarine location or if specifically allowed by the applicable management unit requirements of this plan; and

b. if a need (e.g., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights or tribal cultural resources or practices; and
c. if no feasible alternative upland locations exist; and
d. if adverse impacts are minimized.
e. other uses and activities which could alter the estuary shall only be allowed if the requirements in b., c., and d. are met.

PART III – SUB-AREAS

Proposed revisions as part of the 2023 update

Introduction

Due to the size and complexity of the Yaquina Bay estuary system, an additional tier of policy has been established at the sub-area level. The sub-area policies are intended to provide general planning guidance at a geographic scale between the overall management policies and the individual management unit level.

For this purpose, the estuary has been divided into seven sub-areas, each representing a common set of natural and anthropogenic features. (See Figure 4. Yaquina Bay Sub-Areas) These sub-areas provide a basis for describing in broad terms how different reaches of the estuary presently function and are used, and to identify considerations in planning for future use and conservation. Each sub-area is described in terms of its existing character, its major committed uses, and its existing and potential conflicts. Policies are established for each sub-area for the purpose of guiding the establishment of management unit designations and specific implementation measures.

Sub-area policies are intended to serve as general guidance for overall spatial planning; they are not applicable approval criteria for individual project or permit reviews. The criteria applicable to individual land use decisions for estuarine development proposals are as set forth in pertinent implementing land use regulations. These include Plan Parts II, IV, V, VI, VII, and X.

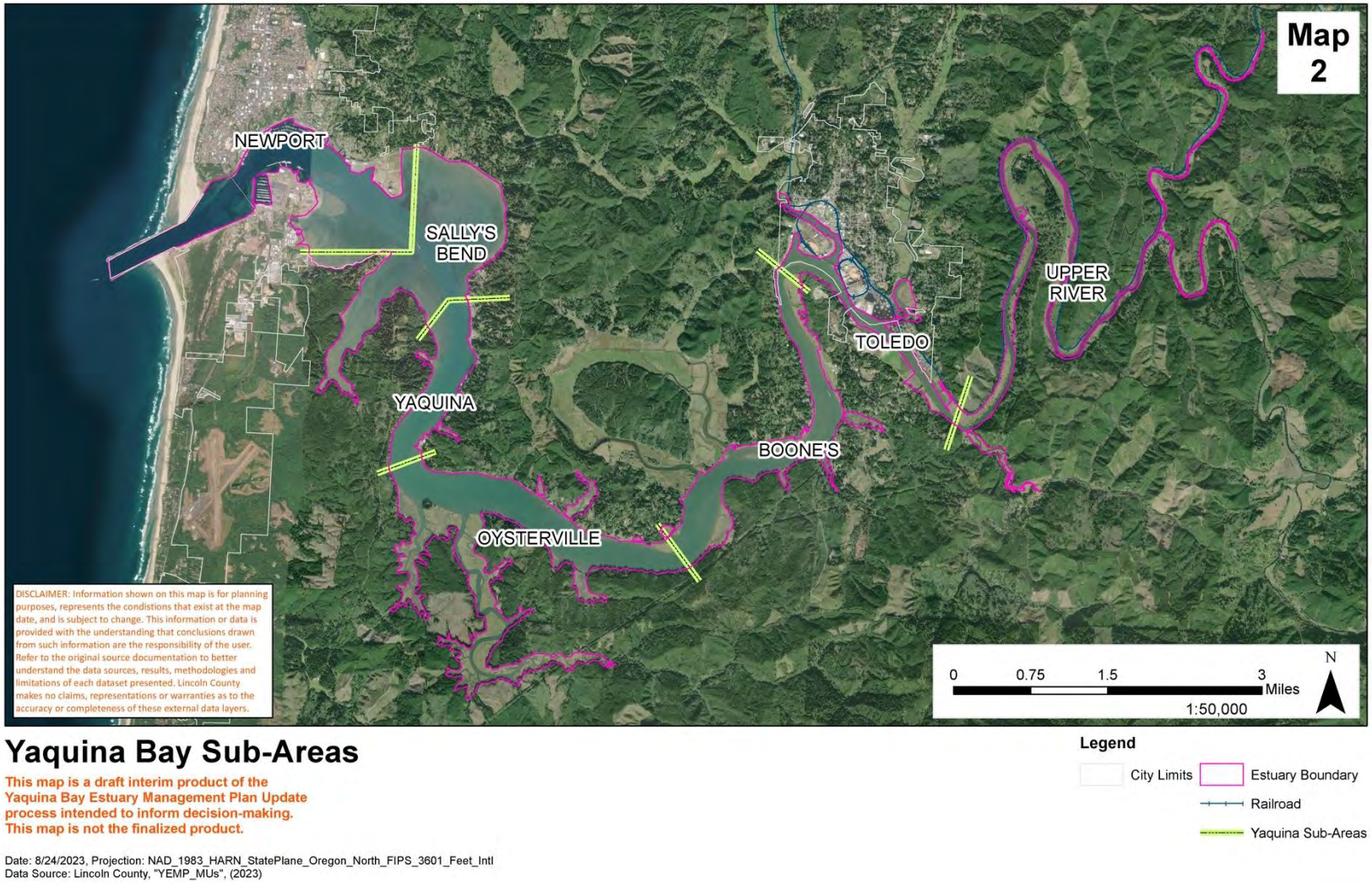


Figure 4. Yaquina Bay Sub-Areas

Newport Sub-Area

Predominant Character

The Newport sub-area is a high intensity use area. It is the hub of commercial fishing, deep water shipping and research, and tourist related commercial activities on Yaquina Bay. Adjacent shorelands are urban in character and the shoreline is mostly continuously altered throughout the sub-area. Aquatic area alterations within the sub-area are extensive. Major alterations include dredging, jetties and other navigation improvements, intertidal fills, and numerous in-water structures, including docks, piers, wharfs and breakwaters. As a fully serviced urban area in close proximity to the harbor entrance and with shoreland access to the deep-water navigation channel, the Newport sub-area represents the most important portion of the estuary for water dependent development.

Important natural resources within the sub-area include eel grass and algal beds, shellfish beds and fish spawning and nursery areas.

Major Committed Uses

The sub-area contains a mix of water dependent, water related and non-water related uses. Industrial uses are concentrated at McLean Point (Northwest Natural's LNG (liquid natural gas) tank and the Port of Newport's International Terminal) and along the Newport waterfront. A recreational marina and a number of non-water related tourist oriented commercial uses also occur along the Newport waterfront. Major uses in the South Beach area include the Oregon State University (OSU) Hatfield Marine Science Center, the South Beach Marina recreational complex, the NOAA Marine Operations Center - Pacific facility and the Oregon Coast Aquarium. Many entities residing in the South Beach area provide experiential educational opportunities for tens of thousands of students and families every year. The sub-area takes in the major components of the authorized Corps of Engineers navigation project, including the jetties, the main navigation channel and turning basin, the boat basins, and related navigation improvements. Recreational use in the sub-area, including sport fishing, crabbing, clamming, diving and boating, is heavy. In some years, a limited commercial herring fishery occurs within the sub-area.

Existing and Potential Conflicts

Several conflicts exist within the sub-area. Conflicts have developed between tourist oriented commercial uses and water dependent commercial and industrial uses along the Newport waterfront. These conflicts involve both competition for available space as well as use conflicts (e.g., traffic, parking, etc.) between established uses. As demand accelerates for both types of uses, conflicts may worsen. In the past, competition between recreational and commercial vessels for moorage has been a problem, however the opening in 1980 of approximately 500 moorage spaces designed to accommodate recreational vessels at the South Beach Marina has largely

alleviated this conflict. The maintenance and redevelopment of water dependent uses in the sub-area will necessitate development in aquatic areas, posing a potential conflict with the protection of natural resources in some portions of the sub-area.

Climate Vulnerabilities

The following list contains potential vulnerabilities to climate change that this sub-area of the estuary may experience over the coming years. These vulnerabilities shall be considered during reviews of proposed activities or uses in this sub-area as applicable (see Plan Part X for more details):

- Increased shoreline erosion due to changes in sediment transport or deposition patterns or increased intensity of storm surges;
- Increased frequency and extent of storm surge flooding due to sea level rise risking the integrity and hindering the use of critical infrastructure;
- Increased risk of jetty or breakwater failures due to sea level rise and storm surge;
- Increased risk of loss of structural integrity to underground or submerged infrastructure due to higher water tables from sea level rise;
- Increased risk of sea level rise submerging port, marina, and other moorage infrastructure;
- Increased risk of structural failure of boat ramp and recreation facilities due to sea level rise and storm surge;
- Increased frequency and extent of storm surge flooding due to sea level rise of bay-adjacent industrial and waste treatment sites increasing risk of structural damage and pollution events;
- Increased risk of toxic leaks from erosion and destabilization of submerged sewer, natural gas and other pipes and utility lines due to changes in sediment transport and deposition patterns;
- Aquaculture and recreational shellfish losses due to ocean acidification and dissolution of oyster shells;
- Loss of suitable habitat conditions for eelgrass, Sitka spruce swamps, or other critical species and habitats due to sea level rise, warming waters, or increased downstream sedimentation;
- Extended use of salt marshes, eelgrass beds, tidal channels and other cool water refugia habitats for juvenile salmonids and forage fish such as herring, anchovies, and smelt due to warmer upriver temperatures in the mid-summer to early fall;
- Increased use of productive estuary habitats by marine birds during periods of low food abundance in the ocean, which are associated with marine heat waves and climate-driven changes in ocean processes;
- Increased use of Yaquina Bay habitats by migratory birds as other regional habitats become unsuitable for climate-related reasons (i.e. climate-related shifts in breeding, migration, and overwintering ranges);

- Increased risk to current dredging regime or location of navigation channels as erosion and accretion patterns change due to sea level rise and storm surge.

Sub-Area Policies

1. The primary objective in the Newport sub-area shall be to manage for the development of water dependent uses, including but not limited to deep draft navigation, marine research, and commercial fishery support facilities.
2. In general, non-water related uses shall not occupy estuarine surface area. However, limited non-water related uses may be permitted in keeping with the scenic and historic waterfront community on the north side of the sub-area.
3. Adverse impacts of development on natural resources and established recreational uses shall be minimized.
4. Land uses of adjacent shorelands should be consistent with the preferences and uses of other sub-areas.

Sally's Bend Sub-Area

Predominant Character

The Sally's Bend sub-area represents one of the most important natural resource areas of Yaquina Bay. It is essentially undeveloped and includes eel grass and algal beds, shellfish beds, fish spawning and nursery areas, and wildlife habitats, all of major significance. The area's intertidal flats represent the largest tract in the estuary. Mature native Olympia oysters have been found in this sub-area in patches on any type of hard surface, such as rock, oyster shells, pilings, and fixed woody debris or other stationary hard surface.

Major Committed Uses

The predominant use of the sub-area is for hunting, sport angling and recreational shellfish harvest. Low intensity commercial oyster production takes place in King Slough. The Yakona Nature Preserve & Learning Center engages youth, young adults and the community through the arts, history and the sciences by way of active engagement in climate research, habitat restoration, and discovery-based learning. The sub-area also includes a portion of the navigation channel that supports medium draft (18 feet authorized depth) commercial navigation. Adjacent shoreland uses consist primarily of low-density housing and commercial forest management. Industrial uses are adjacent (though they do not extend into the sub-area) at McLean Point and South Beach. Portions of the sub-area have historically been used for log storage, though no current log storage activities are present.

Existing and Potential Conflicts

No major conflicts exist within the sub-area, though potential for conflict is present at several locations. Demands for urban level development in the Idaho Point area (which is within the

Newport urban growth boundary) may be incompatible with preservation of natural values in the adjacent portion of the estuary. Industrial development at McLean Point and in the Coquille Point area may impact important resource areas at Sally's Bend. If increases in deep water shipping precipitate a demand for expansion of the current navigation channel and turning basin, some loss of natural resource values would result from the required dredging.

Climate Vulnerabilities

The following list contains potential vulnerabilities to climate change that this sub-area of the estuary may experience over the coming years. These vulnerabilities shall be considered during reviews of proposed activities or uses in this sub-area as applicable (see Plan Part X for more details):

- Aquaculture and recreational shellfish losses due to ocean acidification that impairs the formation of oyster shells;
- Loss of suitable habitat conditions for eelgrass, Sitka spruce swamps, or other critical species and habitats due to sea level rise, warming waters, or increased downstream sedimentation;
- Increased risk of shoreline protection structures, pilings, or jetties becoming underwater hazards due to sea level rise;
- Loss of carbon capturing (blue carbon) habitat due to sea level rise;
- Extended use of salt marshes, eelgrass beds, tidal channels and other cool water refugia habitats for juvenile salmonids and forage fish such as herring, anchovies, and smelt due to warmer upriver temperatures in the mid-summer to early fall;
- Increased use of productive estuary habitats by marine birds during periods of low food abundance in the ocean, which are associated with marine heat waves and climate-driven changes in ocean processes;
- Increased use of Yaquina Bay habitats by migratory birds as other regional habitats become unsuitable for climate-related reasons (i.e. climate-related shifts in breeding, migration, and overwintering ranges); Water damages to housing structures or mobile homes from riverine flooding due to sea level rise;
- Increased risk of flooding to bay adjacent public roads and streets due to sea level rise;
- Increased risk to current dredging regime or location of deepwater channel as erosion and accretion patterns change due to sea level rise and storm surge;
- Increased risk of bay and groundwater pollution (nutrient loading) from bay adjacent septic systems and higher water tables due to sea level rise.

Sub-Area Policies

1. The primary objective in the Sally's Bend sub-area shall be to preserve and protect natural resources.
2. It is recognized that some alteration of the sub-area will be required in conjunction with the maintenance and possible expansion and/or deepening of the deep water navigation

channel and turning basin. Other alterations shall be limited to those that are consistent with the overall protection of natural resource values, or those undertaken in conjunction with restoration projects.

3. To maintain recreational values, commercial shellfish harvest by mechanical means should not be permitted above extreme low water.
4. Low intensity land uses which do not adversely impact estuarine natural resource values shall be preferred on adjacent shorelands.
5. Identified areas of important wildlife habitat shall be protected.

Yaquina Sub-Area

Predominant Character

The Yaquina sub-area is a mixture of medium intensity development (east shore) and areas of sparse or no development (west shore). The primary character of the area is derived from the concentration of water dependent and water related uses along the east shore of the estuary. Major natural resources within the sub-area include important fish spawning and nursery areas, shellfish beds, and eel grass and algal beds. Areas of important wildlife habitat are concentrated on the undeveloped west shore. Mature native Olympia oysters have been found in this sub-area in patches on any type of hard surface, such as rock, oyster shells, pilings, and fixed woody debris or other stationary hard surface.

Major Committed Uses

On the east shore, between river mile 3.5 and 5.3, the available shoreline is mostly developed with water dependent and water related uses. These uses include two developed marina facilities, three marine construction and repair facilities, and several commercial fishing related gear storage and maintenance facilities. Rural residential use is also concentrated along the east shore, mostly on the upland side of Yaquina Bay Road. Aquatic area alterations are extensive along the east shore, including piers, pilings, floating docks, intertidal fills and armored shorelines. The west shore and adjacent aquatic area are essentially undeveloped. A substantial portion of the land area on the west shore is held in conservation ownership (Yakona Nature Preserve & Learning Center) and is managed for the conservation of natural resources. The remainder is in private forest ownerships.

Existing and Potential Conflicts

The Yaquina sub-area is moderately developed with potential for additional development. The sub-area also has characteristics that make it suitable for aquaculture. Conflicts could develop over demands for additional aquatic area development and the need for maintenance of water quality for aquaculture. The east side of the estuary is currently closed to commercial shellfish harvest because of potential contamination. Occupation of surface area by aquaculture activities

may conflict with navigation and recreational activities. Lack of adequate facilities and services to the area may pose constraints on water dependent development.

Climate Vulnerabilities

The following list contains potential vulnerabilities to climate change that this sub-area of the estuary may experience over the coming years. These vulnerabilities shall be considered during reviews of proposed activities or uses in this sub-area as applicable (see Plan Part X for more details):

- Increased shoreline erosion due to changes in sediment transport and deposition patterns or increased intensity of storm surge;
- Increased demand for shoreline protective structures due to increased erosion from sea level rise and storm surge;
- Aquaculture and recreational shellfish losses due to ocean acidification that impairs the formation of oyster shells;
- Loss of suitable habitat conditions for eelgrass, Sitka spruce swamps, or other critical species and habitats due to sea level rise, warming waters, or increased downstream sedimentation;
- Increased risk of failure of shoreline protective structures due to storm surge and sea level rise;
- Loss of carbon capturing (blue carbon) habitat due to sea level rise;
- Extended use of salt marshes, eelgrass beds, tidal channels and other cool water refugia habitats for juvenile salmonids and forage fish such as herring, anchovies, and smelt due to warmer upriver temperatures in the mid-summer to early fall;
- Increased use of productive estuary habitats by marine birds during periods of low food abundance in the ocean, which are associated with marine heat waves and climate-driven changes in ocean processes;
- Increased use of Yaquina Bay habitats by migratory birds as other regional habitats become unsuitable for climate-related reasons (i.e. climate-related shifts in breeding, migration, and overwintering ranges);
- Increased risk of flooding to bay adjacent public roads and streets due to sea level rise;
- Increased risk of tide gates and dike failures due to sea level rise and storm surge;
- Increased risk to current dredging regime or location of navigation channels as erosion and accretion patterns change due to sea level rise and storm surge;
- Increased risk of bay and groundwater pollution (nutrient loading) from bay adjacent septic systems and higher water tables due to sea level rise.

Sub-Area Policies

1. It is recognized that demand for development in the lower estuary may exceed available space in the Newport urban area. Water dependent development should be

accommodated along the east shore of the Yaquina sub-area consistent with available levels of public facilities and services.

2. The portion of the sub-area west of the navigation channel shall be managed to conserve natural resources, protect water quality, and maintain overall suitability for aquaculture.
3. Occupation of estuarine surface area by in-water structures shall not interfere with the use of the navigation channel and should not unreasonably interfere with established recreational uses within the sub-area.
4. Shorelands on the east side of the sub-area that are suitable for water dependent development shall be reserved for water dependent uses. On shorelands on the west side of the sub-area, low intensity natural resource uses shall be preferred.

Oysterville Sub-Area

Predominant Character

The Oysterville sub-area is rural in character, with a mixture of low intensity development and natural resource areas. The predominant development in the area is for aquaculture uses. The Oysterville sub-area is the prime aquaculture area of Yaquina Bay. The natural resource areas include tide flats, the most extensive tracts of intact tidal marsh in the estuary, eel grass and algal beds, important fish spawning and nursery areas, and major shellfish beds. Areas of important wildlife habitat occur throughout the sub-area, particularly on the south shore of the estuary. Mature native Olympia oysters have been found in this sub-area in patches on any type of hard surface, such as rock, oyster shells, pilings, and fixed woody debris or other stationary hard surface.

Major Committed Uses

The predominant use within the sub-area is aquaculture. A large share of the estuarine area outside of the navigation channel is devoted to aquaculture. The Wetlands Conservancy has a substantial ownership in the sub-area and manages these lands for conservation. Natural resources such as tidal marsh, eel grass and algal beds within the sub-area provide ecosystem service benefits to aquaculture activities. Recreational use of the sub-area (primarily boating and angling) is also extensive. Shoreland uses include landside facilities for aquaculture operations, scattered rural residences, conservation areas management, and commercial forest management activities.

Existing or Potential Conflicts

The Oysterville sub-area is relatively free of conflict. Potential conflict could develop if demand for increased recreational moorage facilities spills over from adjacent sub-areas. Such development could threaten existing and future aquaculture operations by adversely impacting water quality. The potential for ocean acidification to impact current aquaculture operations is a possible emerging issue.

Climate Vulnerabilities

The following list contains potential vulnerabilities to climate change that this sub-area of the estuary may experience over the coming years. These vulnerabilities shall be considered during reviews of proposed activities or uses in this sub-area as applicable (see Plan Part X for more details):

- Aquaculture and recreational shellfish losses due to ocean acidification that impairs the formation of oyster shells;
- Loss of suitable habitat conditions for eelgrass, Sitka spruce swamps, or other critical species and habitats due to sea level rise, warming waters, or increased downstream sedimentation;
- Increased risk of shoreline protection structures, pilings, or jetties becoming underwater hazards due to sea level rise;
- Increased risk of failure of shoreline protective structures due to storm surge and sea level rise;
- Loss of carbon capturing (blue carbon) habitat due to sea level rise;
- Extended use of salt marshes, eelgrass beds, tidal channels and other cool water refugia habitats for juvenile salmonids and forage fish such as herring, anchovies, and smelt due to warmer upriver temperatures in the mid-summer to early fall;
- Increased use of productive estuary habitats by marine birds during periods of low food abundance in the ocean, which are associated with marine heat waves and climate-driven changes in ocean processes;
- Increased use of Yaquina Bay habitats by migratory birds as other regional habitats become unsuitable for climate-related reasons (i.e. climate-related shifts in breeding, migration, and overwintering ranges);
- Increased risk of structural failure of boat ramp and recreation facilities due to sea level rise and storm surge;
- Increased risk of flooding to bay adjacent public roads and streets due to sea level rise;
- Increased risk of tide gates and dike failures due to sea level rise and storm surge;
- Increased risk to current dredging regime or location of navigation channels as erosion and accretion patterns change due to sea level rise and storm surge;
- Increased risk of bay and groundwater pollution (nutrient loading) from bay adjacent septic systems and higher water tables due to sea level rise.

Sub-Area Policies

1. Maintaining suitability for aquaculture uses is the top priority in the overall management of the Oysterville sub-area due to the scarcity of such resources throughout Yaquina Bay.
2. The overall management of the Oysterville sub-area shall emphasize conservation of natural resources and maintenance of water quality. Major tracts of tidal marsh and tide flats shall be preserved.

3. The recreational resources of the sub-area should be utilized by maintaining existing patterns of use. High intensity recreational development shall not be permitted.
4. In general, low intensity land uses such as forestry, conservation management, and low density housing shall be preferred in adjacent shoreland areas, consistent with the protection of significant wildlife habitat. It is recognized that some adjacent shoreland areas will also be needed for developed aquaculture facilities.

Boone's Sub-Area

Predominant Character

The Boone's sub-area is a largely undeveloped portion of the estuary. Some minor alterations of the estuary are present, mostly in conjunction with the diking of marshlands and remnant structures formerly used for log storage. A variety of important natural resource values are associated with the sub-area, including tideflats, extensive tidal marshes, eel grass and algal beds, fish spawning and nursery areas, and shellfish beds of major importance. Mature native Olympia oysters have been found in this sub-area in patches on any type of hard surface, such as rock, oyster shells, pilings, and fixed woody debris or other stationary hard surface. Adjacent shorelands include substantial areas of important wildlife habitat.

Major Committed Uses

Major uses in the sub-area include shallow draft navigation (authorized depth of 10 feet) and recreation. Important recreational activities include boating, angling and water skiing. Shoreland uses consist primarily of dispersed rural residences, forestry, and agriculture. The Port of Toledo maintains public access recreational boating facilities within the sub-area at river mile 10.7 and at the Toledo Airport at river mile 11.1.

Existing or Potential Conflicts

There are currently no major conflicts within the sub-area. The possible expansion of the Toledo airport facility represents a potential conflict as the resulting fill that would be required would conflict with the preservation of productive tidal marsh. In Boone's and Nute's sloughs, a potential conflict exists between the possible need for the area as a restoration/mitigation site and the demand to commit the area to land uses which would preclude its use for restoration/mitigation.

Climate Vulnerabilities

The following list contains potential vulnerabilities to climate change that this sub-area of the estuary may experience over the coming years. These vulnerabilities shall be considered during reviews of proposed activities or uses in this sub-area as applicable (see Plan Part X for more details):

- Increased shoreline erosion due to changes in sediment transport and deposition patterns or increased intensity of storm surge;
- Increased demand for shoreline protective structures due to increased erosion from sea level rise and storm surge;
- Loss of suitable habitat conditions for eelgrass, Sitka spruce swamps, or other critical species and habitats due to sea level rise, warming waters, or increased downstream sedimentation;
- Increased risk of shoreline protection structures, pilings, or jetties becoming underwater hazards due to sea level rise;
- Increased risk of failure of shoreline protective structures due to storm surge and sea level rise;
- Loss of carbon capturing (blue carbon) habitat due to sea level rise;
- Extended use of salt marshes, eelgrass beds, tidal channels and other cool water refugia habitats for juvenile salmonids and forage fish such as herring, anchovies, and smelt due to warmer upriver temperatures in the mid-summer to early fall;
- Increased use of productive estuary habitats by marine birds during periods of low food abundance in the ocean, which are associated with marine heat waves and climate-driven changes in ocean processes;
- Increased use of Yaquina Bay habitats by migratory birds as other regional habitats become unsuitable for climate-related reasons (i.e. climate-related shifts in breeding, migration, and overwintering ranges);
- Increased frequency and extent of storm surge flooding due to sea level rise risking the integrity and hindering the use of critical infrastructure;
- Increased risk of structural failure of boat ramp and recreation facilities due to sea level rise and storm surge;
- Increased risk of flooding to bay adjacent public roads and streets due to sea level rise;
- Increased risk of tide gates and dike failures due to sea level rise and storm surge;
- Increased risk to current dredging regime or location of navigation channel as erosion and accretion patterns change due to sea level rise and storm surge;
- Increased frequency and extent of storm surge flooding due to sea level rise of bay-adjacent industrial and waste treatment sites increasing risk of structural damage and pollution event;
- Increased risk of bay and groundwater pollution (nutrient loading) from bay adjacent septic systems and higher water tables due to sea level rise;
- Increased risk to livestock in bay adjacent pasture land due to sea level rise and storm surge.

<u>Sub-Area Policies</u>

1. The emphasis in the Boone's sub-area shall be to conserve and protect natural resources.

2. Establishment of new uses which would substantially degrade recreational values within the sub-area shall not be permitted.
3. Boone's and Nute's sloughs shall be protected from land uses which would preclude their potential use as a restoration or mitigation site.
4. Low intensity land uses such as forestry, agriculture and low-density housing shall be preferred in adjacent shoreland areas. Such uses shall be consistent with the protection of significant wildlife habitat.

Toledo Sub-Area

Predominant Character

The Toledo sub-area is a mix of high intensity industrial development within the Toledo urban area and undeveloped areas that are rural in character. The character of the sub-area is defined primarily by the wood products and marine construction and repair industrial uses along the urban waterfront. Natural resources of major significance include anadromous fish migration routes, wetlands, and some areas of important wildlife habitat.

Major Committed Uses

A portion of the Toledo sub-area is committed to high intensity industrial uses - primarily wood products manufacturing, along with the Port of Toledo's shipyard at Sturgeon Bend. These industrial uses are served by medium draft navigation, though commercial cargo traffic is not currently active. Recreational use in the Toledo sub-area is light.

Existing or Potential Conflicts

No major conflicts exist within the sub-area. Intensified industrial development may have adverse impacts on water quality. Demand for industrial expansion may also potentially conflict with protection of fish and wildlife habitat in the area.

Climate Vulnerabilities

The following list contains potential vulnerabilities to climate change that this sub-area of the estuary may experience over the coming years. These vulnerabilities shall be considered during reviews of proposed activities or uses in this sub-area as applicable (see Plan Part X for more details):

- Increased shoreline erosion due to changes in sediment transport and deposition patterns or increased intensity of storm surge;
- Increased demand for shoreline protective structures due to increased erosion from sea level rise and storm surge;
- Loss of suitable habitat conditions for eelgrass, Sitka spruce swamps, or other critical species and habitats due to sea level rise, warming waters, or increased downstream sedimentation;

- Increased risk of failure of shoreline protective structures due to storm surge and sea level rise;
- Loss of carbon capturing (blue carbon) habitat due to sea level rise;
- Increased frequency and extent of storm surge flooding due to sea level rise risking the integrity and hindering the use of critical infrastructure;
- Increased risk of structural failure of boat ramp and recreation facilities due to sea level rise and storm surge;
- Increased risk of loss of structural integrity to underground or submerged infrastructure due to higher water tables from sea level rise;
- Increased risk of flooding to bay adjacent public roads and streets due to sea level rise;
- Increased risk of tide gates and dike failures due to sea level rise and storm surge;
- Increased risk of sea level rise submerging port, marina, and other moorage space infrastructure;
- Increased risk to current dredging regime or location of navigation channels as erosion and accretion patterns change due to sea level rise and storm surge;
- Increased frequency and extent of storm surge flooding due to sea level rise of bay-adjacent industrial and waste treatment sites increasing risk of structural damage and pollution event;
- Increased risk of combined sewer overflow (CSO) events due to sea level rise, riverine flooding, and changing winter precipitation patterns;
- Increased risk of toxic leaks from erosion and destabilization of submerged sewer, natural gas and other pipes and utility lines due to changes in littoral drift.

Sub-Area Policies

1. The portion of the Toledo sub-area within the Toledo Urban Growth Boundary shall be managed for continued development of water-dependent and water-related industrial uses.
2. Restoration, maintenance and expansion of existing non-water related uses shall be permitted.
3. Effects on water quality must be carefully considered in the process of industrial expansion in order to minimize adverse impacts, both within the sub-area and in areas down-river.
4. Areas of significant habitat and major marshes shall be protected.
5. If not needed for water-dependent development, the diked areas along Depoe and Olalla Sloughs should be protected as potential restoration sites.

Upper River Sub-Area

Predominant Character

The Upper River sub-area is a largely undeveloped rural environment. Navigation channel improvements are not maintained above RM 14 and overall alteration of the river above this point is minimal. While river flows are subject to tidal influence, the river environment is predominantly freshwater. Several tracts of historically diked tidal marsh have been restored in the sub-area. Shoreland areas are characterized by scattered diked marshlands, and a narrow floodplain grading into steep forested uplands.

Major Committed Uses

Major uses in adjacent shorelands of the Upper River sub-area include small scale agricultural operations, high intensity commercial forest management activities, while recreational activities (primarily boating and angling for anadromous fish) are the predominant uses within the estuary. No active commercial or industrial uses are located within the sub-area.

Existing or Potential Conflicts

No major conflicts exist within the sub-area. Some potential for conflict exists with pressures for additional river front residential development within the sub-area. Such development may precipitate demand for construction of individual docks and moorage, shoreline stabilization and other activities that may conflict with conservation of estuarine resources and established recreational uses.

Climate Vulnerabilities

The following list contains potential vulnerabilities to climate change that this sub-area of the estuary may experience over the coming years. These vulnerabilities shall be considered during reviews of proposed activities or uses in this sub-area as applicable (see Plan Part X for more details):

- Increased shoreline erosion due to changes in sediment transport and deposition patterns or increased intensity of storm surge;
- Loss of suitable habitat conditions for eelgrass, Sitka spruce swamps, or other critical species and habitats due to sea level rise, warming waters, or increased downstream sedimentation;
- Increased risk of failure of shoreline protective structures due to storm surge and sea level rise;
- Loss of carbon capturing (blue carbon) habitat due to sea level rise;
- Water damages to housing structures or mobile homes from riverine flooding due to sea level rise;
- Increased risk of structural failure of boat ramp and recreation facilities due to sea level rise and storm surge;
- Increased risk of flooding to bay adjacent public roads and streets due to sea level rise;
- Increased risk of tide gates and dike failures due to sea level rise and storm surge;

- Increased risk of sea level rise submerging port, marina, and other moorage space infrastructure;
- Increased risk of riverine flooding of public infrastructure due to tidal amplification, sea level rise, and storm surge;
- Increased risk of bay and groundwater pollution (nutrient loading) from bay adjacent septic systems and higher water tables due to sea level rise;
- Increased risk to livestock in bay adjacent pasture land due to sea level rise and storm surge.

Sub-Area Policies

1. The primary objective in the Upper River sub-area shall be to conserve and protect natural resources. Uses that require little or no alteration to the estuary shall be preferred.
2. Increased public recreational access to the estuary shall be encouraged.
3. Natural resource-based uses (e.g., forestry, agriculture and conservation) shall be preferred in adjacent shoreland areas.
4. The proliferation of individual single purpose docks and piers within the sub-area shall be restricted by encouraging community facilities at appropriate location.

PART IV - CLASSIFICATION SYSTEM

Proposed revisions as part of the 2023 update

In order to maintain a diversity of values and resources, the estuary has been divided into Management Units. A management unit is a discrete geographic area defined by biophysical characteristics and features within which particular uses and activities are promoted, encouraged, protected, or enhanced, and others are discouraged, restricted, or prohibited.

Each individual management unit is assigned a classification that defines a management objective, provides a general policy framework for the unit, and specifies permissible uses and alterations. The management unit classification system consists of three management classifications: Natural, Conservation and Development. The classifications are defined below in terms of the general attributes and characteristics of geographic areas falling into each category. The management objective and permissible uses and alterations for each classification are also specified.

1. Natural Management Units. Natural Management Units are those areas that are needed to ensure the protection of significant fish and wildlife habitats; of continued biological productivity within the estuary; and of scientific, research, and educational needs. These shall be managed to preserve the natural resources in recognition of dynamic, natural, geological and evolutionary processes. Such areas shall include, at a minimum, all major tracts of salt marsh, tideflats, tidal swamps, and seagrass and algal beds.

   The following uses are permitted in Natural Management Units:
   a. undeveloped low-intensity water-dependent recreation;
   b. research and educational observation;
   c. navigational aids, such as beacons and buoys;
   d. protection of habitat, nutrient, fish, wildlife and aesthetic resources;
   e. passive restoration measures;
   f. dredging necessary for on-site maintenance of existing functional tidegates and associated drainage channels and bridge crossing support structures;
   g. riprap for protection of uses existing as of October 7, 1977, unique natural resources, historical and archeological values; and public facilities; and
   h. bridge crossings.

   Where consistent with the resource capabilities of the area and the purpose of this management unit, the following uses may be allowed:

a. aquaculture which does not involve dredge or fill or other estuarine alteration other than incidental dredging for harvest of benthic species or removable in-water structures such as stakes or racks;
b. communication facilities;
c. active restoration of fish and wildlife habitat or water quality and estuarine enhancement;
d. boat ramps for public use where no dredging or fill for navigational access is needed;
e. pipelines, cables and utility crossings, including incidental dredging necessary for their installation;
f. installation of tidegates in existing functional dikes;
g. temporary alterations;
h. bridge crossing support structures and dredging necessary for their installation.

In Natural Management Units, a use or activity is consistent with the resource capabilities of the area when either the impacts of the use on estuarine species, habitats, biological productivity and water quality are not significant, or the resources of the area are able to assimilate the use and activity and their effects and continue to function in a manner to protect significant wildlife habitats, natural biological productivity, and values for scientific research and education.

MANAGEMENT OBJECTIVE: To preserve, protect and where appropriate enhance these areas for the resource and support values and functions they provide.

2. Conservation Management Units. Conservation Management Units shall be designated for long-term uses of renewable resources that do not require major alteration of the estuary except of the purpose of restoration. These areas shall be managed to conserve their natural resources and benefits. These shall include areas needed for maintenance and enhancement of biological productivity, recreational and aesthetic uses, water quality, and aquaculture. They shall include tracts of significant habitat smaller or of less biological importance than those in (1) above, and recreational or commercial oyster and clam beds not included in (1) above. Areas that are partially altered and adjacent to existing development of moderate intensity that do not possess the resource characteristics of natural or development units shall also be included in this classification.

   While the general purpose and intent of the conservation classification are as described above, uses permitted in specific areas subject to this classification may be adjusted by special policies applicable to individual management units in order to accommodate needs for natural resource preservation.

Permissible uses in conservation areas shall be all those allowed in (1) above except temporary alterations. Where consistent with the resource capabilities of the area and the purposes of this management unit, the following additional uses may be allowed:

a. high-intensity water-dependent recreation, including boat ramps, marinas and new dredging for boat ramps and marinas;
b. minor navigational improvements;
c. mining and mineral extraction, including dredging necessary for mineral extraction;
d. other water-dependent uses requiring occupation of water surface area by means other than dredge or fill;
e. aquaculture requiring dredge or fill or other alteration of the estuary;
f. active restoration for purposes other than those listed in 1(d);
g. temporary alterations.

In a Conservation Management Unit, a use or activity is consistent with the resource capabilities of the area when either the impacts of the use on estuarine species, habitats, biological productivity and water quality are not significant or that the resources of the area are able to assimilate the use and activity and their effects and continue to function in a manner that conserves long-term renewable resources, natural biologic productivity and aesthetic values and aquaculture.

MANAGEMENT OBJECTIVE: To conserve, protect and where appropriate enhance renewable estuarine resources for long term uses and to manage for uses that do not substantially degrade the natural or recreational resources or require major alterations of the estuary.

3. Development Management Units. Development Management Units shall be designated to provide for navigation and other identified needs for public, commercial, or industrial water dependent uses, consistent with the level of development or alteration allowed by the overall Oregon Estuary Classification. Such areas shall include deep-water areas adjacent or in proximity to the shoreline, navigation channels, sub-tidal areas for in-water disposal of dredged material and areas of minimal biological significance needed for uses requiring alteration of the estuary.

   While the general purpose and intent of the development classification are as described above, uses permitted in specific areas subject to this clarification may be adjusted by special policies applicable to individual management units in order to accommodate needs for natural resource preservation.

Permissible uses in areas managed for water-dependent activities shall be navigation and water-dependent commercial and industrial uses.

The following uses may also be permissible in development management units:

a. dredge or fill, as allowed elsewhere in the plan;
b. navigation and water-dependent commercial enterprises and activities;
c. water transport channels where dredging may be necessary;
d. flow-lane disposal of dredged material monitored to assure that estuarine sedimentation is consistent with the resource capabilities and purposes of affected natural and conservation management units;
e. water storage areas where needed for products used in or resulting from industry, commerce and recreation;
f. marinas.
g. Where consistent with the purposes of this management unit and adjacent shorelands designated especially suited for water-dependent uses or designated for waterfront redevelopment, water-related and non-dependent, non-related uses not requiring dredge or fill; mining and mineral extraction; and activities identified in (1 - Natural) and (2-Conservation) above, shall also be appropriate.

MANAGEMENT OBJECTIVE: To provide for water dependent and water related development.

ESTUARY ZONING DISTRICTS

Information on permitted, conditional, or not allowed uses and activities can be found in the Estuary Zoning Districts for the below jurisdictions. Templates for Natural, Conservation, and Development estuary zoning districts can be found in Appendix F.

Lincoln County: [Placeholder for zoning code location]
City of Newport: [Placeholder for zoning code location]
City of Toledo: [Placeholder for zoning code location]

PART V - ESTUARINE USE STANDARDS

From original EMP document (not updated)

Estuarine Use Standards

The following standards will be applied to all new uses and activities in Lincoln County's estuaries. All estuarine uses that involve dredging, fill, structures, shoreline stabilization (except vegetative) or other alteration waterward of Mean Higher High Water or the line of non-aquatic vegetation are currently regulated either at the state level (State Removal/Fill Law, ORS 541,695), federal level (Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act) or both. Certain other uses such as energy facility siting, aquaculture, and exploration for oil, gas, or geo-thermal energy are further regulated by additional state or federal permits. To minimize duplication of local, state, and federal permits, the estuarine use standards will be applied through local review of the appropriate state and/or federal permits. In addition to the standards set forth herein, all uses and activities must further comply with applicable state and federal regulations governing water quality, resource protection, and public health and safety.

Structures

Definition: Structures include all constructed, man-made facilities which extend into the estuary; fixed or floating.

Structures do riot include log rafts or new land created from submerged or submersible lands (see fill).

Structural types include:
Docks: A fixed or floating decked structure against which a boat may be berthed temporarily or indefinitely.

Pier: A structure extending into the water from solid land generally to afford passage for persons or goods to and from vessels, but sometimes to provide recreational access to the estuary.

Wharf: A structure built alongside a waterway for the purpose of receipt, discharge and storage of goods and merchandise from vessels.

Piling: A long, slender stake or structural element of steel, concrete or timber which is driven, jetted, or otherwise embedded into the bed of the estuary for the purpose of supporting a load.

Dolphin: A group of piles driven together and tied together so that the group is capable of withstanding lateral forces from vessels or other floating objects.

Jetty: An artificial barrier used to change littoral drift to protect inlet entrances from excessive sedimentation and to direct and confine the stream of tidal flow. Usually constructed at the mouth of a river of estuary to help deepen and stabilize a channel.

Groin: A shore protection structure (usually perpendicular to the shoreline) to trap littoral drift or retard erosion of the shoreline. Generally constructed of rock or other solid material.

Pile Dike: Flow control structures analogous to groins, but constructed from closely spaced piling connected by timbers.

Breakwater: An offshore barrier, sometimes connected to the shore at one or both ends to break the force of waves. Used to protect harbors and marinas, breakwaters may be constructed of rock, concrete, piling or may be floating structures.

1. The siting and design of all structures shall be chosen to minimize adverse impacts on aquatic life and habitats, flushing and circulation characteristics and patterns of erosion and accretion.

2. Materials to be used for structures shall be clean and durable so as to allow long term stability and minimize maintenance. Materials which could create water quality problems or which will rapidly deteriorate are not permitted.

3. The development of structures shall be evaluated to determine potential conflicts with established water uses (e.g. navigation, recreation, aquaculture, etc.). Such conflicts shall be minimized to the extent feasible.

4. Occupation of estuarine surface area by structures shall be limited to the minimum area practical to accomplish the proposed use.

5. Where feasible, breakwaters of the floating type shall be preferred over those of solid construction.

6. Floating structures shall not be permitted in areas where they would regularly contact the bottom at low water (i.e. shall be located waterward of Mean Lower Low Water). Exceptions may be granted for structures of limited area which are necessary as part of an overall approved project where grounding would not have significant adverse impacts.

7. Individual single purpose docks and piers for recreational and residential uses shall be permitted only when it has been demonstrated that there are no practical alternatives (e.g. mooring buoys, dry land storage etc.). Community facilities or other structures common to several uses are encouraged at appropriate locations.

8. Piers, docks and similar facilities for individual recreational or residential uses shall meet each of the following requirements:
    a. No dock, pier or similar facility shall extend into any watercourse more than 25' beyond MLLW unless. It can be demonstrated that additional extension is essential to accomplish the intended purpose of the structure.
    b. No individual private recreational dock. pier or similar facility shall extend into any watercourse more than 5% of the width thereof (as measured perpendicular from MLLW on one side of the watercourse to MLLW on the opposite side) unless it can be shown that additional extension is essential to accomplish the intended purpose of the structure.

9. Docks and similar facilities shall have the long dimension running parallel to the channel unless future development will result in pier construction or moorages being connected, necessitating facility design perpendicular to the channel.

Dredging

Definition: The removal of sediment or other material from the estuary usually for the purpose of deepening a channel, mooring basin or other navigation area

1. All dredging in the estuary shall be conducted in such a manner so as to minimize:
    a. Adverse short-term effects such as pollutant release, dissolved oxygen depletion and disturbance of important biological communities.
    b. Adverse long-term effects such as loss of fish habitat and tidelands, loss of flushing capacity, destabilization of bottom sediments, and biologically harmful changes in circulation patterns.
    c. Removal of material in wetland and productive shallow submerged lands.

2. Dredging shall be permitted only:
    a. For navigation or navigational access; or

b. In conjunction with a permitted or conditionally permitted water dependent use; or
c. As part of an approved restoration project; or
d. For mining or mineral extraction as provided for in the Mining and Mineral Extraction Standards; or
e. For an approved public use, such as bridge crossings, submerged utility crossings, etc.

3. Local governments shall rely on the Division of State Lands to administer the provisions of ORS Ch. 541 requiring the mitigation of adverse impacts of dredging in intertidal and tidal marsh areas.

Shoreline Stabilization

Definition: The stabilization or protection from erosion of the banks of the estuary by vegetative or structural (rip rap or bulkheads) means.

1. Shoreline stabilization procedures shall be confined to those areas where:
   a. Active erosion is occurring which threatens existing uses or structures; or
   b. New development or re-development of water dependent or water related uses requires protection for maintaining the integrity of upland structures or facilities.

2. The following, in order, are the preferred methods of shoreline stabilization:
   a. Vegetative or other non-structural
   b. Vegetated rip rap
   c. Unvegetated rip rap
   d. Bulkheads.

   Structural shoreline stabilization methods shall be permitted only where a higher priority method is not feasible.

3. Materials to be used must be clean and of a non-erodable quality that will allow long term stability and minimize maintenance. Materials which could create water quality problems or which will rapidly deteriorate are not permitted.

4. Minor modification of the bankline profile may be permitted on a case-by-case basis. These alterations shall serve the purpose of gaining additional upland area.

5. Shoreline stabilization structures shall be designed and located so as to minimize adverse impacts on aquatic life and habitat, circulation and flushing characteristics, and patterns of erosion and accretion.

6. The use of bulkheads shall be limited to "development" and "conservation" management units.

Fill

Definition: Placement of material in the estuary to create new shoreland area.

1. Fill shall be permitted only in conjunction with a water dependent use which requires an estuarine location and for which no feasible alternatives (e.g. construction on piling) or upland locations exist.

2. All fill projects shall be designed and place so as to minimize adverse impacts on aquatic life and habitats, flushing and circulation characteristics, erosion and accretion patterns, navigation and recreation.

3. Fill materials which could create water quality problems or which will rapidly deteriorate are not permitted.

4. When available from an authorized dredging project, dredged materials shall ae preferred over upland materials for approved fill projects.

5. As an integral part of the fill process, new fills placed in the estuary shall be protected by approved methods of bank stabilization to prevent erosion.

6. Local governments shall rely on the Division of State Lands to administer the provisions of ORS Ch. 541 requiring the mitigation of adverse impacts of filling in intertidal or tidal marsh areas.

7. In the design of fill projects, provision of public access to the estuary shall be encouraged to the extent compatible with the proposed use.

Marina and Port Facilities

Definitions:

Marina: A small harbor, boat basin or moorage dockage for recreational craft.

Port Facilities: Facilities which accommodate and support commercial fishery and navigation activities, including terminals and boat basins and moorage for commercial vessels, barges and oceangoing ships.

1. All structures, fills, dredging or shoreline stabilization measures undertaken in conjunction with marina or port facility development must comply with applicable standards set forth in this plan.

2. Provision must be made in the design of marina and port facilities to ensure adequate flushing for the maintenance of water quality.

3. Open moorage shall be preferred over covered or enclosed moorage except for repair or construction facilities.

4. Multi-purpose and cooperative use of moorage, parking, cargo handling and storage facilities shall be encouraged.

5. In the development of new port marina facilities, maximum feasible public access shall be encouraged, consistent with security and safety requirements.

Aquaculture

Definition: The raising, feeding, planting and harvesting of fish, shellfish or marine plants, including facilities necessary to engage in the use.

1. All structures located in conjunction with aquaculture operations shall be subject to the standards set forth in this plan for structures.

2. Water diversion structures or man-made spawning channels shall be constructed so as to maintain minimum required stream flows for aquatic life in the adjacent streams.

3. The potential impacts of introducing a new fish or shell-fish species (or race within a species) shall be carefully evaluated in light of existing aquatic life and potential fish and shellfish production in the stream, estuary and ocean.

4. Aquaculture facilities shall be located far enough from any sanitary sewer outfalls to prevent any potential health hazard.

Mineral and Aggregate Extraction

Definition: The removal for economic use of minerals, petroleum resources, sand, gravel or other materials from the estuary.

1. All mineral and aggregate removal projects shall be conducted in such a manner so as to minimize:
    a. Adverse short term effects such as pollutant release, dissolved oxygen depletion, excessive turbidity, and disturbance of important biological communities.
    b. Adverse long term effects such as loss habitat and tidelands, loss of flushing capacity, destabilization of bottom sediments and biologically harmful changes in circulation patterns.

2. Removal of aggregate materials from the estuary shall be allowed only after a clear demonstration that comparable materials are not available from local upland sources.

3. Unless part of an approved fill project, spoils and stock- piles shall be placed beyond the reach of high water and in such a manner that sediment will not enter or return to the waterway.

4. Riparian vegetation shall be retained to the optimum degree possible. Disturbed shoreline areas shall be re-vegetated.

Dikes

Definition: An earthern embankment or ridge constructed to restrain high waters. New diking is placement of dikes on area which (1) has never been previously diked; or (2) has previously been diked but all or a substantial part of the area is presently subject to tidal inundation and tidal marsh has been re-established.

1. Existing functional dikes and tide gates may be maintained and repaired as necessary to fulfill their original purpose.

2. New dikes or expanded dikes in estuarine areas shall be allowed only:
    a. As part of an approved fill project; subject to the standards for fill; and
    b. If appropriate mitigation is undertaken in accordance with relevant state standards.

3. Dikes constructed to retain fill materials shall be considered fill and are subject to standards for fill.

4. The outside face of new dikes shall be protected by approved shoreline stabilization procedures.

Outfalls

Definition: An outlet through which materials are discharged into the estuary. Outfalls include sanitary (sewer) discharges, storm drainage facilities and industrial waste discharges.

1. As applicable, the standards for dredging, shoreline stabilization and placement of structures as set forth in this plan must be complied with in the installation of outfalls.

2. Outfalls shall not be allowed in poorly flushed areas of the estuary. unless all state and federal water quality standards can be met.

Submerged Crossings

Definition: Power, telephone, water, sewer, gas or other transmission lines which are constructed across the estuary, usually by embedding into the bottom of the estuary.

1. Trenching or other bottom disturbance undertaken in conjunction with installation of a submerged crossing shall conform to the standards for dredging as set forth in this plan.

2. Submerged crossing shall be designed and located so as to eliminate interference with present or future navigational activities.

3. Submerged crossings shall be designed and located so as to ensure sufficient burial or water depth to avoid damage to the crossing.

Restoration

Definition: Replacing or restoring original attributes or amenities such as natural biological productivity or cultural and aesthetic resources which have been diminished or lost by past alterations or activities. Active restoration involves the use of specific remedial action such as removing dikes, installing water treatment facilities, etc. Passive restoration is the use of natural processes, sequences or timing to bring about restoration after the removal or reduction of adverse stresses.

1. Restoration in areas designated for development shall be undertaken only if it is likely that the project will not conflict with or be destroyed by existing or subsequent development.

2. All restoration projects shall be designed so as to minimize adverse impacts on aquatic life and habitats, flushing and circulation characteristics, erosion and accretion patterns, navigation and recreation.

Excavation

Definition: Excavation of shorelands to create new estuarine surface area directly connected to other estuarine waters.

1. Creation of new estuarine surface area shall be allowed only for navigation, other water dependent use, or restoration.

2. All excavation projects shall be designed and located so as to minimize adverse impacts on aquatic life and habitats, flushing and circulation characteristics, erosion and accretion patterns, navigation and recreation.

3. Excavation of as much as is practical of the new water body shall be completed before it is connected to the estuary.

4. In the design of excavation projects, provision of public access to the estuary shall be encouraged to the extent compatible with the proposed use.

Dredged Material Disposal

Definition: The deposition of dredged material in estuarine areas or shorelands.

1. Disposal of dredged materials should occur on the smallest possible land area in order to minimize the quantity of land that is disturbed. Clearing of land should occur in stages on an as needed basis.

2. Dikes surrounding disposal sites shall be well constructed and large enough to encourage proper "ponding" and to prevent the return of suspended sediments into the estuary.

3. The timing of disposal activities shall be coordinated with the Department of Environmental Quality and the Department of Fish and Wildlife to ensure adequate protection of biologically important elements such as fish runs, spawning activity, etc. In general, disposal should occur during periods of adequate river flow to aid flushing of suspended sediments.

4. Disposal sites which will receive materials with toxic characteristics shall be designed to include secondary cells in order to achieve good quality effluent. Discharge from the sites should be monitored to ensure adequate cell structures have been constructed and are functioning properly.

5. Revegetation or other stabilization of disposal sites shall occur as soon as is practicable in order to stabilize the site and retard wind erosion.

6. Outfalls from dredged material disposal sites shall be located and designed so as to minimize adverse impacts on aquatic life and habitats and water quality.

7. General priorities for dredged material disposal sites shall be (in order of preference):
   a. Upland or approved fill project sites
   b. Approved offshore disposal sites
   c. Aquatic areas

The Lincoln County Dredge Material Disposal Plan should be consulted for information concerning specific disposal sites and further policy recommendations.

Water Handling of Logs

Definition: Water handling of logs is the combined process of log dumping, storage, transportation, mill-side handling and takeout as logs are placed into the water and moved to a final processing site.

1. Water handling of logs shall be conducted in such a manner to ensure that violations of water quality standards do not result from such activities.

2. New free fall log dumps shall not be permitted. All new log dumps and shipside unloading shall employ easy let-down devices.

3. The inventory of logs in the estuary for any purpose shall be the lowest practical number for the shortest practical time considering log availability and market conditions.

4. The inventory of logs in areas where grounding will occur shall be the lowest practical number for the shortest practical time considering log availability, market conditions.

5. Best practical bark and wood debris control, collection and disposal methods shall be employed at log dumps, shipside unloading areas, raft building areas and millside handling and takeout areas.

PART VI - MANAGEMENT UNITS

Proposed revisions as part of the 2023 update

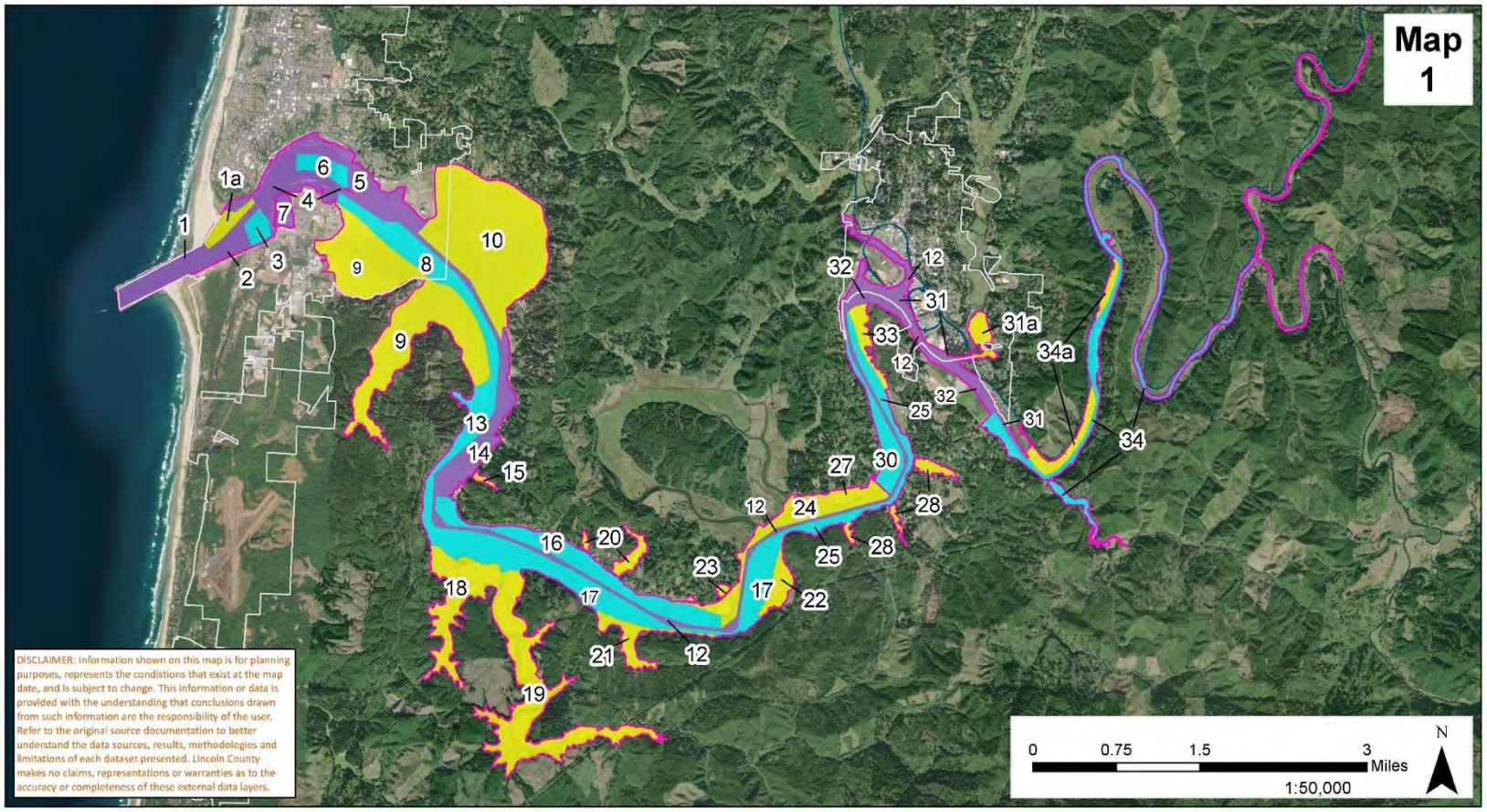
Part VI establishes the third and most specific policy level of the Lincoln County Estuary Management Plan: the individual management unit delineations and classifications.

Each management unit description includes:

- the management classification (natural, conservation or development) of the unit and a summary rationale for the classification;
- a description of the spatial boundaries of the unit;
- a summary of the natural resource characteristics of the unit;
- a description of major uses and alterations present in the unit;
- a management objective which provides an overall statement of priorities for management of the unit;
- permitted uses within the unit, both those that are deemed consistent with the resource capability of the unit, and those uses that will require case-by-case resource capability determinations;
- Special policies specific to the unit which serve to clarify, or in some cases further limit, the nature and extent of permitted uses.

During the original planning process to develop the 1982 Lincoln County Estuary Management Plan multiple management units were initially drafted but were ultimately absorbed into other adjacent units. This is the reason why management units 11, 26, and 29 have been omitted from the 1982 Plan and the 2023 update.

Figure 5 shows the spatial extent of the management units for the Yaquina Bay estuary along with their classifications. It is important to note that the text descriptions are the regulating boundary of the management units. Maps and GIS data layers are a representation of those boundaries. In case of any doubt, the text descriptions should be used to resolve any boundary confusion.



Estuary Management Unit Classifications

This map is a draft interim product of the Yaquina Bay Estuary Management Plan Update process intended to inform decision-making. This map is not the finalized product.

Date: 6/7/2023, Projection: NAD_1983_HARN_StatePlane_Oregon_North_FIPS_3601_Feet_Intl
Data Source: Lincoln County, "YEMP_MUs", (2023)

Legend

- Natural Units
- Conservation Units
- Development Units
- Estuary Boundary
- City Limits
- Railroad

Figure 5. All Estuary Management Units for Yaquina Bay

Management Unit 1: YAQUINA BAY

Description

Management Unit 1 consists of the area between the navigation channel and the north jetty west of the Highway 101 bridge, excepting the area described as Management Unit 1A (see Figure 6). Natural resources of importance include shellfish beds, fish spawning and nursery areas, and wildlife habitat. Of special importance are areas used by ling cod for spawning. Primary uses in the area are medium and shallow draft navigation and recreation (angling, boating, diving and surfing). Alterations include the north jetty, riprapped shoreline east of the jetty, navigation aids, and piling dolphins at the base of the bridge columns. (See maps for location of resources and uses)

Classification: Development

This unit has been classified as Development in order to provide for maintenance and repair of the north jetty, a navigation improvement that may require periodic major alterations. Other than providing for alterations necessary to maintain navigation, management of Unit 1 shall conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

Resource Capability

As a development management unit, permissible uses in Management Unit 1 are not subject to the resource capability test.

Management Objective

Management Unit 1 shall be managed to provide for maintenance and repair of the north jetty as necessary to maintain the functionality of the deep-water channel. Otherwise, this unit shall be managed to conserve shellfish beds, fish spawning and nursery areas, and other natural resources.

Special Policies

1. Major alterations in Management Unit 1 shall be limited to jetty and other navigation improvements necessary to maintain the authorized federal navigation channel. However, uses shall minimize disturbance of important natural resources identified in this unit.

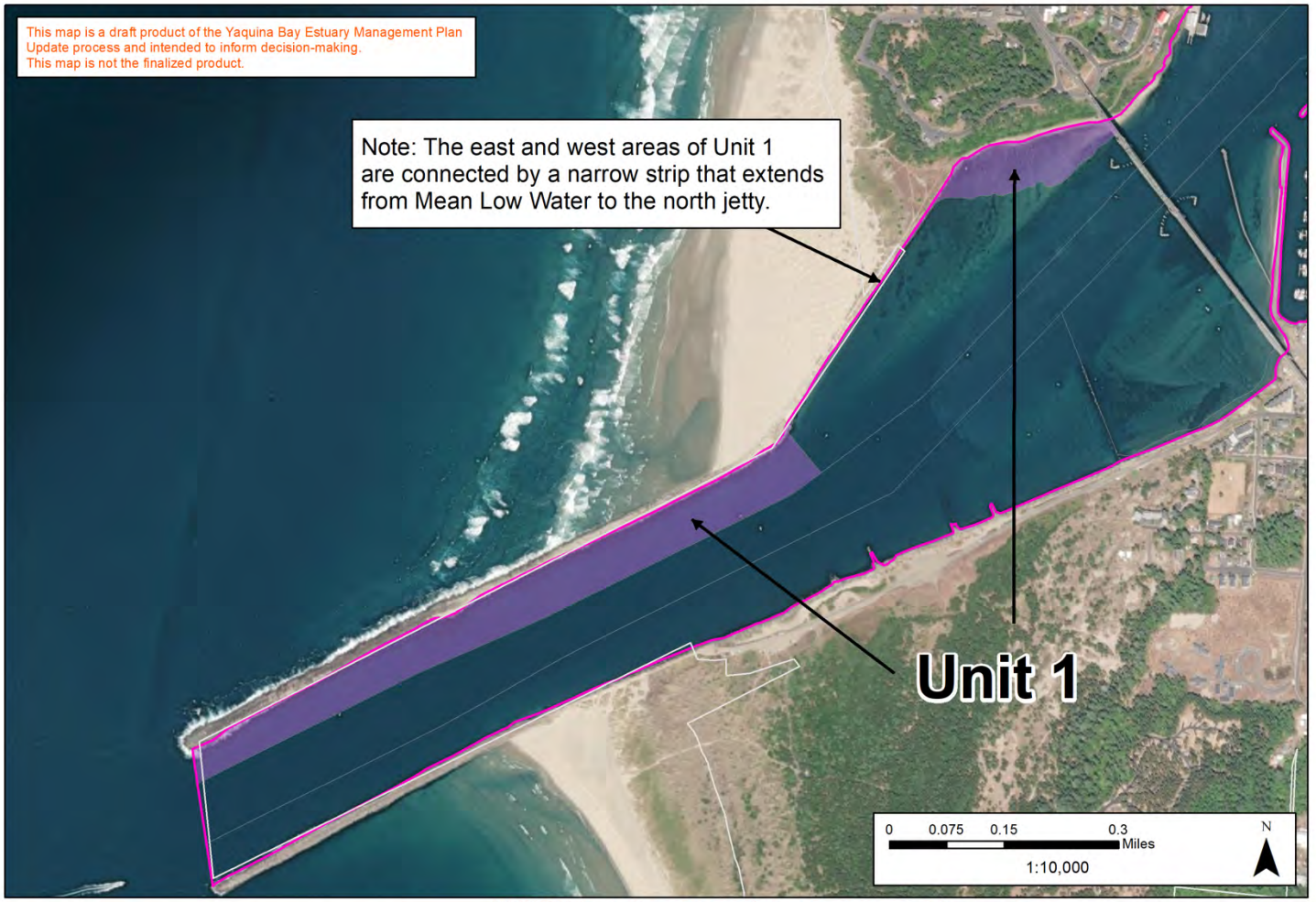


Figure 6. Estuary Management Unit 1, Yaquina Bay

Management Unit 1a: YAQUINA BAY

Description

Management Unit 1a consists of the intertidal and subtidal area west of the Yaquina Bay Bridge, lying between the navigation channel and the north shore. Along the north jetty, Unit 1a extends up to MLW (Mean Low Water). Unit 1a is bounded on the west by MLLW, and on the east by the Yaquina Bay bridge (see Figure 7). Natural resources of importance include shellfish beds, fish spawning and nursery areas, and wildlife habitat. Of special importance is a major algal bed. Primary uses in the area are medium and shallow draft navigation and recreation (angling, boating, diving and surfing). Alterations include the riprapped shoreline east of the jetty, navigation aids, and piling dolphins at the base of the bridge column. (See maps for location of resources and uses)

Classification: Natural

This unit has been classified as Natural in order to protect the natural resources of the unit and limit alterations to low intensity activities similar to those now existing in the unit.

Resource Capability

The major algal bed in this unit is a sensitive habitat area of special value. Other habitats, while of major importance, are less susceptible to disturbance from minor alterations. Low intensity alterations such as pilings, dolphins and riprap have occurred in this area in the past without significant damage to resource values. Similar activities of this nature in conjunction with the uses contemplated in Unit 1a will constitute minor alterations consistent with the resource capabilities of the area.

Management Objective

Management Unit 1a shall be managed to preserve natural resources.

Special Policies

1. The algal bed within Management Unit 1A as defined by the Oregon Department of Fish and Wildlife Habitat Classification Map shall be preserved.

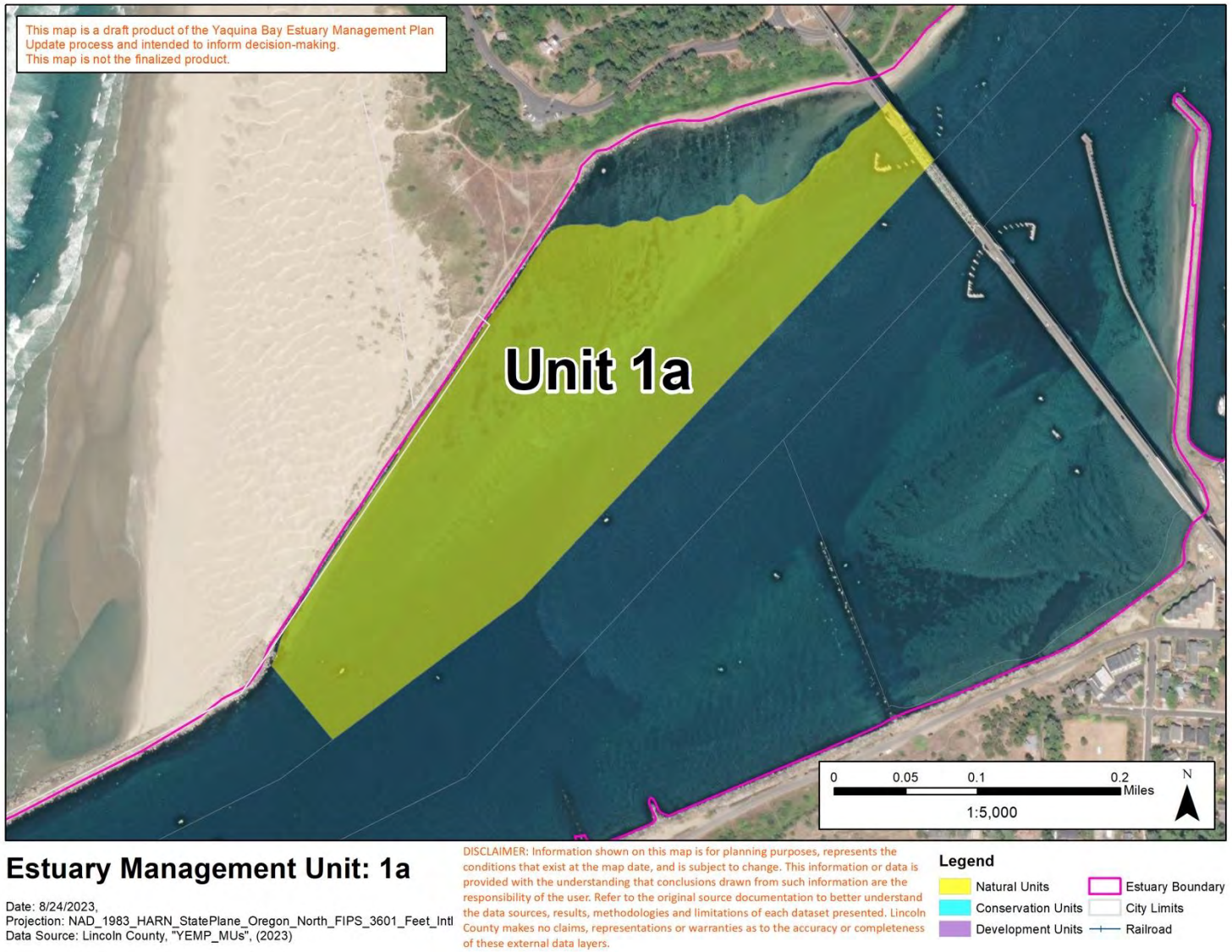


Figure 7. Estuary Management Unit 1A, Yaquina Bay

Management Unit 2: YAQUINA BAY

Description

Management Unit 2 contains the area between the south jetty and the navigation channel, extending from the channel entrance east to the spur jetty (see Figure 8). From the spur jetty east to the Yaquina Bay Bridge, Unit 2 includes the aquatic area above MLW. Natural resources of importance include shellfish beds, algal beds, eel grass beds, fish spawning and nursery areas and waterfowl habitat. Major uses in the unit are shallow draft navigation and recreational activities, including fishing, diving and boating. Alterations in the area include the south jetty, the spur jetty and groins, and navigation aids. (See maps for location of resources and uses)

Classification: Development

This unit has been classified as Development in order to provide for the maintenance and reconstruction of navigation improvements, including the south jetty and the spur jetty and groins, which may require major alterations.

Resource Capability

As a development management unit, permissible uses in Management Unit 2 are not subject to the resource capability test. However, uses shall minimize disturbance of important natural resources identified in this unit.

Management Objective

Management Unit 2 shall be managed to provide for the maintenance and repair of the south jetty and associated navigation improvements. Major alterations shall be limited to those necessary to provide for these uses. Otherwise, this unit shall be managed to conserve shellfish beds, algal beds, fish spawning and nursery areas and other natural resources.

Special Policies

1. Major alterations in Management Unit 2 shall be limited to jetty, groin and other navigation improvements necessary to maintain the functionality of the authorized federal navigation channel. However, uses shall minimize disturbance of important natural resources identified in this unit.

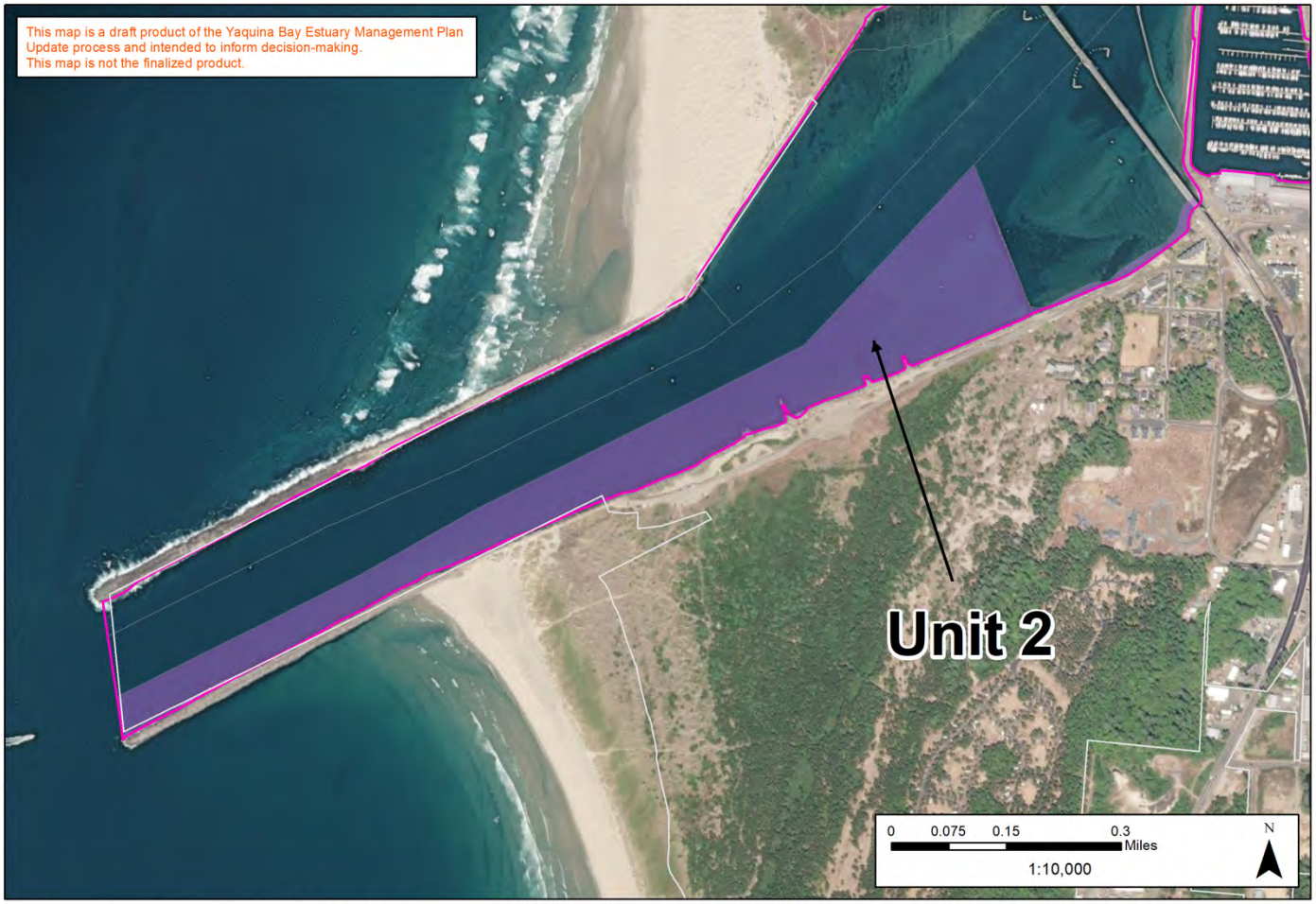


Figure 8. Estuary Management Unit 2, Yaquina Bay

Management Unit 3: YAQUINA BAY

Description

Management Unit 3 consists of the area from the navigation channel to MLW along the south shore, from the spur jetty to the Yaquina Bay Bridge (see Figure 9). The area has a number of important natural resources, including tideflats, eelgrass beds, significant shellfish beds, important fish spawning and nursery areas, and important waterfowl habitat. Major uses within the unit are shallow draft navigation and recreation (clam digging, fishing, boating). Some minor commercial shellfish harvest takes place in the unit. Alterations include navigation aids, dolphins, and riprapped shorelines. (See maps for location of resources and uses.)

Classification: Conservation

This unit has been classified as conservation in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

Resource Capability

Management Unit 3 has significant intertidal area, and important shellfish beds. Existing alterations are minor in nature. Further minor structural alterations such as pilings and dolphins would be consistent with the existing character and resource capability of the area.

Management Objective

Management Unit 3 shall be managed to conserve natural resources of importance.

Special Policies

1. Major clam beds are located within Management Unit 3. These clam beds shall be protected.

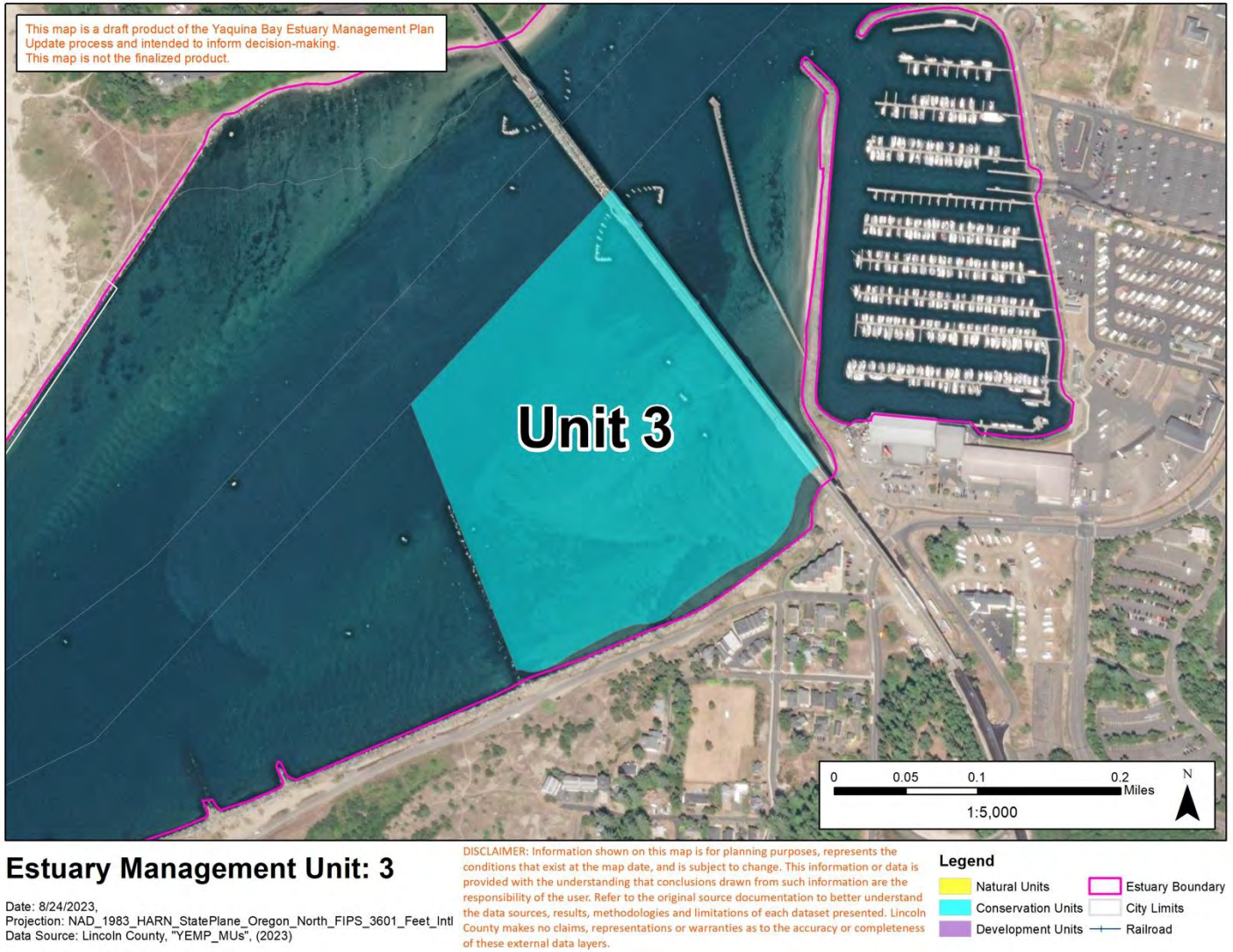


Figure 9. Estuary Management Unit 3, Yaquina Bay

Management Unit 4: YAQUINA BAY

Description

Management Unit 4 is the Corps of Engineers authorized deep-water federal navigation channel, up to and including the turning basin at McLean Point. This unit includes the 40-foot-deep, 400-foot-wide entrance channel; the 30-foot-deep, 300-foot-wide bay channel, and the turning basin (see Figure 10). Natural resources within the unit include fish spawning and nursery areas, and important shellfish beds. Major uses within the unit include navigation (shallow, medium and deep draft), recreation (fishing, crabbing, and boating) and some limited commercial harvest. Alterations include pilings, navigation aids, submerged crossings and the Yaquina Bay bridge crossing. Of special importance is the maintenance dredging of the federally authorized navigation channel and turning basin. (See maps for locations of resources and uses.) Management Unit 4 is an area of diverse marine influenced habitats, including some major shellfish beds.

Classification: Development

This unit has been classified as development, to provide for the dredging and other alterations required to maintain the deep-water navigation channel and turning basin.

Resource Capability

As a development management unit, authorized uses are not subject to resource capability requirements. The area is periodically dredged for maintenance of the federally authorized navigation channel and turning basin, and resources present are subject to this regular disturbance.

Management Objective

Management Unit 4 shall be managed to protect and maintain the authorized navigation channel and turning basin for deep-draft navigation.

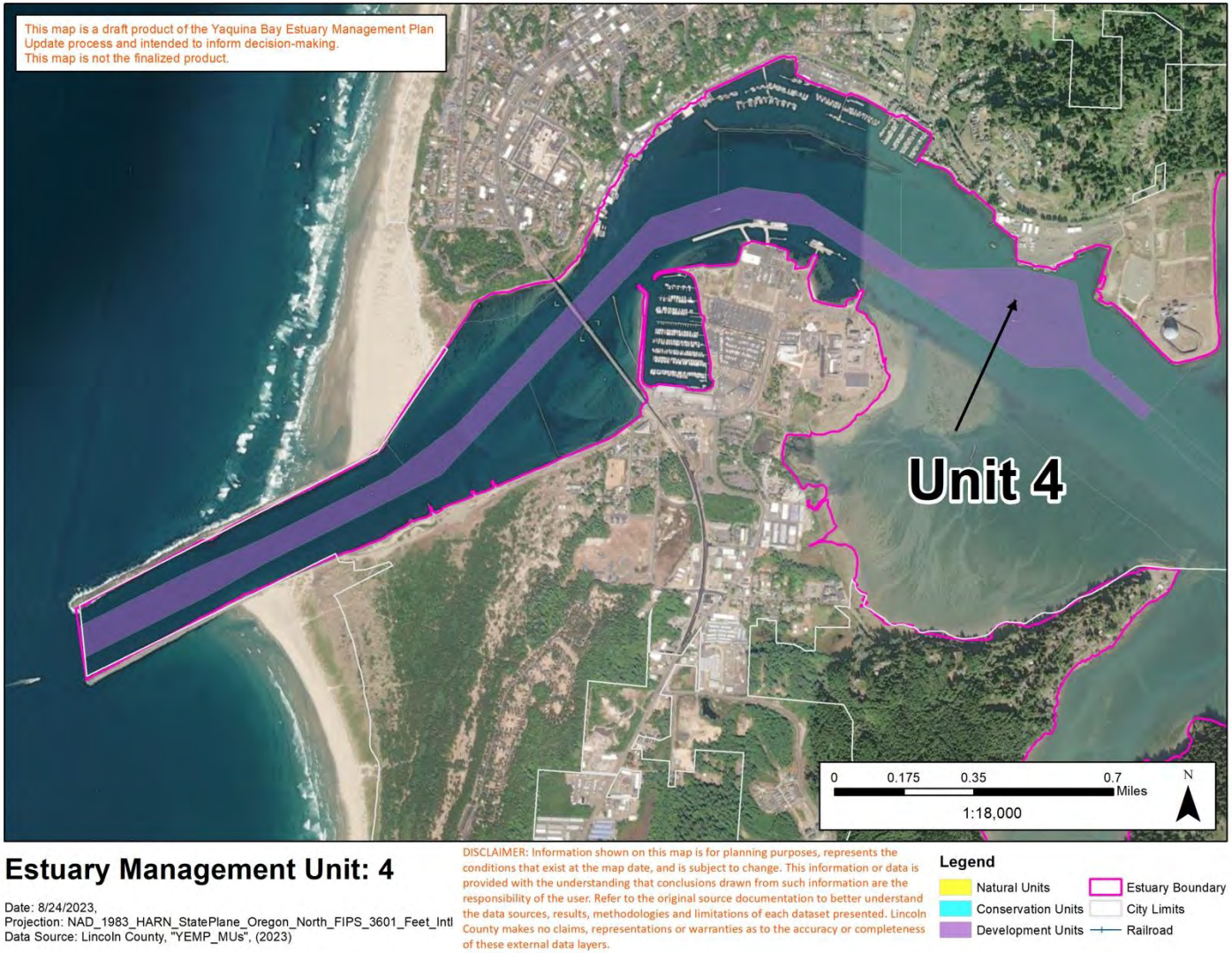


Figure 10. Estuary Management Unit 4, Yaquina Bay

Management Unit 5: YAQUINA BAY

Description

Management Unit 5 consists of the area between the north shore of the bay and the navigation channel, from the west side of the Yaquina Bay bridge up to McLean Point (see Figure 11). It includes the Port of Newport commercial moorage basins (Port Docks 3, 5 and 7, and the north marina breakwater), the developed waterfront in the Newport urban area, and the Port of Newport's international terminal facilities at McLean Point. Natural resources of importance include tideflats, eelgrass and shellfish beds, and fish spawning and nursery areas. This portion of the estuary is used intensively for shallow and medium draft navigation, moorage of small and large boats, and for recreation. Other significant uses include the Port of Newport's international terminal operation, research activities, the U.S. Coast Guard Station, seafood processing plants and infrastructure, and mixed-use development along the historic Newport bayfront. The shoreline and aquatic areas are extensively altered with riprap, bulkheads, piers and wharves, the north marina breakwater, pilings, floating docks, periodic maintenance dredging and other activities. (See maps for location of resources and uses.)

Classification: Development

This unit is classified as development to provide for the port's development needs in support of navigation, commercial fishing and other water dependent and mixed uses along the urban waterfront.

Resource Capability

Management Unit 5 is the most extensively altered area in the estuary. Maintenance and redevelopment of existing facilities in this area, along with new development, will result in further alterations, including major dredging and construction activities. As a development management unit, these authorized uses within Management Unit 5 are not subject to resource capability requirements.

Management Objective

Management Unit 5 shall be managed to provide for the development of port facilities and other water-dependent uses requiring aquatic area alterations. Water related and non-related uses not requiring dredge or fill may be permitted consistent with the unique mixed-use character of the Newport waterfront.

Special Policies

1. Important shellfish beds are located in Management Unit 5. Adverse impacts on these shellfish beds from development shall be avoided or minimized.

2. Due to the limited water surface area available and the need for direct land to water access, alternatives (such as mooring buoys or dry land storage) to docks and piers for commercial and industrial uses are not feasible in Unit 5. Multiple use facilities common to several users are encouraged where practical.

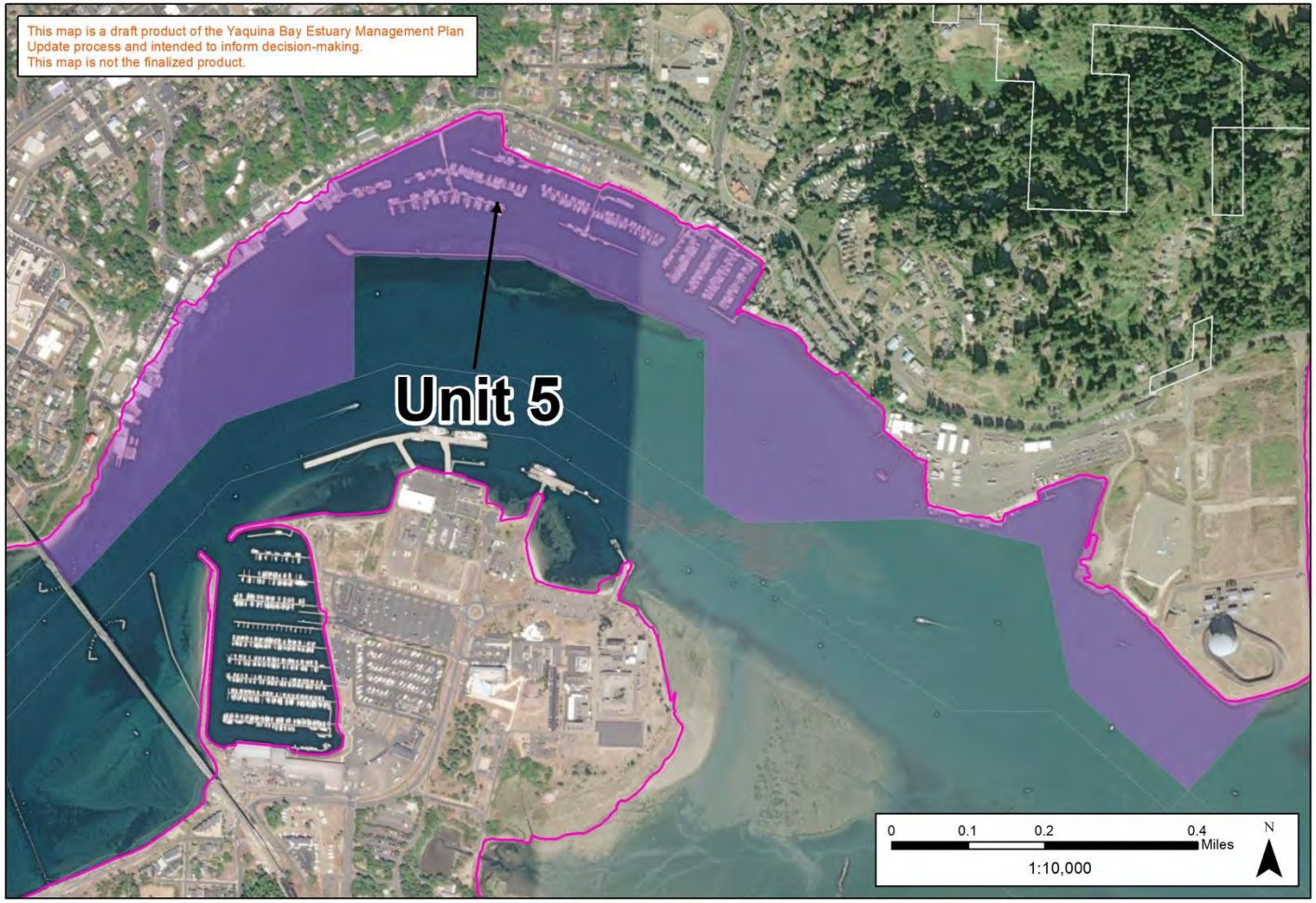


Figure 11. Estuary Management Unit 5, Yaquina Bay

Management Unit 6: YAQUINA BAY

Description

Management Unit 6 consists of the area south of the north marina breakwater, extending from MLW south to the navigation channel (see Figure 12). Unit 6 is bounded on the west by a north-south line extending from the west end of the breakwater to the navigation channel, and on the east by a north-south line extending from the east end of the breakwater to the navigation channel. Unit 6 contains both intertidal and subtidal area with a number of important resource characteristics. Significant habitat areas include eelgrass and shellfish beds, fish spawning and nursery areas, and waterfowl habitat. Major uses in the unit include recreation (fishing, boating, crabbing and clamming), medium and shallow draft navigation, and some limited commercial harvest activities. Alterations within the unit include pilings and navigation aids. (See maps for location of resources and uses.)

Classification: Conservation

This unit has been classified as conservation in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

Resource Capability

Management Unit 6 is a mostly sub-tidal area near the upper end of the marine subsystem. It supports a variety of important resources that could be adversely impacted by major fill, removal or other aquatic alterations. Important uses in the unit such as navigation and recreation require a largely unobstructed surface area. For these reasons, alterations consistent with the resource capability of this unit are limited to minor structural alterations such as pilings and dolphins. Any fill or removal activities should be evaluated on a case-by-case basis.

Management Objective

Management Unit 6 shall be managed to conserve natural resources and to provide for uses compatible with existing navigation and recreation activities.

Special Policies

1. The shellfish beds adjacent to the north marina breakwater as defined by the publication "Sub-tidal Clam Populations: Distribution, Abundance and Ecology" (OSU Sea Grant, May 1979) are considered a resource of major importance. Adverse impacts on this resource shall be avoided or minimized.[9]

[9] Hancock et al. 1979. Subtidal Clam Populations: Distribution, Abundance, and Ecology. Oregon State University Sea Grant College Program. Publication no. ORESU-T-79-002.

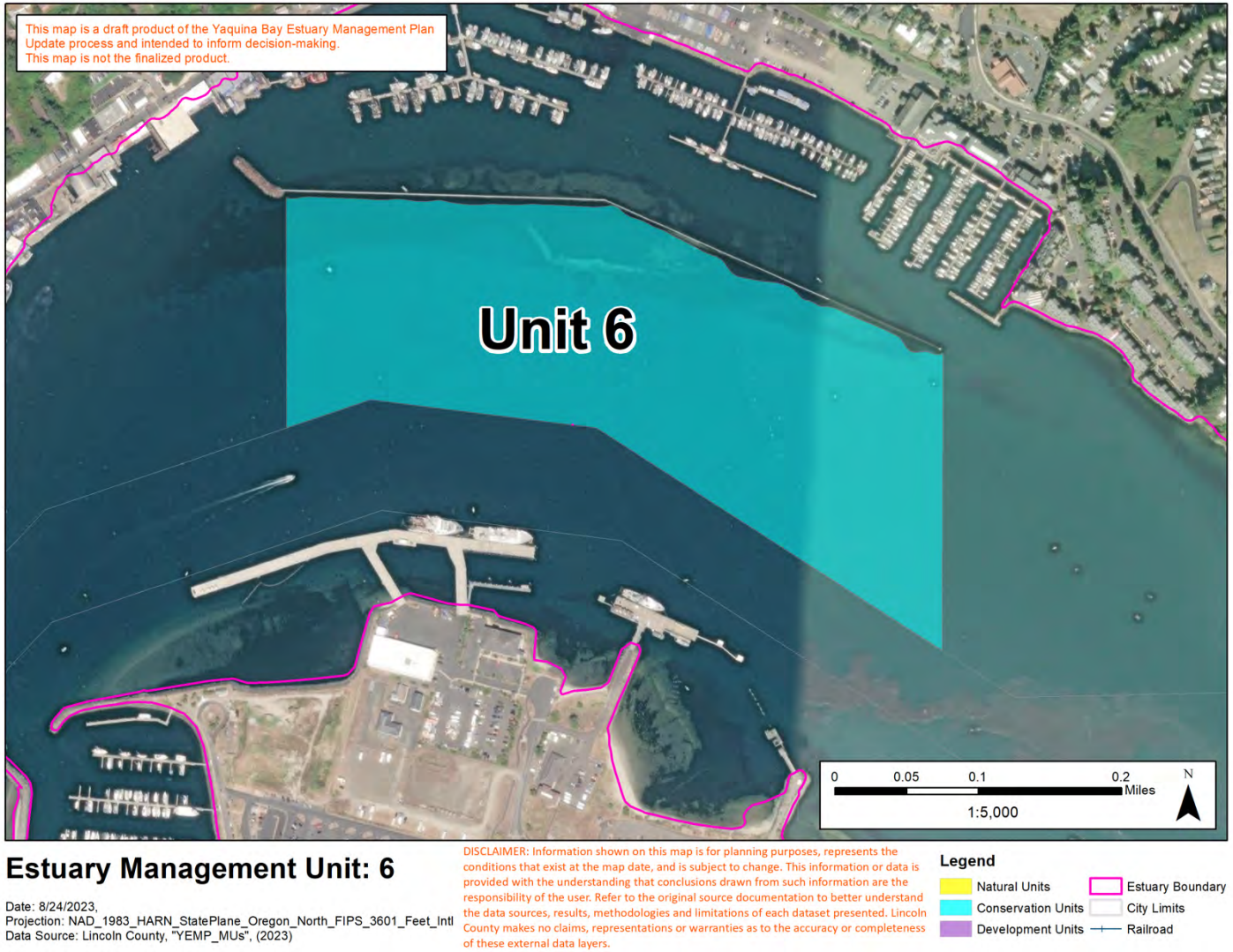


Figure 12. Estuary Management Unit 6, Yaquina Bay

Management Unit 7: YAQUINA BAY

Description

Management Unit 7 consists of the aquatic area between the navigation channel and the south shore, from the Highway 101 bridge east to the small boat pier at the Hatfield Marine Science Center (see Figure 13). It includes the South Beach Marina, the NOAA Marine Operations Center, and the OSU Hatfield Marine Science Center facilities. The majority of the unit is sub-tidal and includes eelgrass and shellfish beds, and fish spawning and nursery areas. Major uses in the area are deep, medium and shallow draft navigation, moorage, recreation and some limited commercial harvest. Alterations include pilings, piers and wharves, breakwaters, floating docks, riprap, and periodic dredging. (See maps for location of resources and uses.)

Classification: Development

This unit has been classified as development to provide for water dependent uses, including the NOAA Marine Operations Center, the South Beach Marina and OSU Hatfield Marine Science Center facilities.

Resource Capability

Management Unit 7 is classified for development, therefore authorized uses are not subject to resource capability requirements.

Management Objective

Management Unit 7 shall be managed to provide for water dependent development compatible with existing uses. Non-water dependent uses not requiring dredge or fill may be permitted consistent with adjacent coastal shorelands designations.

Special Policies

1. Eelgrass beds, shellfish beds, and fish spawning and nursery areas are located within Management Unit 7. Adverse impacts of development on these resources shall be avoided or minimized.
2. Due to the limited water surface area available and the need for direct land to water access, alternatives (such as buoys and dry land storage) to docks and piers for commercial and industrial uses are not feasible in Unit 7. Multiple use facilities common to several users are encouraged where practical.

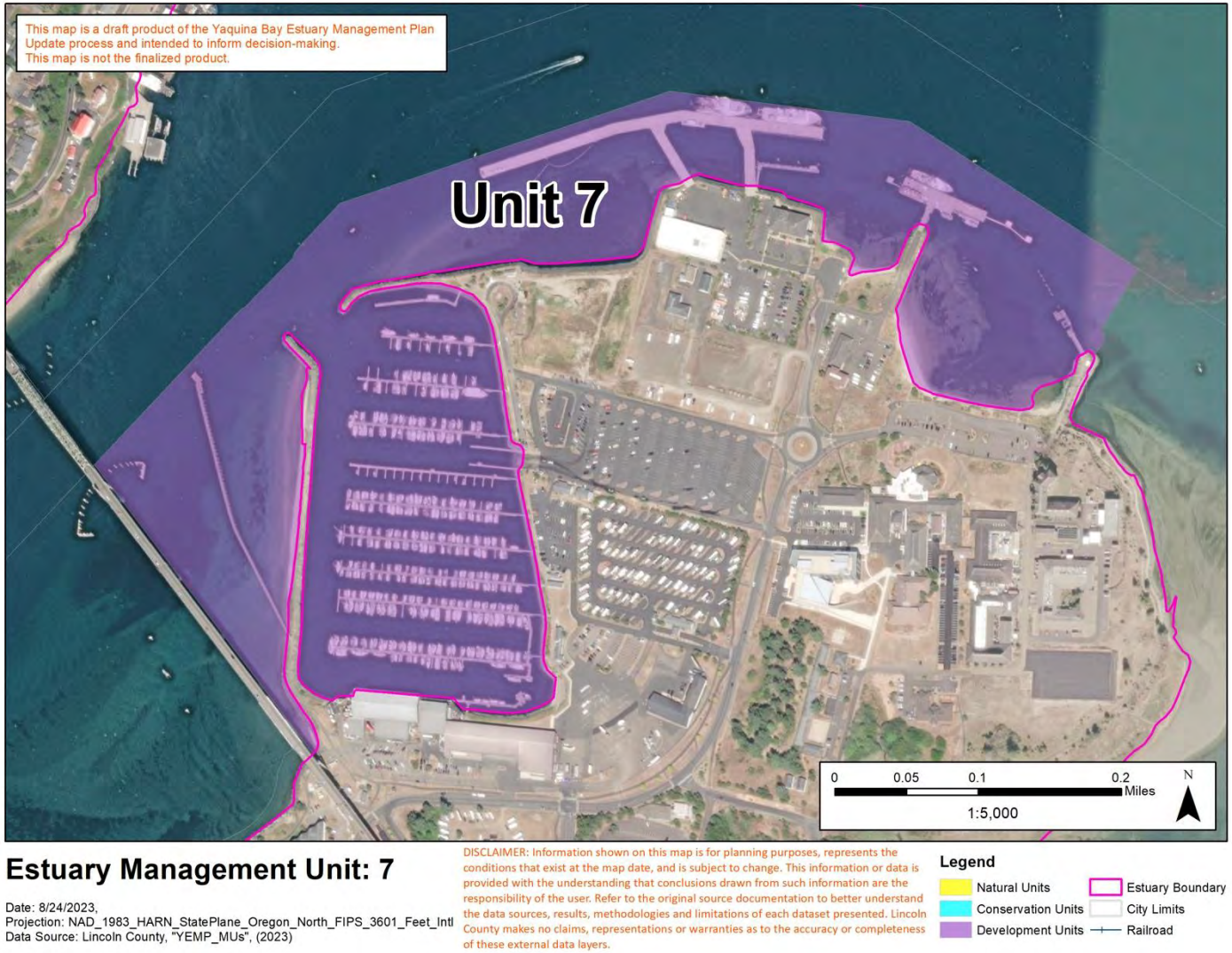


Figure 13. Estuary Management Unit 7, Yaquina Bay

Management Unit 8: YAQUINA BAY

Description

Management Unit 8 is a sub-tidal area between the navigation channel and the intertidal flats of the Idaho Point/King's Slough area (see Figure 14). It contains significant habitat areas, including eelgrass and shellfish beds, fish spawning and nursery areas, and waterfowl habitat. Uses within the unit consist of medium and shallow draft navigation, commercial harvest and recreation. Existing alterations are limited to navigation aids. (See maps for location of resources and uses.)

Classification: Conservation

This unit has been classified as conservation in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

Resource Capability

Management Unit 8 is an important resource area. Shallow portions of this sub-tidal unit support eelgrass beds; major shellfish beds are also located in this area. Alterations in this area are limited to navigation aids (pile supported). Similar minor structural alterations such as pilings and dolphins are consistent with the resource capabilities of this area.

Management Objective

Management Unit 8 shall be managed to conserve and protect natural resources such as eelgrass and shellfish beds.

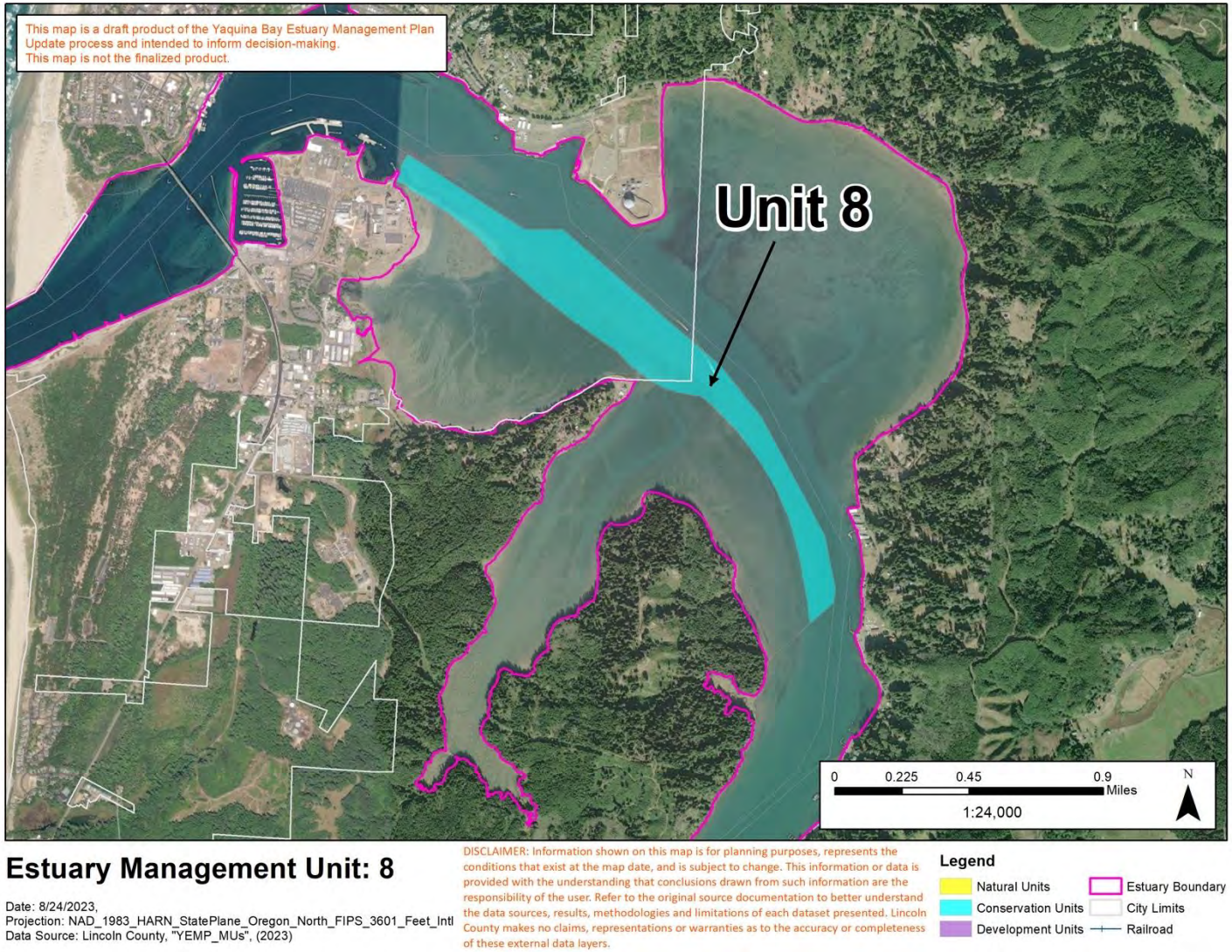


Figure 14. Estuary Management Unit 8, Yaquina Bay

Management Unit 9: YAQUINA BAY

Description

Management Unit 9 includes the Idaho Flats tideflat between the Marine Science Center and Idaho Point, all of King Slough, and the intertidal area upriver from the mouth of King Slough known as Racoon Flat (see Figure 15). This is one of the largest tideflats in the estuary with a number of natural resource values of major significance, including eelgrass beds, shellfish beds, low salt marsh, fish spawning and nursery areas and waterfowl habitat. The area is used extensively for recreational purposes, primarily angling, clamming and waterfowl hunting. A private boat ramp (formerly the site off a small marina) is present at Idaho Point. The intertidal flat area west of Idaho Point is in public ownership (State of Oregon Board of Higher Education). Most of the intertidal area of King Slough is privately owned and was used historically for log storage. There is a small, low intensity aquaculture operation (tipping bag oyster culture) on the east side of King slough. A substantial portion of the Racoon Flat intertidal area along the west shore above the mouth of King Slough is owned by the Yakona Nature Preserve and Learning Center. Alteration to the unit is minimal, with a few scattered pilings and limited areas of riprapped shoreline.

Classification: Natural

As a major tract of tideflat, this unit has been classified natural in order to preserve the natural resources of the unit.

Resource Capability

Management Unit 9 is a highly sensitive area with resource values of major importance to the estuarine ecosystem. In order to maintain resource values, alterations in this unit shall be kept to a minimum. Minor alterations which result in temporary disturbances (e.g., limited dredging for submerged crossings) are consistent with resource values in this area; other more permanent alterations will be reviewed individually.

Management Objective

Management Unit 9 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Limited maintenance dredging and other maintenance activities may be permitted for the maintenance of the existing boat ramp in Management Unit 9. Expansion of this use or establishment of new marina uses is not permitted.
2. Major portions of Management Unit 9 are held in private ownership. Because the preservation of critical natural resources requires that uses in this area be severely restricted, public or conservation acquisition of these privately owned lands is strongly encouraged.

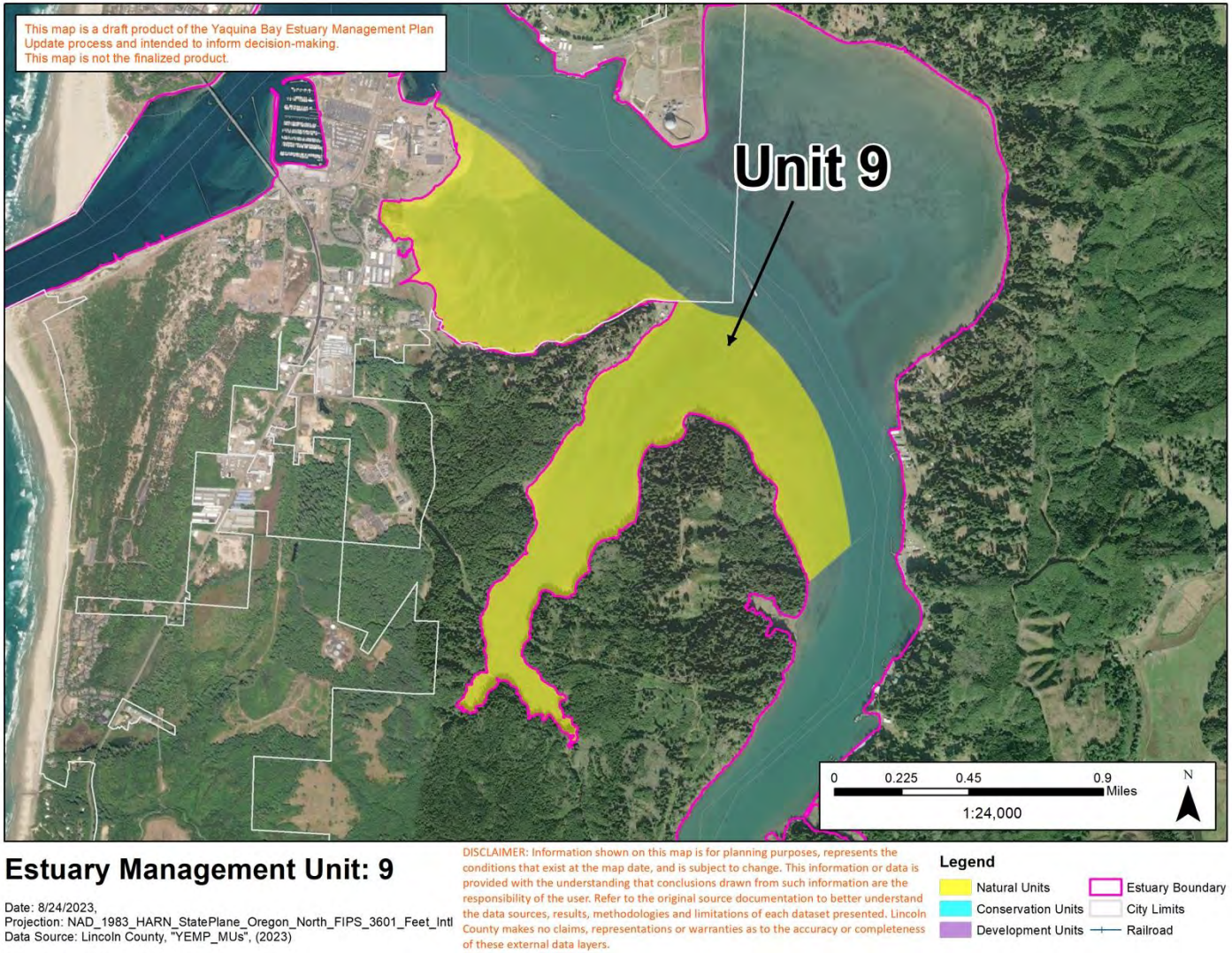


Figure 15. Estuary Management Unit 9, Yaquina Bay

Management Unit 10: YAQUINA BAY

Description

Management Unit 10 includes the Sally's Bend area between Coquille Point and McLean Point and bounded on the south by the authorized federal navigation channel (see Figure 16). Much of this unit is owned by the Port of Newport. A number of minor alterations are present, including pilings and riprap along the shoreline.

The unit consists of one of the largest tideflats in the estuary, with a number of natural resource values of major significance including eelgrass beds, shellfish and algal beds, fish spawning and nursery areas, and wildlife and waterfowl habitat. The historically large eelgrass meadow present in MU 10 has become much smaller over time, indicating a significant loss of habitat. Eelgrass and associated habitat make this area extremely important for Endangered Species Act (ESA) listed fish species, commercially important fisheries species, recreationally important clams, and migratory birds. It is recognized as "Essential Fish Habitat" under the Magnuson–Stevens Fishery Conservation and Management Act. Additionally, a significant area in the middle of MU 10 is utilized by pinnipeds (seals and sea lions) as a haul out region, which are species supported under the Marine Mammal Protection Act. Recovering populations of native Olympia oysters have also been surveyed at the South corner of the management unit off Coquille Point.

Uses in the area are limited to shallow draft navigation, recreational use, and some minor commercial harvest of clams. The Sally's Bend recreational clamming area in this unit is the largest in Yaquina Bay. There are no public boat launches or other recreational infrastructure to access the water via boat, but public access is available at the NW Natural Gas plant on the West side and Coquille Point to the East. An Olympia oyster restoration project was initiated by ODFW in 2021, on the state-owned tidelands region of MU 10 (on the southern corner).

Classification: Natural

As a major tract of tideflat with eelgrass beds, this unit has been classified natural in order to preserve natural resources in the unit.

Resource Capability

Management Unit 10 is similar in character and resource values to Management Unit 9. Due to the importance and sensitive nature of the resources in this area, permitted alterations shall be limited to those which result in only temporary, minor disturbances (e.g., several submerged crossings have been located in this area). More permanent alterations will be reviewed individually for consistency with the resource capabilities of the area.

Management Objective

Management Unit 10 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Because this unit is suitable for native oyster re-establishment and restoration efforts are underway, impacts to existing Olympia oysters shall be avoided.
2. Deepening and widening of the federal navigation channel and turning basin into this management unit, which would impact the significant ecosystems within Sally's Bend, shall be avoided.

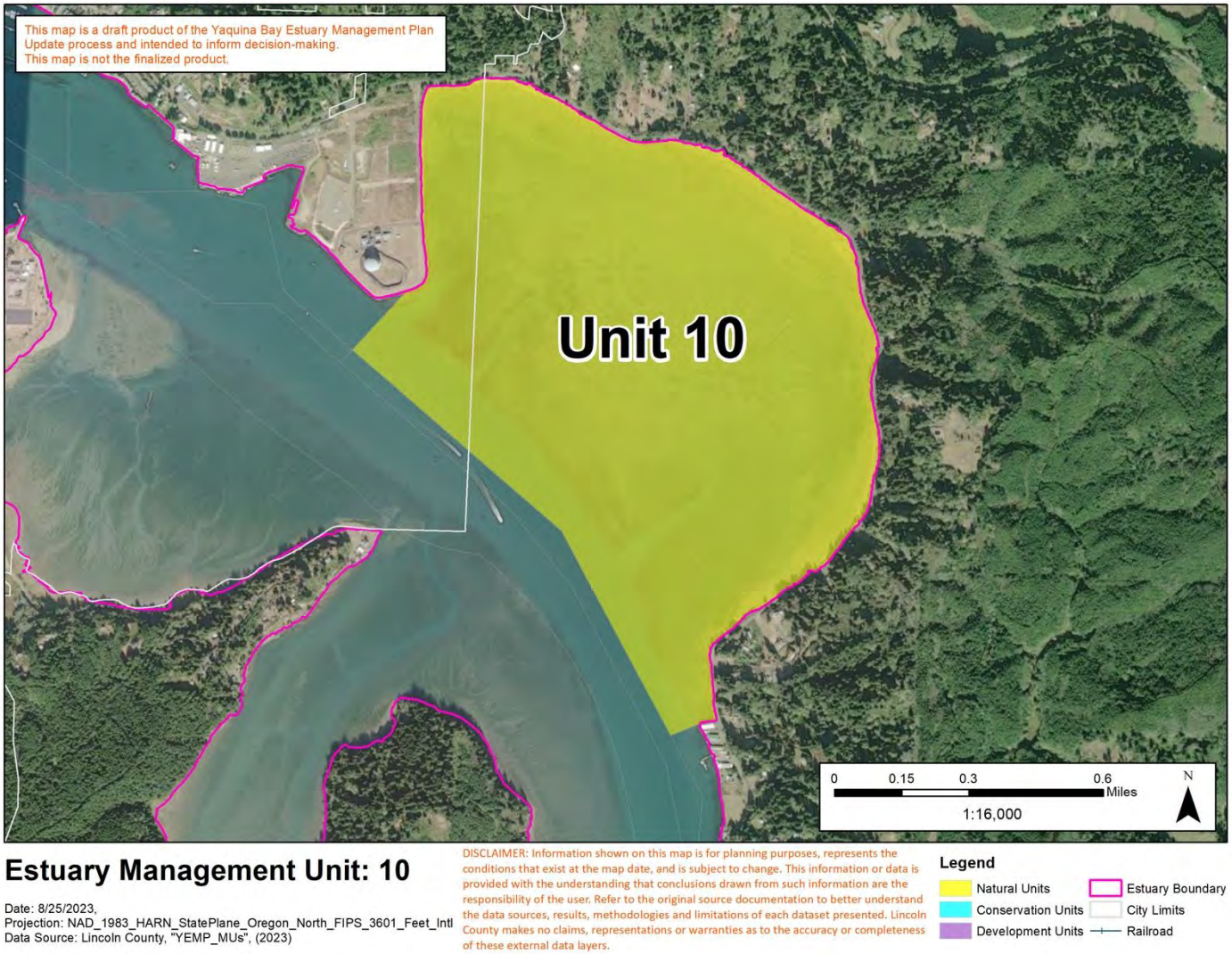


Figure 16. Estuary Management Unit 10, Yaquina Bay

Management Unit 12: YAQUINA BAY

Description

Management Unit 12 consists of the Corps of Engineers federally authorized navigation channel from the turning basin to the upstream extent of dredging at RM 14 in Toledo (see Figure 17). The channel above the turning basin is maintained to a depth of 18 feet up to Yaquina (RM 4+ 20), and to a depth of 10 feet from Yaquina up to Toledo. Natural resources of major significance in the unit are shellfish beds and fish spawning and nursery areas. The channel is used extensively for shallow and medium draft navigation, though there is currently no active commercial cargo traffic. Other uses include recreation, commercial harvest and aquaculture. Alterations within the channel include maintenance dredging and several minor alterations such as pilings, submerged cable crossings and navigation aids.

Classification: Development

This unit has been classified development as it is the federally authorized navigation channel and undergoes periodic maintenance dredging.

Resource Capability

Resources within Management Unit 12 are subject to periodic major alterations a result of maintenance dredging activities. Authorized uses in this unit are not subject to resource capability requirements.

Management Objective

Management Unit 12 shall be managed to maintain navigational access to upriver areas above the turning basin.

Special Policies

1. Bridge crossing construction shall be permitted only for maintenance or replacement of the existing Butler Bridge crossing.

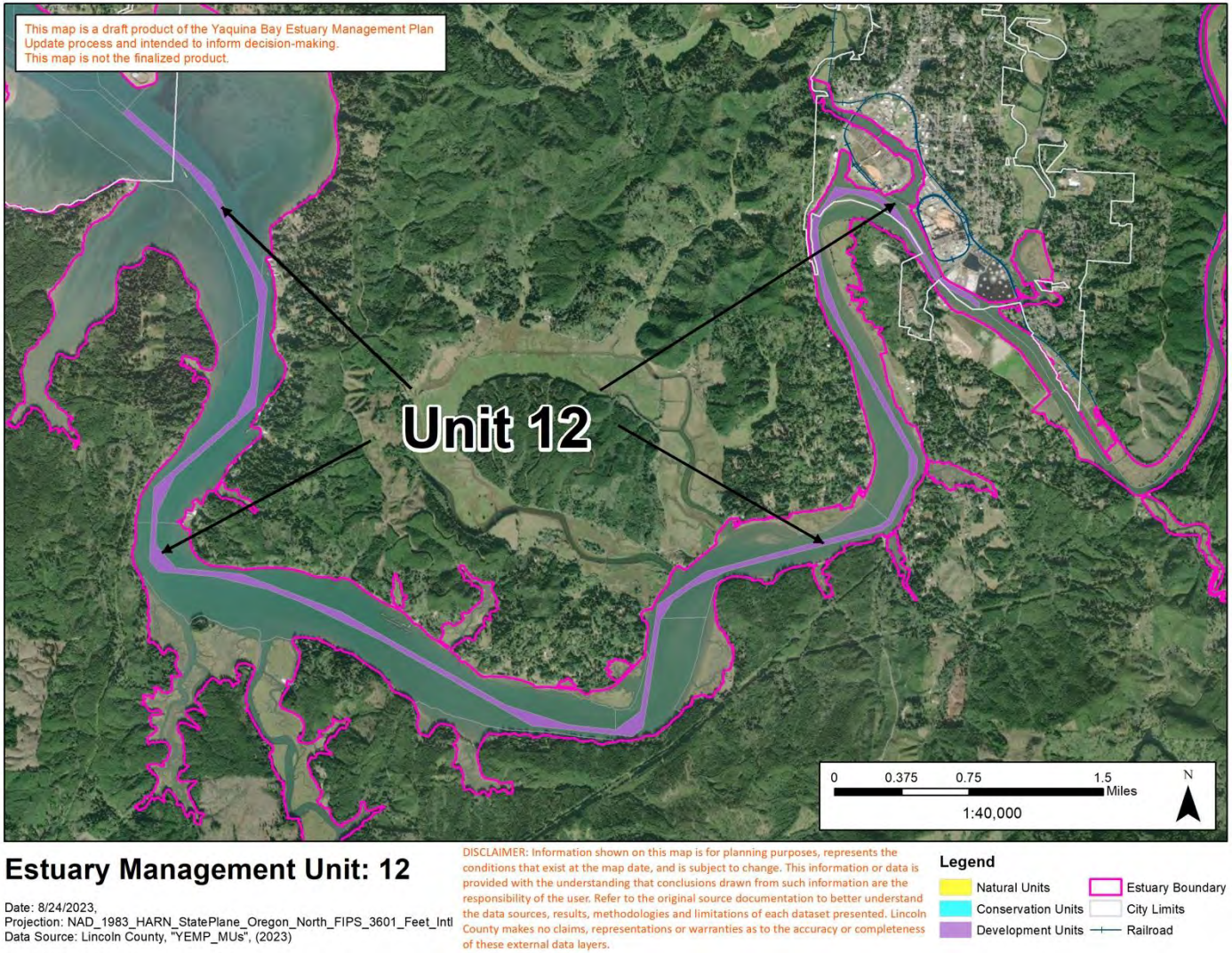


Figure 17. Estuary Management Unit 12, Yaquina Bay

Management Unit 13: YAQUINA BAY

Description

Management Unit 13 is the aquatic area between the navigation channel and the west shore, from the Racoon flat tideflats up to River Bend (see Figure 18). This mostly sub-tidal unit contains shellfish beds, fish spawning and nursery areas, some small tracts of tidal marsh, and important wildlife habitat. Uses in the area consist primarily of shallow and medium draft navigation, commercial harvest, and recreational boating and fishing. The area has natural characteristics that make it suitable for aquaculture. Alterations in the unit are limited to a few pilings and navigation aids.

Classification: Conservation

This unit is a partially altered area with some important resource characteristics that qualify for conservation management.

Resource Capability

Unit 13 is part of the bay subsystem as described in the ODFW Habitat Classification System. This is a relatively protected area that provides a transition zone between marine and fresh water. It is within the portion of Yaquina Bay that is suitable for oyster culturing operations. Minor alterations that will not jeopardize the suitability of the area for aquaculture are consistent with the resource capability of this area. Shoreline stabilization and other more significant alterations shall be reviewed individually to assure consistency with this resource capability.

Management Objective

Management Unit 13 shall be managed to conserve natural resources, protect water quality and to provide for aquaculture related development.

Special Policies

1. To maintain the suitability of this area for aquaculture and otherwise protect important resources, development for high intensity water dependent recreation shall not be permitted in Management Unit 13.

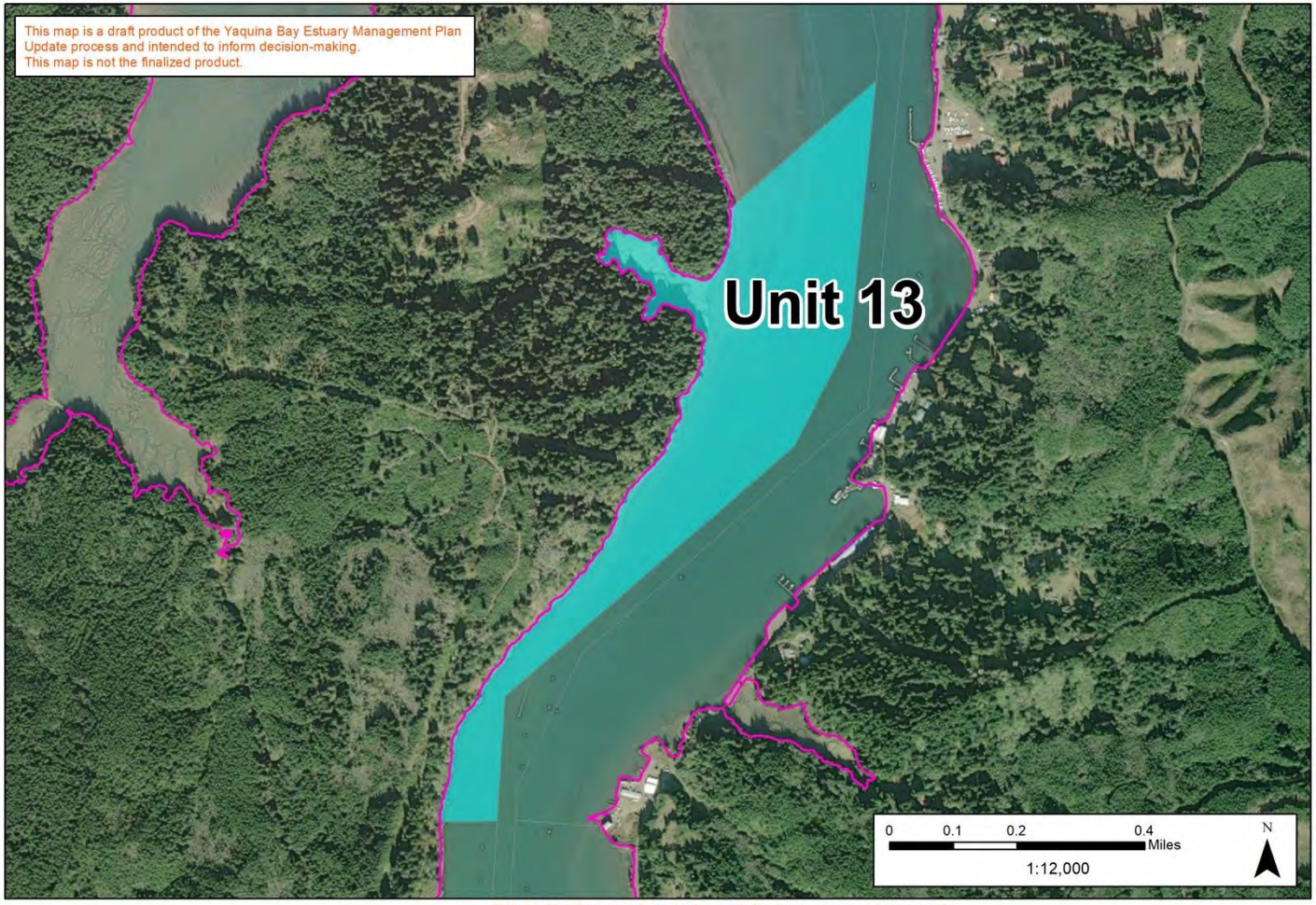


Figure 18. Estuary Management Unit 13, Yaquina Bay

Management Unit 14: YAQUINA BAY

Description

Management Unit 14 is the area between the navigation channel and the east shore from Coquille Point up to River Bend (Oneatta Point) (see Figure 19). Natural resources include fish spawning and nursery areas, eelgrass and shellfish beds, tideflats, and wildlife habitat (all of minor significance). The predominant uses in the unit are small boat moorage, medium and shallow draft navigation, marine construction and repair, and recreation. Major alterations are present in the form of boat launches and haul outs, pilings, wharves, floating docks that serve marina development, and marine construction and repair operations. Additional alterations include fills, dredging, navigation aids, and stabilized shorelines (bulkheads and riprap).

Classification: Development

Unit 14 is a deep-water area close to shore with existing development of moderate intensity and thus is classified for development management.

Resource Capability

Numerous major alterations have occurred in this area in conjunction with past developments, including dredging, intertidal fills and structures such as piers and docks. This unit also has natural deep water adjacent to developable shorelands, one of the last such areas in the estuary. Development of these areas for water dependent uses is not subject to resource capability requirements and will be consistent with the purpose of a development management unit.

Management Objective

Management Unit 14 shall be managed to provide for water dependent development consistent with available levels of services and backup space.

Special Policies

1. Due to the limited water surface area available and the need for direct land to water access, alternatives (such as mooring buoys and dry land storage) to docks and piers for commercial and industrial use are not feasible in Unit 14. Multiple use facilities common to several users are encouraged where practical.

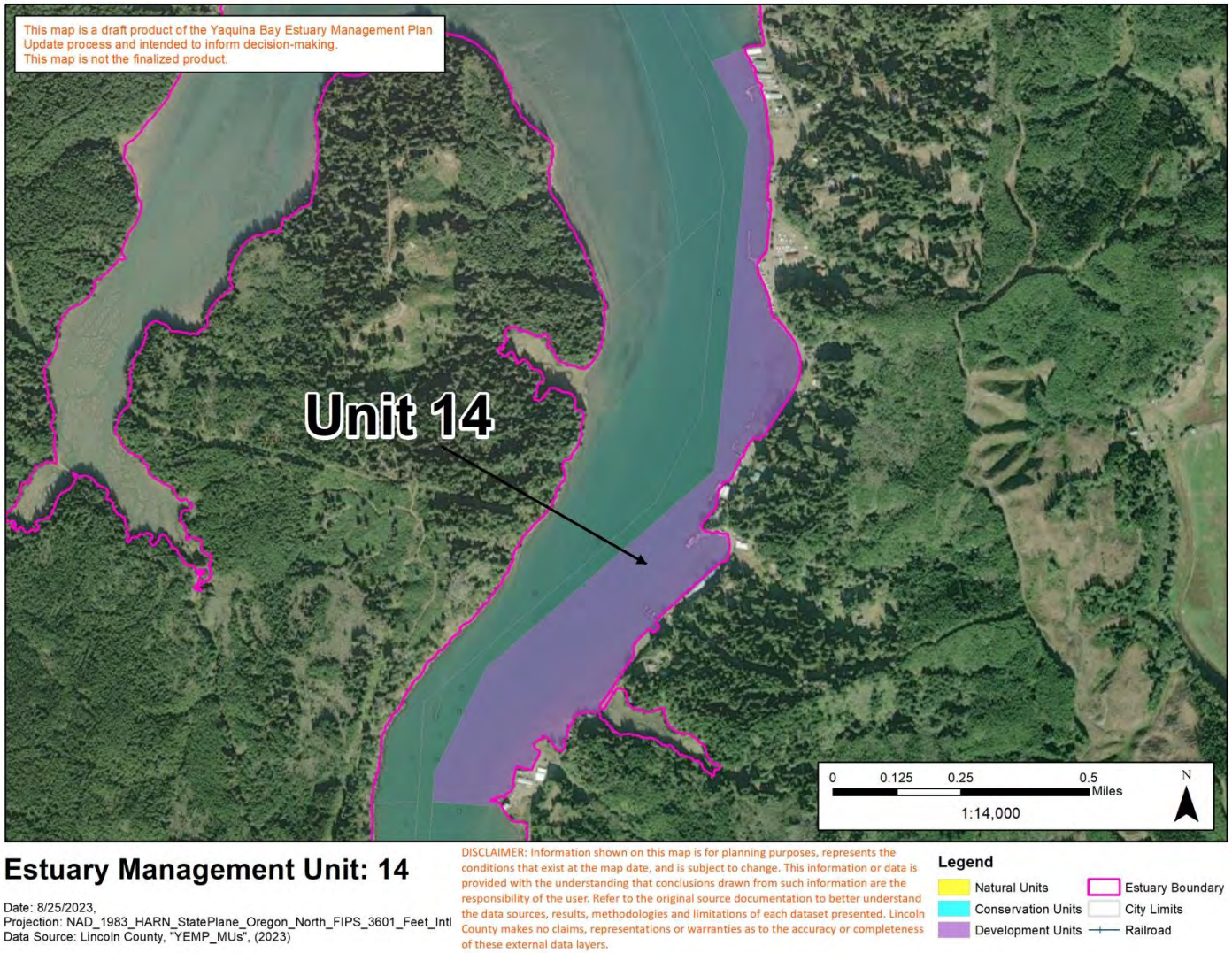


Figure 19. Estuary Management Unit 14, Yaquina Bay

Management Unit 15: YAQUINA BAY

Description

Management Unit 15 consists of Parker Slough east of County Road 515 (see Figure 20). Natural resources of major significance in the unit include tidal marsh, wildlife habitat and fish spawning and nursery areas. Uses within the unit are limited to some shallow draft navigation and minor recreational activity. Only minor alterations are present; these consist of pilings and a small area of riprapped shoreline.

Classification: Natural

This unit is classified natural in order to preserve important resource values associated with the intertidal flats and tidal marsh areas.

Resource Capabilities

This unit is an essentially undisturbed slough sub-system. Alterations have occurred at the mouth of the slough through the construction of the county road and the subsequent bridging of the road dike. This bridge crossing spans the main sub-tidal channel of the slough, and is supported by pilings and riprapped shorelines. Alterations of this nature in conjunction with the maintenance or replacement of this bridge crossing will occur in the least sensitive portion of this unit and are necessary to maintain the tidal circulation and other resource capabilities of the remainder of the unit.

Management Objective

Management Unit 15 shall be managed to preserve and protect natural resources and values.

Special Policies

1. Bridge crossing construction may be permitted only for maintenance or replacement of the existing crossing.

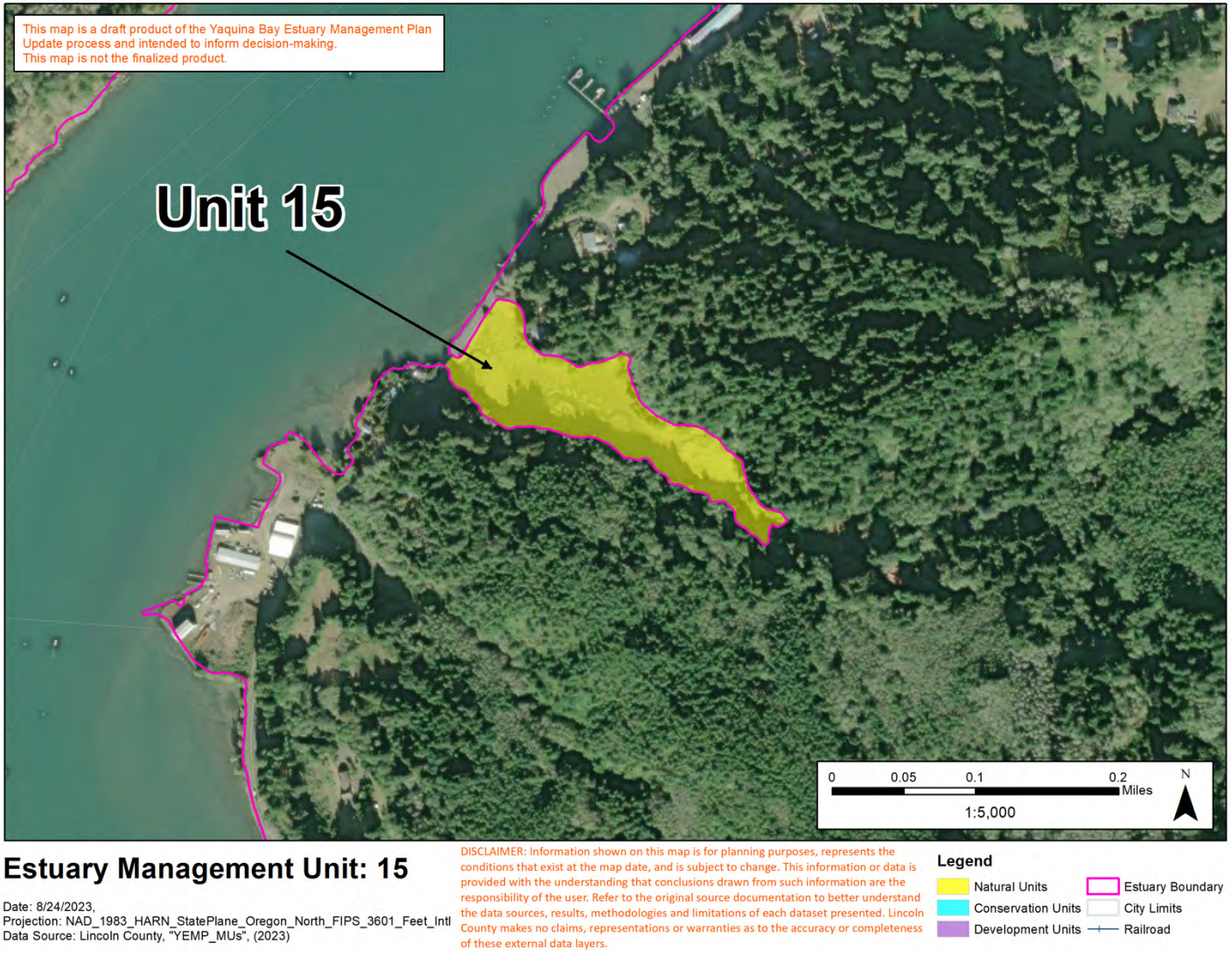


Figure 20. Estuary Management Unit 15, Yaquina Bay

Management Unit 16: YAQUINA BAY

Description

Management Unit 16 consists of the area between the navigation channel and the north shore of the bay from River Bend east to Grassy Point (see Figure 21). Natural resources of significance in the unit include shellfish beds, fish spawning and nursery areas and wildlife habitats. This unit represents a portion of the prime aquaculture area of the estuary and oyster farming is the primary use in the unit. Other uses in the unit include recreation and shallow draft navigation. Alterations within the unit include pilings, floating docks, pier structures and riprap.

Classification: Conservation

This unit is an area suitable and needed for aquaculture and related activities and is thus classified conservation in order to manage for long term uses of renewable resources.

Resource Capability

Unit 16 has been used for decades as a commercial oyster growing area. Water quality and other characteristics make this area especially suitable for such use. Numerous minor alterations needed for these commercial aquaculture operations have taken place in this area. These include pilings, piers, floating docks and stabilized shorelines. Similar types of minor alterations are necessary for the operation of the oyster industry and are consistent with the resource capabilities of this unit.

Management Objective

Management Unit 16 shall be managed to maintain and enhance natural resources and aquaculture opportunities and to provide for aquaculture related development.

Special Policies

1. Aquaculture facilities may include receiving, processing and retail sales facilities.
2. To maintain the suitability of this area for aquaculture and otherwise protect important resources, development for high intensity water dependent recreation shall not be permitted in Management Unit 16.

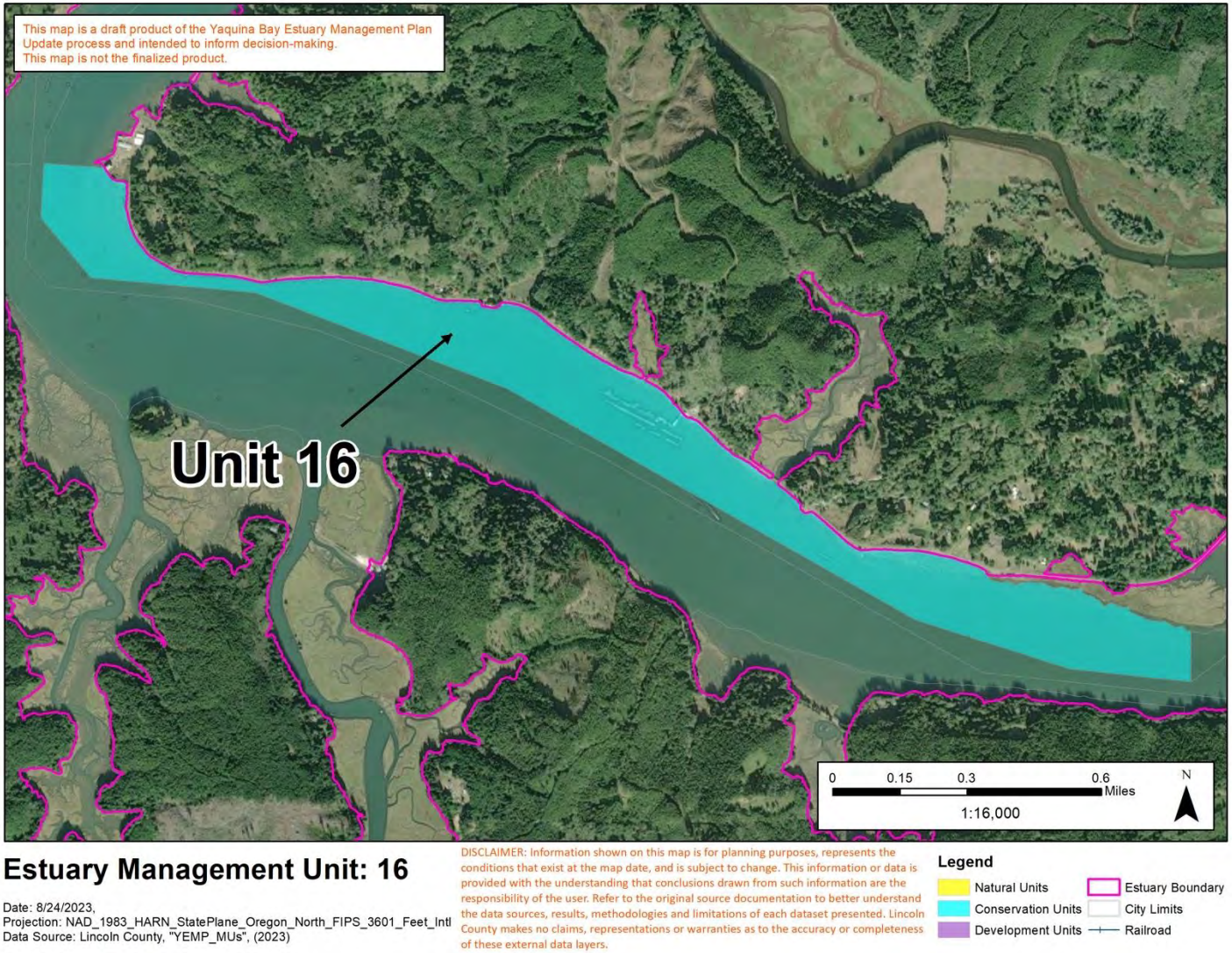


Figure 21. Estuary Management Unit 16, Yaquina Bay

Management Unit 17: YAQUINA BAY

Description

Management Unit 17 consists of the area between the navigation channel and the south shore of the bay from River Bend east to Grassy Point (see Figure 22). Natural resources of significance include shellfish beds, fish spawning and nursery areas, and wildlife habitat. This unit represents a portion of the prime aquaculture area of the estuary and oyster farming is the principal use in the unit. Other uses in the unit include shallow and medium draft navigation, recreation, and commercial harvest. Alterations within the unit are minor and include pilings, floating docks, and riprap.

Classification: Conservation

This is an area suitable and needed for aquaculture and related activities and is thus classified conservation in order to manage for long term uses of renewable resources.

Resource Capability

Unit 17 has been used for decades as a commercial oyster growing area. Water quality and other characteristics make the area especially suitable for such use. Numerous minor alterations needed for these commercial aquaculture operations have taken place in this area. These include pilings, piers, floating docks and stabilized shorelines. Similar types of minor alterations will be necessary for the continued operation of the oyster industry and are consistent with the resource capabilities of this unit.

Management Objective

Management Unit 17 shall be managed to maintain and enhance natural resources and aquaculture opportunities and to provide for aquaculture related development.

Special Policies

1. Aquaculture facilities may include receiving, processing, and retail sales facilities.
2. To maintain the suitability of this area for aquaculture and otherwise protect important resources, development for high intensity water dependent recreation shall not be permitted in Management Unit 17.

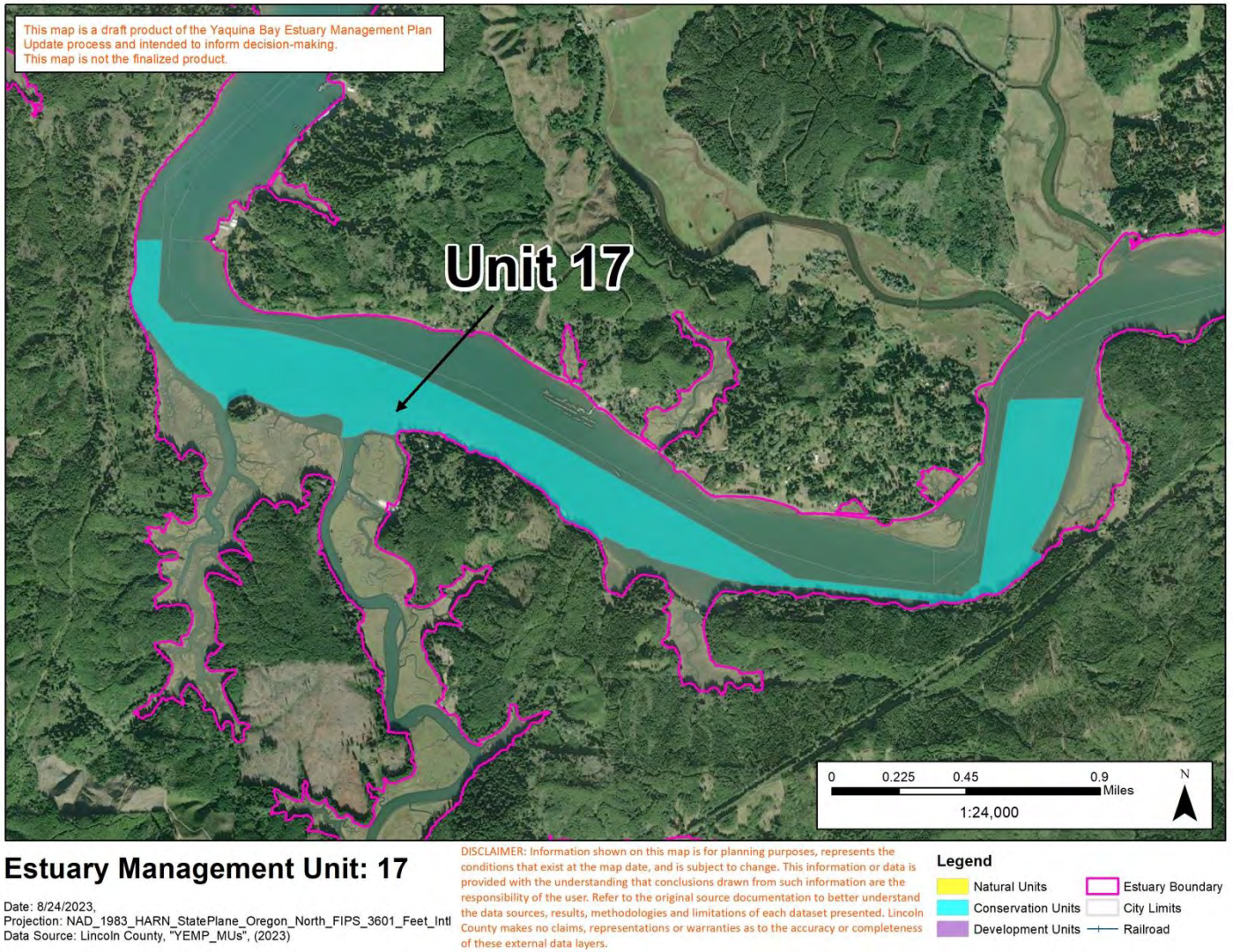


Figure 22. Estuary Management Unit 17, Yaquina Bay

Management Unit 18: YAQUINA BAY

Description

Management Unit 18 includes the tidal marsh complex and intertidal area of McCaffery Slough (see Figure 23). This is an important natural resource area, with a major tract of tidal marsh providing important primary productivity and extensive wildlife habitat. Uses in the area are confined to limited low intensity recreational activities. Substantial portions of the unit are owned by the Wetlands Conservancy and are managed for conservation. Most of the aquatic area and wetlands of this unit remain essentially unaltered.

Classification: Natural

As a major tract of tidal marsh, this unit is classified natural in order to preserve its essential resource characteristics.

Resource Capability

The McCaffery Slough area provides major resource values in the form of primary productivity and wildlife habitat. This is a sensitive area and alterations shall be limited to those activities that do not impact these major natural resource values. Minor structural alterations such as pilings or navigation aids are consistent with the resource capabilities of this area as long as they do not significantly degrade productivity or wildlife habitat.

Management Objective

Management Unit 18 shall be managed to preserve and protect natural resources and values.

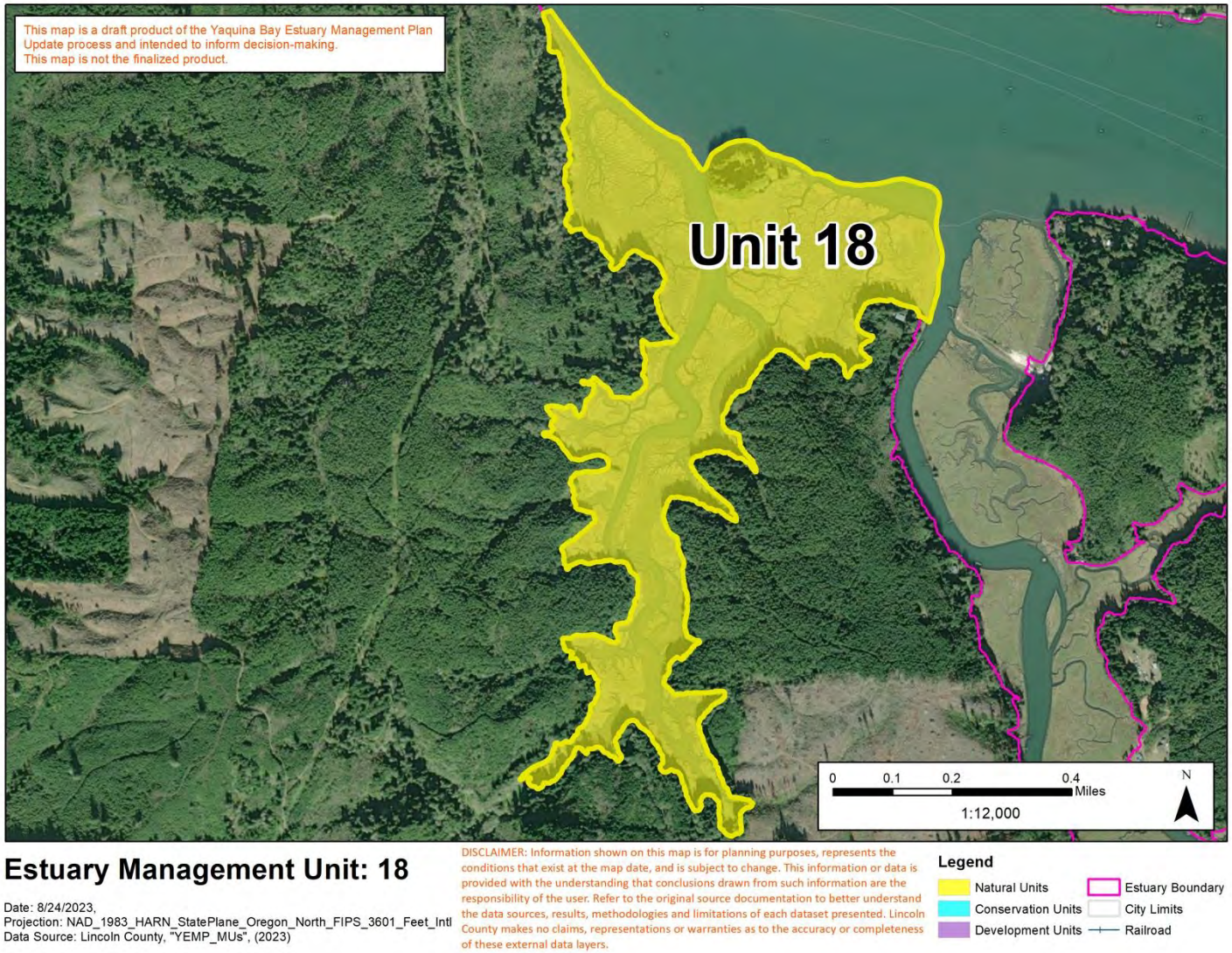


Figure 23. Estuary Management Unit 18, Yaquina Bay

Management Unit 19: YAQUINA BAY

Description

Management Unit 19 includes all of the tidal marsh area of Poole's Slough (see Figure 24). This area is part of the largest and most diverse tidal marsh complex in the estuary and provides an extensive area of significant wildlife habitat. Uses in this area include shallow draft navigation, aquaculture activities, and recreational use. Substantial portions of the unit are owned by the Wetlands Conservancy and are managed for conservation.

Management Unit 19 also includes the main sub-tidal channel of Poole's Slough. This area is presently used for oyster culture and some limited development of facilities is present. The channel is also used for shallow draft navigation in conjunction with aquaculture operations. This area is partially altered, with docks, pilings and other minor structural improvements.

Classification: Natural

This area is a major tract of tidal marsh and is classified natural in order to preserve important resource values.

Resource Capability

Unit 19 provides a large area of tidal marsh and the associated resource values, particularly primary productivity and wildlife habitat. Alterations that do not significantly impact these values (e.g., piling, navigation aids and other minor structural alterations) are consistent with the resource capabilities of this area.

The sub-tidal portion of Poole's Slough is composed primarily of fine organic sediments, and many areas of the channel provide protected rearing sites for juvenile fishes and crabs, and prime growing areas for oysters. Structural alterations that do not overly impede circulation, occupy excessive surface area or adversely affect water quality are consistent with the resource capabilities of this unit.

Management Objective

Management Unit 19 shall be managed to preserve and protect natural resources and values.

Special Policies

1. A Goal 16 exception has been taken to allow aquaculture development in Unit 19 at a level of intensity greater than that normally permitted in a natural management unit. New dredge and fill activities for aquaculture development shall be limited to those activities specifically authorized by the exception statement (see Appendix C). Alterations proposed which are not included within the scope of the exception statement and are not consistent

with the resource capabilities and management objective of this unit are not permitted unless appropriate revisions to the exception are adopted through the plan amendment process.

2. The proposed goal exception will be a phased development (see exception statement). Phases II and III of the project are to be undertaken in accordance with the need justification set forth in the exception statement. Additional expansion for uses other than the proposed seed nursery operation is not permitted under the provisions of this exception.
3. The proposed project size is felt to be adequate to provide seed nursery production for Yaquina Bay (with the possible eventuality of providing seed to other currently un-utilized grounds in other local estuaries). Additional, similar projects shall require further justification of need based on an analysis including, but not limited to, the following information: seed market conditions, demand, and oyster production opportunities.
4. Mitigation for adverse impacts of dredge and fill activities in the tidal marsh area will be required. The nature and extent of mitigation required and final site selection shall be addressed during the Fill and Removal permit process.

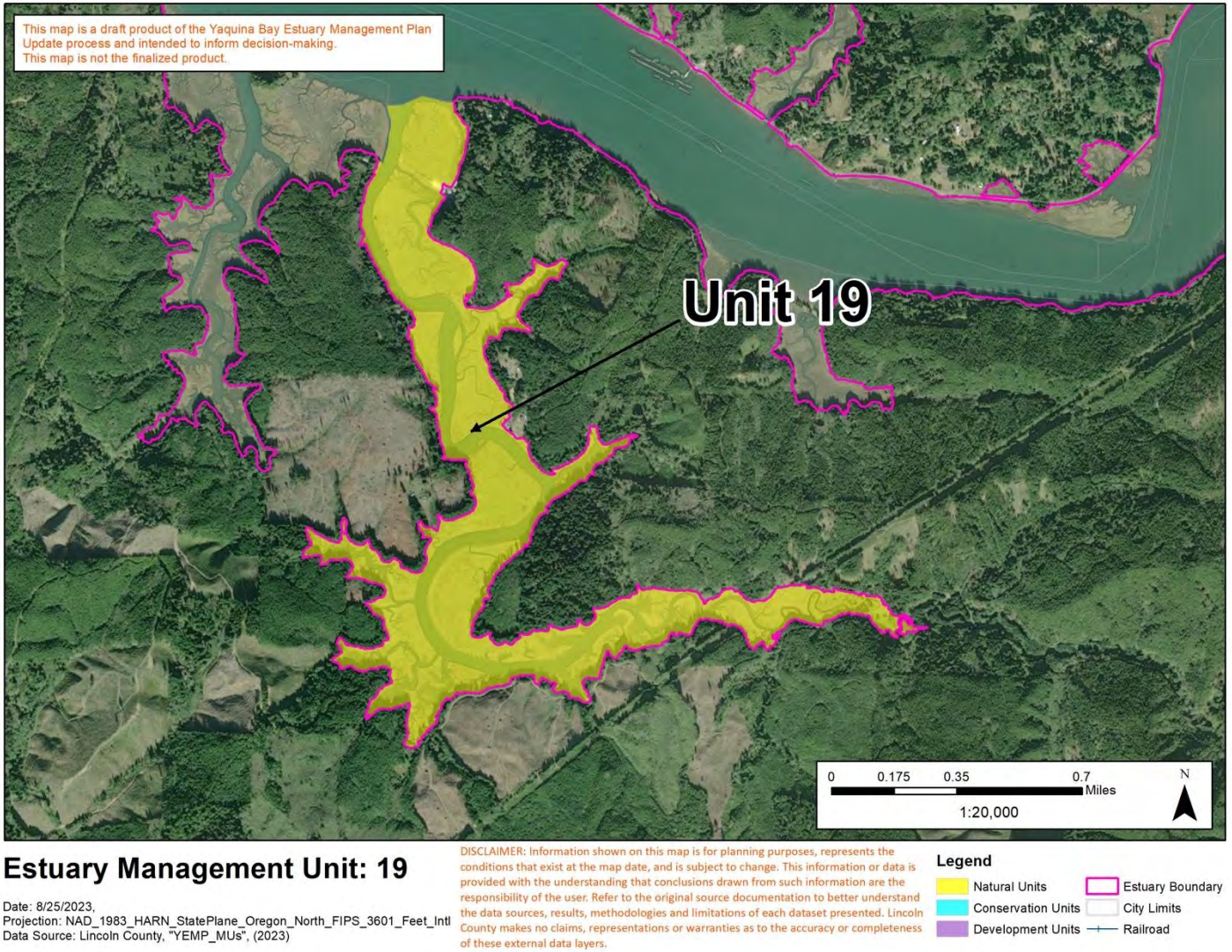


Figure 24. Estuary Management Unit 19, Yaquina Bay

Management Unit 20: YAQUINA BAY

Description

Management Unit 20 is composed of Winant Slough and Johnson Slough on the north side of the estuary (see Figure 25). These small sloughs include tidal marshes, tideflats, and wildlife habitats that are of major significance. Use in the sloughs is limited to minor recreational activity. Small areas of riprapped shoreline and pilings at the mouths of the sloughs represent the only alterations present. Winant Slough is in public ownership (Lincoln County) and is protected by conservation easement. A small portion of the upper portion of Johnson Slough is in conservation ownership (The Wetlands Conservancy), while the majority is held in several private ownerships.

Classification: Natural

Management Unit 20 is considered to be a major tract of tidal marsh and is classified natural in order to protect essential resource values.

Resource Capabilities

Areas included within Unit 20 are important components of the estuarine system, in that they include tracts of productive tidal marsh and intertidal channels that have remained essentially unaltered. This is a sensitive area. Minor structural alterations that will not adversely impact, or will improve, tidal flow or the productive value of the marsh areas are permitted, such as minor pilings and bank stabilization activities associated with the maintenance or replacement of the bridge crossings at the mouths of the sloughs. Such activities may be essential to the maintenance of the resource functions and capabilities of these areas.

Management Objective

Management Unit 20 shall be managed to preserve and protect the resource values of the tidal marshes, tideflats and wildlife habitats.

Special Policies

1. Bridge crossing construction will be permitted for maintenance or replacement of the existing crossing.

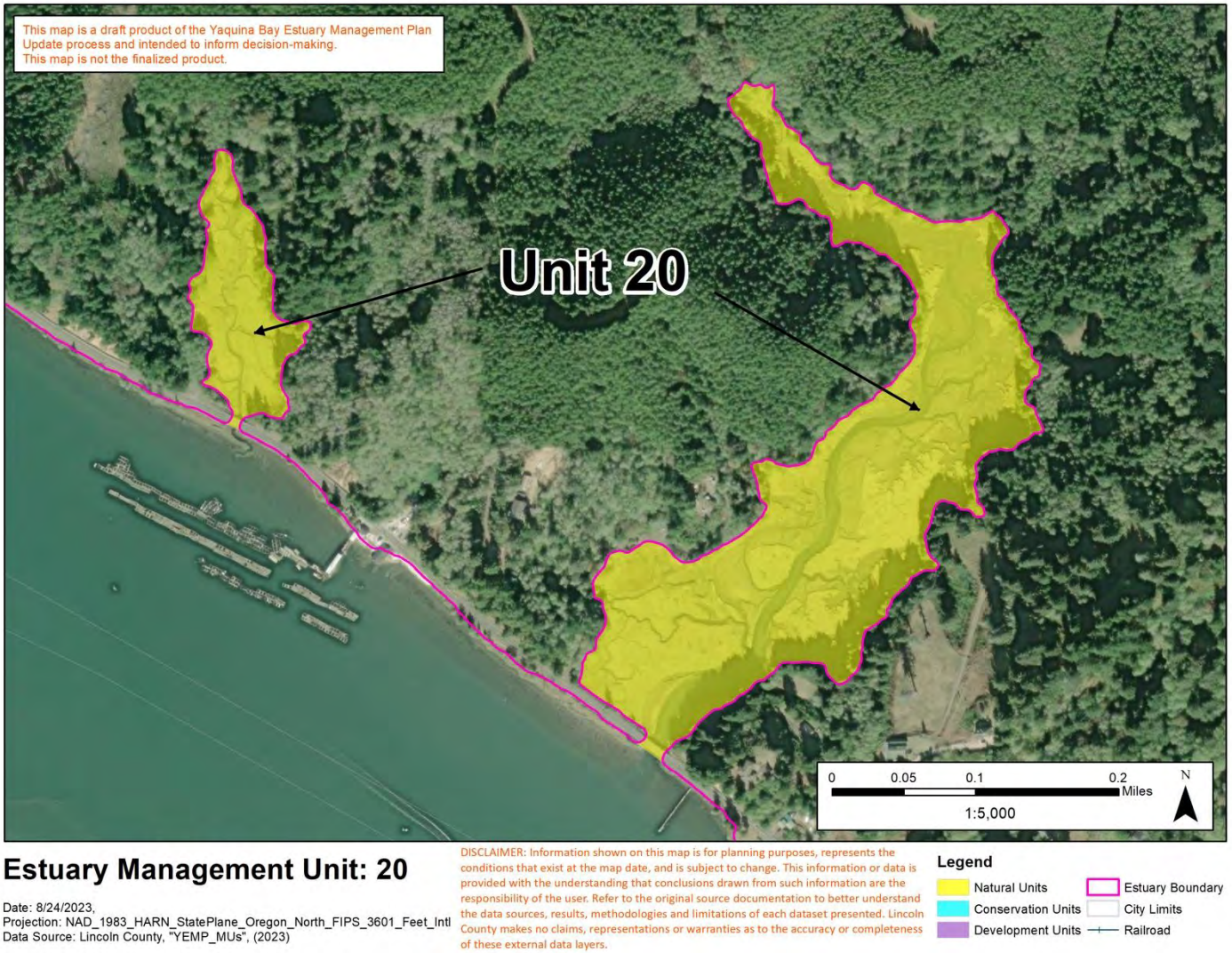


Figure 25. Estuary Management Unit 20, Yaquina Bay

Management Unit 21: YAQUINA BAY

Description

Management Unit 21 consists of Flesher Slough and the tideflats at the slough mouth down to MLLW (see Figure 26). The unit contains tidal marsh and wildlife habitat of major significance. Uses within the unit include limited shallow draft navigation and some recreational activity. The slough has been altered near its mouth by the road (County Road 520) crossing. The road crossing dike has a small culvert through it that restricts tidal exchange within the slough.

Classification: Natural

This area is a major intertidal tract and is classified natural in order to preserve natural resource values.

Resource Capability

Flesher Slough is an important intertidal flat and tidal marsh area. Substrates in the slough are mostly fine-grained organic materials, and small tracts of eelgrass are present near the mouth of the main slough channel. The slough mouth has been severely altered by placement of fill for the county road dike. Currently, the small culvert through which the slough fills and drains allows very limited tidal circulation. Removal activities to install additional culverts or the construction of a bridge crossing would greatly improve circulation and productivity of this area. Activities undertaken for the purpose of active restoration align with the resource capabilities of the unit and would result in long-term benefits that will more than offset the short term disturbance to the area.

Management Objective

Management Unit 21 shall be managed to protect and, where appropriate, enhance the natural resources and values.

Special Policies

1. Active restoration activities that improve ecosystem function in Flesher Slough are allowed, consistent with the resource capabilities of the unit.

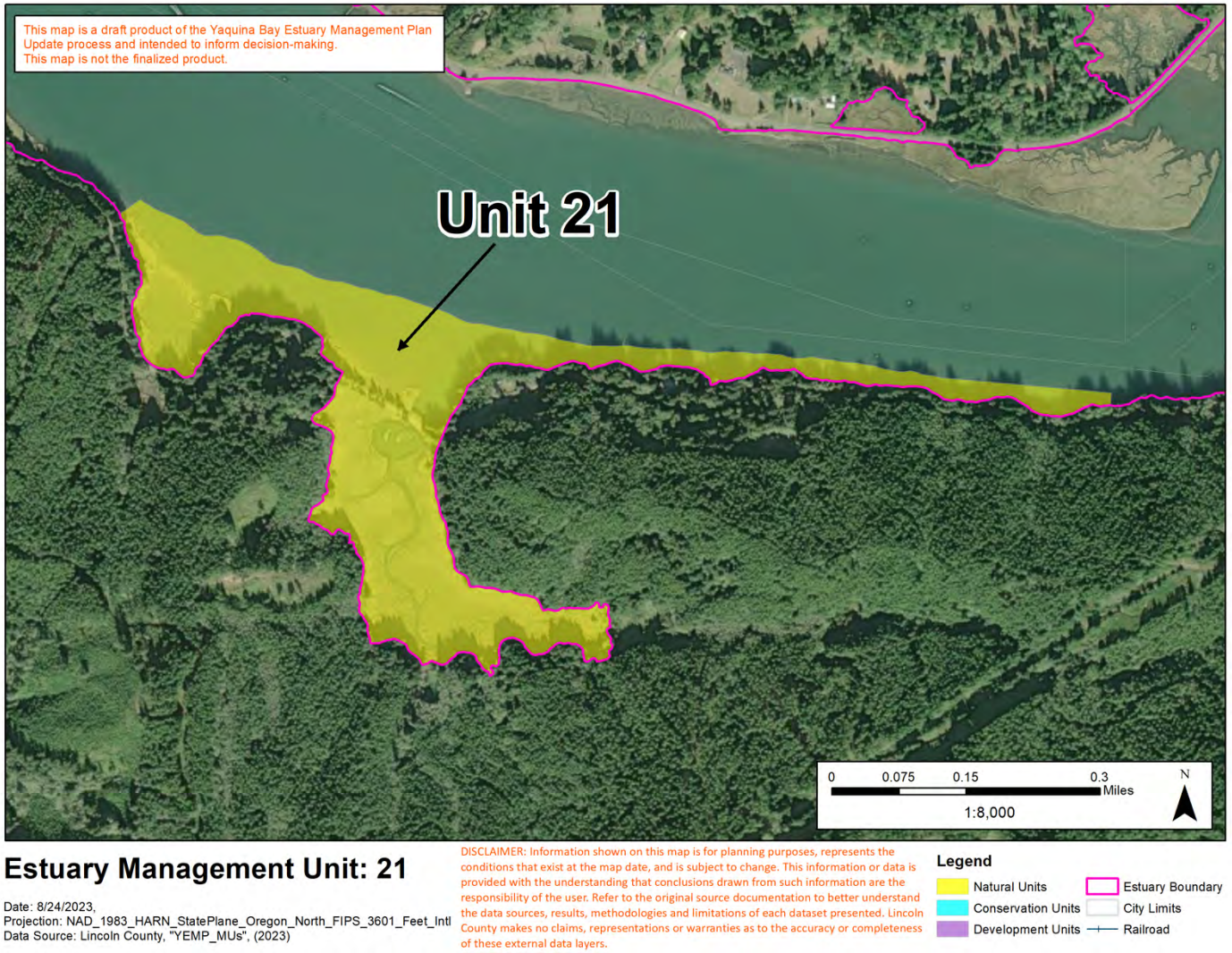


Figure 26. Estuary Management Unit 21, Yaquina Bay

Management Unit 22: YAQUINA BAY

Description

Management Unit 22 consists of the tidal marsh and tideflat area located between the navigation channel and the southeast shoreline and includes the areas known locally as Blind Slough and Busher Flats (see Figure 27). The unit contains both tidal marsh and wildlife habitat of major significance. Uses within the unit are limited to some shallow draft boat traffic and minor recreational use. The area is unaltered, except for a few abandoned pilings.

Classification: Natural

This unit is classified natural in order to preserve the resource values of the major tracts of tideflats and tidal marsh.

Resource Capability

Busher Flats is an important resource area, with numerous natural resource values including productive intertidal and shallow sub-tidal areas, tidal marsh, and important waterfowl habitat. Alterations that would occupy or remove significant amounts of intertidal surface area could have negative impacts on these resource values and their contribution to the estuarine system. However, limited minor alterations such as pilings or navigation aids would not be a significant impact on these values and are consistent with the resource capabilities of this area.

Management Objective

Management Unit 22 shall be managed to preserve the resource values associated with the important tideflats, tidal marsh and wildlife habitat present within the unit.

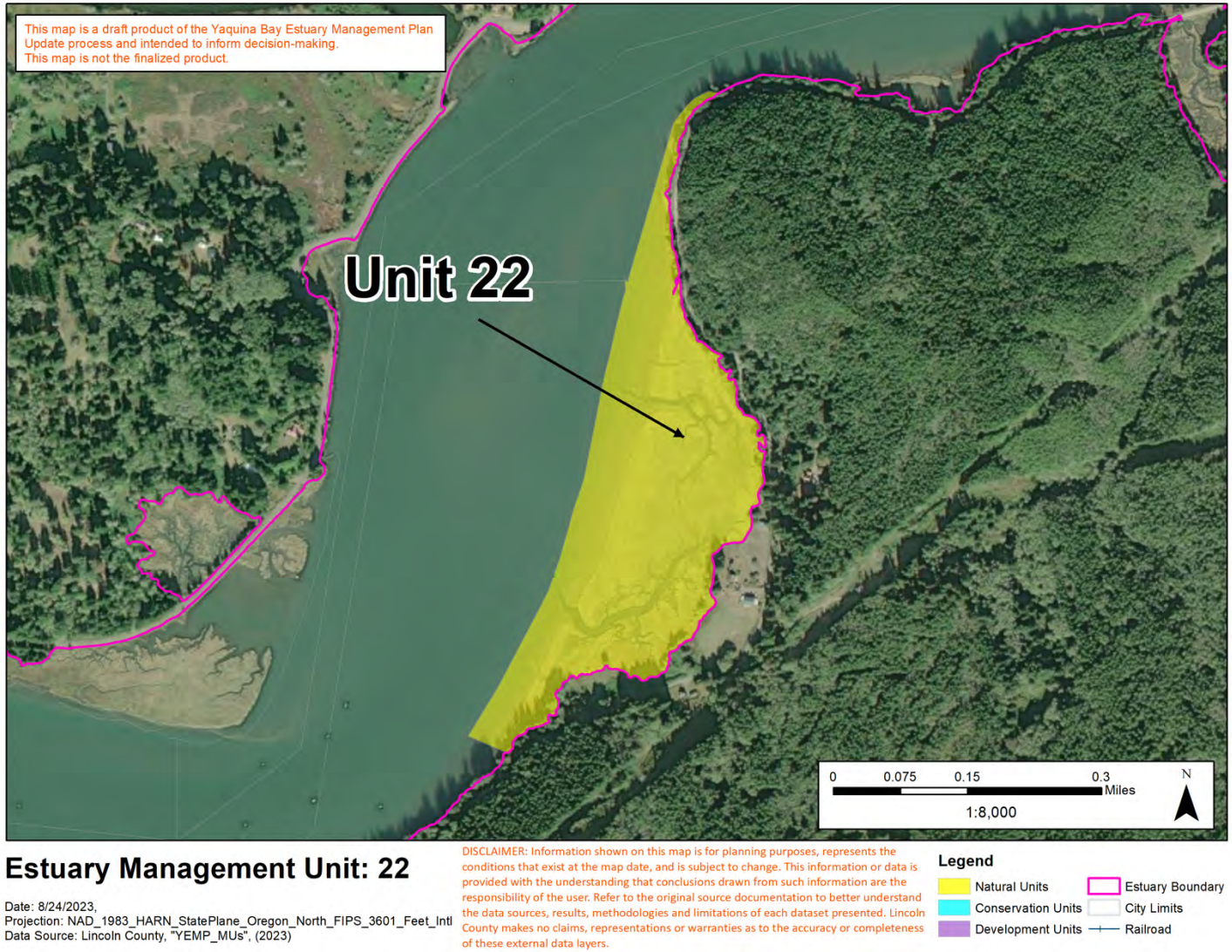


Figure 27. Estuary Management Unit 22, Yaquina Bay

Management Unit 23: YAQUINA BAY

Description

Management Unit 23 consists of the major tract of tidal marsh known as Grassy Point, extending from Lower High Water (LHW) inland to the line of non-aquatic vegetation (see Figure 28).

Classification: Natural

This unit is a major tract of tidal marsh and is classified natural to preserve its important resource values.

Resource Capability

As a major tract of tidal marsh, this unit should be kept free of alterations that might result in channelization or disruption of tidal flow, destruction of wetland vegetation, or excessive soil disturbance. Minor structural alterations such as pilings or navigation aids are consistent with maintaining the area's natural resource values, particularly those activities associated with improving tidal circulation for that portion of this unit north of County Road 515.

Management Objective

Management Unit 23 shall be managed to preserve, protect and, where appropriate, enhance the natural values of its salt marsh and wildlife habitat.

Special Policies

1. Improvement of tidal flow to those marsh areas north of Yaquina Bay Road is considered to be active restoration consistent with the purposes and resource capabilities of this unit.

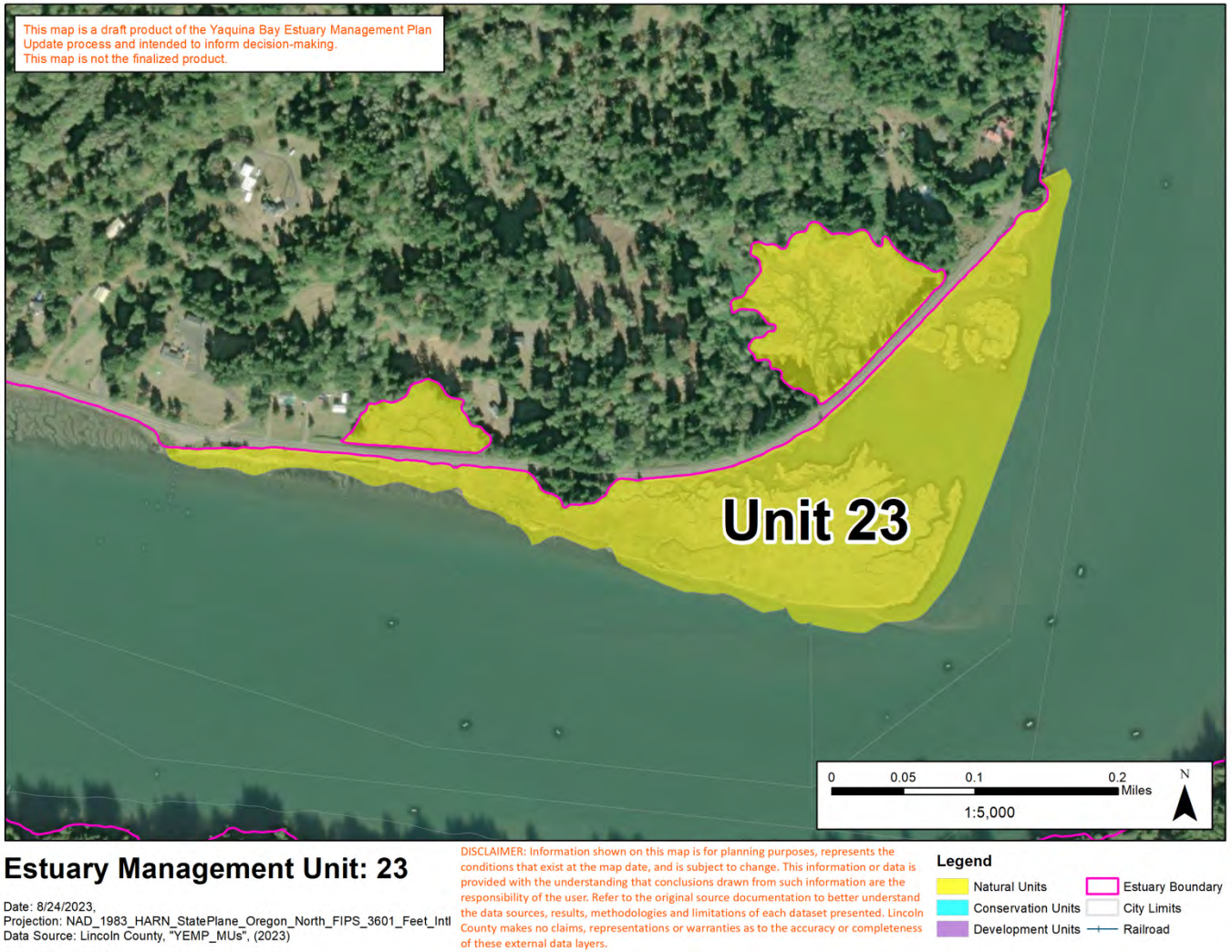


Figure 28. Estuary Management Unit 23, Yaquina Bay

Management Unit 24: YAQUINA BAY

Description

Management Unit 24 includes the area between the navigation channel and the north shore from Grassy Point east to Criteser's Moorage (see Figure 29). This unit contains a number of natural resources of major significance, including eelgrass and shellfish beds, fish spawning and nursery areas, tideflats and wildlife habitat. Medium and shallow draft navigation and recreational activity are the major uses within the unit. Alterations include riprapped shorelines, pilings, navigation aids, and dikes and tidegates (at the mouth of Boone and Nute Sloughs), which are maintained by Mill 4 Drainage District.

Classification: Natural

This unit is classified natural in order to preserve the important diversity of natural resources values in the area.

Resource Capability

Unit 24 is an area of diverse resource values, including productive intertidal and shallow sub-tidal areas, shellfish beds, fish spawning and nursery areas, and eelgrass beds. Activities and uses consistent with the resource capabilities of this unit include:

- Minor structural alterations such as pilings or small docks that do not occupy excessive surface area or significantly affect circulation patterns;
- Temporary alterations such as dredging for submerged cable crossings;
- Active restoration to improve ecosystem function of the natural resources of the unit.

Management Objective

Management Unit 24 shall be managed to preserve natural resources such as shellfish beds, productive tideflats and wildlife habitat.

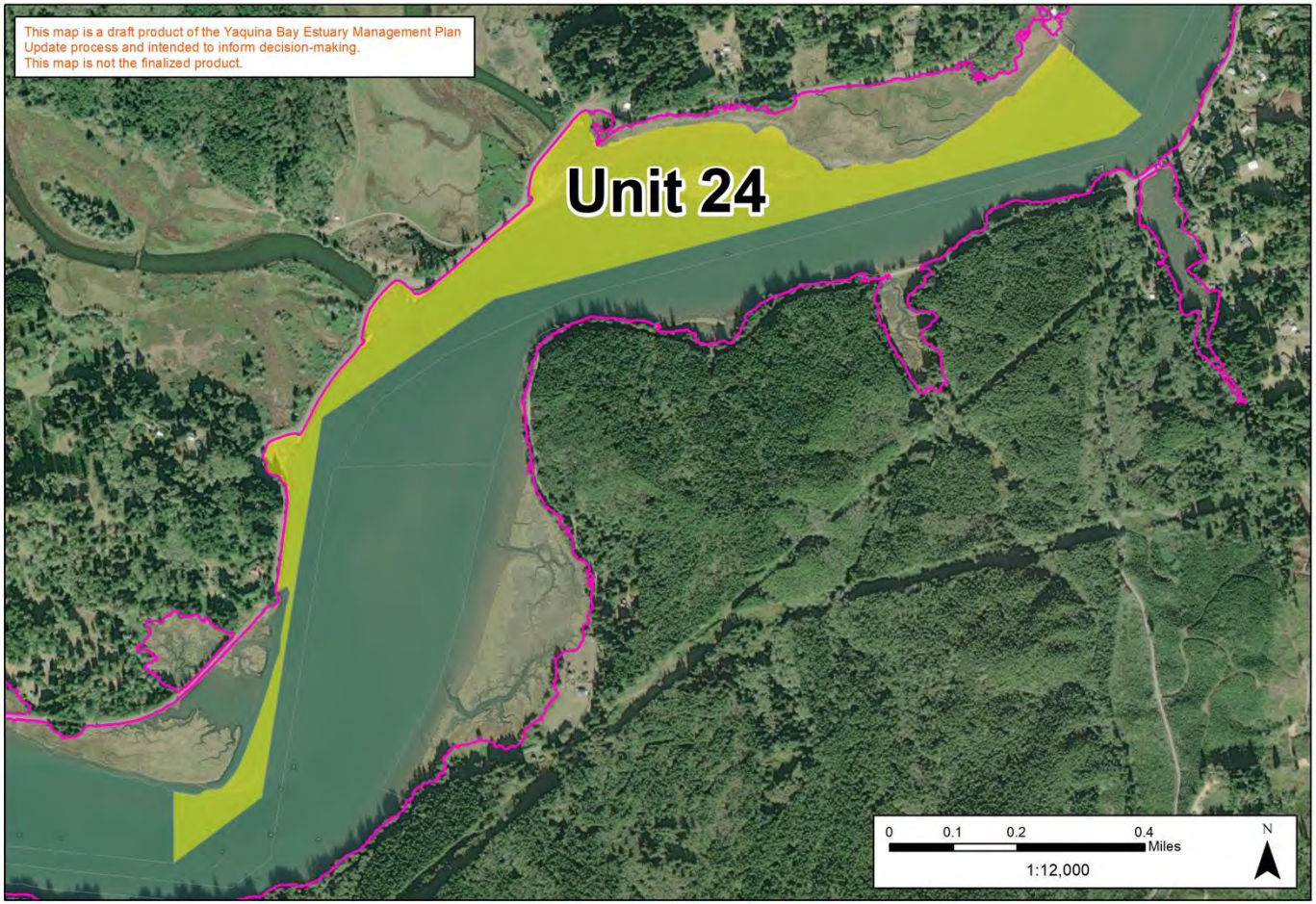


Figure 29. Estuary Management Unit 24, Yaquina Bay

Management Unit 25: YAQUINA BAY

Description

Management Unit 25 takes in the area between the navigation channel and the south shore from the upriver end of Management Unit 22 up to the Toledo city limits (see Figure 30). This unit has shellfish beds, fish spawning and nursery areas, and wildlife habitat, all of major significance. Major uses within the unit include recreation and medium and shallow draft navigation. Numerous minor alterations are present within the unit. They include dredging, riprap, bulkheads, piers, wharves, floating docks, pilings, and the Port of Toledo's boat-launch and mooring float at the Toledo Airport.

Classification: Conservation

As a partially altered area adjacent to development of moderate intensity, this unit is classified conservation in order to conserve resource values and manage for development that requires only minor alterations.

Resource Capability

Unit 25 is an area with a number of important resource characteristics; however the area has a number of significant existing alterations at several locations, including the Port of Toledo public boat launch facility. Portions of this unit adjacent to the Toledo airport and the existing port facility are suitable for water dependent uses. Minor structural alterations such as piers, pilings, docks and shoreline stabilization in conjunction with water dependent uses would not have significant adverse effects and would be similar to the existing development in this area.

Management Objective

Management Unit 25 shall be managed to conserve natural resources.

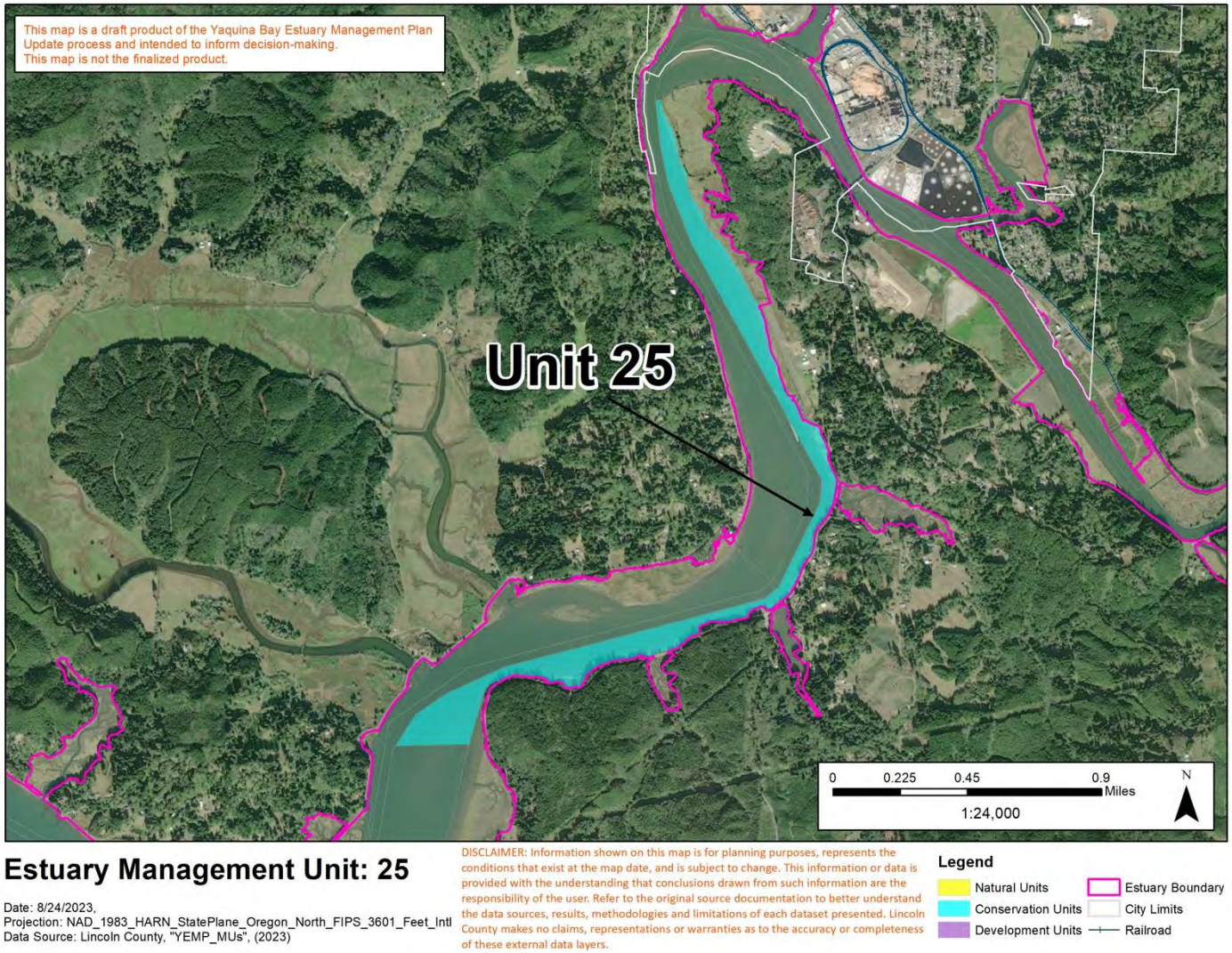


Figure 30. Estuary Management Unit 25, Yaquina Bay

Management Unit 27: YAQUINA BAY

Description

Management Unit 27 is a large tidal marsh area immediately east of the mouth of Nute Slough, extending upriver to the Port of Toledo's paddle park at approximately river mile 10.3 (see Figure 31). The tidal marsh and wildlife habitat within this unit are considered to be of major significance. The unit also includes a small tideflat area that supports important shellfish beds. Use within the unit is confined to recreational activities. A small portion of this unit is diked by the county road crossing, but culverts allow relatively free flow of tidal waters into this area. The major portion of this unit is in public ownership (State of Oregon Board of Higher Education and the Port of Toledo).

Classification: Natural

As a major tract of tidal marsh, this unit is classified natural in order to preserve critical resource values.

Resource Capability

Unit 27 is an important area for primary productivity and wildlife habitat values. This is a highly sensitive area and the resource values can be subject to disturbance from structural developments or alterations. Minor structural improvements for needed public uses such as navigation aids would be consistent with the resource capabilities of this unit.

Management Objective

Management Unit 27 shall be managed to preserve and protect the resource values of the tidal marsh and tidal flats within the unit.

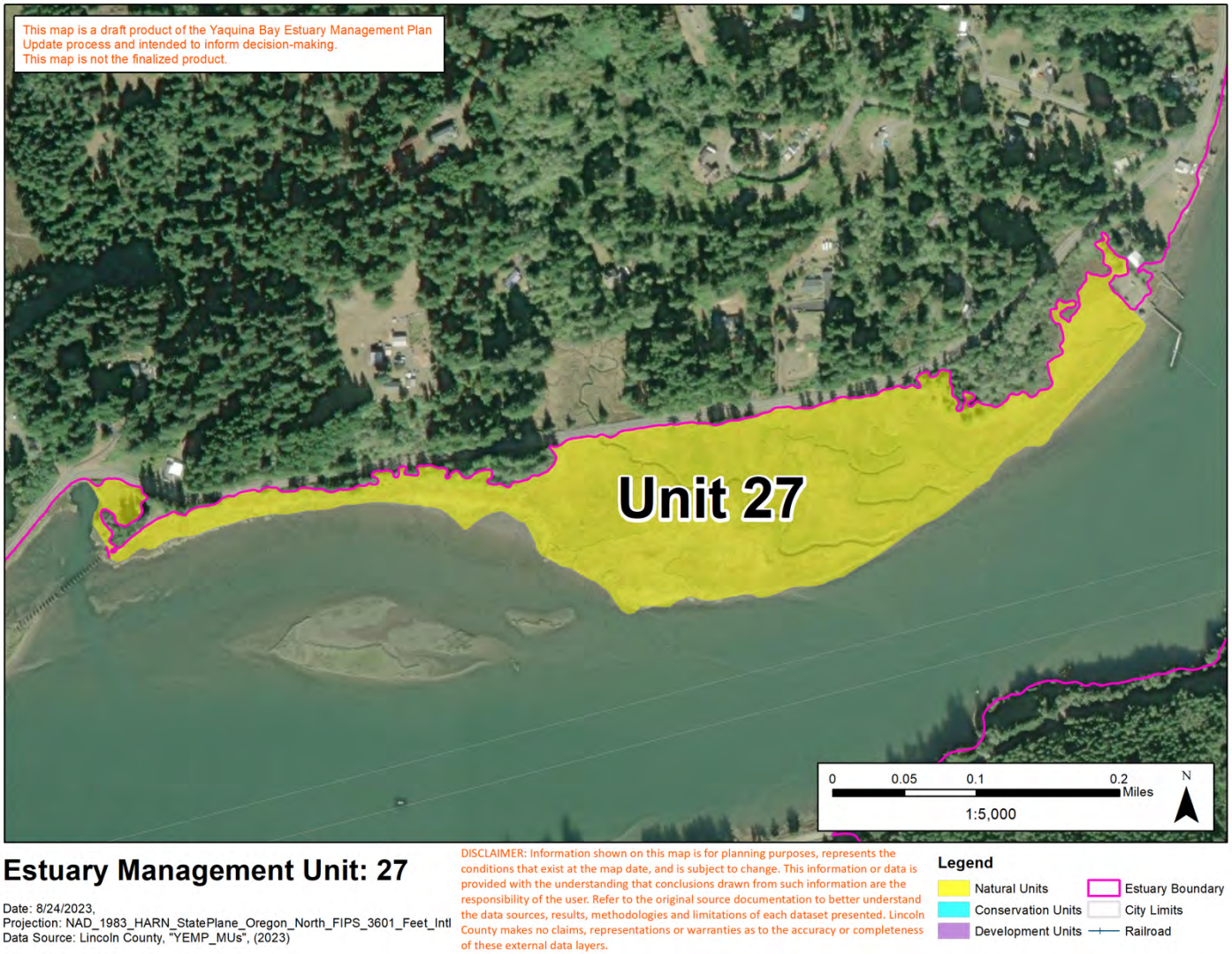


Figure 31. Estuary Management Unit 27, Yaquina Bay

Management Unit 28: YAQUINA BAY

Description

Management Unit 28 consists of three small sloughs formed by the mouths Babcock Creek, Montgomery Creek and a third unnamed creek, located along the south shore of the bay west of the Toledo Airport (see Figure 32). These sloughs contain important intertidal flats, channels and tidal marshes, and provide fish spawning and nursery areas and wildlife habitat of major significance. Minor recreational activity is the only current use within this unit. All three sloughs are partially closed off at the mouth by the county road crossings but piling bridges or culverts allow the sloughs to fill and drain with the tides.

Classification: Natural

These areas are classified natural in order to preserve the diversity of important resource values present.

Resource Capability

The areas contained in unit 28 are typical of the small sloughs found in the middle section of the estuary. The areas are primarily intertidal flats, with low and high tidal marshes around the fringes. In addition to their value for productivity, these sloughs provide a protected environment for rearing of juvenile fishes and crabs as well as valuable waterfowl feeding and resting sites. Minor structural alterations associated with low intensity uses are consistent with the resource capabilities of the unit.

Tidal circulation is currently impeded in these areas by the county road crossings. The construction of bridge crossings or the placement of additional or larger culverts to enhance tidal circulation would improve resource values and would be consistent with the area's resource capabilities.

Management Objective

Management Unit 28 shall be managed to preserve, protect and where appropriate, enhance the natural resources and values.

Special Policies

1. Bridge crossing construction and/or culvert replacement activities may be permitted for maintenance or replacement of existing crossings or for active restoration of tidal exchange in these sloughs. Alterations for these activities are consistent with the purpose and resource capabilities of this unit.

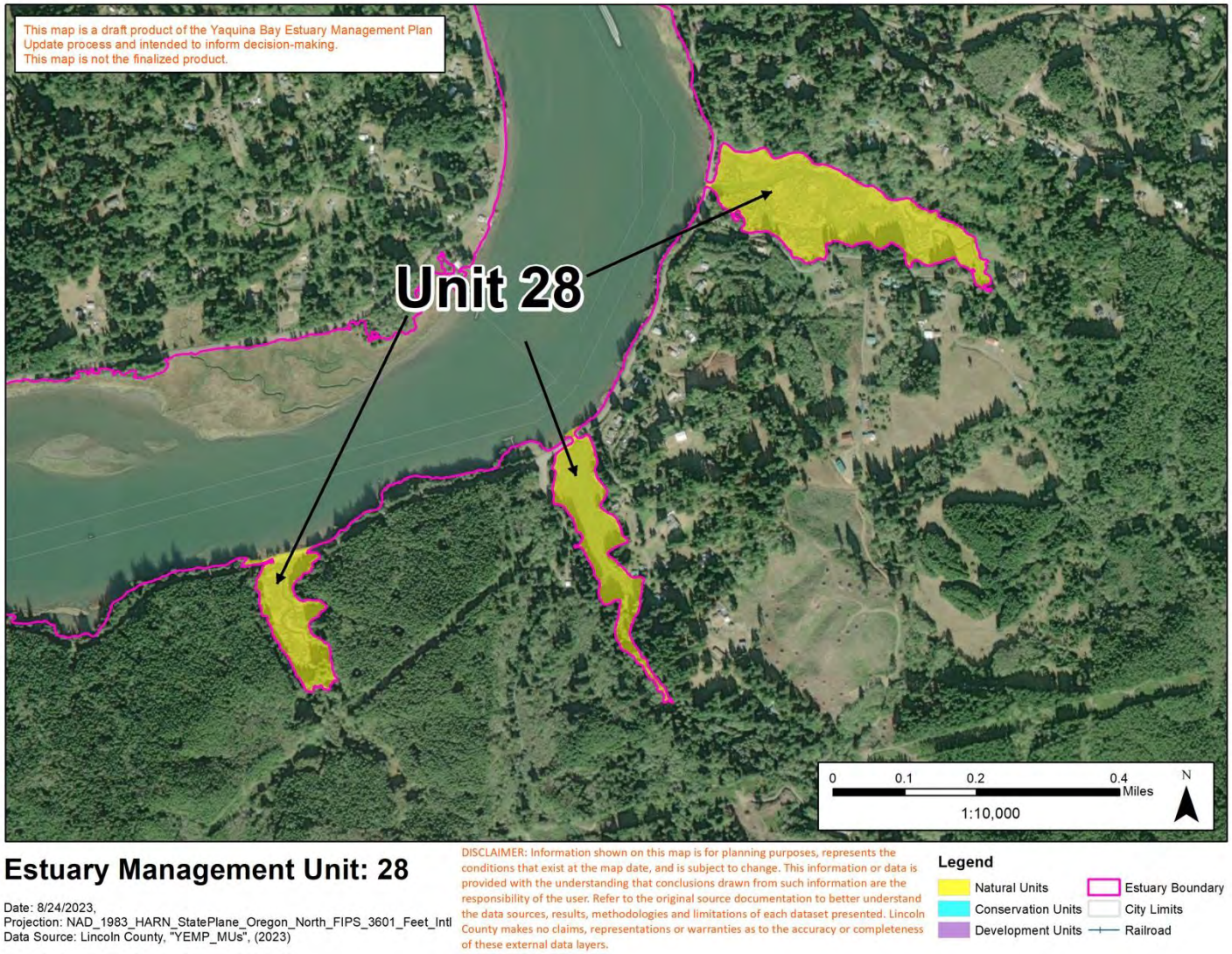


Figure 32. Estuary Management Unit 28, Yaquina Bay

Management Unit 30: YAQUINA BAY

Description

Management Unit 30 takes in the area between the navigation channel and the north shore from the Port of Toledo Paddle Park east to the Toledo city limits (see Figure 33). Shellfish beds, fish spawning and nursery areas and wildlife habitats of minor significance are found within the unit. Uses within the unit include a launch and moorage facility for small boats, medium and shallow draft navigation, maintenance dredging, and recreation. Significant numbers of pilings and dolphins formerly used for log storage are present, as well as a number of other minor alterations including riprap, piers and floating docks.

Classification: Conservation

This is a partially altered area and is classified conservation in order to provide for uses that require only minor alterations and are consistent with the conservation of natural resources.

Resource Capability

Unit 30 is an area with a number of alterations, including docks, piers and maintenance dredging at Criteser's Moorage. The area adjacent to Criteser's Moorage is suitable for expansion of water dependent uses. Additional minor structural alterations such as piers, pilings and docks in conjunction with water dependent uses would not have significant adverse effects to the resources of the unit and would be similar to existing development in this area.

Management Objective

Management Unit 30 shall be managed to provide for continuation of existing water dependent uses consistent with the conservation of natural resources.

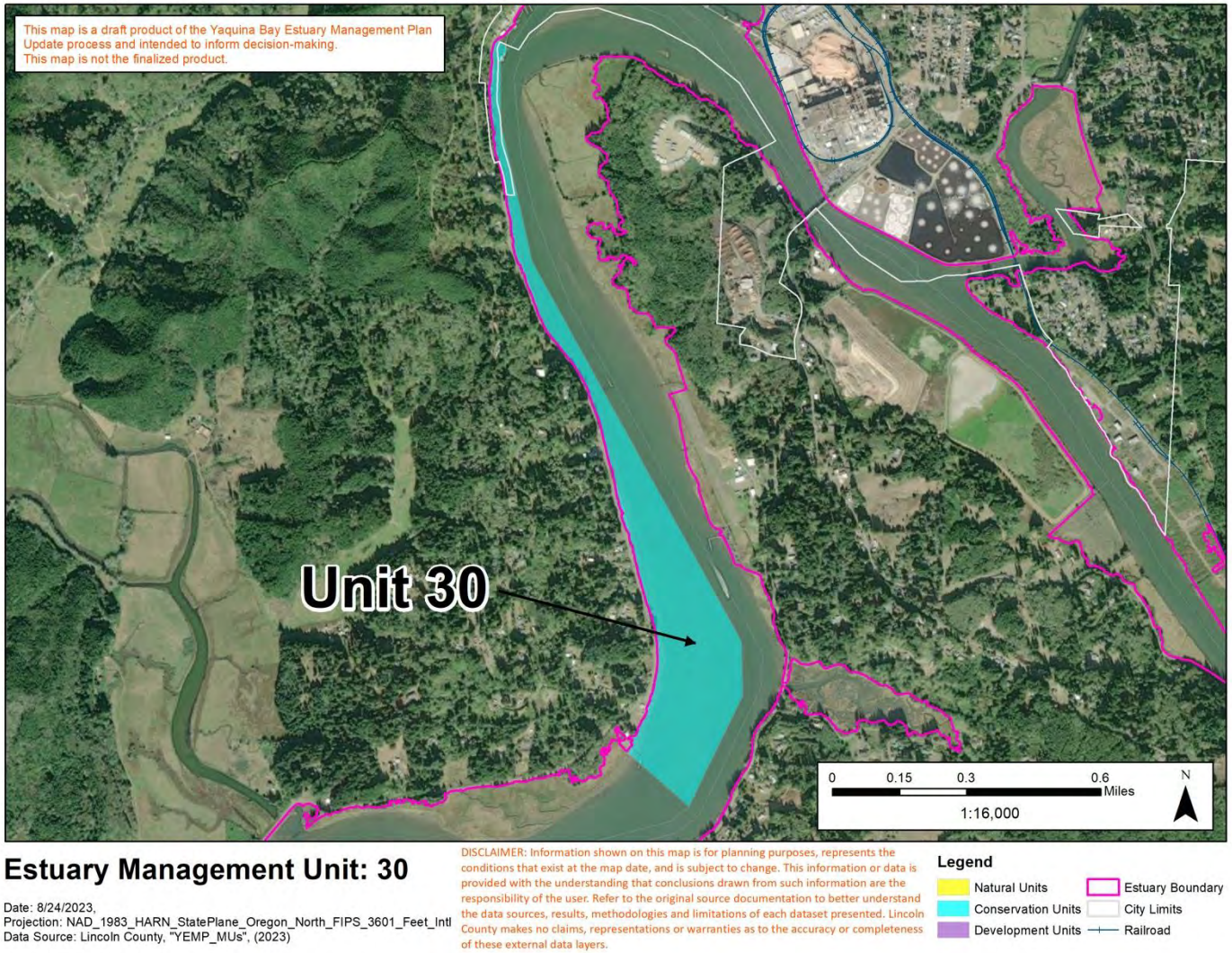


Figure 33. Estuary Management Unit 30, Yaquina Bay

Management Unit 31: YAQUINA BAY

Description

Management Unit 31 consists of the area north of the navigation channel from the Toledo city limits upstream to the mouth of Mill Creek. After RM 14, the north side of MU 31 extends past the navigation channel from river centerline to north shore up to the city of Toledo urban growth boundary (UGB). It includes Depoe Slough up to the tidegate, and Olalla Slough up to and including the railroad bridge (see Figure 34). Natural resources of minor significance present within the unit include some small fringes of tidal marsh, tideflat, spawning and nursery areas and wildlife habitat. Fish migration routes are considered significant. Uses of major significance within the unit include medium draft navigation, the Port of Toledo marina, marine construction and repair operations, including the Port of Toledo shipyard at Sturgeon Bend, and maintenance dredging. The unit has several significant alterations, including bulkheads, pilings, piers, dikes, outfalls, and overhead crossings.

Classification: Development

This is an area of minimal biological sensitivity and is designated development to provide for the continuation of existing uses and for new uses requiring alteration of the estuary.

Resource Capability

Unit 31 fronts the industrialized urban waterfront at Toledo. This is a significantly altered area with numerous established water dependent uses including port facilities, boat building and repair operations and wood products related activities. Biological values in this area are of minor significance. Navigation channel maintenance will protect the migration routes of anadromous fish through this area. Competing uses for the limited surface area of this unit shall be evaluated for compatibility.

Management Objective

Management Unit 31 shall be managed to provide for continued development of water dependent and water related uses.

Special Policies

1. Expansion or relocation of the City of Toledo's existing sanitary sewer outfall must comply with Department of Environmental Quality requirements.
2. New boat moorage, boat works, boat repair and associated water-dependent and water related commercial and industrial activity will be encouraged on Tokyo Slough, at Sturgeon Bend, and at other locations with direct access to navigable water. Docks for small boats will be allowed consistent with existing development on the urban waterfront

and when compatible with existing large vessel moorage and industrial activity on the river.

3. The Port of Toledo will be encouraged to maintain its existing dock at the foot of Main Street, for transfer of cargo and for boats seeking a downtown moorage.
4. Due to the limited water surface area available and the need for direct land to water access, alternatives (such as mooring buoys and dry land storage) to docks and piers for commercial and industrial uses are not feasible in Unit 31. Multiple use facilities common to several users are encouraged where practical.

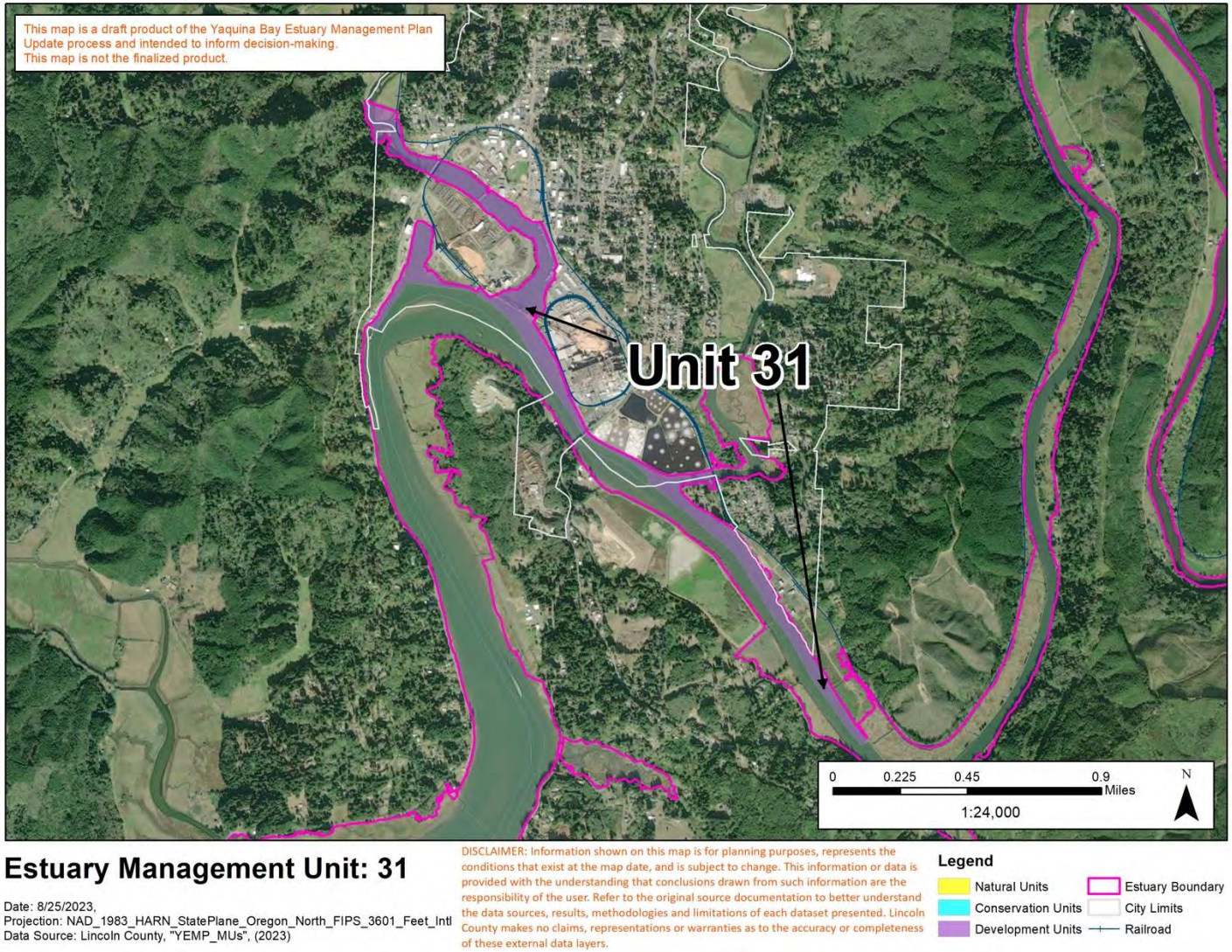


Figure 34. Estuary Management Unit 31, Yaquina Bay

Management Unit 31A: YAQUINA BAY

Description

Management Unit 31A consists of the portion of Olalla Slough upstream of the railroad bridge, extending up to the limit of tidal influence at the Georgia Pacific pumping station and tidegate at SE 10th Street (see Figure 35). Natural resources of significance in the unit include fish migration routes and nursery areas, and a sizable area of tidal marsh totaling approximately 36 acres. This tidal marsh area was formerly blocked from direct tidal inundation by dikes but has been restored to tidal exchange by dike breaching and channel restoration that took place in 2009. Uses in this unit are limited to recreational use, primarily at the City of Toledo's East Slope Park and Glen Lyons Natural Area.

Classification: Natural

This unit contains a major tract of tidal marsh and has been classified natural in order to preserve and protect natural resources in the unit.

Resource Capability

Management Unit 31A includes areas of restored tidal marsh that were historically diked for agricultural use and largely disconnected from the tidal regime of the estuary. These tracts are now substantially restored to tidal exchange, reestablishing their direct connection to the estuarine system. The restoration of full function of this marsh is ongoing and additional active restoration activities may be undertaken to further enhance the value of these tracts to the estuarine system. Such active restoration activities are consistent with the resource capabilities of this unit.

Management Objective

Management Unit 31A shall be managed to preserve, protect, and enhance natural resources and values.

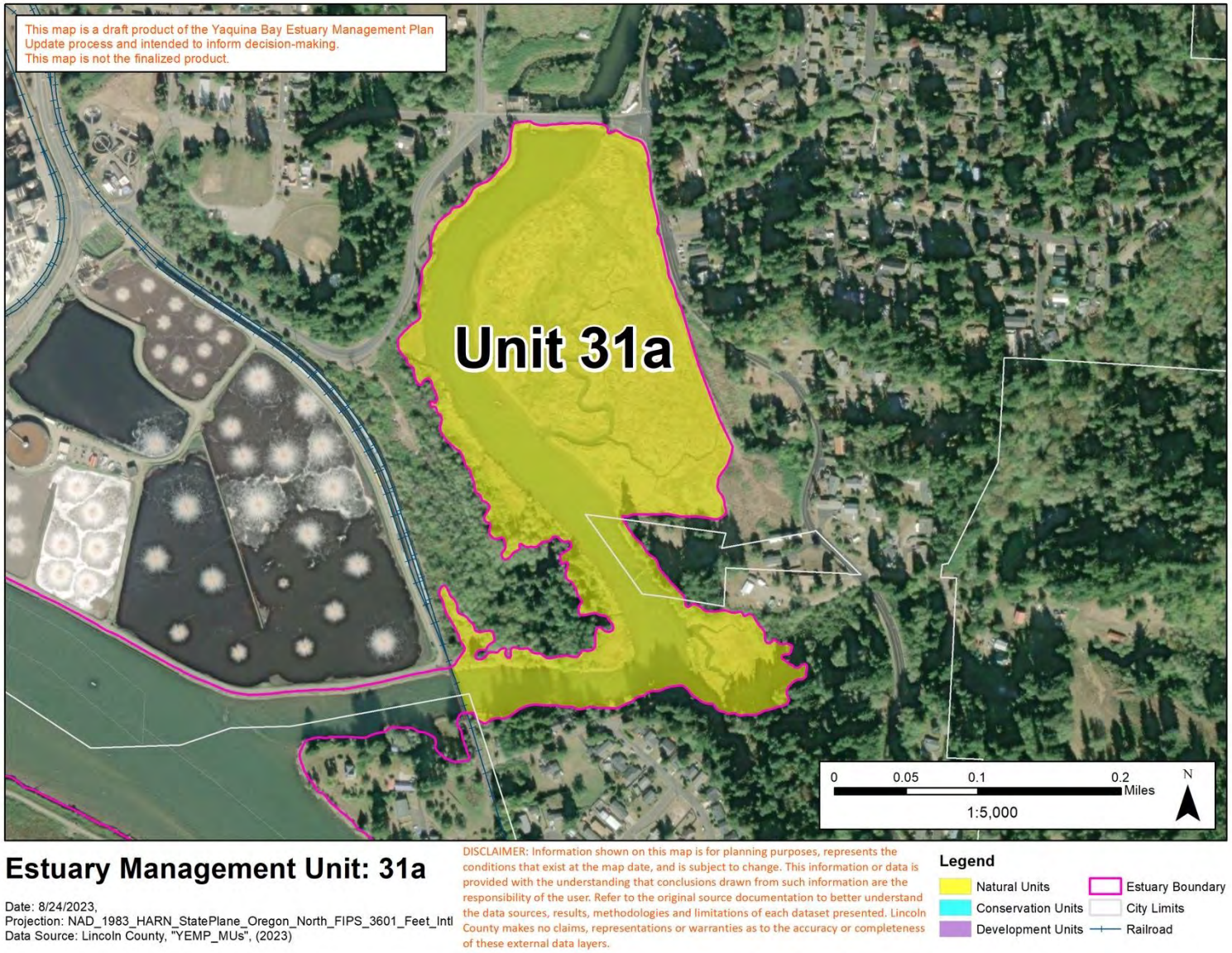


Figure 35. Estuary Management Unit 31a, Yaquina Bay

Management Unit 32: YAQUINA BAY

Description

Management Unit 32 consists of the area south of the navigation channel from the west Toledo city limits and, after RM 14, the south side extends past the navigation channel upstream to the extent of the Georgia Pacific Toledo landfill (see Figure 36). The unit contains small tracts of marsh, tideflats, and wildlife habitat of minor significance. Major uses within the unit include medium and shallow draft navigation, marine construction and repair operations, and recreational boating and angling. Significant alterations within the unit include bulkheads, pilings, piers, floating docks, dikes and overhead crossings. The unit is considered committed to water-dependent development uses.

Classification: Development

This is an area of minimal biological sensitivity and is needed for uses requiring alteration of the estuary.

Resource Capability

Unit 32 is a partially altered area that borders the south shoreline of the Toledo urban area. Marine construction and repair operations and associated alterations are present in this unit. Additional upland shoreland area is available for water dependent and water related uses and the general range of alterations needed within the adjoining estuary management unit for these uses shall be provided for in this area.

Management Objective

Management Unit 32 shall be managed to provide for water dependent and water related estuarine development.

Special Policies

1. Water dependent and water related industrial/commercial uses will be encouraged on coastal shorelands north and south of the Butler Bridge, where city facilities can be made available and access to the navigation channel is convenient.
2. Due to the limited water surface area available and the need for direct land to water access, alternatives (such as mooring buoys and dry land storage) to docks and piers for commercial and industrial use are not feasible in Unit 32. Multiple use facilities common to several users are encouraged where practical.

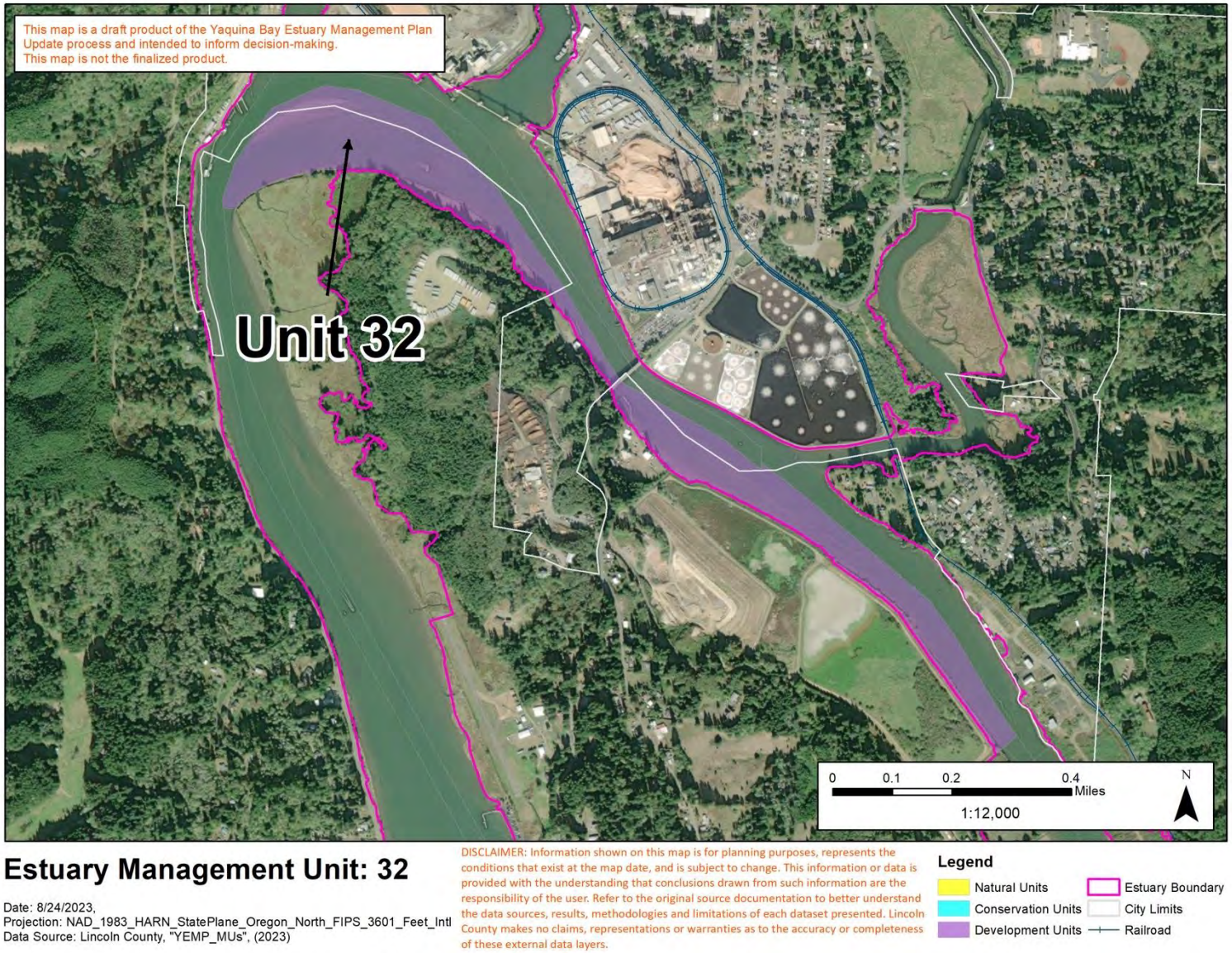


Figure 36. Estuary Management Unit 32, Yaquina Bay

Management Unit 33: YAQUINA BAY

Description

Management Unit 33 consists of tidal marsh area immediately north of the Toledo Airport. This is a tidal marsh and wildlife habitat of major significance (see Figure 37). No uses are established in this unit at the present time. Alteration of the unit is minimal, with a few pilings present. The northern portion of this unit is an area that has been diked in the past but has largely reverted to tidal marsh due to natural breaches in the dike. Additional dike breaching and ditch filling has been accomplished at this site as part of a restoration project undertaken in 2009.

Classification: Natural

As a major tract of tidal marsh, this area is classified natural to preserve and protect important resource values.

Resource Capability

Unit 33 is a tidal marsh area, portions of which are partially diked. Some pilings and other minor structural alterations are present in the area and have had no apparent adverse effects. Similar minor structures for needed public uses such as navigation aids would be consistent with the area's resource capabilities. The values of the tidal marsh resources of this unit could be enhanced through additional active restoration activities; alterations necessary for active restoration are consistent with the resource capabilities of the area.

Management Objective

Management Unit 33 shall be managed to preserve, protect, and enhance the natural resource values of the productive and significant tidal marsh and wildlife habitat.

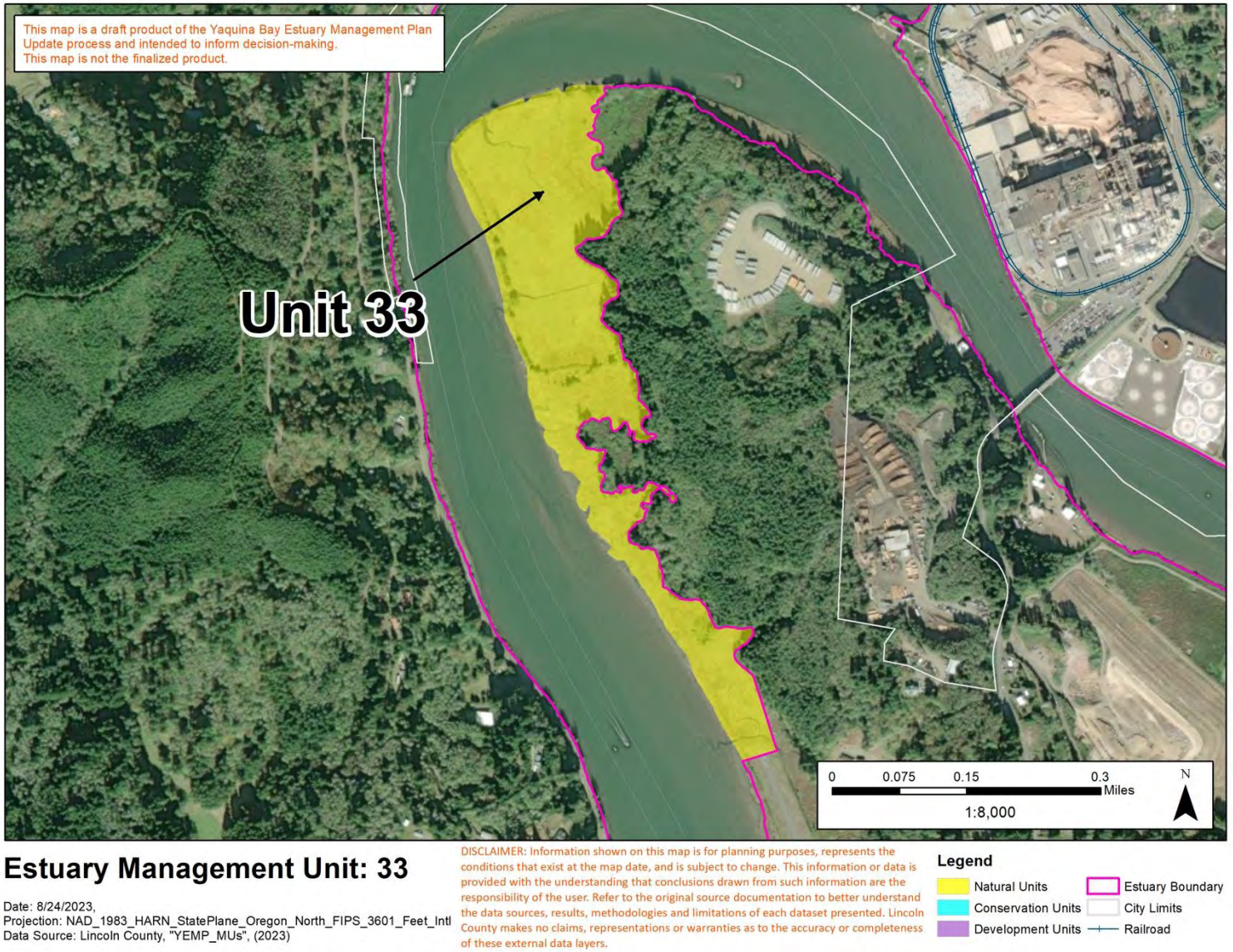


Figure 37. Estuary Management Unit 33, Yaquina Bay

Management Unit 34: YAQUINA BAY

Description

Management Unit 34 includes the entire upper river and associated tidal wetlands from the downstream extent of the Georgia Pacific landfill up to the head of tide at approximately RM 21.8 on the Yaquina River, and approximately RM 4.5 on Big Elk Creek (see Figure 38). Management Unit 34 also includes Mill Creek, up to the head of tide at the confluence of Slack Creek and associated tidal marsh areas. Important natural resources in this unit include marshes, wildlife habitats, and fish spawning and nursery areas. Uses within this unit include shallow draft navigation and recreation. This unit is of special importance as a major sport angling area for anadromous fish. Minimal alterations composed mainly of scattered riprap, dikes and floating docks have occurred in this unit.

Classification: Conservation

This is a partially altered area and is classified conservation in order to provide for uses that require only minor alterations and are consistent with the conservation of natural resources.

Resource Capability

Management Unit 34 includes all of the riverine subsystem of the Yaquina Bay Estuary, as described in the ODFW estuarine habitat classification system. This unit has the character of a tidal river, with very narrow intertidal fringes along the shoreline and a relatively broad channel area. Management recommendations made by ODFW for similar riverine areas suggest that the development of public marinas and boat ramps are consistent with the resource capabilities of the area. Such facilities will serve as an alternative to the proliferation of private docks. Publicly oriented facilities should be reviewed so that they are located only where minor alterations are required (i.e., no major dredge or fill activities). Minor structural alterations such as docks, pilings and piers will not significantly degrade resources in this system.

Management Objective

Management Unit 34 shall be managed to conserve natural resources and values and to provide for low intensity uses which do not require major alterations of the estuary.

Special Policy

1. Individual single purpose docks and piers shall not be permitted in new subdivisions and planned developments. Community facilities common to several users are encouraged.

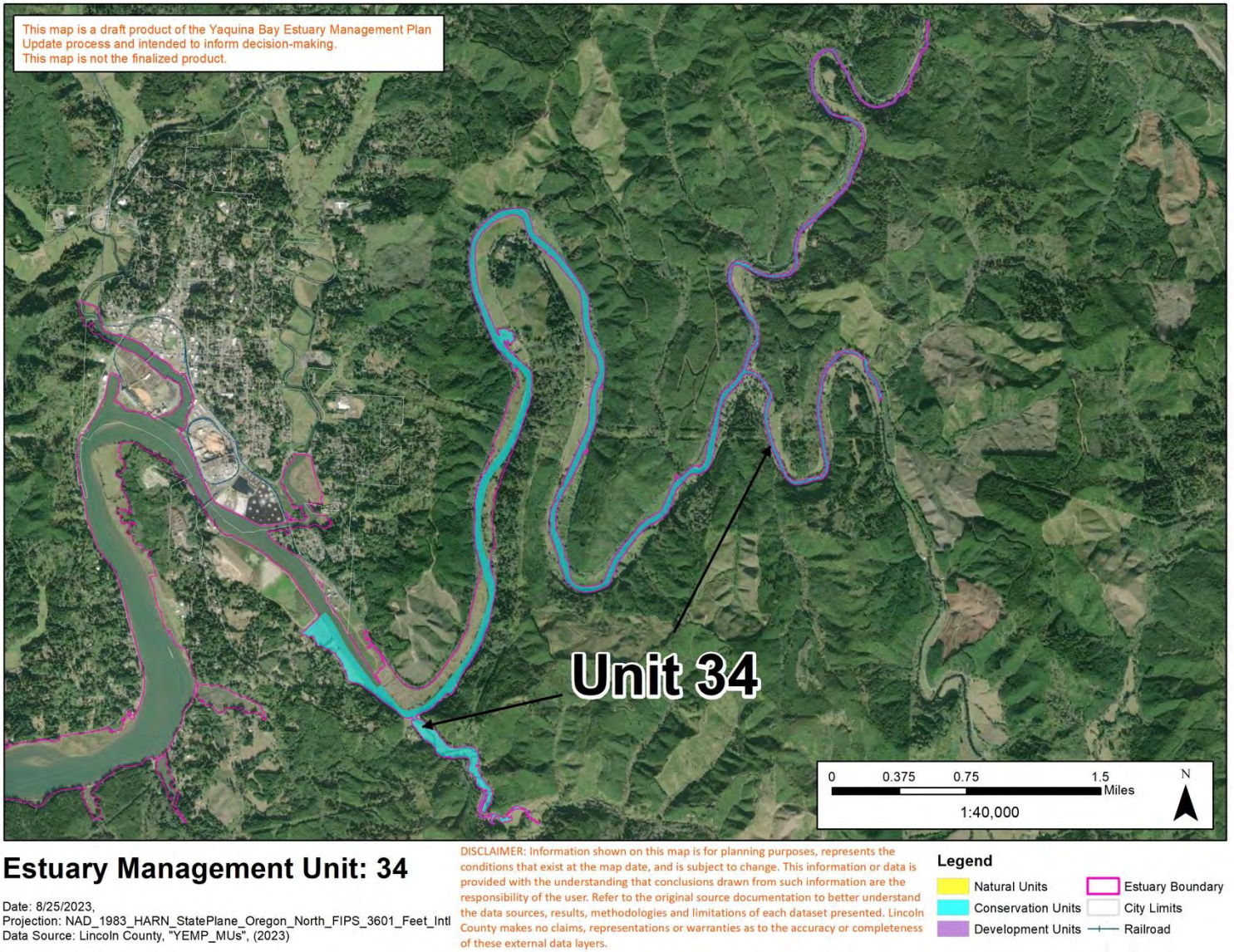


Figure 38. Estuary Management Unit 34, Yaquina Bay

Management Unit 34A: YAQUINA BAY

Description

Management Unit 34A consists of two tracts of restored tidal marsh and intertidal fringe marsh located along the north and west shore, upriver of the STEDCO industrial property and lying between the railroad grade and MLLW (see Figure 39). These tracts of marsh total roughly 77 acres and are currently owned by the Wetlands Conservancy. These areas were blocked from tidal exchange by dikes in the early 20th century and have been restored to the estuary system through dike breaching and channel restoration that began in 2002. These marshes are part of the river sub-system, which is a primarily riverine environment with minimal marine influence. These tidal marshes represent a scarce habitat type in this reach of the estuary and are considered resources of major significance. There are currently no active human uses in this unit.

Classification: Natural

As a major tract of tidal marsh, this unit has been classified natural in order to preserve natural resources in the unit.

Resource Capability

Management Unit 34A is a formerly diked area that was mostly disconnected from the tidal regime of the estuary. These tracts are now largely restored to tidal exchange and thus reconnected to the estuarine system. However, the restoration of full function of this marsh is ongoing and additional active restoration activities may be undertaken to further enhance the value of these tidal wetland tracts to the estuarine system. Such active restoration activities are consistent with the resource capabilities of this unit.

Management Objective

Management Unit 34A shall be managed to preserve and enhance natural resources and values.

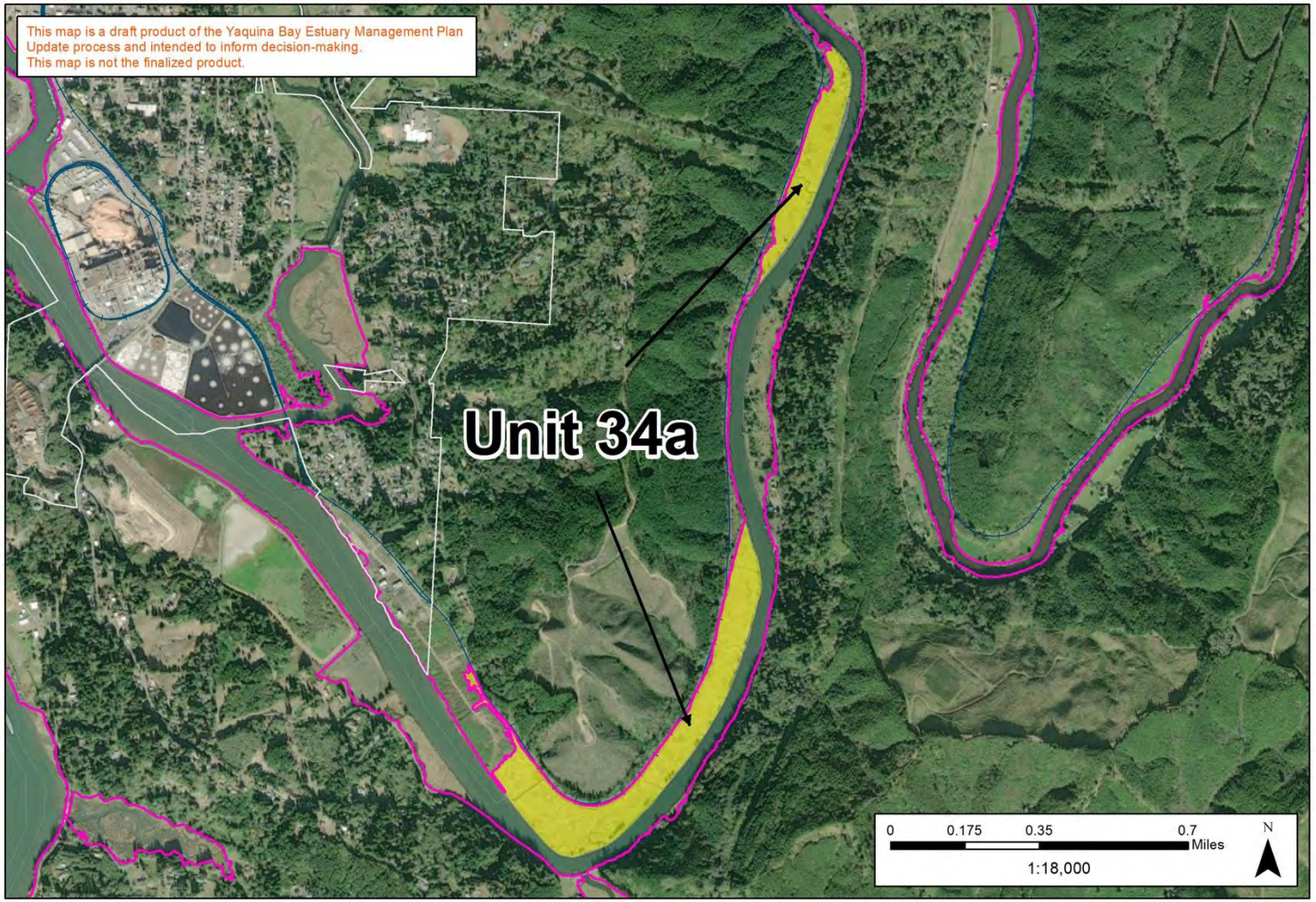


Figure 39. Estuary Management Unit 34a, Yaquina Bay

Management Unit 34B: YAQUINA BAY

Description

Management Unit 34B consists of a tract of tidal marsh and intertidal fringe at approximately RM 16.5, just upriver from Cannon Quarry County Park. It lies between Elk City Road (County Road 533) and MLLW. This tract of marsh totals approximately 22 acres, roughly 14 acres of which are currently owned by the Wetlands Conservancy. This marsh is part of the river sub-system, which is a primarily riverine environment with minimal marine influence. This tract is an example of a tidal swamp (forested and scrub/shrub tidal wetland), a plant community that is a scarce habitat type in the Yaquina estuary. It is therefore considered a resource of major significance. There are currently no active human uses in this unit.

Classification: Natural

As a major tract of tidal marsh, this unit has been classified natural in order to preserve natural resources in the unit.

Resource Capability

Management Unit 34B is a tidal swamp, a portion of which is in conservation ownership. Though currently undiked and open to tidal exchange, active restoration activities may be appropriate to further enhance the value of this tract to the estuarine system. Such active restoration activities are consistent with the resource capabilities of this unit.

Management Objective

Management Unit 34B shall be managed to preserve and enhance natural resources and values.

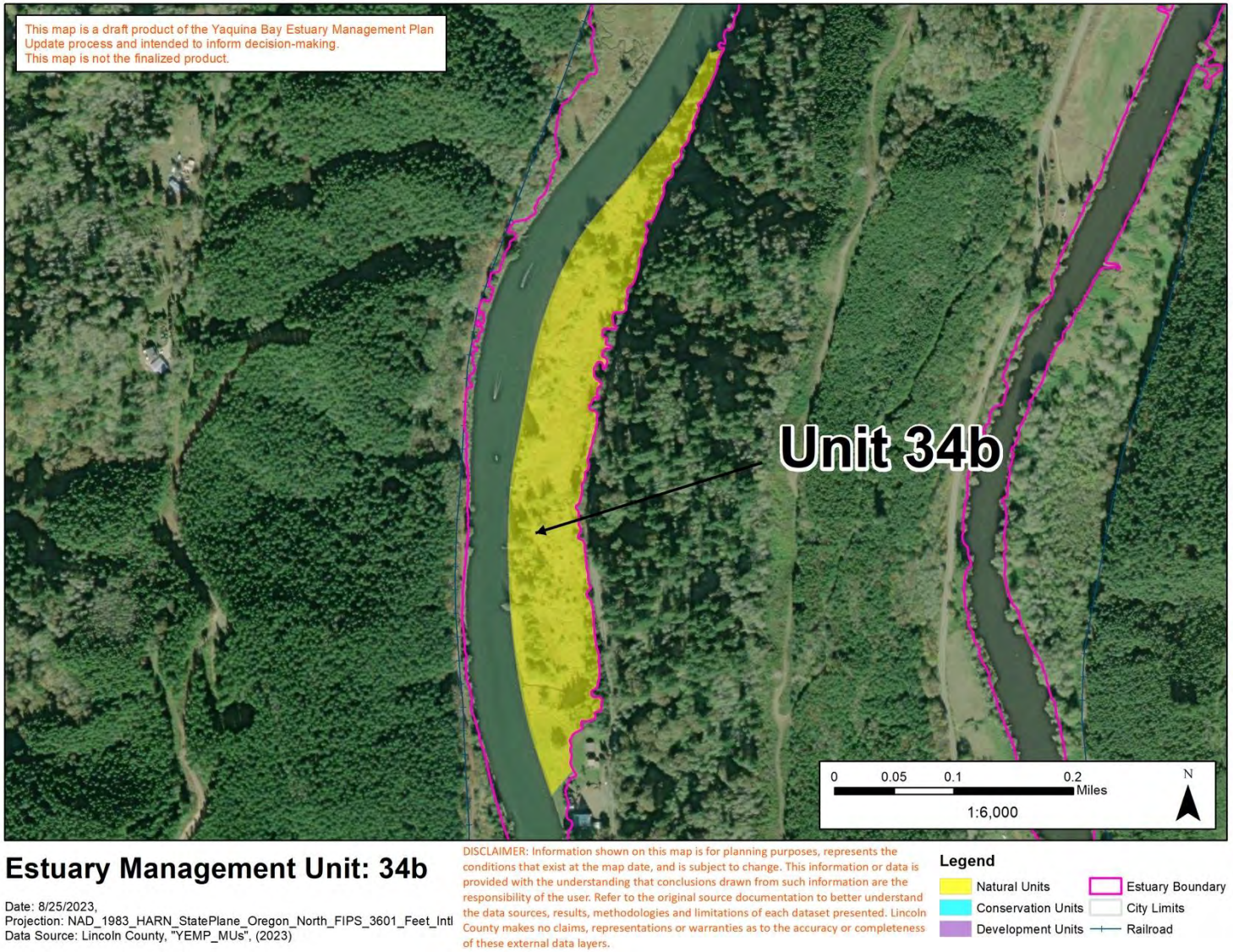


Figure 40. Estuary Management Unit 34b, Yaquina Bay

PART VII - MITIGATION AND RESTORATION

Proposed revisions as part of the 2023 update

Lincoln County estuaries have been substantially altered over the past century to provide for navigation, shoreline development and agriculture. Upriver watershed activities have also contributed significantly to changes in the natural functioning of the estuaries. Estuaries provide important benefits—called ecosystem services—that impact our day-to-day lives. In addition to their natural beauty, they support clean water, abundant wildlife, and recreation. They also protect homes, businesses, and infrastructure from the impacts of flooding and climate change. Therefore, restoration of estuarine resources and habitat is critical to support sustainable fisheries, recover threatened and endangered species, clean water, store carbon, and increase the resilience of coastal communities. Additionally, new development projects in estuarine areas will have some adverse environmental and social impacts, regardless of how carefully the projects are designed and planned. The adverse effects of such development can be compensated for (or mitigated) by the creation, restoration or enhancement of other estuarine areas.

Relationship of Restoration and Mitigation

Restoration is defined for purposes of Statewide Planning Goal 16 and this Estuary Management Plan as follows:
"Restoration means to revitalize or reestablish functional characteristics and processes of the estuary diminished or lost by past alterations, activities, or catastrophic events. A restored area must be a shallow subtidal or an intertidal or tidal marsh area after alteration work is performed and may have not been a functioning part of the estuarine system when alteration work began."

Examples of estuarine restoration projects include removing fills; marsh creation; breaching dikes or removing tidegates to restore or improve tidal exchange; and dredging and construction measures to re-establish former depths, shoreline configurations and flushing and circulation patterns.

For purposes of this Plan, mitigation refers specifically to offsetting or compensating for adverse impacts of dredging and filling in intertidal or tidal marsh areas through creation, restoration and enhancement of estuarine areas. Mitigation is defined in Statewide Planning Goal 16 as *"the creation, restoration or enhancement of an estuarine area to maintain the functional characteristics and processes of the estuary, such as its natural biological productivity, habitats and species diversity, unique features and water quality."*

It is important to note the limited meaning of the term "mitigation" as defined in the Statewide Planning Goals. For Goal 16 purposes, mitigation refers *only* to compensatory measures to offset the impacts of dredge or fill in intertidal or tidal marsh area. In contrast, in state and federal regulatory processes, mitigation has a more expansive definition, and generally refers to project design features or other measures that serve to avoid, reduce, or compensate for adverse impacts of any type of aquatic area alteration. In the estuary management plan, mitigation is given its more limited meaning in accordance with Goal 16.

Restoration and mitigation are related in that certain restoration activities can serve as mitigation for adverse impacts of development. For example, restoration of a diked tidal marsh to full tidal exchange by removing or breaching the dike could serve as mitigation for filling a tidal marsh area for water dependent development.

Statewide Planning Goal 16 has explicit requirements concerning mitigation. Implementation requirement 5 states:
"*When dredge or fill activities are permitted in intertidal or tidal marsh areas, their effects shall be mitigated by creation, restoration, or enhancement of another area to ensure that the integrity of the estuarine ecosystem is maintained. Comprehensive plans shall designate and protect specific sites for mitigation which generally correspond to the types and quantity of intertidal area proposed for dredging or filling or make findings demonstrating that it is not possible to do so.*"

Implementation of the Goal 16 compensatory mitigation requirement for intertidal dredge or fill is the responsibility of the Department of State Lands (ORS 196.830). The Oregon Removal-Fill Law (ORS 196.795-990) provides the Department of State Lands (DSL) with the authority to require mitigation for dredging or filling waters of the state. For estuarine areas, DSL must require mitigation for alteration of intertidal and tidal marsh areas as required by Goal 16. DSL may require mitigation for removal and/or fill actions in subtidal areas, and all areas in the estuary below highest measured tide. Applications for alterations of intertidal and tidal marsh areas are reviewed by local jurisdictions. If such alterations are permissible or conditionally permitted based on the type of alteration and the Management Unit's classification and special policies, then the application is raised to DSL's review. DSL coordinates permit issuance and mitigation requirements with affected local, state, and federal agencies. The need for mitigation is determined through the state permitting process with the type and amount of mitigation determined via the eligibility and accounting process.

Overall Restoration Policy

All restoration projects should serve to revitalize, return, replace or otherwise improve estuarine ecosystem characteristics. Examples include restoration of biological productivity, fish or wildlife habitat, other natural or cultural characteristics or resources, or ecosystem services that have

been diminished or lost by past alterations, activities or catastrophic events. In general, the Lincoln County Estuary Management Plan shall provide for and facilitate the beneficial restoration of estuarine resources and habitats, consistent with Statewide Planning Goal 16.

Restoration Needs

Yaquina Bay

Past alterations in the Yaquina Bay estuary have resulted in the loss of several resources and habitat types. For example, there are the numerous filled-in estuarine areas (253 acres total) which have resulted in the loss of nearly 200 acres of intertidal area, or about 14% of the total tidelands within the bay. The other major alteration that has resulted in significant habitat and resource loss has been the extensive diking and/or filling of tidal marsh areas. Tidal marsh is a relatively scarce habitat type within Yaquina Bay that provides vitally important primary productivity habitat for salmon and other species, and a host of other ecosystem services. With a total area of slightly less than 4,000 acres, Yaquina Bay contains only 819 acres of tidal marsh. Some tidal marsh areas have been filled for development or used as dredged material disposal sites. Others have been diked and closed off from tidal exchange, primarily for use as pasture.

The opportunities for the restoration of tideland area within Yaquina Bay are extremely limited. Nearly all of the filled areas have been developed for commercial or industrial uses, making any major fill removal impractical. Some small sites may be suitable for the restoration of limited intertidal areas.

By far the most prevalent and practical restoration opportunities in Yaquina Bay involve marsh creation/restoration. Extensive areas of diked or semi-diked marsh exist in the middle and upper portions of the estuary; a number of these areas have the potential to be restored to productive tidal marshes. Lastly, many of the habitats and fauna native to Yaquina Bay that restoration activities seek to preserve or re-establish, such as native oysters or eelgrass, can move over time.

Restoration Sites

Considerable work has been done by agencies, academia, and conservation interests in identifying and assigning priorities to restoration opportunities in Yaquina Bay. The reports that have been produced from this work generally serve the purpose of guiding agency and conservation group strategic plans for restoration, and prioritizing individual restoration projects. While prioritizing or initiating restoration projects is not within the scope or purpose of the estuary management plan, the new information generated from these reports provides an excellent baseline for the identification of restoration sites required by Goal 16 (implementation requirement 8).

For purposes of establishing the inventory of estuarine restoration sites for Yaquina Bay required by Goal 16, the following publications constitute the primary sources of information:

1. Lincoln County. 1982. **Lincoln County Estuary Management Plan.**
2. Brophy, L.S. 1999. **Final Report: Yaquina and Alsea River Basins Estuarine Wetland Site Prioritization Project** (for the MidCoast Watersheds Council).
3. Brophy, L.S. 2012. **Tidal Wetlands of the Yaquina and Alsea River Estuaries, Oregon: Geographic Information Systems Layer Development and Recommendations for National Wetlands Inventory Revisions. USGS Open-File Report 2012–1038. U.S. Dept. of the Interior, U.S. Geological Survey**
4. Oregon Central Coast Estuary Collaborative. 2022. **Restoring Resilience in Two Estuaries** (A Focused Investment Partnership Application to Oregon Watershed Enhancement Board).

The list of potential restoration sites documented in these publications is incorporated into the comprehensive plan inventory and constitutes the identification of areas for restoration as required by Goal 16, implementation requirement 8. These reports also establish a priority ranking of the identified sites intended to help guide the decisions of entities that initiate and fund restoration projects. However, these rankings are not incorporated into the Estuary Management Plan (EMP), and these priorities are not a factor in the evaluation of proposed restoration activities subject to review under the EMP.

The list of potential restoration sites adopted as a part of the plan inventory is not necessarily all-inclusive, and should not be construed to preclude any other site from consideration for restoration that is otherwise consistent with the requirements of the EMP. For instance, the primary sources for this list have not explicitly evaluated or prioritized areas currently defined as shoreland that, due to projected sea level rise, may become potential restoration sites or tidal marsh through landward migration.

Mitigation

The mitigation provisions of Goal 16 require that appropriate sites be designated to meet anticipated needs for estuarine resource replacement required to compensate for dredge or fill in intertidal or tidal marsh areas. These sites are to be protected from uses that would preempt their availability for required mitigation activities. Mitigation sites have been selected from among the restoration sites identified in the preceding discussion. All of these sites have been evaluated as potential mitigation sites based on the following criteria:

1. Biological Potential: Sites have been evaluated in terms of their similarity of habitat to areas likely to be altered or destroyed by future development activities; or, alternatively, sites were chosen which may provide resources that are in greatest scarcity compared to their past abundance or distribution. This

evaluation has been based on an analysis of each site relative to a general assessment of probable foreseeable mitigation needs in each estuary, as well as past alterations or losses.

2. Engineering or Other Technical Constraints: Sites have been evaluated in terms of the type and magnitude of technical limitations that need to be overcome to accomplish restoration or enhancement. Sites with fewer constraints were considered more appropriate for use as mitigation sites.
3. Present Availability: The probable availability of each site during the original planning period has been evaluated. This evaluation was based primarily on the presence or absence of existing conflicting uses and ownership factors that might influence availability (e.g., public versus private ownership).
4. Feasibility of Protecting the Site: An assessment of each site has been done to determine the likelihood that an overriding need for a preemptive use will arise during the planning period. Sites for which no conflicting uses are anticipated are considered most desirable from the standpoint of ensuring future availability through protective zoning or other means.

Mitigation Needs and Sites

Yaquina Bay

Future mitigation needs in Yaquina Bay will most likely be generated by dredge and fill activities in intertidal flat areas in the Newport and Toledo sub-areas and possibly in the Yaquina sub-area.

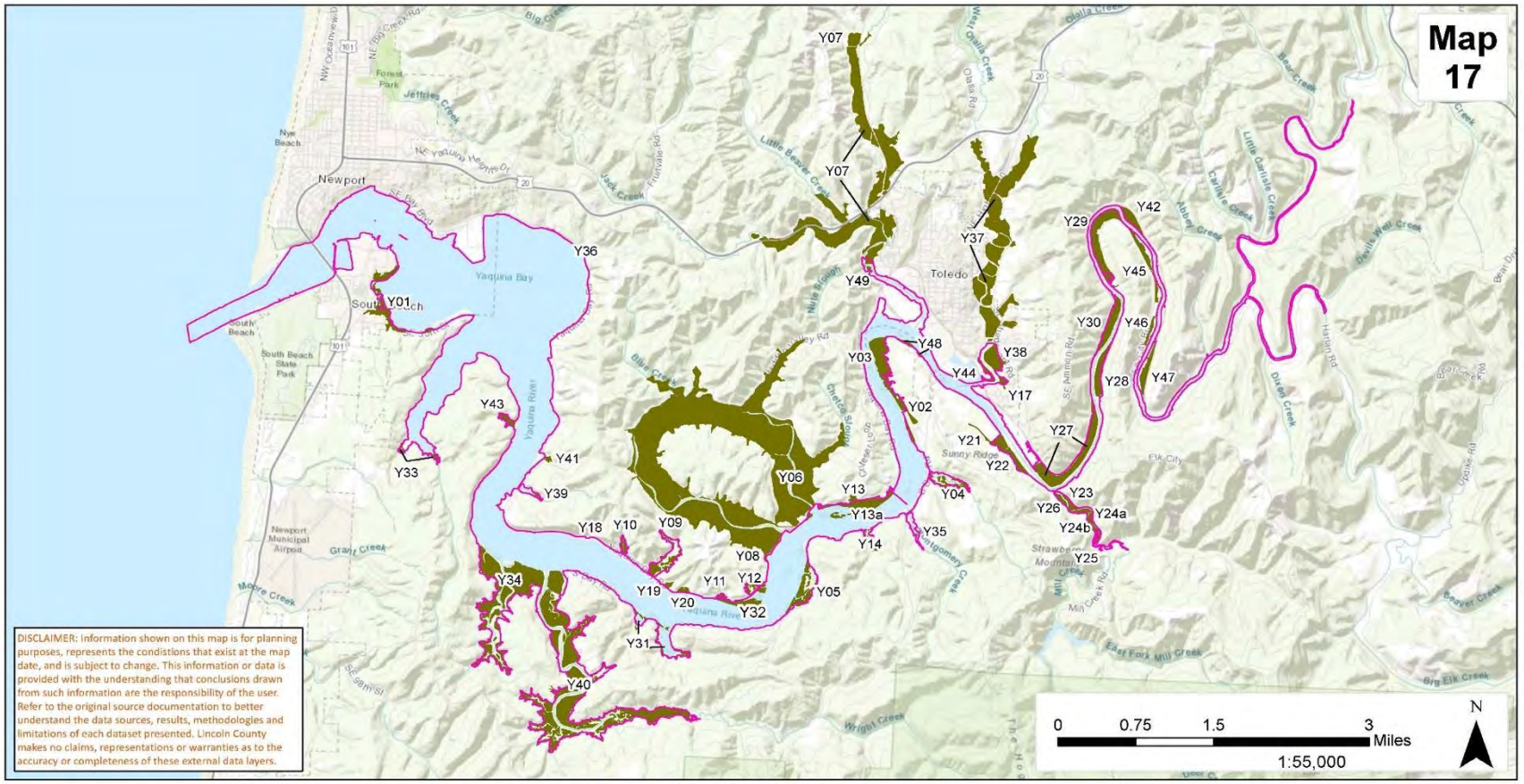
Almost all of the tidal marsh areas in Yaquina Bay are protected by Natural Management Unit designations, so projects involving dredge and/or fill in tidal marsh areas are unlikely. One notable exception is the proposed aquaculture development at Poole's Slough (see Goal Exceptions, Appendix C). This project would involve fill and removal in a tidal marsh area and appropriate mitigation would be required.

As described in the discussion of restoration needs and sites, opportunities for restoration or enhancement in intertidal flat or shore areas in Yaquina Bay appear to be very limited. For this reason, the mitigation sites listed below were selected for the opportunities they provide for restoration primarily of tidal marsh, a historically diminished resource. The matching of sites to individual dredge or fill projects will be accomplished as part of the DSL Removal-Fill permit process.

While it is not possible to precisely estimate and quantify the amount of mitigation that will be needed during the planning period, it was determined that the sites listed below represent sufficient biological potential to compensate for the general range and extent of anticipated intertidal dredge and fill activities in Yaquina Bay.

It is important to note that the identification and protection of the following sites is intended to reserve a supply of sites and ensure their availability for estuarine resource replacement as required by Goal 16. This list in no way precludes the use of other appropriate sites or actions to fulfill Goal 16 mitigation requirements as determined by the Department of State Lands. The sites have been identified in Dr. Brophy's 1999 paper (see the 2nd source listed for restoration sites as described above) and the site numbers correspond to the sites visualized in Figure 2 (below) Restoration Sites (Map Inventory #17).

Site # (Brophy, 1999)	**Protective Mechanism**
Y18	Coastal Shorelands (C-S) Overlay (significant wetland)
Y19	Estuary Management Unit (16)
Y20	C-S Overlay (significant wetland)
Y11	Estuary Management Unit (23)
Y30	C-S Overlay (significant wetland)
Y31	Estuary management Unit (21)
Y6	C-S Overlay (significant wetland)



Restoration Sites

See reports cited below for descriptions of each restoration site.

This map is a draft interim product of the Yaquina Bay Estuary Management Plan Update process intended to inform decision-making. This map is not the finalized product.

Legend

Restoration Sites | Estuary Boundary

Date: 5/30/2023, Projection: NAD_1983_HARN_StatePlane_Oregon_North_FIPS_3601_Feet_Intl
Data Source: Brophy, L.S. 2012. Tidal Wetlands of the Yaquina and Alsea River Estuaries, Oregon: Geographic Information Systems Layer Development and Recommendations for National Wetlands Inventory Revisions. USGS Open-File Report 2012–1038. U.S. Dept. of the Interior, U.S. Geological Survey.
https://pubs.usgs.gov/of//2012/1038/methods.html

Data Source: Brophy, L.S. 1999. Final report—Yaquina and Alsea River Basins estuarine wetland site prioritization project: Report prepared for the MidCoast Watersheds Council, Newport, Oregon, Green Point Consulting, Corvallis, Oregon, 50 p.
https://doi.org/10.13140/RG.2.2.26654.20803

Data Source: Brophy L.S., Greene C.M., Hare V.C., Holycross B., Lanier A., Heady W.N., O'Connor K., Imaki H., Haddad T., and Dana R. 2019. Insights into estuary habitat loss in the western United States using a new method for mapping maximum extent of tidal wetlands. PLOS ONE 14(8): e0218558.
https://doi.org/10.1371/journal.pone.0218558.

Figure 41. Restoration Sites

PART VIII – (REMOVED) LOG STORAGE & TRANSPORTATION

Proposed revisions as part of the 2023 update

This Plan Part has been removed as part of the 2023 update. A Needs & Gaps Assessment was performed to recommend updates to the Plan. The below text from the Assessment describes the cause for the removal of the Plan Part.

"In the forty some years since this element of the YBEMP was developed, much has changed in the wood products industry. Of the six mills that were operating on Yaquina Bay in the early 1980s, only one remains in operation, the Georgia-Pacific paper mill in Toledo. The two mills that were still utilizing in-water log storage at that time both ceased operations more than three decades ago. Currently, no in-water log storage or transportation is conducted in Yaquina Bay. Most of the associated infrastructure (pilings and dolphins) is in a deteriorated state. Given current technology and foreseeable market conditions, it is not anticipated that there will be any future demand for the storage or transport of raw logs in the estuary. Given these factors, it is concluded that Part VIII is no longer relevant to the management of future use of the Yaquina Bay estuary."

-Page 26 of the Yaquina Bay Estuary Management Plan Needs & Gaps Assessment

PART IX – (REMOVED) FUTURE DEVELOPMENT SITES

This Plan Part was not updated as part of the 2023 update. It is not regulatory, is obsolete, and was not used in current decision making. This Plan Part and its accompanying Management Unit special policies Management Units have been removed to avoid confusion.

A Needs & Gaps Assessment was performed in 2023 to recommend updates to the Plan. Plan Part IX – Future Development Sites was recommended to be updated sometime in the future if economic conditions warranted development beyond in-fill redevelopment. The below text from the Assessment describes why this specific Plan Part was not updated.

"The identification of potential sites for redesignation to accommodate future development needs is not required by Goal 16. This analysis was included in the original YBEMP in recognition that areas within the estuary qualifying for development management unit designation were largely fully developed at the time the plan was completed, and that accommodating additional major development could require the redesignation of areas currently designated *natural* or *conservation*.

Part IX does not provide binding policy and is thus primarily an attempt to provide general guidance for future deliberations on redesignation. Because the analysis of future development needs is based on economic and market forecasts from the late 1970s, Part IX is currently obsolete. Adding to that obsolescence are the significant changes in applicable state and federal environmental standards since Part IX was adopted. Given these current standards, the likelihood is remote that a number of the identified potential future development sites could secure necessary regulatory approvals for development. Part IX is therefore of limited utility as presently formulated."

-Page 27 of the Yaquina Bay Estuary Management Plan Needs & Gaps Assessment

PART X - PLAN IMPLEMENTATION

Proposed revisions as part of the 2023 update

The Lincoln County Estuary Management Plan is implemented at the local level by the units of local government with comprehensive planning and zoning responsibilities, i.e., Lincoln County and the cities of Newport and Toledo. Relevant portions of the management plan are adopted as an element of the applicable local comprehensive plans.

Local Land Use Regulation Requirements

To implement the policies and standards of the estuary management plan, city and county land use regulations shall, at a minimum:

- Specify permissible uses for individual management units consistent with the Management Classification requirements of Part IV;
- Provide for the application of review standards set forth in Part II, Part IV and Part V in accordance with applicable procedural requirements; and
- Establish a requirement to assess the impacts of proposed estuarine alterations in accordance with Statewide Planning Goal 16, implementation requirement 1 and Part II of this plan.

Impact Assessment Requirements

As set forth in Part II, unless fully addressed elsewhere in this plan, actions that would potentially alter the estuarine ecosystem shall be preceded by a clear presentation of the impacts of the proposed alteration. Impact Assessments are required for dredging, fill, in-water structures, shoreline protective structures including riprap, log storage, application of pesticides and herbicides, water intake or withdrawal and effluent discharge, flow lane disposal of dredged material, and other activities that could affect the estuary's physical processes or biological resources.

The Impact Assessment requirement does not by itself establish any approval threshold related to impacts. The purpose of the Impact Assessment is to provide information to allow local decision makers and other reviewers to understand the expected impacts of proposed estuarine alterations, and to inform the application of relevant approval criteria (e.g., consistency with resource capabilities).

The Impact Assessment need not be lengthy or complex. The level of detail and analysis should be commensurate with the scale of expected impacts. For example, for proposed alterations with minimal estuarine disturbance, a correspondingly simple assessment is sufficient. For alterations with the potential for greater impact, the assessment should be more comprehensive. In all cases, it should enable reviewers to gain a clear understanding of the impacts to be expected. The Impact Assessment shall be submitted in writing to the local jurisdiction and include information on:

1. The type and extent of alterations expected;
2. The type of resource(s) affected;

3. The expected extent of impacts of the proposed alteration on water quality and other physical characteristics of the estuary, living resources, recreation and aesthetic use, navigation and other existing and potential uses of the estuary;
4. The expected extent of impacts of the proposed alteration must reference relevant Climate Vulnerabilities as described in applicable sub-area(s) for the management unit(s) where the alterations are proposed (applicants are encouraged to document the use of any applicable data and maps included in the inventory such as sea level rise and landward migration zones) when considering future:
    a. long term continued use of the proposed alteration
    b. water quality and other physical characteristics of the estuary,
    c. living resources,
    d. recreation and aesthetic use,
    e. navigation, and
    f. other existing and potential uses of the estuary;
5. The methods which could be employed to avoid or minimize adverse impacts; and
6. References, information, and maps relied upon to address (1) through (5) above.

Local Review Procedures

Statewide Planning Goal 16 establishes a number of discretionary standards that apply to the review of proposed estuarine development activities. These include certain management unit requirements (e.g., resource capability test) and the provisions of implementation requirement 2. These standards are in turn incorporated into this estuary management plan, specifically in Parts II, IV, V, VI.

County or city approval of estuarine alterations subject to one or more discretionary review criteria is a "permit" as defined in ORS 215 and ORS 227 and subject to the procedural requirements of ORS 215.402 to 215.438 (county) or ORS 227.160 to 227.186 (cities). In compliance with statutory procedural requirements, all proposals for estuarine alterations subject to Goal 16, Implementation Requirement 2, or subject to findings of consistency with the resource capabilities of the area, shall be reviewed in accordance with either Type II procedure (decision without a hearing subject to notice), or Type III procedure (public hearing), as specified in the applicable jurisdiction's land use regulations.

State and Federal Regulation

Most development activities in estuarine aquatic areas are subject to regulation by one or more state and federal agencies. These regulatory requirements derive from state and federal statutes, and these authorities are discrete and independent from the provisions of the Estuary Management Plan. State and federal regulatory requirements are therefore additive to the policies and implementation requirements of the Estuary Management Plan. That is, the authorization of uses and activities by this estuary management plan and implementing local land use regulations does not remove the requirement for applicants to comply with applicable state and federal regulatory requirements. Likewise, state and/or federal approvals of estuarine development activities do not supersede or pre-

empt the requirements of this plan and implementing regulations. While state and federal permitting agencies do not have jurisdictional authority or responsibility to directly implement the management plan, under state agency coordination and federal consistency requirements, agency regulatory actions must be compatible with the plan and statewide planning goals. More detailed discussion of this coordination relationship between the management plan and state and federal regulatory programs is provided in the subsections below.

Though state and federal regulations are not directly part of the management plan, a basic knowledge of the principal regulatory programs is useful in understanding the multi-jurisdictional regulatory environment for estuarine development. The following state and federal regulatory authorities are summarized in general terms to assist users of this plan in identifying the basic processes involved in the regulation of estuarine development. For detailed information regarding these regulatory programs, users should contact the appropriate agency.

Federal Permits

The principal federal authorizations required for estuarine development activities are Department of the Army permits administered by the US Army Corps of Engineers. Under Section 10 of the Rivers and Harbors Act, a Corps permit is required prior to any work in or over navigable waters of the United States, or work which affects the course, location, condition or capacity of such waters. Projects typically requiring Section 10 permits include construction of piers, wharves, bulkheads, dolphins, marinas, ramps, floats, intake structures, cable, or pipeline crossings, including overhead transmission lines and tunnels, and dredging and excavation. Under Section 404 of the Clean Water Act, a Corps permit is required prior to the discharge of dredged or fill material into the waters of the United States.

Many projects that require a Corps Section 10 and/or Section 404 permit also require evaluation under other related federal laws and regulations. These include, but are not limited to:

- Section 401 of the Clean Water Act
  The Clean Water Act (CWA) gives states (Oregon DEQ) the authority to grant, deny, or waive certification of proposed federal licenses or permits that may discharge into waters of the United States. Under Section 401 of the CWA, the Corps may not issue a permit or license to conduct any activity that may result in any discharge into waters of the United States unless a Section 401 water quality certification is issued, or certification is waived.
- Endangered Species Act/Magnuson-Stevens Act
  When a proposed project will affect a species listed under the Endangered Species Act, the Corps is required to consult with the National Marine Fisheries Service (NMFS) and/or the US Fish and Wildlife Service (USFWS), and cannot issue a permit until that consultation is complete. The NMFS consults on salmon, marine fish, marine mammals and marine reptiles. The USFWS consults on birds, terrestrial animals, plants, amphibians and most freshwater fish.
- National Historic Preservation Act - Cultural Resources and Historic Properties
  In reviewing and issuing permits, the Corps is required to comply with Section 106 of the National Historic Preservation Act of 1966, which requires federal agencies to take into account the effects of their undertakings on historic properties. Historic properties, commonly referred

to as cultural resources, are archaeological sites, historic districts, buildings or structures, and traditional cultural properties that are included in the National Register of Historic Places, or meet the criteria for inclusion in the National Register. The term encompasses artifacts, records and human burials related to and located within such properties.

- Federal Trust Responsibilities
  The federal government's unique relationship with Native American tribes is embodied in the U.S. Constitution, treaties, court decisions, federal statutes and executive orders. Native American treaties protect and preserve land and certain rights retained by the tribes when they sign treaties. Treaties with tribes are binding, enforceable, and share a level of supremacy comparable to federal laws passed by Congress. As a federal agency, the Corps has federal trust responsibility to ensure that the rights of federally recognized tribes are not compromised as part of permit decisions.

State Permits

There are several state regulatory programs that require approvals prior to undertaking certain estuarine developments and activities. Among these programs are the following:

Removal-Fill Permits

Oregon's Removal-Fill Law (ORS 196.795-990) requires a permit to remove or fill material in wetlands or waterways. The Removal-Fill permit process is administered by the Oregon Department of State Lands (DSL). Many proposed estuarine development projects will require both a Removal-Fill permit and a Corps Section 10/Section 404 permit, along with a Section 401 water quality certification. To simplify the application process for projects that require both a Removal-Fill and Corps permit, DSL, DEQ and the Corps have established a joint permit application (JPA). The JPA allows an applicant to submit a single unified application to all three agencies simultaneously.

An important component of the Removal-Fill permit in estuaries is the estuarine resource replacement requirement of ORS 196.830. This codifies DSL's authority to implement the compensatory mitigation requirements of Goal 16, Implementation Requirement 5.

In making decisions on Removal-Fill permits, DSL consults with other agencies that have responsibilities for and/or expertise in the management of aquatic resources. These include:

- Oregon Department of Fish and Wildlife (ODFW)
  In the Removal-Fill permit process, ODFW serves as a consultant to DSL on all matters related to fish and wildlife habitat. In the review of Removal-Fill permits, ODFW provides input on ways to minimize impacts on fish and wildlife habitat, specifies the timing of in-water work, assures compliance with fish passage requirements, and provides related guidance for the protection of fish and wildlife resources.
- Oregon Department of Environmental Quality (DEQ)
  In the Removal-Fill Permit review process, DEQ serves as a consultant to DSL on all matters related to water quality. In addition to its responsibility to issue Section 401

water quality certification for Corps permits, DEQ may also provide input to DSL about the potential water quality effects of a proposed removal-fill project. DEQ issues stormwater (NPDES) permits that are frequently required for removal-fill related activities, and DEQ administers the Total Maximum Daily Load (TMDL) standards for water quality, which are considered in the removal-fill permit process.

- Oregon Water Resources Department (OWRD)
  OWRD may review applications for water storage or uses that appropriate water and require a water right from OWRD.
- Oregon State Marine Board (OSMB)
  If a proposed project involves a dock or other structure in the waterway, OSMB may provide input to DSL to address navigation access and safety requirements.

Waterway Authorizations

The Department of State Lands (DSL) issues several types of proprietary authorizations required for the use of state-owned submerged and submersible land. The uses subject to these authorizations typically involve various types of in-water structures or other uses or activities that occupy waterway surface area. These authorizations include leases for commercial or larger private structures, licenses for certain public uses, easements for utility and infrastructure improvements, and registrations for smaller, private use structures.

Commercial Shellfish Plats

Under ORS 622, the Oregon Department of Agriculture (ODA) is the state authority for issuing leases of state owned submerged or submersible lands for the commercial cultivation of clams, mussels and oysters. These leases, referred to as oyster plats, are issued only in areas where water quality has been certified by ODA as suitable for the production of shellfish for human consumption.

State and Local Coordination

Under ORS Chapter 197, state agencies are required to conduct their activities (including the issuance of permits and other authorizations) in a manner that complies with the statewide planning goals and is compatible with local comprehensive plans and land use regulations. To address this requirement, each state agency has developed and adopted a state agency coordination (SAC) program that has been approved by the Land Conservation and Development Commission. The SAC sets forth the procedures each agency will employ to assure that agency actions comply with the statewide planning goals and are compatible with local plans and regulations.

For state agencies with regulatory authority over estuarine development, the primary mechanism for ensuring compatibility with local estuary plan requirements is the Land Use Compatibility Statement (LUCS). Applicants for Removal-Fill permits, waterway authorizations, water quality certifications and most other state agency authorizations are required to obtain from the local land use authority a LUCS that certifies that the proposed use or activity complies with local land use requirements or that specifies local land use approvals are required to establish compliance. In general, state agencies will

not begin their permit review until compatibility with local planning requirements is certified by the local jurisdiction.

Federal Consistency

The Coastal Zone Management Act of 1972 provides for "federal consistency," a requirement that federal agency actions (including the issuance of federal permits and licenses) within the coastal zone must be consistent with a state's federally approved coastal management program. All of Oregon's estuarine areas are within the coastal zone jurisdiction of the Oregon Coastal Management Program (OCMP), thus Corps and other federal permits required for estuarine development are subject to federal consistency requirements.

The OCMP is comprised of a network of state and local authorities that includes city and county comprehensive plans and land use regulations. In general, most of the substantive provisions of the estuary management plan are incorporated into the OCMP as "enforceable policies" applicable to federal consistency reviews. In short, this means that federal permits and licenses (e.g., Corps permits) required for estuarine development may be issued only for uses or activities that have been determined to be consistent with the applicable enforceable policies of the estuary management plan.

As Oregon's designated coastal management agency, the Department of Land Conservation and Development (DLCD) is charged with making federal consistency determinations on federal actions and permits in the coastal zone. In making these decisions, DLCD coordinates with local jurisdictions to determine consistency with enforceable policies in locally adopted estuary management plans.

While federal consistency precludes the issuance of federal permits for development that is inconsistent with enforceable policy provisions of the estuary management plan, a determination that a proposed development is consistent with the enforceable policies of the EMP does not obligate federal agencies to approve permits for that development. The federal agency must still determine that the proposed use or activity complies with all applicable federal statute and regulation requirements, which are independent from the enforceable policies of the estuary management plan.

PART XI - UPDATING THE PLAN

Proposed revisions as part of the 2023 update

The Lincoln County Estuary Management Plan (EMP) was originally adopted in 1983. The first comprehensive update of the EMP was completed in 2023. The relatively static nature of the EMP over this period can be attributed to a number of factors. Significant is the fact that the EMP has been generally effective in accomplishing both conservation and development objectives. Also, due to the relative complexity of the EMP and the need to engage a wide range of agencies and interests in its development, the comprehensive update process is commensurately complex and demanding of resources.

Due largely to these factors, it is anticipated that both the need and available capacity for comprehensive updates of the EMP will remain limited. The likelihood is that the time interval for comprehensive updates will be long.

However, it is both feasible and desirable to adapt the EMP over shorter periods of time in response to changes in conditions and relevant trends. It is the purpose of this part of the EMP to provide guidance to the implementers of this plan on evaluating the desirability for adaptive updates of the EMP to address specific changes in conditions.

Legal Framework

The EMP is an element of the Lincoln County Comprehensive Plan, thus updates to the EMP must be accomplished in accordance with state and local statutes and rules governing comprehensive plan amendments.

Post Acknowledgement Amendment Requirements

Amendments to either the text, maps, or implementing regulations of the EMP are subject to the requirements of Oregon Administrative Rules, Chapter 660, Division 18. In summary, these rules require the applicable city or county jurisdiction to provide notice to the Department of Land Conservation and Development (DLCD) of any proposed amendment at least 35 days prior to the first evidentiary hearing on the proposed amendment. The Department may participate in the local hearing process as a party.

The local jurisdiction must submit the adopted amendment to DLCD within 20 days after the decision to adopt the change.

Local Initiation and Review Procedures

Local plan and land use regulation amendments may be initiated in several different ways, depending on the jurisdiction and the provisions of the local land use code. Typically, a quasi-judicial map amendment may be initiated by application of the property owner, or by the jurisdiction's governing body. In some cases, legislative amendments to the text of the plan or regulation may be initiated by application of a property owner, but in other cases, legislative amendment may only be initiated by the governing body or planning commission.

Similarly, local review of proposed amendments to the EMP or implementing regulations vary somewhat by jurisdiction, but in general require one or more public hearings and final adoption by the governing body. Adoption of plan amendments is by ordinance. Typically, a proposed amendment is first considered at a public hearing before the jurisdiction's planning commission; upon completion of the hearing, the planning commission will forward a recommendation on the amendment to the governing body (city council or board of county commissioners). The governing body will conduct a second hearing before entering a decision to approve or deny the proposed amendment.

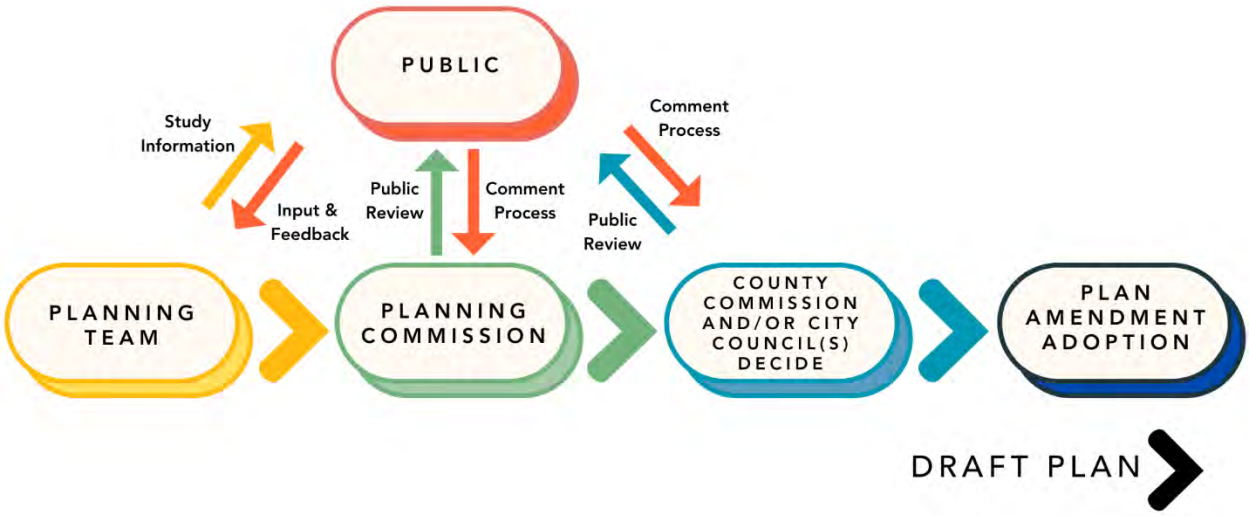


Figure 42. Local Plan Amendment Process

Adaptive Updates to the Estuary Management Plan

As noted, it is likely that there will be long intervals between comprehensive updates to the EMP. However, between these comprehensive updates, changes in conditions or in the types and intensities of specific uses may warrant more narrowly focused amendments to the plan in order to adapt to these changes.

The dynamic nature of the estuarine system makes precise forecasts of future conditions difficult. This difficulty is compounded by the largely uncertain impacts of climate change on both natural systems and the human uses which these systems support. In addition, history tells us that uses of the estuary will evolve in response to change, whether physical system changes, including those driven by climate change, changes in market forces, or a combination of these and other factors. It is recommended that local jurisdictions periodically review and update the resource inventory and accompanying maps if physical, biological, social, or economic conditions of the estuary have significantly changed.

Despite these uncertainties, there are at least two aspects of the EMP where change can be reasonably anticipated. The following are areas where local governments should periodically assess the need for adaptive updates to the EMP.

Changes in Jurisdictional Extent of the EMP

The policies and implementing regulations of the EMP apply to estuarine waters and associated wetlands, the extent of which, as defined by Goal 16, is Mean Higher High Water or, in the case of tidal marsh, the line of non-aquatic vegetation. This is in effect a "rolling" jurisdictional boundary and the precise demarcation between estuary and upland may shift based on changes in tidal elevations and conditions on the ground. The plan maps provide a graphic depiction of this boundary and, while not geodetically exact, the mapped boundaries do provide important guidance for plan users and local practitioners.

Sea level rise is likely to be a driver of geospatial changes in the jurisdictional boundaries of the EMP. While it is not possible to provide precise forecasts of the amount and rate of sea level rise, the general trends in sea level rise should be monitored by local governments insofar as they may affect the overall accuracy and utility of EMP maps. Periodic evaluation of the impact on sea level rise on jurisdictional boundaries is recommended. In cases where identified changes present significant discrepancies with adopted map boundaries, local governments should consider initiating plan map amendments in accordance with prescribed local procedures.

Restoration Activities

Restoration activities that create new estuarine areas impact the EMP in at least two ways. First, these new estuarine areas become subject to the jurisdiction of the EMP, thereby altering the spatial boundaries of the plan. Second, it is likely that newly restored areas will include sites that are on the plan's inventory of potential restoration sites established in Part VII. These restored sites will no longer be "potential" restoration sites thus rendering the inventory out of date.

To adapt to these changes, local governments should monitor estuarine restoration activities with the objective of maintaining as current both the mapped spatial boundaries of the estuary and the inventory of potential restoration sites.

Revising plan maps to add restored sites to the estuary is best accomplished through a site-specific, quasi-judicial plan map amendment. In addition to inclusion within the jurisdictional boundary of the plan, restored sites must be evaluated in relation to other plan criteria to determine proper placement within the spatial scheme of management units, and be assigned an appropriate management classification in accordance with Part IV. These are very fact-specific determinations that are appropriately addressed through the individual map amendment process.

Local government staff should encourage owners of restored areas to plan for and, upon completion of restoration, make an application for the appropriate plan map amendment in accordance with prescribed local procedures**.** Owners of newly restored areas should reach out to Planning Department staff of the jurisdiction(s) with purview over the site's location to initiate conversations on process and the information required.

Revising the plan inventory of potential restoration sites can be accomplished on a periodic basis through the legislative amendment process. Frequency of this inventory update will be dependent on the level of restoration activity occurring in the estuary and other changes in conditions on the ground.

<u>Recommended Updates</u>

During the 2023 update, a Needs & Gaps Assessment (Assessment) was performed to identify the components of the Yaquina Bay Estuary Management Plan that needed to be modernized to reflect current conditions and improve plan usability and implementation. The Assessment categorized recommendations across three Tiers.

Tier 1 recommendations were accomplished through the 2023 update process.

Tier 2 recommendations are actions that would accomplish desirable modernization objectives but which, due to their scope and/or complexity, would be impracticable to complete within the limits of resources constraints of the 2023 update process.

Tier 3 recommendations are actions that cannot be practicably achieved through local planning processes without additional policy support or technical assistance from outside agencies.

The Assessment identified updates to Plan Parts V-Estuarine Use Standards and IX-Future Development Sites as Tier 2 recommendations. It is the responsibility of the local jurisdictions of Lincoln County, City of Newport, and City of Toledo to complete the comprehensive update of the Yaquina Bay Estuary Management Plan by updating these Plan Parts when capacity and resources allow.

APPENDIX A. DEFINITIONS

Proposed revisions as part of the 2023 update

ACCRETION: The build-up of land along a beach or shore by the deposition of waterborne or airborne sand, sediment, or other material

ACTIVE RESTORATION: The use of specific remedial action such as removing fills, breaching dikes, removing tide gates etc. to restore or replace original estuarine attributes (see RESTORATION)

AQUACULTURE: The raising, feeding, planting and harvesting of fish, shellfish or marine plants, including facilities necessary to engage in the use.

BENTHIC: Living on or within the bottom sediments in water bodies.

BOAT LAUNCHING: A facility designed for the launch, take out and/or tie up of recreational or smaller commercial craft. Such use may include commercial, public or individual private facilities. Boat launching does not include large scale marine railway facilities designed for marine industrial boat building and repair facilities.

BREAKWATER: A barrier, sometimes connected to the shore at one or both ends to break the force of waves. Used to protect harbors and marinas, breakwaters may be constructed of rock piling, concrete or may be floating structures.

BRIDGE CROSSING: A structure spawning a waterway designed to carry automobile, railroad and/or pedestrian traffic across the waterway. Maintenance or re- placement of bridge crossings means repair, restoration, or in-kind replacement of a bridge such that the number of travel lanes is not increased.

BRIDGE CROSSING SUPPORT STRUCTURES: Piers, piling, and similar structures necessary to support a bridge span but not including fill for causeways or approaches.

CLIMATE CHANGE: The increasing changes in the measures of climate over a long period of time including precipitation, temperature, and wind patterns.

CONDITIONAL: Refers to a use which may be permitted only after a case-by-case review and local conditional use approval has been granted. (See PART IV)

CONSERVE: To manage in a manner which avoids wasteful or destructive use and provides for future availability.

DIKE: An earthen embankment or ridge constructed to restrain high waters.

DOCK: A fixed or floating decked structure against which a boat may be berthed.

DOLPHIN: A group of piles driven together and tied together so that the group
Is capable of withstanding lateral forces from vessels or other objects.

DREDGED MATERIAL DISPOSAL: The deposition of dredged material in shorelands or estuarine areas.

DREDGING: The removal of sediment or other material from a water body, usually for the purpose of deepening a channel, mooring basin or other navigation area.

ECOSYSTEM SERVICES: Ecosystem services are the benefits that nature provides, such as purifying and cooling water or storing carbon dioxide.

ESTUARY: A semi-enclosed body of water connected with the ocean and within which fresh and salt water mix. The estuary includes (a) estuarine water; (b) intertidal lands; (c) sub-tidal lands; and (d) tidal marshes. Estuaries extend upstream to the head of tide; their landward extent is Mean Higher High Water or the line of non-aquatic vegetation.

EXCAVATION: Excavation of shoreland to create new estuarine surface area directly connected to other estuarine waters.

FILL: The placement of material in estuarine areas to create new shoreland area or raise the elevation of land.

GEOGRAPHIC INFORMATION SYSTEMS (GIS): A system that creates, manages, analyzes, and maps all types of data.

GROIN: A shore protection structure (usually perpendicular to the shoreline) to trap littoral drift or retard erosion of the shoreline. Generally constructed of rock or other solid material.

INTERTIDAL: The area between mean lower low water and mean higher high water.

JETTY: An artificial barrier used to change littoral drift to protect inlet entrances from sedimentation and to direct and confine the stream of tidal flow. Usually constructed at the mouth of a river or estuary to help deepen and stabilize a channel.

LANDWARD MIGRATION ZONE: Upslope areas above the current Mean Higher High Water mark suitable for intertidal and subtidal habitats as local sea level rises.

MANAGEMENT UNIT: A discrete geographic area, defined by biophysical characteristics and features, within which certain uses and activities are protected, encouraged and protected and others are discouraged, restricted or prohibited.

MARINA: A shall harbor, boat basin or moorage facility providing dockage for recreational craft.

MEAN HIGHER HIGH WATER: The average of higher high waters over a 19 year period.

MEAN LOW WATER: The average of all the low water heights observed over the National Tidal Datum Epoch.

MEAN LOWER LOW WATER: The average of the lower low waters over a 19 year period.

MINERAL AND AGGREGATE EXTRACTION: The removal for economic use of minerals, petroleum resources , sand, gravel or other materials from the estuary.

MITIGATION: The creation, enhancement, or restoration of an estuarine area to maintain the functional characteristics and processes of the estuary such as its natural biological productivity, habitats and species diversity, unique features and water quality.

NOT ALLOWED: Refers to a use or activity which is not permitted. Can only be permitted upon adoption of a plan amendment.

OCEAN ACIDIFICATION: The reduction in the pH of the ocean over an extended period of time, caused primarily by the uptake of carbon dioxide (CO_2) from the atmosphere.

OUTFALLS: An outlet through which materials are discharged into the estuary. Outfalls include sanitary (sewer) discharges, storm drainage facilities, and other industrial waste discharges.

PASSIVE RESTORATION: The use of natural processes, sequences or timing to bring about restoration after removal or reduction of adverse stresses. (See Restoration)

PERMITTED WITH STANDARDS: Refers to a use which is permitted as consistent with the purpose and management objective of the management unit. Permitted uses must conform to the Estuarine Use Standards set for in the plan.

PIER: A structure extending into the water from solid land generally to afford passage for persons or goods to or from vessels, but sometimes to provide recreational access to the estuary.

PILING: A long, slender stake or structural element of steel, concrete or timber which is driven, jetted, or otherwise embedded into the bed of the estuary for the purpose of supporting a load.

PORT FACILITIES: Facilities which accommodate and support commercial fishery and navigation activities, including terminals and boat basins and moorage for commercial vessels, barges and oceangoing ships.

PRESERVE: To save from change or loss and reserve for a special purpose.

PROTECT: Save or shield from loss and reserve for a special purpose.

RESOURCE CAPABILITY: The ability of a natural resource site to be physically, chemically or biologically altered, or otherwise assimilate an external use, and still fulfill its estuarine resource role as stated in management objective of the individual management unit and the definition of the management classification in which it is located.

RESTORATION: Revitalizing, returning or replacing original attributes and amenities, such as natural biological productivity, which have been diminished or lost by past alterations, activities or catastrophic events.

RIPARIAN: Of, pertaining to or situated on the bank of a river or other body of water.

GLOBAL SEA LEVEL RISE: The increase currently observed in the average Global Sea Level Trend, which is primarily attributed to changes in ocean volume due to two factors: ice melt and thermal expansion.

SHORELANDS: The area adjacent to the estuary and its wetlands. The lower boundary of the shorelands is Mean Higher High Water or the line of non-aquatic vegetation; the upper boundary is the shorelands boundary, which is established on the basis of a number of inventory characteristics. Shorelands extend upstream to the head of tide.

SHORELINE STABILIZATION: The stabilization or protection from erosion of the banks of a waterway by vegetative or structural means.

SIGNIFICANT HABITAT AREAS: A land or water area where sustaining the natural resource characteristics is important or essential to the production and maintenance of aquatic life or wildlife populations.

STORM SURGE: An abnormal rise of water generated by a storm, over and above the predicted astronomical tides.

SUBMERSED CROSSINGS: Power, telephone, water, sewer, gas or other transmission lines which are constructed beneath estuarine waters, usually by embedding into the bottom of the estuary.

SUB-TIDAL: Below the level of mean lower low water.

TEMPORARY ALTERATIONS: May not be for more than three years and the affected area must be restored to its previous condition.

TIDAL MARSH: Estuarine wetlands from the line of non-aquatic vegetation down to the end of vegetated flats, which is approximately the lower high water level.

TRIBAL CULTURAL RESOURCES OR PRACTICES: Any place in which a relationship, past or present, exists between a spatial area, resource, and an associated group of indigenous people whose cultural practices, beliefs, or identity connects them to that place. A tribal cultural landscape is determined by and known to a culturally related group of indigenous people with relationships to that place.

WATER DEPENDENT: A use or activity that can only be carried out on, or in adjacent to the water because the use physically or economically requires access to the water body for water borne transportation, recreation, energy production or source of water. Non-water dependent accessory uses may be permitted in conjunction with a primary water dependent use. In general, such non-water dependent uses should not exceed 10% of the total area of the use. Variations to this standard may be permitted if it is found that additional area is required for non-water dependent uses essential to the functioning of the primary water dependent use(s).

Examples of water dependent uses include, but are not limited to:

Marinas
Aquaculture
Marine ways
Seafood processing plants
Marine shipping terminals
Charter boat operations
Marine fuel sales

WATER RELATED: A water related use is:

a. a use which derives a cost savings advantage (not associated with land costs or rent) from a location on or near the water; or
b. a use whose location on or near the water is essential to the functioning of adjacent water dependent uses

Examples of water related uses include, but are not limited to:

Marine supply sales
Bait and tackle shop
Commercial fishing gear storage
Seafood market

WETLANDS: Land areas where excess water is the dominant factor determining the nature of soil development and the types of plant and animal communities living at the soil surface. Wetland soils retain sufficient moisture to support aquatic or semi-aquatic plant life. In marine and estuarine areas, wetlands are bounded at the lower extreme by extreme low water; in freshwater areas, by a depth of six feet. The areas below wetlands are submerged lands.

WHARF: A structure built alongside a waterway for the purpose of receipt, discharge and storage of goods and merchandise from vessels.

APPENDIX C. GOAL EXCEPTIONS

From original EMP document (not updated)

GOAL 16 EXCEPTION TO ALLOW AQUACULTURE DEVELOPMENT AT POOLE'S SLOUGH

Description

The area addressed by this exception includes tidal marsh and some limited intertidal lands at the mouth of Poole's Slough in management unit 19. Exception is taken to the Goal 16 "Natural" management requirements to allow dredge, fill and other activities for aquaculture development. These activities would otherwise be prohibited by the Goal in areas qualifying for natural management.

The aquaculture development proposed for the area involves the expansion of the existing Newport Pacific Corporation oyster facility and an adjacent operation to utilize a modified out-of-bay culture, a local seed technique to provide production and nursery operation.

The project would be accomplished in three phases. The first phase of the project would see maintenance dredging of a silted in channel from the firm's Poole Slough and Yaquina Bay growing grounds to their processing house. The 30 foot wide channel would be deepened some 5 feet for its 800 foot length. The resulting dredgings would be used to create a 100 x 32 foot tract of land in a sub-slough fronting the existing up-land site, and would become the site of a new processing plant and seed production operation.

Phase II of the plan would create by dredging, two modified out-of-bay rearing channels in the tidal marsh area, each 16 feet wide and 400 feet long, and a workway for mechanical equipment between them. Nearly all of the dredged material would be used to build the workway, with the small surplus taken to the new plant site.

The nursery channels, through the construction of berns, baffles, tidegates, etc. will function as an outdoor incubator driven by the tides and direct solar heating. Oyster seed larvae will initially. be brought in from a Netarts Bay hatchery and later from an on-site hatchery), and placed in the nursery area. Once the larvae have set, the resulting spat will be transplanted into the subtidal channel of Poole's Slough and adjacent areas of Yaquina Bay for the final growth phases. At maturity, the oysters will be harvested and delivered by boat to the shucking house for processing.

Phase III would see a staged expansion in the number of rearing channels up to a maximum of 18, with the dredged material expanding the original plant site to provide for shell·storage, seed processing operations, and a larval hatchery. The additional seed production capacity provided by the Phase III channels should provide sufficient production for seeding all suitable oyster growing in Yaquina Bay, with some seed production for outside markets a possible eventuality.

In total, the completed plan would involve approximately 5.35 acres of the land, consisting of 3.45 acres of dredging and 1.9 acres of fill.

Need

Commercial oyster growing has taken place in Yaquina Bay since before the turn of the century. Current oyster production is about 8,000 gallons per year. Roughly 200 acres of the bay (out of 600 acres which have been identified as suitable by the Oregon Department of Fish and Wildlife) are currently in production.

For complex biological reasons, the native Yaquina oyster failed to adequately re-propogate and commercial production demands necessitated turning to external seed sources. Growers utilized the larger Pacific oyster, which grows well in Yaquina Bay, but does not successfully spawn. Japan, for decades, was the only source of seed. Historically, oyster production has been limited by the expense and inadequate availability of seed and long (3-4 yrs.) growth cycles. Because of these limitations on production, the capital investment. necessary for improving harvesting, processing and other operations has not been feasible.

Oregon State University and other institutions have intensified various research programs in an effort to overcome these limitations. The creation of new genetic oyster strains, production of regional. seed sources and other factors have combined to increase somewhat the overall efficiency of oyster operations.

As a result of this work, for example, most Northwest oyster seed is now produced domestically in "eyed larval" hatcheries, with growers setting their own seed. More recently, advancing research on "out-bay" culture techniques offers great commercial promise for more efficient spat production and the reduction of total growth time.

The underlying principle of out-bay culture is water control hence the control of algal production. Usually single celled algal plankton reproduce once every twenty-four hours. By controlling the rate of water exchange in a closed water mass, plankton blooms can be encouraged. Nutrients for the system can come from upwelled seawater or supplied as organic or in-organic fertilizer. Tests have shown that oyster seed can grow up to four times faster in such a system in comparison with non-manipulated seawater.

Modified out-bay culture which is proposed for Poole's Slough would entail developing dredged channels which would provide nursery areas for oyster seed.

Setting eyed larvae as currently practiced in Yaquina Bay necessitates the two day old seed being placed directly in the estuary. By placing the seed ih1.controlled nursery areas, accelerated growth is anticipated. According to professor Wilbur Breese of Oregon State University this will increase survival

and provide larger and healthier seed in less time. Hopefully the benefits to the seed will allow the oysters to reach market size from six months to a year earlier, a reduction in growth time of from 15 to 30 per cent.

The development of a seed production and nursery operation of this type provides the potential for putting into production large areas of Yaquina Bay which are currently underutilized for oyster growth. This local source of seed is felt to be a key step in realizing the full potential of the oyster industry in Yaquina Bay.

Alternatives

The following sites and designs are felt to represent the theoretical alternatives to the modified out-bay culture project proposed for Poole's Slough:

Upland Locations - The use of a remote upland location would involve construction of tanks and/or ponds to provide oyster nursery areas. Water would have to be pumped from the estuary to the site and returned via an outfall .A feasible upland site would need to be located in reasonable proximity to the estuary in order to provide access for a water source and also for moving the juvenile oysters by vessel from the nursery area to the open water areas of the estuary for the final growth stages.

No upland sites with suitable area (approximately 5.5 acres) are known to exist within the "oyster zone" of Yaquina Bay (River Bend to Grassy Point). Extreme topography along this portion of the estuary severely limits suitable area for a project of this nature. Relatively low, level lands are limited to tidal marsh or intertidal flat areas, which would require dredge and fill activities for project construction.

Suitable upland areas are available both above and below the oyster zone. Upland areas suitable for water dependent use are available in the Toledo area; however winter salinities in this area are too low to allow for oyster growth. Upland areas are available in the Yaquina sub- area (Coquille Point) and in the Newport area (Mclean Point; South Beach). None of these areas have access to State certified shellfish waters, and water quality and ultra violet sterilizers).

Diked shorelands within the oyster zone were also examined as possible alternative sites. Several small diked areas are present along County Road 515 (north shore) between River Bend and Grassy Point. None of these areas is large enough to provide the needed area for an integrated nursery processing facility and none has vessel access for replanting of spat. (Provision of vessel access to these areas would require extensive intertidal dredging.) Further, resource agencies have indicated that, despite being partially diked, these areas are still classified as wetlands and would require full environmental review under Section 404 for needed dredge and fill activities (and would require either Goal 16 or 17 exceptions). Due to the scarcity

of mitigation sites in Yaquina Bay, these diked areas have been identified and reserved as needed mitigation sites.

Diked shorelands are also potentially available in the Boone's and Nute's Slough areas. Sufficient area is available at both of these sites for the proposed facility. State certified shellfish water is not available, and water quality control equipment would be required. Vessel access to this area is not available; intertidal dredging in a Natural management unit would be required to provide such access.

All of the above diked shoreland sites would require major construction activities to breach existing dikes and provide tidal openings through the fill bed of County Road 515. Several sites would also involve removal and relocation of large tidegates. All of these sites have the additional limitation of being located across County Road 515 from the estuary itself. This would necessitate crossing the county road (classed as a major arterial) regularly with equipment, cages, trays etc. as they are transferred from the nursery areas to the open water areas, a potentially hazardous situation.

Finally, all of the potential sites along the north shore which are outside of the City of Newport (diked shoreland and other upland) have no known source of fresh water. Groundwater supplies are uncertain and known surface water supplies available for appropriation are not adequate. It is anticipated that at eventual capacity, the nursery and processing facilities will require substantial quantities of fresh water.

Open Water Areas - Open water areas in the oyster zone have been considered in the past for use as oyster nursery areas. There are several serious limitations with the use of these areas. First, and most important, is the fact that to properly establish and monitor accelerated growth techniques requires minimizing the many environmental variables, which is extremely difficult to accomplish in an open water situation. Use of such areas largely nullifies the anticipated advantages of the relatively isolated and controllable environment provided by the modified out-bay technique. Additional problems with the use of these areas include possible damage from boat traffic, heavy winds and strong tidal currents; potential conflicts with established users of the water surface area such as boaters and anglers; and potential vandalism and security problems.

Design Alternatives - Design alternative involving man made channels or ponds constructed on adjacent shoreland areas have been considered under "upland alternatives."

It is theoretically possible to provide construction of processing and other landside facilities on piling, thus minimizing the amount of fill needed. This would be possible at the Poole's Slough site as well as several locations on the north shore of the oyster zone along County Road 515. However, due to the amount of area needed for the project (at least 60,000 square feet) this. is not felt to be an economically feasible alternative. Local contractors' current cost estimates for

pile supported structure are approximately $20 per square foot. This would require an initial capital cost of 1.2 million dollars for construction of these facilities; at least five times the cost of construction on fill. In addition, ongoing maintenance and repair costs for pile supported structures would significantly increase the cost of operation.

A final design alternative involves the use of the Poole's Slough site for construction of the nursery area and locating the remaining landside facilities at other less environmentally sensitive locations. For successful operation, both the nursery facility (i.e. the rearing channels) and processing facilities must be located in close proximity to the open water growing grounds (for efficient transfer of spat and harvested oysters) and harvested oysters) and have vessel access (to provide for direct transfer of spat or harvested product to and from the growing grounds). Due to extreme topography and inadequate water depths, no upland sites are available in the oyster growing zone which could provide suitable area for a processing facility.

The operators of this proposed facility believe that integrating these uses at one location will be essential to an economical operation. Numerous capital and operating costs, including personnel, equipment, utilities, transportation, and initial facility construction could be at least partially consolidated and thereby significantly reduced through the combining of operations at a single site. Since the economics of this proposal are currently untested, such factors may be key to successful operation.

In summary, the site and facility design for the proposed Poole's Slough oyster nursery operation meet the following essential requirements (alternatives considered are all found to be deficient relative to one or more of these requirements):

1. Slough Facility can be operated using direct tidal exchange for the rearing channels. No pumping or other water and exchange facilities are required. Based on power and equipment cost estimates, an upland site requiring pumping would add over $6,000 per month to the facility's operating costs. This cost factor renders the use of upland sites or full "out-bay" techniques impractical.

2. The Poole's Slough site has excellent water characteristics or oyster growth. Sites upriver from the oyster zone do not have access to waters with suitable salinity and nutrient characteristics. Sites downriver do not have access to State Health Division certified shellfish waters. These waters could only be used after processing with sand filters and ultra-violet sterilizers. According to representatives of Becker Industries (designer and manufacturers of sophisticated water filtration systems) this equipment would cost a minimum of $150,000, plus installation, maintenance and operating costs, amounts which would render the project economically impractical.

3. Adequate space can be made available for an integrated nursery – processing facility at the Poole's Slough site. No other sites which meet the above requirements 1 and 2, have this needed area available.

4. Poole's Slough has adequate road and navigational access. Potential diked shoreland sites along the north shore of the oyster zone would require extensive dredging to provide vessel access. Upland and open water areas on the south shore downriver of Poole's Slough have no road access.

5. Poole's Slough has a reliable source of fresh water available. The Seal Rock Water District main line runs past the Poole's Slough site. It is unlikely that groundwater supplies elsewhere in the oyster zone would be adequate for the operation of the proposed facility.

Environmental Consequences

Approximately 5 acres of tidal marsh would be lost to dredge and fill activities as a result of the proposed project. This would result in the loss of primary productivity, detrital export, favorable water filtration and wildlife habitat. While this is a relatively small portion of the total area of tidal marsh in Yaquina Bay (approximately 819 acres), tidal marsh is considered a scarce habitat type in the estuary when compared to past abundance and to Oregon estuaries of similar size. The loss of even a small portion of a major tract of tidal marsh such as Poole's Slough must be considered a serious environmental consequence.

Actual loss of estuarine surface area will be limited to the approximately 1.9 acre area of fill. The roughly 3 acres of dredged area will result in high tidal marsh habitat being replaced by shallow sub-tidal habitat. Most, if not all of these negative environmental consequences can likely be compensated for through appropriate mitigation. Several potential sites for the restoration of tidal marsh are available in this area of the estuary (see Mitigation Sites).

Socio-Economic Consequences

With the development of new aquaculture facilities in this area, the oyster industry's efforts to expand production would be significantly enhanced. The local economy will realize the positive employment and economic spin-off that will result from the expansion of this basic industry. It is estimated that expansion of the oyster industry as a result of the proposed development could provide from 30 to 50 jobs and increase oyster production to 750 gallons weekly. This will help the county to further its economic goals of diversifying and stabilizing the local economy.

The Poole's Slough area has been identified by the Oregon Natural Heritage Program as a potential significant natural area. However, according to refinements of the ONHP Data Summary for Lincoln County, the Poole's Slough area does not qualify for consideration as an ecologically or scientifically significant natural area (See Goal 5 Inventory, Lincoln County Comprehensive Plan). A long history of human-use and disturbance, particularly in the area

near the mouth of the slough indicate that it is not suitable for consideration as a significant natural area.

Energy Consequences

Energy will be conserved by allowing provision of navigational access to existing facilities on Poole's Slough. Currently, harvested oysters are unloaded at a site near River Bend Moorage, trucked up the Bay Road to Toledo, and back down the South Bay Road to Poole's Sough. This 12 mile trip would be eliminated, as oysters could be delivered directly by boat once historically used channels are re-established through dredging. In addition, the proposed site and design provides the most energy efficient design for this type of nursery facility. Tidal and solar energy will be employed to provide the water circulation and temperature control needed for enhancing oyster production.

Compatibility

Existing uses in and around Poole's Slough include aquaculture operations, boating, angling, waterfowl hunting, commercial forestry uses, widely scattered rural residences, biological productivity and fish and wildlife habitat. Currently, no compatibility problems exist in this area. It is anticipated that the expansion of the existing aqua-culture facilities in this area will represent a continuation of an existing use pattern and will be compatible with surrounding uses.

Existing boat traffic and occupation of surface area will not increase significantly and thus will not conflict with anglers, boaters, hunters or other public water users. Existing residences in this area are all entirely screened from the project site, thus no conflicts should arise as a result of these uses.

The proposed project is located entirely within an aquatic area and is buffered by privately owned upland areas. Commercial forestry activities in the vicinity will not be affected in any way by the proposed expansion. The proposal will adversely impact biological productivity and wildlife habitat only on the small area actually included in the project site. The project site is geographically isolated from other areas important for productivity and habitat (i.e. McCaffery's Slough and upper Poole's Slough).

The influence of human activity on surrounding areas will not be significantly greater than it is at present. Therefore, the proposed facility will not conflict with the area's overall values for biological productivity and fish and wildlife habitat.

Poole's Slough Aquaculture Proposal - Development Summary

PHASE I

1. DREDGE SUB-SLOUGH CHANNEL - POOLE SLOUGH TO ROAD.

   A. 30' wide by 5' deeper (from +3.0 to -2.0) by 800' length..

   B. Provides 4,444 cu. yds. material.
   $\frac{12{,}000 \text{ cu. ft.}}{27 \text{ cu.ft./cu.yd.}}$ 4,444 cu. yds.

2. DREDGE ADDITIONAL 25' x 100' x 5' DEEPER TO CREATE TURNING BASIN OF 55' x 100' x 5' DEEPER.

   A. Provides 463 cu. yds. material.

   B. $\frac{12{,}500 \text{ cu. ft.}}{27 \text{ cu.ft./cu.yd.}}$ 463 cu. yds.
   TOTAL 4,907 cu. yds.

3. CREATE NEW PROCESS PLANT SITE AT ROAD.

   A. Fill 100' wide front channel 10' deep (to +13.0) x 132.6' long.

   B. 100' x 10' = 1,000 cu. ft. and 37 cu. yds. per running foot.

   C. $\frac{4{,}907 \text{ cu. yds.}}{37 \text{ cu. yds. per foot}}$ = 132.6 ft. length

   D. 100' x 132' = 13,200 sq. ft.
   $\frac{13{,}200 \text{ sq. ft.}}{43{,}000 \text{ sq. ft. per acre}}$ = Plant Site 100' x 132' 0.31 acres

PHASE II

1. CREATE THREE REARING CHANNELS 16' WIDE x 6' DEEP 400' LONG.

   A. With slope, plan 10' at bottom and 16' at +9' level.

   B. Plan dredged depth to +3.0'.

   C. For calculation, plan 13' wide ave. x 6' deep x 400' per channel.
   13 x 6 x 400 = 31,200 cu. ft. or 1,156 cu. yds. dredged.

D. 1,156 cu. yds. x 2 channels = 2,311 cu. yds. dredged.

E. Dredge 16' wide x 400' x 2 = 12,800 sq. ft. or 0.30 acres.

2,311 cu. yds.

2. CREATE ENTRY AND EXIT DITCHES AT EACH END.

A. Ditch 10' wide (plan 7' average) x 8' deeper (+1.0) x 50' x 2 ditches.

B. 7' x 8' x 50' x 2 = 5,600 cu.ft. or 207 cu. yds.

Dredge 207 cu.yds.
TOTAL DREDGE 2,518 cu.yds.

3. BUILD WORKWAYS TO SERVICE CHANNELS.

A. Build 25' wide x 50' long main workway at 13' level (+9.0 to +13.0)
25' x 4' x 50' = 5,000 cu. ft. or 185 cu.yds.

185 cu. yds.

B. Build 2 channel workway 16' wide x 400' long @ 13' level.
16' x 4' depth x 400' = 25,600 cu. ft. or 948 cu. yds.

948 cu. yds.
TOTAL FILL 1,133 cu. yds.

C. Total dredge area = 16' x 400' x 2 channels = 6,400 sq. ft. or 0.3 acres

SURPLUS FILL TO PLANT SITE 1,385 cu. yds.

D. Total fill 25' x 50' + 16' x 400' x 2 channels or 1,250 + 12,600 or 14,050 sq. ft. or 0.33 acres.

TOTAL DREDGE AND FILL 0.63 acres +

PHASE III

1. DEVELOP - BY STAGES - ADDITIONAL REARING CHANNELS.

A. 16 additional channels - 18 total.

B. Each channel requires dredgin 1,156 cu.yds.
x 16 channels. = 18,496 cu.yds. dredged

C. Each channel = 0.15 acres dredged. = 2.4 acres dredged

Development Summary

D. Plan one workway per two channels.

1. Plan 8 added workways (total of 9).

2. 16' x 400' x 8 = 51,200 sq. ft. or 1.2 acres filled

3. Add 50' main workway (Plan 48' lineal per 2 channels) or 50' x 48' x $\frac{16 \text{ channels}}{2}$ = 19,200 sq. ft. or 0.45 acres. 0.45 acres filled

E. Add entry exit ditches of 48' x $\frac{16 \text{ channels}}{2}$ x 2 ditches x 7' average width = 5,376 sq. ft. or 0.13 acres dredged

1-7' wide x 384' length x 8' deep = 21,504 cu. ft. or 796 cu. yds. 796 cu.yds. dredged

TOTAL DREDGED 19,292 cu. yds.

TOTAL FOR WORKWAYS
1-total sq. ft. (57,200 + 19,200)
is 70,400 x 4' depth = 281,600 ÷ 27
= 10,430 cu. yds.
SURPLUS TO PLANT SITE 8,862 cu. yds.

2. DEVELOP REMAINDER OF PLANT SITE.

A. Use surplus from ditches and channels.

1. 8,862 cu. yds. from Phase III + 1,385 cu. yds. from Phase II or 10,247 cu. yds.

B. Plan 100' wide x 10' deep or 37 cu.yds. per running foot.

C. $\frac{10,247}{37}$ = 277 lineal feet

D. 277 x 100' wide = 27,700 sq. ft. = 0.64 acres fill

E. Add Phase II surplus of 1,385 cu. yds. to create fill of

$\frac{1,385 \text{ cu. yds}}{37 \text{ cu. yds. per foot @ 100 ' width x 10' deep}}$ = 68 lineal feet 6,800 sq. ft.

and .16 acres

TOTAL FILL 0.8 acres

OUT OF BAY CULTURE POWER USE ANALYSIS

1. CENTRAL LINCOLN PUD - Jack Snook, Comm. Mgr.

   A. Qualifies under GS2 rate

   B. Must build 240 volt 3-phase line
      COST $50,000

   C. Kilowatt demand is 3.56 mo. per KW
      plus present rate of .009 KWH

   D. Rates will triple within ten years.
      Plan $10.00 per month per KW demand .
      Plan .027 per KWH rate.

2. WATER FLOW RATES

   A. Channels @ 14' x 4' x 400' = 22,400 cu. ft. x
      7.48 gals./cu. ft. = 167,552 gallons x 18 channels =
      3,015,936 total gallons.

   B. Plan 30 hour turnover (Prof. Breese)
      30 hrs. x 60 mins. = 1,800 minutes

   C. 3,015,936/1,800 mins. = 1,675 gals. per min.

   D. Plan 1,700 GPM @ 100' of head and 240V - 3-phase.

3. QUEEN PUMP CO. - Portland, Oregon

   A. Plan 2 pumps with starter @ $12,000 ea. rated @
      200 H-P each.

   B. Plan future pump cost @ $15,000. (when purchased)

   C. Plan one pump on line - one on standby.

   D. Plan 10 year life on first two pumps.

   E. $30,000 cost over 10 years = $3,000 per year.

4. MONTHLY POWER COST

   A. 200 H-P = 200 KW demand.

   B. 200 KW x $10.00 mo. = 2,000 monthly.

   C. Add 0.027 per KWH.

      30 days x 24 hours x 200 KW = 144,000 KWH per mo.
      144,000 x 0.027 = 3,888 per mo.

OUT OF BAY CULTURE POWER USE ANALYSIS (Cont.)

5. PUMP STATION INSTALLATION AND PIPING COSTS NOT ADDRESSED.

6. TOTAL COSTS W/O INSTALLATION - PIPING.

A.	Pump amortization $3,000 yr./12 mo's	=$ 250.00 mo.
B.	200 KW demand x $10.00	=$2,000.00 mo.
C.	KWH usage @ 0.027 KWH	=$3,888.00 mo.
	TOTAL	$6,138.00 mo.

APPENDIX D. CLIMATE VULNERABILITY

New appendix proposed as part of the 2023 update

The list of climate vulnerabilities specific to Yaquina Bay and the Lincoln County Estuary Management Plan (EMP) was developed during the 2023 EMP under the guidance of the planning process' Technical Sub-Group, Advisory Group, and Steering Committee. In Plan Part III - Sub-Areas each sub-area describes applicable climate vulnerabilities sourced from this list.

Shoreline and Habitat

- Increased shoreline erosion due to changes in sediment transport and deposition patterns or increased intensity of storm surge
- Increased demand for shoreline protective structures due to increased erosion from sea level rise and storm surge
- Aquaculture and recreational shellfish losses due to ocean acidification that impairs the formation of oyster shells
- Loss of suitable habitat conditions for eelgrass, Sitka spruce swamps, or other critical species and habitats due to sea level rise, warming waters, or increased downstream sedimentation
- Increased risk of shoreline protection structures, pilings, or jetties becoming underwater hazards due to sea level rise
- Increased risk of failure of shoreline protective structures due to storm surge and sea level rise
- Loss of carbon capturing (blue carbon) habitat due to sea level rise
- Conflicts between migrating wetlands and adjacent shoreland uses
- Extended use of salt marshes, eelgrass beds, tidal channels and other cool water refugia habitats for juvenile salmonids and forage fish such as herring, anchovies, and smelt due to warmer upriver temperatures in the mid-summer to early fall
- Increased use of productive estuary habitats by marine birds during periods of low food abundance in the ocean, which are associated with marine heat waves and climate-driven changes in ocean processes
- Increased use of Yaquina Bay habitats by migratory birds as other regional habitats become unsuitable for climate-related reasons (i.e. climate-related shifts in breeding, migration, and overwintering ranges)

Infrastructure and Facilities

- Increased frequency and extent of storm surge flooding due to sea level rise risking the integrity and hindering the use of critical infrastructure
- Water damages to housing structures or mobile homes from riverine flooding due to sea level rise
- Increased risk of jetty or breakwater failures due to sea level rise and storm surges

- Increased risk of structural failure of boat ramp and recreation facilities due to sea level rise and storm surge
- Increased risk of loss of structural integrity to underground or submerged infrastructure due to higher water tables from sea level rise
- Increased risk of flooding to bay adjacent public roads and streets due to sea level rise
- Increased risk of tide gates and dike failures due to sea level rise and storm surge
- Increased risk of sea level rise submerging port, marina, and other moorage space infrastructure
- Increased risk to current dredging regime or location of navigation channels as erosion and accretion patterns change due to sea level rise and storm surge
- Increased risk of riverine flooding of public infrastructure due to tidal amplification, sea level rise, and storm surge

Pollution or Toxic Event

- Increased frequency and extent of storm surge flooding due to sea level rise of bay-adjacent industrial and waste treatment sites increasing risk of structural damage and pollution event
- Increased risk of bay and groundwater pollution (nutrient loading) from bay adjacent septic systems and higher water tables due to sea level rise
- Increased risk of combined sewer overflow (CSO) events due to sea level rise, riverine flooding, and changing winter precipitation patterns
- Increased risk of toxic leaks from erosion and destabilization of submerged sewer, natural gas and other pipes and utility lines due to changes in sediment transport and deposition patterns
- Increased risk to livestock in bay adjacent pasture land due to sea level rise and storm surge

APPENDIX E. RESTORATION & MITIGATION SITES LIST

New appendix proposed as part of the 2023 update

The following is the list of Restoration and Mitigation sites included in the Lincoln County Estuary Management Plan. This list was developed during the 2023 update and more information on the process for compiling sites can be found in Plan Part VII: Mitigation & Restoration.

Mitigation sites are in orange.

The list was last updated 6/12/2023.

Label	Acres	Site Description	Vegetation Description
Y01	33.5	tidal marsh S of Hatfield Marine Science Center on W side of bay	low to high tidal marsh along bay margin; to W (W of dikes & roads), some freshwater wetlands where not filled
Y02	14.5	tidal marsh just N of airport, & W of airstrip	low to high tidal marsh, disturbed and weedy just N of airport hangars
Y03	35.2	diked tidal marsh N of Airport (N end of Sunny Ridge)	high tidal marsh, possibly sedge marsh, maybe mixed with freshwater marsh where tidal flow is impeded
Y04	8.9	tidal marsh at mouth of Babcock Creek	high tidal marsh dominated by tufted hairgrass, Baltic rush
Y05	22.2	tidal marsh on E bank of Yaquina opposite Boone Slough	high tidal marsh dominated by tufted hairgrass
Y06	839.1	extensive former tidal marsh, many remnant channels	freshwater wetland to upland pasture
Y07	260.8	diked & ditched former tidal marsh (fed by Beaver Creek and Depot Creek)	freshwater emergent wetland and willow scrub-shrub wetland
Y08	0.7	marsh in "notch" in N Bay Road, just S of mouth of Boone Slough.	high tidal marsh dominated by tufted hairgrass
Y09	14.5	N bank of Yaquina, N of N Bay Road, about 2 mi W of mouth of Boone Slough	high tidal marsh dominated by tufted hairgrass; lots of Puget Sound gumweed
Y10	4.1	small tidal marsh opposite OR Oyster, ~1/2 mi W of Johnson Slough	high tidal marsh, dominated by tufted hairgrass

Label	Acres	Site Description	Vegetation Description
Y11	1.8	heavily grazed tidal marsh w/intact tidal channels, N side of N Bay Rd opposite W end of Grassy Point marsh	degraded tidal marsh (weedy, heavily grazed)
Y12	4.3	tidal marsh on N side of N Bay Rd. across from Grassy Point	high tidal marsh dominated by tufted hairgrass; lots of Puget Sound gumweed
Y13	2.2	tidal marsh on N side of N Bay Rd. (across from site 13a, a large undisturbed tidal marsh at bend in Yaquina). Just upstream of Nute Slough.	high tidal marsh dominated by tufted hairgrass, Baltic rush; may be degraded (lots of colonial bentgrass further in)
Y13a	32.4	tidal marsh at bend in Yaquina just upstream of Nute Slough	high tidal marsh dominated by tufted hairgrass
Y14	5.9	tidal marsh at mouth of unnamed creek about 1/2 mi W of Montgomery Creek	high tidal marsh; some areas of brass buttons (Cotula)
Y17	3.0	diked tidal marsh (naturally breached) @ S end, E bank of Olalla Slough	high tidal marsh/sedge marsh
Y18	0.6	mostly mud flat	mostly mud flat; degraded, but Lyngby sedge is recolonizing at edges
Y19	1.8	ditched, disturbed tidal marsh between Johnson Sl. & former hatchery	degraded high tidal marsh (weedy: thistles, colonial bentgrass)
Y20	2.5	former Reinoehl hatchery? small, degraded tidal marsh	degraded, partially tidal high marsh mixed with freshwater wetland (weedy)
Y21	11.9	diked & ditched former tidal marsh; some remnant channels, L bank Yaq SE of settling ponds	partially tidal high marsh (Lyngby sedge, tufted hairgrass) to fresh (bulrush/cattail) marsh, with upland areas (blackberry)
Y22	8.6	ditched tidal marsh; remnant channels, L bank Yaq SE of settling ponds	high tidal marsh dominated by Lyngby sedge, Agrostis spp.
Y23	3.8	Mill Creek wetlands, W bank nr mouth	high tidal marsh dominated by Lyngby sedge, tufted hairgrass; blackberry and Scotch broom on dike
Y24a	4.2	Mill Creek wetlands, W bank inside first hairpin bend	high tidal marsh with tufted hairgrass, some bulrush, thistles
Y24b	2.8	Mill Creek wetlands, E bank just upstream of first hairpin bend	brackish to fresh high tidal marsh
Y25	4.0	Mill Creek wetlands, W bank, cross-ditched area inside bend just above 24b	brackish to fresh high tidal marsh; reed canarygrass in ditched areas
Y26	5.9	Mill Creek wetlands, E bank nr. mouth	high tidal marsh dominated by tufted hairgrass, Lyngby sedge, orache

Label	Acres	Site Description	Vegetation Description
Y27	48.7	diked, ditched, heavily disturbed former tidal marsh, R bank of Yaquina upstream from Toledo	not accessible, but appears to be degraded high tidal marsh. Blackberry on dikes.
Y28	18.1	tidal swamp on E bank of Yaquina E of Toledo	tidal spruce swamp: Sitka spruce with brackish to freshwater tidal herbaceous layer dominated by tufted hairgrass, slough sedge, silverweed, Agrostis species, yarrow.
Y29	46.5	diked, ditched, partially filled former tidal marsh along Elk City Rd E of Toledo (W side of hairpin bend in Yaquina)	emergent and scrub/shrub freshwater wetland (reed canarygrass, willows, soft rush), some upland; some remnant tidal channels
Y30	23.9	tidal marsh, R bank of Yaquina just S of hairpin bend	not accessible, but appears to be high tidal marsh
Y31	8.1	mud flat w/fringing tidal marsh (incl. pocket slough ~1/4 mi W); S bank of Yaquina	mud flat with fringing high tidal marsh dominated by tufted hairgrass
Y32	18.6	tidal marsh on N bank of Yaquina at bend just downstream of Boone Slough	high tidal marsh dominated by tufted hairgrass
Y33	8.0	mud flat, small amts of fringing tidal marsh, S end of King Slough	mainly tidal flats with some fringing tidal marsh at S end
Y34	135.7	extensive tidal marsh	low to high tidal marsh, mostly high marsh dominated by tufted hairgrass, Baltic rush.
Y35	0.4	mud flat w/small amts of fringing tidal marsh, mouth of Montgomery Creek	mostly mud flat; fringing high tidal marsh dominated by tufted hairgrass
Y36	1.2	small freshwater wetland, formerly tidal, E side of Sally's Bend @ junction of John Nye Rd & N Bay Rd	nontidal freshwater emergent wetland (slough sedge)
Y37	210.6	diked, ditched former tidal marsh N of 10th Street/Sturdevant Rd barrier, on E side of Toledo	nontidal freshwater wetland (lots of reed canarygrass, some willows) and upland
Y38	19.4	diked, ditched former tidal marsh, E bank of Olalla just S of dam (remnant channels)	not accessible; diked, so possibly freshwater wetland
Y39	1.4	tidal flat, E bank of Yaquina just N of River Bend	mainly mud flat; some high tidal marsh at upper end, not accessible
Y40	245.7	extensive tidal marsh in lower reaches of Wright Creek	low to high tidal marsh; mostly high marsh dominated by tufted hairgrass. Transition to freshwater tidal marsh at upper end into Wright Creek.
Y41	1.3	very small former tidal marsh just S of Weiser Point [=Kevin Hill's Marine site = Margaret's Marine Ways]	degraded high tidal marsh /freshwater marsh. Not accessible.

Label	Acres	Site Description	Vegetation Description
Y42	12.5	diked, partially tidal wetland on N bank of Yaquina, N end of hairpin bend along Elk City Road	freshwater wetland (reed canarygrass) to upland (blackbery)
Y43	4.6	tidal marsh on W bank of Yaquina, N of River Bend (opposite Weiser Point)	not accessible; appears to be high tidal marsh
Y44	7.4	n/a	n/a
Y45	13.6	n/a	n/a
Y46	4.2	n/a	n/a
Y47	12.3	n/a	n/a
Y48	2.2	n/a	n/a
Y49	3.2	n/a	n/a

APPENDIX F - ESTUARY ZONING DISTRICTS

New appendix proposed as part of the 2023 update

The following is template language for the adoption of Natural, Conservation and Development estuary zoning districts into the zoning code for Lincoln County, the City of Newport, and the City of Toledo.

Section XXX Estuary Natural Zone E-N

In an E-N zone the following regulations shall apply:

1. **Application:**
   The provisions of the E-N zone shall apply to those estuarine aquatic areas within the boundaries of Natural Management Units as designated in the Lincoln County Estuary Management Plan. As used in this section, "estuarine aquatic area" means estuarine waters, submerged lands, tidelands and tidal marshes up to Mean Higher High Water or the line of non-aquatic vegetation, whichever is further landward.
2. **Uses Permitted Outright:**
   The following uses and their accessory uses are permitted subject to the Special Policies of the applicable Management Unit and the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, and 1.1901 to 1.1999:
   (a) Undeveloped low intensity recreation requiring no aquatic area alteration.
   (b) Research and educational observations requiring no aquatic area alteration.
   (c) Projects for the protection of habitat, nutrient, fish, wildlife and aesthetic resources requiring no aquatic area alteration.
   (d) Passive restoration requiring no aquatic area alteration.
   (e) Bridge crossing spans not requiring the placement of support structures within the E-N zone.
3. **Conditional Uses Permitted:**
   The following uses may be permitted subject to the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.1699 and 1.1901 to 1.1999:
   (a) Undeveloped low intensity recreation that requires aquatic area alteration.
   (b) Research and educational observations that requires aquatic area alteration.
   (c) Navigation aids such as beacons and buoys.
   (d) Projects for the protection of habitat, nutrient, fish, wildlife and aesthetic resources that require aquatic area alteration.
   (e) Passive restoration that requires estuarine aquatic area alteration.
   (f) On-site maintenance of existing functional tidegates and associated drainage channels, including, as necessary, dredging and bridge crossing support structures.
   (g) Riprap for the protection of uses existing as of October 7, 1977.
   (h) Riprap for the protection of unique resources, historical and archeological values and public facilities.

4. **Additional Conditional Uses Permitted Subject to Resource Capability Test:**
The following uses and their accessory uses may be permitted subject to the provisions of subsection (7) of this section and the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.1699 and 1.1901 to 1.1999:
   (a) Aquaculture that does not involve dredge or fill or other estuarine aquatic area alteration except that incidental dredging for harvest of benthic species or the use of removable structures such as stakes or racks may be permitted.
   (b) Communication facilities.
   (c) Active restoration of fish and wildlife habitat, water quality, or estuarine productivity.
   (d) Boat ramps for public use not requiring dredge or fill.
   (e) Pipelines, cables and utility crossings including incidental dredging necessary for their installation.
   (f) Installation of tidegates in existing functional dikes.
   (g) Bridge crossing support structures and dredging necessary for their installation.
   (h) Temporary alterations.
5. **Special Standards:**
Dredging, filling or other alterations of the estuary shall be allowed only:
   (a) In conjunction with a use authorized in accordance with subsections (3) and (4) of this section;
   (b) If a need (i.e., a substantial public benefit) is demonstrated;
   (c) The use or alteration does not substantially interfere with public trust rights;
   (d) If no feasible alternative upland locations exist; and
   (e) If adverse impacts are minimized.
6. **Impact Assessment**
All decisions authorizing uses in the E-N zone that involve alterations of the estuary that could affect the estuary's physical processes or biological resources shall include a written impact assessment. The impact assessment need not be lengthy or complex. The level of detail and analysis should be commensurate with the scale of expected impacts. For example, for proposed alterations with minimal estuarine disturbance, a correspondingly simple assessment is sufficient. For alterations with the potential for greater impact, the assessment should be more comprehensive. In all cases it shall provide a summary of the impacts to be expected. It should be submitted in writing to the local jurisdiction. It shall include:
   (a) The type and extent of alterations to be authorized;
   (b) The type of resources affected;
   (c) The expected extent of impacts on water quality and other physical characteristics of the estuary, biological resources, recreation and aesthetic use, navigation and other existing and potential uses of the estuary;
   (d) The expected extent of impacts of the proposed alteration should reference relevant Climate Vulnerabilities as described in applicable sub-area(s) and management unit (applicants are encouraged to document the use of any applicable data and maps included in the inventory such as sea level rise and landward migration zones) when considering future:

i. continued use of the proposed alteration given projected climate change impacts
ii. water quality and other physical characteristics of the estuary,
iii. living resources,
iv. recreation and aesthetic use,
v. navigation, and
vi. other existing and potential uses of the estuary; and

(e) Methods to be employed to avoid or minimize adverse impacts.

7. Conditional Use Requirements:

All conditional uses in the E-N zone shall comply with the following standards:

(a) The use is consistent with the management objective of the individual management unit; and

(b) The use complies with any applicable Special Policies of the individual management unit.

8. Additional Requirements for Conditional Uses Subject to Resource Capability Test:

In addition to all other applicable provisions of this section, conditional uses set forth in subsection (4) of this section are subject to the following requirements:

(a) The use shall be consistent with the purposes of the Natural Management Unit classification;

(b) The use shall be consistent with the resource capabilities of the area. A use is consistent with the resource capabilities of the area when:

i. The negative impacts of the use on estuarine species, habitats, biological productivity and water quality are not significant; or

ii. The resources of the area are able to assimilate the use and its effects and continue to function in a manner to protect significant wildlife habitats, natural biological productivity and values for scientific research and education.

Section XXX Estuary Conservation Zone E-C

In an E-C zone the following regulations shall apply:

1. Application:

The provisions of the E-C zone shall apply to those estuarine aquatic areas within the boundaries of Conservation Management Units as designated in the Lincoln County Estuary Management Plan. As used in this section, "estuarine aquatic area" means estuarine waters, submerged lands, tidelands and tidal marshes up to Mean Higher High Water or the line of non-aquatic vegetation, whichever is further landward.

2. Uses Permitted Outright:

The following uses and their accessory uses are permitted subject to the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, and 1.1901 to 1.1999 and the Special Policies of the applicable Management Unit:

(a) Undeveloped low intensity recreation requiring no estuarine aquatic area alteration.

(b) Research and educational observations requiring no estuarine aquatic area alteration.
(c) Projects for the protection of habitat, nutrient, fish, wildlife and aesthetic resources requiring no estuarine aquatic area alteration.
(d) Passive restoration requiring no estuarine aquatic area alteration.
(e) Bridge crossing spans not requiring the placement of support structures within the E-C zone.

3. Conditional Uses Permitted:

The following uses may be permitted subject to the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.1699, and 1.1901 to 1.1999 and the Special Policies of the applicable Management Unit:

(a) Undeveloped low intensity recreation that requires estuarine aquatic area alteration.
(b) Research and educational observations that requires estuarine aquatic area alteration.
(c) Navigation aids such as beacons and buoys.
(d) Projects for the protection of habitat, nutrient, fish, wildlife and aesthetic resources that require estuarine aquatic area alteration.
(e) Passive restoration that requires estuarine aquatic area alteration.
(f) On-site maintenance of existing functional tidegates and associated drainage channels, including, as necessary, dredging and bridge crossing support structures.
(g) Riprap for the protection of uses existing as of October 7, 1977.
(h) Riprap for the protection of unique resources, historical and archeological values and public facilities.
(i) Aquaculture that does not involve dredge or fill or other estuarine aquatic area alteration except that incidental dredging for harvest of benthic species or the use of removable structures such as stakes or racks may be permitted.
(j) Communication facilities.
(k) Active restoration of fish and wildlife habitat, water quality, or estuarine productivity.
(l) Boat ramps for public use not requiring dredge or fill.
(m) Pipelines, cables and utility crossings requiring only incidental dredging.
(n) Installation of tidegates in existing functional dikes.
(o) Bridge crossing support structures and dredging necessary for their installation.

4. Additional Conditional Uses Permitted Subject to Resource Capability Test:

The following uses and their accessory uses may be permitted subject to the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.1699, and 1.1901 to 1.1999, the Special Policies of the applicable Management Unit, and the provisions of subsection (7) of this section:

(a) High intensity water dependent recreation, including, but not limited to, boat ramps and marinas, and including new and maintenance dredging for such uses.
(b) Other water dependent uses requiring the occupation of estuarine surface area by means other than fill
(c) Minor navigational improvements.
(d) Mining and mineral extraction, including dredging necessary for such extraction.
(e) Aquaculture requiring dredge, fill or other alteration of estuarine aquatic area.

(f) Temporary alterations.

5. Special Standards

Dredging, filling or other alterations of the estuary shall be allowed only:

(a) In conjunction with a use authorized in accordance with subsections (3) and (4) of this section;
(b) If a need (i.e., a substantial public benefit) is demonstrated;
(c) If the use or alteration does not substantially interfere with public trust rights;
(d) If no feasible alternative upland locations exist; and
(e) If adverse impacts are minimized.

6. Impact Assessment

All decisions authorizing uses in the E-C zone that involve alterations of the estuary that could affect the estuary's physical processes or biological resources shall include a written impact assessment. The impact assessment need not be lengthy or complex. The level of detail and analysis should be commensurate with the scale of expected impacts. For example, for proposed alterations with minimal estuarine disturbance, a correspondingly simple assessment is sufficient. For alterations with the potential for greater impact, the assessment should be more comprehensive. In all cases it shall provide a summary of the impacts to be expected. It should be submitted in writing to the local jurisdiction. It shall include:

(a) The type and extent of alterations to be authorized;
(b) The type of resources affected;
(c) The expected extent of impacts on water quality and other physical characteristics of the estuary, biological resources, recreation and aesthetic use, navigation and other existing and potential uses of the estuary;
(d) The expected extent of impacts of the proposed alteration should reference relevant Climate Vulnerabilities as described in applicable sub-area(s) and management (applicants are encouraged to document the use of any applicable data and maps included in the inventory such as sea level rise and landward migration zones) when considering future:
    i. continued use of the proposed alteration given projected climate change impacts
    ii. water quality and other physical characteristics of the estuary,
    iii. living resources,
    iv. recreation and aesthetic use,
    v. navigation, and
    vi. other existing and potential uses of the estuary; and
(e) Methods to be employed to avoid or minimize adverse impacts.

7. Conditional Use Requirements:

(a) All conditional uses in the E-C zone shall comply with the following standards:
    i. The use is consistent with the management objective of the individual management unit; and
    ii. The use complies with any applicable Special Policies of the individual Management Unit.

8. **Additional Requirements for Conditional Uses Subject to Resource Capability Test:**
   In addition to all other applicable provisions of this section, conditional uses set forth in subsection (4) of this section are subject to the following requirements:
   (a) The use shall be consistent with the purposes of the Conservation Management Unit classification;
   (b) The use shall be consistent with the resource capabilities of the area. A use is consistent with the resource capabilities of the area when:
      i. The negative impacts of the use on estuarine species, habitats, biological productivity and water quality are not significant; or
      ii. The resources of the area are able to assimilate the use and its effects and continue to function in a manner which conserves long-term renewable resources, natural biological productivity, recreational and aesthetic values and aquaculture.

Section XXX Estuary Development Zone E-D

In an E-D zone the following regulations shall apply:

1. **Application:**
   The provisions of the E-D zone shall apply to those estuarine aquatic areas within the boundaries of Development Management Units as designated in the Lincoln County Estuary Management Plan. As used in this section, "estuarine aquatic area" means estuarine waters, submerged lands, tidelands and tidal marshes up to Mean Higher High Water or the line of non-aquatic vegetation, whichever is further landward.
2. **Conditional Uses Permitted:**
   The following uses may be permitted subject to the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.699, and 1.1901 to 1.1999:
   (a) High intensity water dependent recreational uses including, but not limited to, boat ramps, marinas and similar facilities.
   (b) Water dependent commercial uses.
   (c) Water dependent industrial uses.
   (d) Marine terminals.
   (e) Commercial boat basins and similar moorage facilities.
   (f) Navigation activities and improvements.
   (g) In-water disposal of dredged material
   (h) Water storage of products used in industry, commerce or recreation.
3. **Additional Conditional Uses Permitted Subject to Management Unit Purpose:**
   The following uses and their accessory uses may be permitted subject to the provisions of subsection (8) of this section and the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.699, and 1.1901 to 1.1999:
   (a) Undeveloped low intensity recreation.
   (b) Research and educational observations.
   (c) Navigation aids such as beacons and buoys.

(d) Projects for the protection of habitat, nutrient, fish, wildlife and aesthetic resources.
(e) Passive restoration.
(f) On-site maintenance of existing functional tidegates and associated drainage channels, including, as necessary, dredging and bridge crossing support structures.
(g) Riprap for the protection of uses not permitted in the E-D zone that were existing as of October 7, 1977.
(h) Riprap for the protection of unique resources, historical and archeological values and public facilities.
(i) Communication facilities.
(j) Active restoration of fish and wildlife habitat, water quality, or estuarine productivity.
(k) Pipelines, cables and utility crossings.
(l) Installation of tidegates in existing functional dikes.
(m) Bridge crossings, including support structures and dredging necessary for their installation.
(n) Mining and mineral extraction.
(o) Aquaculture.
(p) Temporary alterations.
(q) Water related and non-water related commercial and industrial uses not requiring dredge or fill.

4. Aquatic Area Alterations Permitted:

Subject to the requirements of subsection (5) of this section, the following types of aquatic area alterations may be permitted in conjunction with the development and conduct of uses set forth in subsection (2) and (3) of this section:

(a) Dredging, except that dredging is not permitted in conjunction with water related or non-water related commercial and industrial uses permitted pursuant to subsection (3)(q) of this section.
(b) Fill, except that fill is not permitted in conjunction with water related or non-water related commercial and industrial uses permitted pursuant to subsection (3)(q) of this section.
(c) In-water structures, including but not limited to pilings, dolphins, docks, piers, wharfs, breakwaters, groins, jetties and similar structures.
(d) Shoreline stabilization including riprap, bulkheads and similar structures.

5. Special Standards:

Dredging, filling or other alterations of the estuary shall be allowed only:

(a) In conjunction with a use authorized in accordance with subsections (3) and (4) of this section, except that dredging and/or filling is not permitted in conjunction with water related or non-water related commercial and industrial uses permitted pursuant to subsection (3)(q) of this section;
(b) If a need (i.e., a substantial public benefit) is demonstrated;
(c) The use or alteration does not substantially interfere with public trust rights;
(d) If no feasible alternative upland locations exist; and
(e) If adverse impacts are minimized.

6. **Impact Assessment:**
   All decisions authorizing uses in the E-D zone that involve alterations of the estuary that could affect the estuary's physical processes or biological resources shall include a written impact assessment. The impact assessment need not be lengthy or complex. The level of detail and analysis should be commensurate with the scale of expected impacts. For example, for proposed alterations with minimal estuarine disturbance, a correspondingly simple assessment is sufficient. For alterations with the potential for greater impact, the assessment should be more comprehensive. In all cases it shall provide a summary of the impacts to be expected. It should be submitted in writing to the local jurisdiction. It shall include:
   (a) The type and extent of alterations to be authorized;
   (b) The type of resources affected;
   (c) The expected extent of impacts on water quality and other physical characteristics of the estuary, biological resources, recreation and aesthetic use, navigation and other existing and potential uses of the estuary;
   (d) The expected extent of impacts of the proposed alteration should reference relevant Climate Vulnerabilities as described in applicable sub-area(s) and management unit (applicants are encouraged to document the use of any applicable data and maps included in the inventory such as sea level rise and landward migration zones) when considering future:
      i. continued use of the proposed alteration given projected climate change impacts
      ii. water quality and other physical characteristics of the estuary,
      iii. living resources,
      iv. recreation and aesthetic use,
      v. navigation, and
      vi. other existing and potential uses of the estuary; and
   (e) Methods to be employed to avoid or minimize adverse impacts.
7. **Conditional Use Requirements:**
   All conditional uses in the E-D zone shall comply with the following standards:
   (a) The use is consistent with the management objective of the individual management unit; and
   (b) The use complies with any applicable Special Policies of the individual management unit.
8. **Additional Requirements for Conditional Uses Subject Management Unit Purpose:**
   In addition to all other applicable provisions of this section, conditional uses set forth in subsection (3) of this section are subject to the following requirements:
   (a) The use shall be consistent with the purposes of the Development Management Unit classification;
   (b) The use shall be consistent with the designation of adjacent shorelands, including where such shorelands are reserved for water dependent uses, or designated for waterfront redevelopment.

APPENDIX G – CMECS DATA DESCRIPTIONS

New appendix proposed as part of the 2023 update

The following is descriptive information on the various types of estuarine natural conditions from the CMECS dataset. The CMECS dataset was utilized to develop Inventory Maps 7 – 12.

CMECS Biotic Codes

CODE	SETTING	CLASS	SUBCLASS	GROUP

2.5 Benthic/Attached Aquatic Vegetation Bed

This class includes subtidal or intertidal bottoms and any other areas characterized by a dominant cover of rooted vascular plants, attached macroalgae, or mosses, which are usually submersed in the water column or floating on the surface. They may be exposed during low tides. Non-rooted floating vegetation and free floating macroalgae are included with the Planktonic Biota Biotic Setting under the Floating/Suspended Plants and Macroalgae Subclass.

2.5.1 Benthic/Attached Aquatic Vegetation Bed Benthic Macroalgae

Aquatic beds dominated by macroalgae attached to the substrate, such as kelp, intertidal fucoids, and calcareous algae. Macroalgal communities can exist at all depths within the photic zone, on diverse substrates, and across a range of energy and water chemistry regimes. In the CMECS framework, macroalgae that dominate the benthic environment and form a vegetated cover fall within this subclass.

2.5.2 Benthic/Attached Aquatic Vegetation Bed Aquatic Vascular Vegetation

Aquatic vascular vegetation beds dominated by submerged, rooted, vascular species (such as seagrasses) or submerged or rooted floating freshwater tidal vascular vegetation (such as hornworts [Ceratophyllum spp.] or naiads [Najas spp.]).

2.5.2.1 Benthic/Attached Aquatic Vegetation Bed Aquatic Vascular Vegetation Seagrass Bed

Tidal aquatic vegetation beds dominated by any number of seagrass or eelgrass species, including Cymocedea sp., Halodule sp., Thalassia sp., Halophilla sp., Vallisnera sp., Ruppia sp., Phyllospadix sp., and Zostera sp. Seagrass beds may occur in true marine salinities, and they may extend into the lower salinity zones of estuaries.

Seagrass beds are complex structural habitats that provide refuge and foraging opportunities for abundant and diverse faunal communities in shallow waters. Seagrass beds require a specific set of ecological conditions for success, and they are generally perceived as areas of high environmental quality.

2.6 Benthic/Attached Emergent Wetland

Areas in this class are characterized by erect, rooted, herbaceous hydrophytes—excluding emergent mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.

2.6.1 Benthic/Attached Emergent Wetland Emergent Tidal Marsh

Communities dominated by emergent, halophytic, herbaceous vegetation (with occasional woody forbs or shrubs) along low-wave-energy, intertidal areas of estuaries and rivers. Vegetation in this subclass is composed of emergent aquatic macrophytes, especially halophytic species—chiefly graminoids (such as rushes, reeds, grasses and sedges), shrubs, and other herbaceous species (such as broad-leaved emergent macrophytes, rooted floating-leaved and submergent species [aquatic vegetation], and macroscopic algae). The vegetation is usually arranged in distinct zones of parallel patterns, which occur in response to gradients of tidal flooding frequency and duration, water chemistry, or other disturbances.

Tides may expose mudflats that contain a sparse mix of pioneering forb and graminoid species. Salinity levels (which control many aspects of salt-marsh chemistry) vary depending on a complexity of factors, including frequency of inundation, rainfall, soil texture, freshwater influence, fossil salt deposits, and more. Salt marshes often grade into (or are intermixed with) scrub-shrub wetlands in higher areas.

CODE	SETTING	CLASS	SUBCLASS	GROUP
2.6.1.1	Benthic/Attached	Emergent Wetland	Emergent Tidal Marsh	Brackish Mars

Marshes dominated by species with a wide range of salinity tolerance. Depending on the salinity levels (0.5-30), more or less salt-intolerant species may be present.

2.7	Benthic/Attached	Scrub-Shrub Wetland		

Emergent wetland areas dominated by woody vegetation that is generally less than 6 meters tall. Characteristic species include true shrubs, young trees, and trees or shrubs that are small or stunted due to environmental conditions. Scrub-Shrub Wetland includes the shrub-dominated portions of high salt marshes—as well as stunted or low mangrove communities.

2.7.1	Benthic/Attached	Scrub-Shrub Wetland	Tidal Scrub-Shrub Wetland	

Estuarine or tidal riverine areas dominated by shrub vegetation that has less than 10% tree cover.

2.7.1.1	Benthic/Attached	Scrub-Shrub Wetland	Tidal Scrub-Shrub Wetland	Brackish Tidal

Tidal areas dominated by shrub or immature tree species that are less than 6 meters tall and have a range of salt tolerance. Salinity may range from 0.5-30 (PSS).

2.8	Benthic/Attached	Forested Wetland		

Areas in this class are characterized by woody vegetation that is generally 6 meters or taller.

2.8.1	Benthic/Attached	Forested Wetland	Tidal Forest/Woodland	

Estuarine or tidal riverine areas with greater than 10% tree cover.

CMECS Aquatic Codes

CODE	SYSTEM	SUBSYSTEM	TIDALZONE
2	Estuarine		

The Estuarine System is defined by salinity and geomorphology. This System includes tidally influenced waters that (a) have an open-surface connection to the sea, (b) are regularly diluted by freshwater runoff from land, and (c) exhibit some degree of land enclosure.

The Estuarine System extends upstream to the head of tide and seaward to the mouth of the estuary. Head of tide is identified in accordance with the Metadata Profile for Shoreline Data, FGDC-STD-001.2-2001 (FGDC 2001) as the inland or upstream limit of water affected by a tide of at least 0.2 foot (0.06 meter) amplitude. The mouth of the estuary is defined by an imaginary line connecting the seaward-most points of land that enclose the estuarine water mass at MLLW. Islands are included as headlands if they contribute significantly to the enclosure.

2.1	Estuarine	Estuarine Coastal	

The Estuarine Coastal Subsystem extends from the supratidal zone at the land margin up to the 4 meter depth contour in waters that have salinity greater than 0.5 (during the period of average annual low flow). The Estuarine Coastal Subsystem would be considered the shallow perimeter in a deeper estuary, although many estuaries may be entirely less than 4 meters deep and be classified as completely in the Coastal Subsystem. The 4 meter contour was selected as a cutoff between "coastal" and "offshore" estuarine waters because it identifies (somewhat arbitrarily) a region that is both shallow and generally in close proximity to the shore, making the substrate-to-water volume ratio here the highest in the entire estuary.

2.2	Estuarine	Estuarine Open Water	

The Estuarine Open Water Subsystem includes all waters of the Estuarine System with a total depth greater than 4 meters, exclusive of those waters designated Tidal Riverine Open Water.

The Open Water Subsystem is subject to a number of physical factors that make it distinct from the Coastal Subsystem, including reduced air-water exchange, potentially reduced light at depth, reduced physical impact from waves and surface currents and reduced interaction between the water column and the bottom. Moreover, because of the formation of stratified layers in the Estuarine System, the Open Water Subsystem is often "capped" by a relatively strong density or stability gradient that distinctly separates the lower water column from the upper water column, separated by a zone of transition (such as a pycnocline, halocline, or thermocline).

2.2.1	Estuarine	Estuarine Open Water	Estuarine Open Water

The substrate is generally continuously submerged in this zone and includes those areas below MLLW.

2.3	Estuarine	Estuarine Tidal Riverine Coa	

The Estuarine Tidal Riverine Coastal Subsystem includes the most upstream region of the estuary, in those areas between MHHW to the 4 meter depth contour below MLLW in waters that (a) can be regularly influenced by tides and (b) where salinity is below 0.5 during the period of annual low flow. The areas with this salinity may extend upriver to the head of tide, which is identified as the point where the mean tidal range becomes less than 0.2 feet (0.06 meters) (FGDC 2001).

The Tidal Riverine Coastal Subsystem includes upstream areas that are influenced by ocean tides, but do not experience significant salinity. The hydraulic gradient is low and water stage and velocity fluctuate under tidal influence. Water is always present and is confined within a channel, and is usually flowing. The Tidal Riverine Coastal Subsystem is a critical part of the ecology and habitat of the estuary. This area is the site of significant ecological activity and a number of estuarine and coastal species depend on Tidal Riverine Coastal areas for breeding habitats, nursery habitats, and migratory pathways (e.g., striped bass, wading birds, and anadromous fishes). The Tidal Riverine Coastal Subsystem also supports unique hydrological features, for example the Estuarine Turbidity Maximum, tidal bores and Coriolis deflections.

CMECS Geoform Codes

CODES	TECTONIC and PHISIOGRAPHIC PROVINCE	ORIGIN	GEOFORM	TYPE
t2	Convergent Active Continental			
			Intense areas of active magmatism, where the oceanic lithosphere is subducted beneath the continental lithosphere. This results in chains of volcanoes near the continental margin; the leading edge of the continental plate is usually studded with steep mountain ranges.	
p9	Embayment/Bay			
			A water body with some level of enclosure by land at different spatial scales. These can be wide, curving indentations in the coast, arms of the sea, or bodies of water almost surrounded by land. These features can be small—with considerable freshwater and terrestrial influence—or large and generally oceanic in character.	
p12	Lagoonal Estuary			
			This class of estuary tends to be shallow, highly enclosed, and have reduced exchange with the ocean. They often experience high evaporation, and they tend to be quiescent in terms of wind, current, and wave energy. Lagoonal estuaries usually have a very high surface-to-volume ratio, a low-to-moderate watershed-to-water-area ratio, and can have a high wetland-to-water ratio. The flushing times tend to be long relative to riverine estuaries and embayments because the restricted exchange with the marine-end member and the reduced river input lengthen residence times. As such, there tends to be more benthic-pelagic interaction, enhanced by generally shallow bathymetry. Additionally, exchange with surrounding landscapes (often riparian wetland and palustrine systems) tends to be enhanced and more highly coupled than in other types of estuaries. Occasionally, a lagoon may be produced by the temporary sealing of a river estuary by a barrier. Such lagoons are usually seasonal and exist until the river breaches the barrier; these lagoons occur in regions of low or sporadic rainfall.	

p16 Riverine Estuary

This class of estuary tends to be linear and seasonally turbid (especially in upper reaches), and it can be subjected to high current speeds. These estuaries are sedimentary and depositional, so they may be associated with a delta, bar, barrier island, and other depositional features. These estuaries also tend to be highly flushed (with a wide and variable salinity range) and seasonally stratified. Riverine estuaries have moderate surface-to-volume ratios with a high watershed-to-water-area ratio—and they can have very high wetland-to-water-area ratios as well. These estuaries are often characterized by a V-shaped channel configuration and a salt wedge.

High inputs of land drainage can promote increased primary productivity, which may be confined to the water column in the upper reach, due to low transparency in the water column. Surrounding wetlands may be extensive and healthy, given the sediment supply and nutrient input. This marsh perimeter may be important in taking up the excess nutrients that are introduced to the system. Physically, the system may tend to be stratified during periods of high riverine input, and the input of marine waters may be enhanced by countercurrent flow.

o1 Geologic

Geologic geoforms are formed by the abiotic processes of uplift, erosion, volcanism, deposition, fluid seepage, and material movement. Uplift may be a result of local and regional seismic and tectonic processes. Waves, currents, wind, chemical dissolution, seismic motion, and chemical precipitation all contribute to these geoforms and give them their distinctive qualities.

g109 Channel

A general term for a linear or sinuous depression on an otherwise more flat area (for example, a valley- or groove-like feature through which water flows). This is a very broad term that is often used in connection with other terms to provide more meaning.

g10903 Channel Slough

(a) A sluggish body of water in a tidal flat, bottomland, or coastal marshland; may also be called bayous or oxbows. (b) A sluggish channel of water (such as a side channel of a river) in which water flows slowly through either low, swampy ground (such as along the Columbia River) or a section of an abandoned river channel (which may contain stagnant water) that occurs in a flood plain or delta.

g121 Fan

A low, outspread gently to steeply sloping mass of loose material, which is shaped like an open fan or a segment of a cone. Fans are made of material deposited by a flow of water at the place where it issues from a narrower or steeper gradient area into a broader area, valley, flat, or other feature.

g12103 Fan Shoreline Fan

A prograding shoreline formed where an alluvial fan is built out into a lake or sea.

g122 Flat

A general term for a level (or nearly level) surface or area of land marked by little or no relief; flats are often composed of unconsolidated sediments (such as mud or sand). These forms are more commonly encountered in the intertidal or in the shallow subtidal zones.

g129 Island

An area of land completely surrounded by water—or an elevated area of land surrounded by swamp or marsh, which is isolated at high water or during floods.

g136 Marsh Platform

The flat, often thick, accumulation of peat that supports emergent marsh vegetation. It is commonly dissected by tidal creeks, and it is occasionally buried and re-exposed through the action of beach erosion and new inlet development.

g141 Natural Levee

An embankment of sediment, bordering one or both sides of a submarine canyon, fan valley, deep-sea channel, river, or other feature. A natural levee has a long, broad, low shape and is composed of sand and coarse silt, which was built by a stream on its flood plain and along both sides of its channel—especially in time of flood when water overflowing the normal banks is forced to deposit the coarsest part of its load. It has a gentle slope away from the river and toward the surrounding floodplain, and its highest elevation is closest to the river bank.

g161 Shore

The intersection of a specified plane of water with the beach that migrates with changes of the tide or of the water level.

o2 Biogenic

Biogenic geoforms are physical features and landforms that were created by the action of living organisms (bioherms). These primarily consist of the different types of reefs. Examples of these generally hard, fixed structures include the incorporation of dissolved calcium carbonate into reef structure by corals, aggregations of mollusk shells into a fixed cohesive substrate, or the cementation of existing sediments into an aggregation of worm tubes. As with all geoforms the characteristic of concern in this component is the physical shape of these reef features, not the living biology that may have participated in their genesis. Any of the reef geoforms may or may not have living coral or other life present.

o3 Anthropogenic

In many coastal and deep oceans, artificial structures (such as piers, breakwaters, bulkheads, berms, drilling rigs, and artificial reefs) are a significant part of the environment. The continually (or intermittently) submerged portions of features attract vagile fauna and provide attachment surfaces for plants and sessile animals. These features can also provide shelter from predators and prevailing current, and they can support niche communities that increase overall biodiversity. However, these structures can also have negative effects (such as altering natural hydrodynamic patterns, interfering with animal movement, and increasing contaminant loading into nearshore areas), and thus are often of interest to resource managers.

g30201 Artificial Dike Artificial Levee

(a) A dike along the side of a river channel erected to prevent overflow during floods, usually running along the channel direction and near the natural levee crests of streams. (b) An artificial embankment constructed along the bank of a watercourse or an arm of the sea to protect land from inundation (or to confine stream flow to its channel).

g313 Dock/Pier

A landing place for vessels normally oriented perpendicular to the shore with a flat surface for off-loading materials. Docks may be fixed in position through anchors or piles, or be supported by pilings or other structures.

g315 Dredge Deposit

A subaqueous area that is substantially shallower than the surrounding area, which resulted from the deposition of materials from dredging and dumping.

g318 Fill Area

A topographically low area into which unconsolidated material has been placed in order to raise the ground level as part of development or expansion of coastal infrastructure.

g320 Harbor

A small bay or a sheltered part of a sea, lake, or other large body of water. A harbor is usually well protected (either naturally or artificially) against high waves and strong currents and serves as a safe anchorage for ships and where port facilities are present. Many smaller anthropogenic geoforms may be encountered within a harbor.

g323 Marina/Boat Ramp

A series of docks, walkways, slips, and support infrastructure (such as cables and small pipelines) for in-water storage of yachts and boats. Marinas commonly include one or more boat ramps, which consist of a sloping driveway for launching small, trailered vessels.

g329 Rip Rap Deposit

An accumulation of rock or boulders placed along a waterway or shoreline to reduce erosion.

g30202 Artificial Dike Breached Dike

A breached, raised, linear barrier intended to contain or hold back water in order to prevent flooding of adjacent land. These may be concrete or fill structures. Breach can be natural or manmade.

CMECS Substrate Codes

CODE	ORIGIN	CLASS	SUBCLASS	GROUP	SUBGROUP
1.1	Geologic Subs	Rock Substrate			

Igneous, metamorphic, or sedimentary rock with particle sizes greater than or equal to 4.0 meters (4,096 millimeters) in any dimension that cover 50% or greater of the Geologic Substrate surface.

1.2	Geologic Subs	Unconsolidated Mineral			

Geologic Substrates with less than 50% cover of Rock Substrate. This class uses Folk (1954) terminology to describe any mix of loose mineral substrate that occurs at any range of sizes—from Boulders to Clay.

1.2.1.2.2	Geologic Subs	Unconsolidated Mineral	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel

Geologic Substrate is 30% to < 80% Gravel, with Sand composing from 50% to < 90% of the remaining Sand-Mud mix.

1.2.1.2.3	Geologic Subs	Unconsolidated Mineral	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Gravel

Geologic Substrate is 30% to < 80% Gravel, with Mud composing 50% or more of the remaining Mud-Sand mix.

1.2.2	Geologic Subs	Unconsolidated Mineral	Fine Unconsolidated Substrate		

Geologic Substrate surface layer contains less than 5% gravel (particles 2 millimeters to < 4,096 millimeters in diameter). These sediments are classified using the bottom two rows of the Folk (1954) Gravel-Sand-Mud diagram, and the entire Folk (1954) Sand-Silt-Clay diagram.

1.2.2.1.2	Geologic Subs	Unconsolidated Mineral	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand

Geologic Substrate is 0.01% to < 5% Gravel, and the remaining Sand-Mud mix is 50% to < 90% Sand.

1.2.2.1.3	Geologic Subs	Unconsolidated Mineral	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud

Geologic Substrate is 0.01% to < 5% Gravel, and the remaining Sand-Mud mix is 50% to < 90% Mud.

1.2.2.1.4	Geologic Subs	Unconsolidated Mineral	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Mud

Geologic Substrate is 0.01% to < 5% Gravel, and the remaining Sand-Mud mix is 90% or more Mud.

1.2.2.3	Geologic Subs	Unconsolidated Mineral	Fine Unconsolidated Substrate	Muddy Sand	

Geologic Substrate surface layer contains no trace of Gravel and is composed of 50% to < 90% Sand (particles 0.0625 millimeters to 2 millimeters in diameter); the remainder is composed of Mud (particles less than 0.0625 millimeters in diameter).

CODE	ORIGIN	CLASS	SUBCLASS	GROUP	SUBGROUP

1.2.2.4 Geologic Subs Unconsolidated Mineral Fine Unconsolidated Substrate Sandy Mud

Geologic Substrate surface layer contains no trace of Gravel and is composed of 10% to < 50% Sand; the remainder is composed of Mud (particles less than 0.0625 millimeters in diameter).

1.2.2.5 Geologic Subs Unconsolidated Mineral Fine Unconsolidated Substrate Mud

Geologic Substrate surface layer contains no trace of Gravel and is composed of 90% or more Mud (particles less than 0.0625 millimeters in diameter); the remainder (< 10%) is composed of Sand (particles 0.0625 millimeters to < 2 millimeters in diameter).

2 Biogenic Subs

Substrates where percent cover of non-living Biogenic Substrate exceeds percent cover of both Geologic Substrate and Anthropogenic Substrates, when all are considered separately. Biogenic substrates are classified at the higher levels by taxonomy, and at the lower levels by median particle size.

3 Anthropogenic

Substrates where percent cover of Anthropogenic Substrate exceeds percent cover of both Geologic Substrate and Biogenic Substrates, considered separately. Anthropogenic Substrates are classified at the higher levels by composition, and at the lower levels by median particle size.

3.1 Anthropogenic Anthropogenic Rock

Anthropogenic Substrate that is primarily composed of natural mineral materials that were purposefully or accidentally deposited by humans. This includes breakwaters made of natural stone, dredge material, artificial reefs made of natural stone, as well as beach nourishment and beach fill. Shape for this substrate class is covered in the GC (e.g., Groin, Breakwater, and Dredge Deposit). If the origin of a feature cannot be determined, it is assumed to be of natural origin and classified in the Geologic or Biogenic Substrate Origin.

3.1.2 Anthropogenic Anthropogenic Rock Anthropogenic Rock Rubble

Substrate that is dominated by Anthropogenic Rock with a median particle size of 64 millimeters to < 4,096 millimeters (Cobbles and Boulders).

3.1.3 Anthropogenic Anthropogenic Rock Anthropogenic Rock Hash

Substrate that is dominated by Anthropogenic Rock with a median particle size of 2 millimeters to < 64 millimeters (Granules and Pebbles).

3.3 Anthropogenic Construction Materials

Anthropogenic Substrate that is composed of any single construction material or combination of construction materials (concrete, brick, rebar, pipe, porcelain, fiberglass, rubber, plastic, < 50% wood, < 50% metal, etc.) that were manufactured by humans. This substrate may be composed of one or many types of these materials. If anthropogenic wood or metal constitute a dominant fraction of the materials, the substrate is classified as Anthropogenic Wood or Metal, accordingly.

YAQUINA BAY AND ESTUARY SECTION

Introduction:

This chapter of the Comprehensive Plan has three parts: The first deals with the Yaquina Bay Estuary; the second summarizes information about the shorelands adjacent to Yaquina Bay; and the third discusses the development of the port and other built-up areas of the bay. Policies governing uses and activities that are specific to a particular area or management unit of the bay are included in the descriptions of the management units. Policies that apply more generally or to more than one management unit are found at the end of this chapter.

Yaquina Bay Estuary:

Wilsey & Ham's Yaquina Bay Resource Inventory[1] provides the primary source for inventory information about the portion of the Yaquina Bay Estuary lying within Newport's urban growth boundary (UGB). That inventory contains specific and general data on the study area, which includes the Yaquina Bay Estuary and the surrounding shorelands.

Important Natural Resources of Yaquina Bay

The estuarine ecosystem of Yaquina Bay includes a rich diversity of habitats, species, and physical features. The Oregon Department of Fish and Wildlife (ODFW), in a study prepared for the Oregon Land Conservation and Development Commission[2], identified four major subsystems of Yaquina Bay. Those are the marine, bay, slough, and riverine subsystems. Of those four, only the marine and bay occur in the Newport UGB.

"The marine subsystem is a localized area near the estuary mouth. It is a high energy zone subject to frequent or constant wave and tidal surges. Salinities are generally high, although on large river systems values may be lower, particularly at low tide and during heavy winter flows. Sediments are generally coarse, clean sands of marine origin. Rocky substrates are also common, and in larger estuaries [such as Yaquina Bay], rock jetties have been constructed to stabilize the estuary mouth and ensure a navigable entrance. Usually only a small percentage of the marine subsystem is intertidal.

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[1] Wilsey & Ham, Yaquina Bay Resource Inventory, 1977.

[2] State of Oregon Department of Fish & Wildlife, Habitat Classification and Inventory Methods for the Management of Oregon Estuaries, 1979.

"Benthic invertebrates [organisms living on the bottom of the bay] in this zone may include species found along the outer coast, as well as those that require the slightly more protected environment found within the estuary mouth. Turbulent conditions in the marine subsystem often require plants and animals to have specialized adaptations for attaching themselves to hard, wave-battered substrates or for rapid burrowing in shifting sand. Kelp and other large algal species may be found on rocky substrates, but unconsolidated sediments are generally devoid of larger plants. Most fishes utilizing Oregon estuaries are marine species. This subsystem often harbors the most diverse assemblage of fishes in the estuary.

"Due to its proximity to the mouth and its relatively deep conditions compared to locations further up the estuary, the marine subsystem is often a preferred site for boat basins and marinas. Commercial and industrial development is also common where coastal towns are located adjacent to the estuary. Although flushing is usually rapid in this subsystem, crowded marinas, where sewage, fish wastes, and petroleum residues may concentrate, and boat basins with constricted entrances that reduce tidal exchange, potentially threaten water quality. Dredging of boat basins and ship channels commonly alters benthic habitats in the marine subsystems of many Oregon estuaries. The total impacts of these various disturbances are not easily predicted."[3]

The ODFW study also describes the bay subsystem in this manner: "The bay subsystem is a transition zone between marine and fresh water. In many estuaries it is characterized by a broad embayment between the constricted estuary mouth and narrow, upriver tidewater sectors. In some cases the bay system may be less conspicuous but identifiable by a relatively large percentage of intertidal land. Salinities in this region may be quite variable due to seasonal changes in river flow, although moderate to high salinity ranges are usual. As an intermediate environment, sediment types in the bay subsystem range from coarse marine sands to fine riverine materials. Bay subsystems are best represented by estuaries in the Coast Range province, where soft parent materials have eroded and been deposited to create broad intertidal flats.

"The bay subsystem is a relatively protected environment, isolated from turbulence near the mouth and strong currents during peak flows in the riverine portion of the estuary. The mixture of marine and riverine sediments and a variety of vegetation types provide a diversity of habitats for benthic species. In many Oregon estuaries, major clam and shrimp beds typically occur in productive intertidal flats of the bay environment. Extensive marsh and eelgrass habitats are also common in the larger Coast Range estuaries.

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[3] Ibid, pgs. 19-21.

"Development in the bay subsystem is varied. Periodic dredging in larger estuaries has been necessary to maintain ship channels. In some areas dredged materials have been dumped in the bay, smothering benthic organisms. Marshes and flats have been filled to provide more area for development. As in the marine subsystem, commercial and industrial facilities are common along the bay shoreline of many estuaries and in the past have contributed pollutants from runoff or direct discharge. Because the bay subsystem is usually an area of very high biological productivity, it is also a favorite site for bird watching, clamming, and occasional crabbing and fishing."[4]

A more detailed description of the marine and bay subsystems is available in the ODFW document and in the description of each management unit below.

Both the marine and bay subsystems of the Yaquina estuary ecosystem have features ranging from relatively unaltered natural areas of varying size to the dredged navigation channel. This diversity within the ecosystem can be protected and maintained through limiting development to areas of existing facilities and applying standards to assure that these uses do not violate the integrity of the estuarine ecosystem.

Land and Water Uses on Yaquina Bay

Lincoln County's adopted Estuary Management Plan[5] discusses the Newport subarea and the Sally's Bend subarea. These two subareas correspond closely to the marine and bay subsystems, respectively. The description of the character, major committed uses, and existing and potential conflicts for these subareas are provided below.

Newport Subarea:

> Predominant Character. The Newport subarea is a high intensity use area. It is the hub for commercial fishing, deep water shipping and tourist related commercial activities on Yaquina Bay. Adjacent shorelands are urban in character, and the shoreline is more or less continuously altered all throughout the subarea. As a fully serviced urban area in close proximity to the harbor entrance and with shoreland access to the deep water channel, the Newport subarea represents the most important portion of the estuary for water dependent development.

Important resource values within the subarea include eelgrass and algal beds, shellfish beds, and fish spawning and nursery areas.

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[4] Ibid, pgs. 21-22.

[5] Lincoln County, Estuary Management Plan, adopted June of 1980.

> Major Committed Uses. The subarea contains a mix of water- dependent, water-related and nonwater-related uses. Industrial uses are concentrated at McLean Point (Northwest Natural Gas LNG tank and deep water terminal facilities) and along the Newport waterfront. A commercial and a recreational marina and a number of nonwater-related tourist oriented commercial uses also occur along the Newport waterfront. Major uses in the South Beach area include the Oregon State University Mark O. Hatfield Marine Science Center, Oregon-Aqua Foods' salmon farming facility, the South Beach Marina recreational complex, and the Oregon Coast Aquarium (expected to open in the spring of 1992). The subarea takes in the entire authorized deep water channel, including the maintained jetties. Recreational use in the subarea, including sport fishing, crabbing, clamming, diving, and other activities, is heavy.

> Existing and Potential Conflicts. Conflicts have developed between tourist oriented commercial uses and water-dependent marine commercial and industrial uses on the Newport waterfront. These conflicts involve both competition for available space, as well as use conflicts (examples include traffic and parking) between established uses. As demand accelerates for either or both types of uses, conflicts may worsen. In the past, competition between recreational and commercial vessels for moorage has been a problem. Development of some 600 moorage spaces designed to accommodate recreational vessels at the South Beach Marina and redevelopment of the existing commercial moorage areas to handle the newer, larger commercial fishing boats should do much to alleviate this conflict. The demand for major development in aquatic areas poses a potential conflict with the protection of natural resources throughout the subarea.

Sally's Bend Subarea:

> Predominant Character. The Sally's Bend subarea represents one of the most important natural resource areas of Yaquina Bay. It is essentially undeveloped and includes eelgrass and algal beds, shellfish beds, fish spawning and nursery

areas, and wildlife habitats, all of major significance. The area's intertidal flats represent the largest tract in the estuary.

> Major Committed Uses. The predominant uses of the subarea are hunting, sport fishing, and recreational shellfishing. The subarea also includes a portion of the navigation channel that supports medium draft commercial traffic. Adjacent shoreland uses consist primarily of low density housing and commercial forest management. Industrial uses are adjacent (though they do not extend into the subarea) at McLean Point and South Beach. Portions of the subarea have historically been used for log storage, though no current activities are present.

> Existing and Potential Conflicts. No major conflicts exist within the subarea, though potential for conflict is present at several locations. Demands for urban level development in the Idaho Point area (which is within the Newport UGB) may be

incompatible with preservation of natural values in the adjacent portion of the estuary. Industrial development at McLean Point and in the Coquille Point area may impact important resource areas at Sally's Bend. If increases in deep water shipping precipitate a demand for expansion of the current channel and turning basins, some loss of natural resource values would result from the required dredging. Owners of intertidal lands within the subarea have identified desires for future use of these areas that may conflict with the preservation of natural resource values.

Estuarine Management Unit Classifications

As is required by Statewide Planning Goal 16, management units have been classified in order to maintain the diverse resources, values, and benefits of the estuary. Natural, conservation, and development management units have been established pursuant to the mandatory language in Goal 16.

Natural management units must include "...all major tracts of salt marsh, tideflats, and seagrass and algae beds."[6] Conservation management units "...shall include tracts of significant habitat smaller or of less biological importance..." than those in natural management units and recreational or commercial oyster and clam beds not included in the natural management units.[7] Partially altered areas or estuarine areas adjacent to existing development of moderate intensity, however, shall also be included in this (conservation) classification unless otherwise needed for preservation or development consistent with the overall Oregon Estuary Classification. Development management units "...shall include deep water areas adjacent or in proximity to the shoreline, navigation channels, subtidal areas for in-water disposal of dredged material and areas of minimal biological significance needed for uses requiring alteration of the estuary...."[8]

The full range of activities in Yaquina Bay is covered by these three main types of estuarine management units. While the general purpose and intent of the conservation/development classification is as described above, the application of this classification to specific areas may be adjusted by special policies applicable to individual management units in order to accommodate needs for natural preservation.

Two major tracts of eelgrass and salt marsh within the UGB were identified in the Yaquina Bay Resource Inventory (YBRI) as significant natural areas and are classified as

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[6] State of Oregon Department of Land Conservation and Development, Oregon's Statewide Planning Goals, 1974 (as amended), p. 16.

[7] Ibid, p. 16.

[8] Ibid, p. 17.

natural management units. These have been identified as Management Units 9-A and 10-A on the Yaquina Bay Estuary (YBE) Map on page 272.

The conservation management units include small tracts of limited estuarine habitat. Some areas are important, though of insufficient size to be considered as "major tracts." Each of the conservation management units is also a partially altered area and adjacent to development management units. Units 1, 2, 3, 6 and 8 on the YBE Map are the conservation management units.

The development management units include the authorized navigation channel and the port and marina areas on both the north and south sides of the bay. The development management units include units 4, 5 and 7.

The classification of estuarine areas into management units also took into account the four additional factors listed in Goal 16. This is evidenced in how the boundaries of the management units were drawn. Adjacent upland characteristics were used to distinguish Management Unit 1 from 5, 2 from 3, 3 from 7, 5 from 10, 7 from 8, and 8 from 9. Compatibility with adjacent uses was also considered. The consideration of energy costs and the benefits of deep water navigation are reflected in the classification of the authorized channel and port areas as development management units. Commitment of the water surface area of the estuary to different surface uses was limited by classifying most of the estuary in natural and conservation management units. Most of the total area within development management units will also be kept as open water for navigation.

The summaries of management units which follow describe and classify, then set a management objective and special policies for each estuarine management unit within the Newport UGB. The priorities of use and implementation standards are set forth in overall plan policies and the permitted use matrices in the Zoning Ordinance. The maps referred to in each management unit description are: (1) the maps of the Yaquina Bay Resource Inventory; (2) the "Habitat Map of Yaquina Estuary" by the Research and Development Section of the Oregon Department of Fish and Wildlife; (3) the maps in the Lincoln County Estuary Management Plan; and (4) the nautical chart of Yaquina Bay and River.[9]

The management objectives, as well as the special policies for each management unit, are comprehensive plan policies of the City of Newport. Boundaries of management units are shown on the Yaquina Bay Estuary Map on page 272.

The base map for the Yaquina Bay Estuary Map is the nautical chart for the Yaquina Bay and River, which exhibits significant navigational features. The Yaquina Bay Bridge

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[9] National Oceanic and Atmospheric Administration, Yaquina Bay and River, 1977.

and submerged crossing corridors are also shown, as well as new crossings from the sewer and water master plans. A cable crossing area lies on either side of the bridge. The city's sewer and water pipelines cross underneath the bay between the Embarcadero and Ore-Aqua. The Oregon State Division of State Lands has approved a subpipe route from the Northwest Natural Gas LNG tank to Idaho Point.

Management Unit 1:

> Description: Management Unit 1 consists of the area between the navigation channel and the north jetty west of the Yaquina Bay Bridge. Natural resources of importance include shellfish beds, fish spawning and nursery areas, and wildlife habitat. Of special importance are areas used by ling cod for spawning and a major algae bed. Primary uses in the area are medium and shallow draft navigation and recreation (angling, boating, and diving). Alterations include the north jetty, rip-rapped shoreline east of the jetty, and piling dolphins at the base of the bridge footings. (See the YBE Map on page 272 for location of resources and uses.)

> Classification: Conservation. This unit has been classified as "conservation" in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

> Resource Capability: The major algal bed in this unit is a sensitive habitat area of special value. Other habitats, while important, are less susceptible to disturbance from minor alterations. Low intensity alterations such as piling, dolphins, riprap, and piers have occurred in this area in the past without significant damage to resource values. Similar activities of this nature in conjunction with the existing uses will constitute minor alterations consistent with the resource capabilities of the area.

The Yaquina Bay Bridge will need to be replaced sometime in the future. The new bridge must be built immediately west of the existing one. This will require the placement of new bridge footings and pilings in this unit.

> Management Objective: Management Unit 1 shall be managed to conserve shellfish beds, fish spawning and nursery areas, and other natural resources. Navigation improvements necessary for the maintenance of the harbor entrance and channel shall be provided for, as well as improvements necessary for the replacement of the Yaquina Bay Bridge.

> Special Policies: The algal bed within Management Unit 1 as defined by the Oregon Department of Fish and Wildlife Classification map shall be preserved. It is recognized that navigation improvements (including jetty maintenance) and bridge construction will be required within this unit.

Management Unit 2:

> Description: Management Unit 2 contains the area between the south jetty and the

navigation channel west of the third (westernmost) groin. Natural resources of importance include shellfish beds, algal beds, fish spawning and nursery areas, and waterfowl habitat. Major uses in the unit are shallow draft navigation and recreational activities (fishing, diving, and boating). Alterations in the area include the south jetty, navigation aids, and a submerged crossing. (See the YBE Map on page 272 for location of resources and uses.)

> Classification: Conservation. This unit has been classified as "conservation" in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

> Resource Capability: Management Unit 2 is a predominantly subtidal area situated in a high energy marine environment. Substrates in this area are primarily coarse marine sands and rocks. Kelp and other algal species cover the rocky areas around the jetty and groins, though the unconsolidated sand areas are generally devoid of larger plants.

Development which threatens water quality or seriously disrupts benthic habitats, especially major dredging or filling, can have definite impacts in marine subsystems. Minor structural alterations such as piling, dolphins, and bank stabilization result in only short term disturbances and may enhance fish habitat by providing cover and substrate for algal species. Such minor alterations are consistent with the resource capability of Management Unit 2.

> Management Objective: Management Unit 2 shall be managed to conserve shellfish beds, algal beds, fish spawning and nursery areas, and other natural resources. Navigation improvements necessary for the maintenance of the harbor entrance and channel shall be provided.

> Special Policies: It is recognized that navigation improvements (including jetty maintenance) will be required within Management Unit 2.

Management Unit 3:

> Description: Management Unit 3 consists of the area between the navigation channel and the south shore from the third jetty groin to the South Beach Marina breakwater. The area has a number of important characteristics including tideflats, eelgrass beds, significant shellfish beds, important fish spawning and nursery areas, and important waterfowl habitat. Major uses within the unit are shallow draft navigation and recreation (clam digging, fishing, and boating). Some minor commercial shellfish harvest takes place in the unit. Alterations include the south

jetty, groins, the South Beach marina breakwater, piling, a pier structure, the bridge crossing, navigation aids, and riprapped shorelines. (See the YBE Map on page 272 for location of resources and uses.)

> Classification: Conservation. This unit has been classified as "conservation" in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

> Resource Capability: Management Unit 3 is similar in character to Management Unit 2, though it has a larger intertidal area and larger and more important shellfish beds. It is also more extensively altered as a result of jetty improvements, the bridge crossing, and construction on the South Beach Marina. These structural alternatives have created diverse fish habitat, as well as substrate for algal species. Further minor structural alterations such as piling, dolphins, recreational piers, or overhead crossing on the bridge would be consistent with the existing character and resource capability of the area.

The Yaquina Bay Bridge will need to be replaced sometime in the future. The new bridge must be built immediately west of the existing one. This will require the placement of new bridge footings and pilings in this unit.

> Management Objective: Management Unit 3 shall be managed to conserve natural resources of importance. Navigation improvements necessary for the maintenance of the harbor entrance and channel shall be provided, as well as improvements necessary for the Yaquina Bay Bridge replacement.

> Special Policies: Major clam beds are located within Management Unit 3. These clam beds shall be protected. It is recognized that navigation improvements (including jetty maintenance) and bridge construction will be required in this management unit.

Management Unit 4:

> Description: Management Unit 4 is the U.S. Army Corps of Engineers authorized deep water channel and includes the turning basin up to the UGB. Natural resources within the unit consist of fish spawning and nursery areas and important shellfish beds. Major uses within the unit include navigation (shallow, medium, and deep draft), recreation (fishing, crabbing, and boating), and commercial harvest. Alterations include piling, submerged crossings, and the bridge crossing. Of special importance is the maintenance dredging of the federally authorized channel and turning basin. (See the YBE Map on page 272 for locations of resources and uses.)

> Classification: Development. This unit has been classified as "development" because of the dredging required to maintain the deep water channel and turning basin.

> Resource Capability: Management Unit 4 is an area of diverse marine influenced habitats, including some major shellfish beds. The area is periodically dredged for maintenance of the federally authorized channel, and resources present are subject to this regular disturbance. The shellfish beds south of the port breakwater as

defined by the publication "Subtidal Clam Populations: Distribution, Abundance and Ecology" (OSU Sea Grant, May 1979) are considered a resource of major importance.

> Management Objective: Management Unit 4 shall be managed to protect and maintain the channel and turning basin for deep draft navigation.

> Special Policies:* Adverse impacts of mining, mineral extraction, or other dredging operations within Management Unit 4 on existing commercial clam harvest shall be minimized. Port facilities may extend into the deep water channel subject to approval by the US Army Corps of Engineers, which maintains jurisdiction, in part, to ensure that new development does not impede navigation.

Management Unit 5:

> Description: Management Unit 5 consists of the area along the north shore of the bay from the bridge to McLean Point. It includes the Port of Newport's moorage basins, the dredged water front in the Newport urban area, and the terminal facilities at McLean Point. This portion of the estuary is used intensively for shallow and medium draft navigation, moorage of small and large boats, and recreation.

Other significant uses include a terminal operation, research activities, and a U.S. Coast Guard Station. The shoreline and aquatic areas are significantly altered with riprap, bulkheads, piers and wharves, piling, floating docks, dredging, and other activities. (See the YBE Map on page 272 for location of resources and uses.)

The shellfish beds south of the port breakwater as defined by the publication "Subtidal Clam Populations: Distribution, Abundance and Ecology" (OSU Sea Grant, May 1979) are considered a resource of major importance.

> Classification: Development. This unit is classified as "development" because of the port's development needs and the water-dependent uses along the waterfront.

> Resource Capability: Management Unit 5 is the most extensively altered area in the estuary. Plans for redevelopment of existing facilities in this area call for further alterations, including major dredging, fill, riprap, and construction activities. Given the nature of existing development and resources in this area, continued development for water- dependent uses and overhead crossings on the bridge will be consistent with the capabilities of this unit.

> Management Objective: Management Unit 5 shall be managed to provide for the development of port facilities and other water-dependent uses and water-related and nonwater-related uses in keeping with the scenic, historic, and unique characteristics of the area. Water-related and nonwater-related development shall be

* Amended by Ordinance No. 1995 (1/6/10)

consistent with the purpose of this unit and with adjacent shoreland designated as especially suited for water-dependent uses or designated for waterfront development.

Special Policies: Experimental shellfish beds were introduced in Management Unit 5 in the 1940's and 1950's. It is anticipated that these shellfish beds will be impacted by future development. Adverse impacts shall be minimized as much as possible while meeting these development needs.

Due to the limited water surface area available and the need for direct land to water access, alternatives (such as mooring buoys or dry land storage) to docks and piers for commercial and industrial uses are not feasible in Unit 5. Multiple use facilities common to several users are encouraged where practical.

Nonwater-related uses may be permitted within the estuarine area adjacent to the old waterfront from Bay Street to Pine Street, extending out to the pierhead line as established by the Corps of Engineers. Tourist related activities will be encouraged to locate on the landward side of S.W. Bay Boulevard. The bay side of S.W. Bay Boulevard should accommodate water-dependent and water-related types of uses. Some tourist related uses may locate on the water side but only upon the issuance of a conditional use permit. CH2M HILL's draft port development plan[10] identifies projects to enhance the water-related and tourist industries (see plan). These projects are consistent with the development classification of the unit and may be allowed. Future development that involves dredging and fill for non-water dependent uses will require an exception to Statewide Planning Goal 16.

Management Unit 6:

> Description: Management Unit 6 consists of the area between the navigation channel and the port breakwater, from the U.S. Highway 101 bridge east to the turning basin. It is a predominantly subtidal area with a number of important resource characteristics. These include eelgrass and shell fish beds, fish spawning and nursery areas, and waterfowl habitat. Major uses in the unit include recreation (fishing, boating, and crabbing), and medium and shallow draft navigation. Alterations within the unit include the port breakwater, pilings, navigation aids, and bridge footings. (See the YBE Map on page 272 for the location of resources and uses.)

> Classification: Conservation. This unit has been classified as "conservation" in

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[10] CH2M HILL, Update of Port Development Element of Comprehensive Plan (draft), 1989.

order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the units.

> Resource Capability: Management Unit 6 is a subtidal area at the upper end of the marine subsystem. It supports a variety of resources which could be adversely impacted by major fill, removal, or other aquatic alterations. Important uses in the unit, such as navigation and recreation, require a largely unobstructed surface area. For these reasons, alterations consistent with the resource capability of this unit are limited to minor structural alterations such as pilings, dolphins, and bridge footings and overhead crossings on the bridge. The sewer and water master plans indicate a submerged crossing that will need to traverse this unit. The port development plan also calls for the relocation of the breakwater south into Management Unit 6. Any removal activities should be evaluated on a case-by-case basis.

> Management Objective: Management Unit 6 shall be managed to conserve natural resources consistent with navigation, municipal, and recreation requirements.

> Special Policies: A Goal 16 exception will be required to justify relocation of the breakwater as proposed in the port development plan.

Management Unit 7:

> Description: Management Unit 7 consists of the aquatic area between the navigation channel and the south shore and from the U.S. Highway 101 bridge east to the small boat pier at the OSU Marine Science Center. It includes the South Beach marina and the Marine Science Center facilities. The majority of the unit is subtidal and includes eelgrass and shellfish beds and fish spawning and nursery areas. Major uses in the area are medium and shallow draft navigation, moorage, aquiculture (salmon farming), commercial harvest, and recreation. Alterations include pilings, piers and wharves, breakwaters, floating docks, riprapped shorelines, dredging, and other activities. (See YBE Map on page 272 for location of resources and uses.)

> Classification: Development. This unit has been classified as "development" because of the existing South Beach Marina, Ore-Aqua, and Marine Science Center facilities on and near the shore, as well as the proposed hotel resort, public park, and stern wheeler landing. Future development of this nature may involve dredging and fill for non-water-dependent uses. A Goal 16 exception will be required to justify any dredging or fill for non-water dependent uses.

> Resource Capability: Management Unit 7 includes the developed area along the south shore of the Newport subarea, corresponding to Management Unit 5 on the north shore. Based on the nature of the resources present in this area and the level and intensity of existing development, continued development of water dependent uses and structural alterations such as piling, piers, shoreline stabilization, bridge footings, and submerged crossings, are consistent with the purpose of this area.

Major fill and removal activities should be evaluated on an individual basis.

> Management Objective: Management Unit 7 shall be managed to provide for development compatible with existing uses and consistent with the resource capabilities of the area.

> Special Policies: Eelgrass beds, shellfish beds, and fish spawning and nursery areas are located within Management Unit 7. Adverse impacts of future development on these resources shall be minimized consistent with allowed development.

Submerged crossings, bridge footings, pilings, dolphins, and other navigation and marina related development undertaken as part of the approved comprehensive plan shall be permitted, as well as docking and other facilities to serve proposed development.

Development of deep and medium draft port facilities shall be a permitted use only outside of the existing South Beach Marina boat basin.

Due to the limited water surface area available and the need for direct land to water access, alternatives to docks and piers for commercial and industrial uses (such as buoys and dry land storage) are not feasible in Unit 7. Multiple use facilities common to several users are encouraged where practical.

Management Unit 8:

> Description: Management Unit 8 is a subtidal area between the navigation channel and the intertidal flats of the Idaho Point/King's Slough area. It contains eelgrass and shellfish beds, fish spawning and nursery areas, and waterfowl habitat. Use within the unit consists of medium and shallow draft navigation, commercial harvest, and recreation. Existing alterations are limited to navigation aids. (See YBE Map on page 272 for location of resources and uses.)

> Classification: Conservation. This unit has been classified as "conservation" in order to conserve the natural resources of the unit while allowing minor alterations similar to those now existing in the unit.

> Resource Capability: Management Unit 8 is an important resource area. Shallow portions of this subtidal unit support eelgrass beds; major shell fish beds are also located in this area. Alterations in this area are limited to navigation aids (pile supported). Because of the area's proximity to the deep water turning basin, it may be needed as a site for temporary log raft anchorage. The piling and rafts should have no significant adverse impacts on resources in this area so long as they are sited to avoid grounding. This activity, if conducted under conditions to minimize occupation of surface area to minimize conflicts with recreational use and to avoid

grounding, will be within the resource capabilities of the area.

> Management Objective: Management Unit 8 shall be managed to conserve natural resources such as eelgrass and shellfish beds. Navigation improvements found to be necessary for the maintenance of the deep water channel shall be provided.

> Special Policies: Temporary moorage of log rafts in Management Unit 8 shall conform to the following standards:

(a) Whenever feasible, individual logs shall be bundled, but they shall always be held in rafts.

(b) The number of log rafts moored at any time shall be the lowest practical number for the shortest practical time considering log supply and tidal cycles.

(c) Water surface area occupied by temporary moorage shall not at any time exceed seven (7) acres.

(d) Dolphins shall be sited and moorage conducted so that log rafts will not ground at low water.

(e) As much as practical, shipment and movements of logs shall be timed to minimize conflicts with recreational uses in the area.

(f) A cobble/pebble dynamic revetment for shoreline stabilization may be authorized in Management Unit 8 for protection of public facilities (such as the Hatfield Marine Science Center facilities).

Management Unit 9-A[11]**:**

> Description: Management Unit 9-A consists of the state-owned tideflats between the Marine Science Center and Idaho Point. The unit contains salt marsh, algae and eelgrass beds, shellfish beds, fish spawning and nursery areas, and waterfowl habitat. All of these resources are considered to be of major importance. Uses within this unit are limited to shallow draft navigation and recreational activities (hunting, fishing, and clamming). This unit is essentially unchanged, with the exception of limited areas of riprapped shorelines and the existing Idaho Point marina and channel. (See the YBE Map on page 272 for location of resources and uses.)

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[11] Management Unit 9-A includes only that part of Management Unit 9 identified by the Yaquina Bay Task Force that is within the Newport UGB. The existing marina is on the county side of the UGB. The description and special policies set forth above differ from those for Management Unit 9 as a whole only because they apply to a smaller, somewhat less diverse area. This subarea is classified, described, and planned for a manner wholly consistent with the remainder of Management Unit 9.

> Classification: Natural. This unit has been classified as "natural" in order to preserve the natural resources of the unit.

> Resource Capability: A sensitive area, Management Unit 9-A has resource values of major importance to the estuary ecosystem. In order to maintain resource values, alterations in this unit should be kept to a minimum. Minor alterations that result in temporary disturbances such as limited dredging for submerged crossings would be consistent with resource values in this area; other more permanent alterations should be reviewed individually for consistency with the resource capabilities of the area and the purposes of the management unit.

> Management Objective: Management Unit 9-A shall be managed to preserve and protect natural resources and values.

> Exceptions: The City of Newport is taking two exceptions to Goal 16/"Estuarine Resources." The first is for a seawater outfall line in conjunction with the Oregon Coast Aquarium. The second is for storm water drainage and outfall for the portion of South Beach that naturally drains into Management Unit 9-A.

A. **Seawater Outfall Line:** Goal 2 and Oregon Administrative Rules 660-04-020 outline the criteria that must be addressed when considering an exception. This particular project's compliance with the standards follow.

Four Factors To Be Addressed When Taking an Exception:

1.) **Reasons justify why the state policy embodied in the applicable goals should not apply.**

The Oregon Coast Aquarium is being constructed on an upland area adjacent to the Yaquina Bay Estuary, which has been designated as a Natural Area (Management Unit 9-A) in accordance with Goal 16/ "Estuarine Resources." The site for the aquarium is upland of the natural area and is located on a site designated in the Newport Comprehensive Plan as "Yaquina Bay Shorelands" (zoned W-2/"Water Related").

The aquarium meets the city's definition of a water-dependent use since it must have access to a continuous supply of seawater in order to keep marine animals and plants alive. Seawater will be drawn from the estuary and piped to a reservoir on the aquarium site where it will

be stored until needed. After seawater passes through exhibits, it will be released back into the estuary from which it came.

The state policy embodied in Goal 16 did not anticipate this situation. The removal and return of seawater to the estuary is a rare request and will have a very limited effect, if any, on existing plant and animal communities. If anything, the continuous discharge of seawater at the edge of a natural area may provide improved habitat for certain organisms.

Goal 16 allows certain uses in natural areas when consistent with resource capabilities of the area and purposes of the management area. These conditionally allowed uses include the following:

* Aquaculture (including incidental dredging and removable in-water structures such as stakes or racks).

* Communication facilities.

* Boat ramps for public use.

* Pipelines, cables, and utility crossings (including incidental dredging necessary for installation).

* Installation of tide gates in existing functional dikes.

* Temporary alterations.

* Bridge crossing support structures (including dredging necessary for their installation).

It is understandable from reading this list that it is not the intent of the state to prohibit all development within a natural area. Rather, it appears that the state adopted a reasonable position that some development is allowed and that the intent is to minimize environmental degradation.

Discharge of seawater back into the estuary where it came from will have less of an impact on the estuary than allowing fish farming or ranching, communication facilities, boat ramps, pipelines, cables, utility crossings, tide gates, and bridges to be constructed.

State policy, as interpreted by the City of Newport, severely limits activities allowed in Management Unit 9-A. Uses mentioned in the unit description are as follows:

* Shallow draft navigation.

* Recreational activities (hunting, fishing, clamming).

* Limited areas of riprap shorelines.

* Limited dredging for submerged crossings.

* Other more permanent alteration should be reviewed individually.

The amount of land that will be impacted by this proposal will be limited to less than about 500 square feet located where outfall pipe(s) penetrate the shoreline bank.

The aquarium property abuts Management Unit 9-A. Because of the slope of the land and the propensity of water to seek a lower level, a seawater discharge anywhere on the property (even if not directly into the estuary) will move overland and eventually enter one of the existing drainage ways that discharge into the estuary. It seems appropriate, therefore, to allow the discharge seawater directly back to the estuary.

2.) **Areas that do not require a new exception cannot reasonably accommodate the use.**

There are only five possible areas or locations where seawater from the site can be discharged after use. These areas or locations, and associated implications are discussed below:

(a) Discharge to the estuary (Management Unit 9-A). This is the proposed approach and has already been discussed.

(b) Discharge to a City of Newport sanitary sewer. This approach is unacceptable to the city. The introduction of seawater into the sanitary sewer system would cause the destruction of bacteria in the sewage treatment plant and lead to treatment failure.

(c) Discharge to an on-site holding pond. This approach would work for occasional or intermittent discharges. However, continuous flow of seawater through the aquarium is required. Even a very large pond would eventually overflow and, because of gravity flow, seawater would return to the estuary.

(d) Discharge near the intake point (Management Unit 7). The Marine Science Center's seawater intake is located on a pier at the northwest corner of the center. The center has allowed the aquarium's intake to be located on the same pier. Because of research projects underway at the center, researchers must have complete control of the water intake area so temperature and salinity can be controlled within tight tolerances. Water is drawn from varying depths to obtain desired temperature and salinity and pumps are started and stopped based on salinity levels and tidal action.

The discharge of seawater from the aquarium in this vicinity could alter temperature and/or salinity levels at the center's intake and could effect on-going research projects. Given that Goal 16 allows research as a permissible use, it seems inappropriate to propose an action that might jeopardize on-going research projects.

(e) Discharge to the estuary near the Highway 101 bridge (Management Unit 7). This approach, while feasible, is costly both in terms of the initial construction and long term operational costs (maintenance and pumping). In addition, traffic on the access road from the bridge would be impacted during construction.

The added costs of this approach, over the costs of the proposed approach, are estimated as follows:

2700 lf- 10 inch PVC pipe @ $24.00/lf	$ 67,500
Pump station (wetwell, pump, piping, electrical supply)	25,000
Construction subtotal	$ 92,500
Engineering @ 10%	9,000
Contingency @ 20%	18,500
Estimated project construction	$120,000

Annual pumping costs (1500 gpm, 30 foot head, 15 HP pump, power costs at $0.04 KWH)	$ 4,800

Annual maintenance at 3% of construction	3,600
Estimated annual operation cost	$ 8,400

The proposed seawater discharge facility, therefore, cannot be reasonably accommodated on non-resource land or on resource land that is already irrevocably committed to non-resource uses.

3.) **The long-term environmental, economic, social and energy consequences resulting from the use at the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located in other areas requiring a Goal exception.**

Several alternative sites for the aquarium were considered before the selected site was chosen. As mentioned earlier, the aquarium is a water- dependent use and must be located near, if not adjacent to, Yaquina Bay. All sites considered would require discharge of seawater back into the estuary. Long term environmental consequences resulting from discharge at this site, as compared to discharge into a natural area from another site, are equal.

The typical positive and negative environmental consequences of discharging seawater at the proposed site, or any other site discharging into a natural area, are as follows:

> Positive Consequences:

* The continuous discharge of seawater at the edge of a natural area may provide

improved habitat for some plant and animal species.

* During winter storms when much fresh water is running into the estuary, the discharge of seawater may slightly increase salinity levels.

> Negative Consequences:

* Continuous discharge of seawater may lead to the enlargement or modification of discharge channels through the mud flats. (Note: this negative impact can be minimized by

dividing the discharge stream into two parts, thereby reducing hydraulic energy available at a given location.)

* Reduction of salinity level fluctuations near the discharge point may discourage plant and animal species which do better in areas where salinity levels fluctuate more widely.

Long term economic, social, and energy consequences resulting from discharge at this site, as compared to discharge into a natural area from another site, are difficult to evaluate. Sites located farther from the estuary than the selected site would require additional discharge piping, a short term economic detriment (added maintenance) to the aquarium. The selected site will allow discharge by gravity, obviating the need to pump seawater (energy cost avoidance). Sites located farther from the estuary or at lower elevations may require pumping, a long term economic detriment to the aquarium. It is unlikely that there would be any social consequences related to the discharge of seawater from the selected site or from any other site considered.

4.) **The proposed uses are compatible with other adjacent uses, or will be so rendered through measures designed to reduce impacts.**

The aquarium will be located south of the Marine Science Center, north of an industrial area, and east of a mostly vacant parcel that accommodates some mobile homes. The Yaquina Bay Estuary is directly to the east of the site. There will be a highly compatible relationship between the Marine Science Center and the aquarium. The center focuses on marine research and higher education, while the aquarium will focus on environmental education and recreation. The aquarium staff will look to the center staff for technical assistance, and the aquarium will unburden the center from its current heavy load of recreationists.

The aquarium and the industrial area should be reasonably compatible. The aquarium will need some services provided by industrial park tenants (e.g., pump repair, electrical equipment maintenance, and welding). Aquarium visitation will, however, cause some congestion along area roads. As a mitigating action, the City of Newport is improving and realigning Ferry Slip Road, which will improve access to both the aquarium and the industrial area.

Once the aquarium is complete and Ferry Slip Road is improved, the area west of the site is expected to become more valuable and will

likely be redeveloped. This action will have a positive economic effect on the South Beach area of Newport but a negative one on occupants of mobile homes on the property.

The placement of a seawater outfall into the estuary east of the aquarium will have no impact on the Marine Science Center, the industrial area, or residents of nearby mobile homes.

Reasons Necessary to Justify an Exception: The proposed use--seawater discharge into a natural area--is not specifically provided for in subsequent sections of this rule. Subsection (1) of 660-04-022 discusses this situation. The following comments are in response to subsection (1).

(a) There is a demonstrated need for the proposed use.

The aquarium will be built on a site which conforms to the Comprehensive Plan and Zoning Ordinance of the City of Newport. The aquarium is viewed by many as a development that will improve the economy of the central coast by creating jobs and increasing tourism. As of May, 1990, funds already committed included approximately $3.3 million in federal monies, $2.5 million in state economic development money, $2.7 million from charitable foundations, and $874,356.00 from other sources.

The proposed aquarium will help achieve Goal 9/"Economy of the State" in the following ways:

* The aquarium will help diversify the economy of the central coast.

* The aquarium will improve the economy of the central coast by generating jobs and providing services consistent with the long term availability of human and natural resources.

* The aquarium will help promote tourism both for in-state residents and out-of-state visitors.

(b) A resource upon which the proposed use or activity is dependent can be reasonably obtained only at the proposed exception site and the use or activity requires a location near

the resource.

(c) The proposed use or activity has special features or qualities that necessitate its location on or near the exception site.

As discussed earlier, the aquarium must be located near a continuous supply of seawater. Once the seawater passes through exhibit areas, it must be discharged. It is essential that a seawater discharge be available to the aquarium, preferably close at hand and capable of operating by gravity.

B. Storm Water Drainage and Outfall: Goal 2, Oregon Revised Statutes (ORS) Section 197.732, and Oregon Administrative Rules (OAR) Chapter 660, Division 4, provide guidance and establish criteria for taking an exception. The following addresses the applicable standards for the storm drainage outfall in South Beach:

Four Factors To Be Addressed When Taking an Exception:

1.) **Reasons justify why the state policy embodied in the applicable goals should not apply.**

The storm drainage system will be constructed and will serve an upland area adjacent to the Yaquina Bay Estuary. The property in the drainage basin to be served by the system is designated on the acknowledged Newport Comprehensive Plan for

residential, commercial, and industrial uses depending on the location. The zoning reflects those Comprehensive Plan designations.

Urban level development requires the provision of urban level services (Goals 11 and 14). The channeling and disposing of storm run-off is one of those services. The existing natural and constructed channels are used now for storm run-off from the upland areas in the drainage basin. The development of the storm drainage system will not alter those existing channels or add new channels.

Goal 16 deals primarily with development or alteration within the estuary. Development outside of the estuary but which affects the estuary is also a concern; however, it is not the primary focus of the goal. Because the issues involved in the development of the storm water drainage system concern those upland areas, the problems that would affect the estuary are controlled by the design and construction of those upland facilities. As Goal 16 does not control the upland

development and storm drainage is a normal City service to the extent Goal 16 can be found applicable to storm water run-off, it should not apply in this instance because it would conflict with the delivery of urban services as required by Goals 11 and 14.

2.) **Areas that do not require a new exception cannot reasonably accommodate the use.**

Storm drainage systems generally rely on existing natural drainage patterns and gravity to function. One option to a gravity system is to collect the storm water and pump it into another drainage basin. The nearest management unit that allows storm drainage is Management Unit 7, approximately 2,600 feet to the north. Another option would be to collect the storm water and release it into the natural management unit at a slow rate. Both would require the construction of detention and pumping facilities.

Any non-gravity collection system would have to be built with the capacity to manage run-off from current and future development in order to properly work. The City of Newport's engineering staff estimate that the current run-off during a 25 year design storm is about 20 cubic feet per second

(cfs). These engineers have also determined that at build-out of the subject drainage basin, a flow of 50 cfs could occur. That number is based on a storm design of a rainfall intensity of one (1) inch of rainfall over a one (1) hour period. That equals 108,000 cubic feet, or 2.5 acre feet of water that must be stored. There would, therefore, have to be some sort of detention system built that could accommodate that much water.

The most likely way to detain water would be a pond or some similar type of impoundment. To store 2.5 acre feet of water, a pond could be one acre in size and at least 3.0 feet deep. It would be preferable to build the pond deeper, at least 5.0 feet, so as not to cause flooding during extreme storms.

For the detention pond to work, it would have to be:

> In low lying land below surrounding uses;

> Centrally located so as to be capable of serving a large area; and

> Easily developable.

The Newport Industrial Park in South Beach is at an elevation of 11 feet. This property is the lowest of the urban land in the area proposed to be affected by improved storm drainage. With that elevation in mind and the above stated depth of the detention facility, the bottom of the pond would be at six feet elevation.

It is not uncommon for high tides to be 8, 9, or 10 feet. If the detention pond were built at the suggested elevation, it would be within lands that are influenced by tidal action. Considering the other two factors of location and availability, the only place the pond could be built is in an area just south of the Newport Industrial Park. this area is partially within Management Unit 9-A and partially within a wetland. No lands are available out of either of these two natural resources. With that scenario, there would be a direct affect on the natural management unit rather than the secondary affect discussed below.

Another way to build the pond would be to construct it so that the bottom was at 12 feet or higher. This would involve large amounts of fill and a pumping system that could pump 25 cfs of future run-off into the pond. It would also have to be sited in an area consistent with the location criteria. Again, this would most likely be in the existing Management Unit 9-A or the abutting wetlands. This massive engineered selection in the management unit or adjacent wetlands is a greater divergence from the Goal 16 requirements than naturally channeled storm run-off.

Once in the pond, the water would either be released gradually into the natural management unit or pumped and released into a non-natural management unit. Either way would involve the construction of a pond and a pump that could dispense with the 50 cfs of water. City engineering staff estimates that the pond would cost about $225,000. That assessment is based on the excavation of a hole five feet deep and other accessories associated with it, such as impermeable liners.

The engineering staff has also estimated that a variable speed pump of sufficient size and its accessory structures would cost $262,000. In addition, there would have to be 200 feet of 24 inch pressure pipe at a cost of $65.00 per foot for a total of $13,000. The total cost of the ponding and pumping system would therefore total $500,000. Such a

pump would not only be very expensive to install, but the ongoing operating costs would be a significant continued expense. (Engineering estimates the cost of operating the pumping system at approximately $60,000 per year.)

In addition, the pump would stand idle most of the time. The above-described system is based on a design storm that occurs once every 50 years; or, conversely, there is a two percent chance that the storm could occur in any given year. It is not cost effective to have such a system that large operate only occasionally, considering the negligible effect on Management Unit 9-A if the exception is granted.

Finally, sediments from the run-off would settle into a detention pond. This means that the pond would have to be periodically dredged. Again, the maintenance costs for a ponding system that is only occasionally used is prohibitive and not a wise use of public monies considering the impact on Management Unit 9-A.

3.) **The long term environmental, economic, social, and energy consequences resulting from the use at the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located in other areas requiring a goal exception.**

Environmental: The state goal is to protect and, where feasible, enhance the natural management units. As mentioned above, the city is not proposing to construct any additional storm drainage facilities into the management unit but merely proposing to increase the amount of discharge through existing, natural channels.

City engineering staff has determined that discharge increase for the 50 year design would be from 20 to 50 cfs. Again, this is calculated for an intense storm. Storm drainage capacities are determined by the formula q=c*i*a, where "q" equals run-off in cubic feet per second, "c" equals the coefficient of permeability, "i" equals the intensity of rainfall, and "a" equals the area of the drainage basin in acres.

When the Engineering Department determined the 50 cfs, "i" equaled "1." That is a very intense storm and, again, according to the engineering staff, a more common figure would be .2. This would equal one-fifth of the design storm of 50 cfs. Consequently, a more common storm would generate only ten cfs. Those figures are based upon build out of the upland commercial, industrial, and residential land use.

Two potential adverse affects could result from that six cfs increase. One would be an increased amount of scouring in existing channels, especially below the high tide mark. Second, because of the increase in the impervious soils in the drainage basin (probably asphalt), there could be an increase in the amount of pollutants such as oil, gas, or antifreeze.

The Engineering Department has examined both impacts. According to the preliminary studies, the existing channel bisecting the bay is of sufficient depth to accommodate the increased run-off without additional scouring.

Also, according to the Engineering Department, the increase in pollutants is mostly offset by an increase in water. This results in a greater amount of mixing and dilution of the pollutants. There would, then, be a measurable but not critical adverse impact on natural Management Unit 9-A.

Economic: As stated in the previous section, the cost of building and maintaining a drainage system that is only used intermittently is very high. By building a drainage system that operates by gravity, the public costs of development and maintenance are considerably less.

The South Beach area has been designated as high density residential, commercial, and industrial elsewhere in this plan. It is estimated herein that the City of Newport will need additional acres of commercial and industrial land to accommodate the anticipated growth. As noted in this plan, areas other than South Beach feasible for commercial development are very limited. The acknowledged Comprehensive Plan stated that the area is needed for the future expansion of the city's economic base. The ability of the city to expand its economic base is necessary for the economic well being of the community and the region. The State of Oregon has recognized this by adopting Goal 9/"Economy of the State" as an important element of mandated comprehensive plans.

Storm drainage facilities must be available for any development, but it is even more critical for commercial and industrial areas. That type of development requires the construction of large parking lots. To be functional, efficient storm drainage is required because lots cannot be developed in accordance with the acknowledged designations if there is the possibility of flooding. This is compounded in the South Beach area because it is relatively flat and low lying.

Social: The South Beach area has a large amount of the future high

density residential lands. Other high density areas in the city are either small or are in areas difficult to develop. The South Beach area is, therefore, one of the few areas in town that can accommodate larger multi-family developments. The lack of a sanitary sewer system in the area has prevented any large projects from locating there, but the extension of

the sewer system into the area is almost complete, and development can now occur.

As with commercial and industrial development, apartments usually involve large amounts of impervious surfaces. This means that storm water must be collected on site and fed into an area-wide storm drainage system. The cost of that system has a direct relationship to the cost of housing because of added development costs. Infrastructure, therefore, must be as cost efficient as possible, yet still provide an adequate service. If the storm drainage system designed for South Beach can take advantage of natural outfall into the bay, the cost of providing that service can be greatly reduced not only in the initial construction but in the long-term maintenance. Conversely, if the cost is high, that added cost will be passed on to the consumer.

The housing element of this plan has identified a need for additional housing, especially for low income persons. The more costs that are required in residential building, the more expensive and less affordable are the homes. This social concern has been identified by the state in Goal 10/"Housing" and the Housing rule as an important goal. Considering the potential great expense of any of the alternatives to the natural gravity system for storm drainage, the availability of cost effective housing for lower income persons could be hampered.

Energy: If the city builds the storm drainage system as proposed, it will work totally on gravity; consequently, once constructed, no energy consumption will be required except for periodic maintenance. If, on the other hand, one of the alternative methods is employed, a considerable amount of energy will be used pumping water. In addition, maintenance demands will increase because of the pump and detention systems. This will also increase the amount of energy consumed.

4.) **The proposed uses are compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts.**

The proposal is to drain storm water into a natural management unit via a natural swale. There will be no additional outfall lines or drainage ditches constructed in Management Unit 9-A.

Natural drainage ways are a common feature for any body of water into which land drains.

Other adjacent uses include salt marshes, algae and eelgrass beds, shellfish beds, fish spawning and nursery areas, and waterfowl habitat. All of these uses have developed at or near the existing drainage way, and no adverse impacts have been identified. Because this proposal does not intend to alter that natural drainage channel but only insignificantly affect the management unit, the proposal is not inconsistent with the above uses.

Other non-natural uses include submerged crossings, navigation improvements, and aquaculture facilities. Submerged crossings and navigation improvements may involve minor alterations, resulting in temporary disturbances (see Goal 16 of the Statewide Planning Goals). It is then evident that some alteration and disturbance is allowed as long as it is temporary. This proposal is to use existing natural drainage with no alterations at all within the management unit. The storm drainage proposal subject to this exception, consequently, is compatible with other uses that may result in minor, temporary alterations.

5.) **There is a demonstrated need for the proposed use.**

As stated before, the subject drainage is and will continue to be a high density residential, commercial, and industrial area. Storm drainage facilities are needed in urban areas, especially in those on the coast that can receive over 80 inches of rain a year.

In addition to the overall rainfall amount, the coastal areas can experience intense rain storms, with an intensity of one inch an hour not uncommon. Even if the ground is vacant, the soil quickly becomes saturated, so water begins to run off. In urban areas, run-off that is not channeled can result in serious water damage to property and structures. Adequate storm drainage facilities, then, are needed in built up areas. This has also been identified as a needed public service under Goal 11.

6.) **A resource upon which the proposed use or activity is dependent can be reasonably obtained only at the proposed exception site,**

and the use or activity requires a location near the resource. The "resource" upon which the use is dependent is water run-off on the Management Unit 9-A area. No other location is reasonable.

7.) **The proposed use or activity has special features or qualities that necessitate its location on or near the exception site.**

As discussed previously, in order to provide a needed storm water drainage system in the South Beach area in the most timely, orderly, and efficient manner, the existing, natural drainage facilities must be used. This requires flow into a natural management unit.

Special Policies: Management Unit 9-A shall be managed to preserve natural amenities. Active restoration activities are limited to fish and wildlife habitat and water quality and estuarine enhancement. There are two exceptions:

> The waste seawater outfall for the Oregon Coast Aquarium; and

> The storm water run-off through a natural, existing drainage system.

Both of these uses are permitted in Management Unit 9. The Idaho Point Marina and the channel that serves it are existing uses within the natural management unit, and they may be maintained as allowed under the existing Corps of Engineers permit. Repair of existing structures and facilities would be considered maintenance, as well. Any new dredging in excess of what is currently allowed under the existing Corps of Engineers permit, or any new development or expansion of existing in-water structures and facilities could require a Goal 16 exception. A cobble/pebble dynamic revetment for shoreline stabilization may be authorized in Management Unit 9-A for protection of public facilities (such as the Hatfield Marine Science Center facilities).

Management Unit 10-A[12]:

> Description: Management Unit 10-A includes part of the Sally's Bend area between Coquille Point and McLean Point. The unit consists of a major tideflat which supports eelgrass, shellfish and algal beds, fish spawning and nursery areas, and wildlife habitat, all of major significance. Uses in the area are limited to shallow and medium draft navigation, recreational use, and some minor commercial harvest. A number of incidental alterations are present, including pilings, dredging, and riprapped shorelines. (See map for location of resources and uses.)

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[12] Management Unit 10-A includes only that part of Management Unit 10 identified by the Yaquina Bay Task Force that is within the Newport UGB. The description and special policies set forth above differ from those for Management Unit 10 as a whole only because they apply to a smaller area. This subarea is classified, described, and planned for in a manner wholly consistent with the remainder of Management Unit 10.

> Classification: Natural. This unit has been classified as "natural" in order to preserve the natural resources of the unit.

> Resource Capability: Management Unit 10-A is similar in character and resource values to Management Unit 9-A. Due to the importance and sensitive nature of the resources in this area, permitted alterations should be limited to those which result in only temporary disturbances. (Several submerged crossings have been located in this area.) More permanent alterations should be reviewed for consistency with the resource capabilities of the area.

> Management Objective: Management Unit 10-A shall be managed to preserve and protect natural resources and values.

> Special Policies: Active restoration activities necessary to preserve and protect the natural resources and values of the management unit are limited to fish and wildlife habitat and water quality and estuarine enhancement. A portion of Management Unit 10-A has been identified as a potential future development site. Development of this area within the "resource line" shown in the Lincoln County Estuary Plan shall require a clear demonstration of need, evaluation of alternative sites, consideration of long-term consequences, and a finding of compatibility with the adjacent uses in order to justify the needed plan amendment and Goal 16 exception.

Estuary Plan Coordination and Implementation

The Lincoln County Estuary Management Plan will be implemented within the Newport urban growth boundary. Lincoln County
has primary responsibility for implementation in those parts of Yaquina Bay outside the city limits, while the City of Newport has primary responsibility for implementation within the city limits. The applicable portions of the Lincoln County Estuary Management Plan, adjusted as needed to produce equivalent results, are incorporated into the Newport Comprehensive Plan and Zoning Ordinance.

Review Procedures

Section 2-2-13 of the city's Zoning Ordinance defines, in terms of a permitted use matrix, the development, conservation, and natural management units and describes appropriate uses, activities, and structures. Any use, structure, or alteration in

any management unit must comply with procedures established in that section of the Zoning Ordinance.

State and Federal Agency Coordination

The Lincoln County Estuary Management Plan and the Newport Comprehensive Plan and Zoning Ordinance are designed to provide for the review of proposed uses and

the application of performance standards in conjunction with the Division of State Lands waterway project permit review procedure (which in turn is integrated into the Corps of Engineers Section 10 and Section 404 review procedures).

Through this process, all state and federal resource agencies that participate in the review of waterway permits will be apprised of actions taken and findings made under the provisions of the management plan.

Similarly, each local government will be able to take advantage of the resource agencies' participation in this process for acquiring technical information and assessments relative to the review of waterway projects.

Yaquina Bay Shorelands:

This section summarizes inventory information about the shorelands adjacent to Yaquina Bay. Identification of the shorelands boundary was based upon consideration of several characteristics of the bay and adjacent uplands. Resources shown on the Yaquina Bay Shorelands Map within the bay-related portion of the shorelands boundary include:

> Areas subject to 100-year floods as identified on the Flood Insurance Rate Map (FIRM).

> Significant natural areas, adjacent marsh, and riparian vegetation along the shore.

> Points of public access to the water.

> Areas especially suited for water-dependent uses.

> Dredged material disposal sites (for a more detailed discussion of dredged material disposal sites, see the amended Yaquina Bay and River Dredged Material Disposal Plan[13]).

Several of the Goal 17 inventory topics for coastal shorelands do not appear in the legend for the Yaquina Bay Shorelands Map either because they do not occur (coastal headlands) or are not directly associated with it (geologic hazards). However, the report

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[13] Wilsey & Ham, Yaquina Bay and River Dredged Material Disposal Plan, 1977.

and mapping of hazards by RNKR Associates is included in the Newport Comprehensive Plan inventory.[14] The historic and archaeological resources of the Yaquina Bay Shoreland have been identified in the historical section of this document.

The Yaquina Bay Bridge is the major aesthetic landmark on Yaquina Bay. Views associated with the ocean have relegated the river scenes to secondary importance.[15] The Visual Resource Analysis of the Oregon Coastal Zone classified the whole of Yaquina Bay as an area with a "less obvious coastal association" than the ocean beaches or Yaquina Head.[16]

Flooding

Areas of 100-year floods along Yaquina Bay (Zone A), as shown on the Flood Insurance Rate Map for the City of Newport (effective April 15, 1980), are included on the Yaquina Bay Shorelands Map. This line represents base flood elevation of 9 or 10 feet, depending upon the location.

The City of Newport has adopted flood plain management regulations that have been approved by the Federal Emergency Management Agency (FEMA). The regulations include provisions that meet the requirements of the National Flood Insurance Program.

Significant Natural Areas

The Oregon Natural Heritage Program identified two significant natural areas on Yaquina Bay within the Newport UGB. These
areas are mostly within the boundaries of Estuarine Management Units 9-A and 10-A. However, the shore adjacent to these management units also contains riparian vegetation and marshland.[17] These significant shoreland and wetland habitats and adjacent wetlands, including riparian vegetation, are shown on the Yaquina Bay Shorelands Map on page 272.

Public Access Points

The Yaquina Bay Shorelands Map identifies points of public access to the water for

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[14] RNKR Associates, Environmental Hazard Inventory: Coastal Lincoln County, Oregon, 1978.

[15] Wilsey & Ham, Yaquina Bay Resource Inventory, 1977.

[16] Walker, Havens, and Erickson, Visual Resource Analysis of the Oregon Coastal Zone, 1979.

[17] Wilsey & Ham, Yaquina Bay Resource Inventory, 1977.

purposes of boating, clamming, fishing, or simply experiencing the bay environment. In addition to those points, there are several points identified in the Inventory of Coastal Beach Access Sites published by Benkendorf and Associates.[18] That document is hereby included within this Plan by reference.

Areas Especially Suited for Water-Dependent Uses

There are several shoreland areas in the Newport UGB that are especially suited for water-dependent uses (ESWD). The shoreland areas especially suited for water-dependent recreational uses within the Newport UGB are virtually all on the ocean as described in the Ocean Shorelands Inventory. Suitable sites for water-dependent commercial and industrial uses exist on both the north and south shores of Yaquina Bay. Some of the water-dependent commercial areas, such as the marina sites, also have a recreational aspect. The port development section of this element will discuss the ESWD sites in more detail.

The factors which contribute to special suitability for water-dependent uses on Yaquina Bay Shorelands are:

> Deep water (22 feet or more) close to shore with supporting land transport facilities suitable for ship and barge facilities;

> Potential for aquaculture;

> Potential for recreational utilization of coastal water or riparian resources;

> Absence of steep slopes or other topographic constraints to commercial and industrial uses next to the water;

> Access or potential for access to port facilities or the channel from the shorelands unobstructed by streets, roads or other barriers.

The first three factors are stated in Goal 17. Protected areas subject to scour that would require little dredging for use as marinas do not exist in Newport. The last two factors are based upon analysis of the characteristics of Yaquina Bay and its shorelands.

There are three areas within the Yaquina Bay Shorelands that have been identified as ESWD based on the five factors listed above. The degree and nature of the suitability for water-dependent uses varies both within and among these areas; consequently, a

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[18] Benkendorf and Associates, Inventory of Coastal Beach Access Sites, 1989.

flexible approach to evaluate proposed uses in these areas on a case-by-case basis will be necessary.

The ESWD areas are noted below with applicable factors from the above list in parentheses, beginning with the east end of the original plat of Newport and proceeding clockwise around the bay. (See the Yaquina Bay Shorelands Map on page 272 for locations.)

1.) The Port of Newport's commercial boat basin facilities and parking lot/storage area lie between the bayfront on the west and the Embarcadero Marina and parking area on the east. This area lies entirely to the south of Bay Boulevard (factors 3, 4 and 5).

This area is largely developed or committed to port facilities, including docks, port offices, and a parking area. This is the port area devoted to berthing commercial fishing boats. There is development potential for changes in the port's facilities to meet the changing needs of the commercial fishing industry. While the total number of vessels has declined, their size and diversity is increasing. Some vessels in the 70 to 100 foot class routinely fish as far away as the north Alaskan coast. Uses outside or on the fringes of the port area that do not conflict or interfere with commercial fishing needs could be acceptable and appropriate.

2.) The other area on the north side of the bay especially suited for water dependent uses is part of the McLean Point fill area, including Sunset Terminals and the LNG tank. Only that land with close proximity to the deep water channel is included. This area is entirely south of the western portion of Yaquina Bay Road (factors 1, 4 and 5).

This area has existing facilities and future development potential for a variety of water-borne transportation, shipping and storage activities in conjunction with fish processing, marine industry, and bulk shipping of limestone, logs, and lumber, liquefied natural gas, or other commodities. A variety of industrial uses would be desirable on the landward side of the terminal facilities.

3.) On the south side of the bay, the OSU Marine Science Center's dock facilities, the Ore-Aqua commercial salmon hatchery, and the land immediately adjacent to the South Beach Marina are especially suited for water-dependent uses (factors 2, 3, 4 and 5), and will also serve the needs of workers and visitors to the area.

This area is only partly developed. Additional water-related and nonwater-related developments associated with the existing South Beach Marina, the OSU Marine Science Center, and port development as identified in the port development plan are envisioned for the areas landward of this ESWD area. These facilities further

the public's enjoyment and understanding of the coastal environment, and resources are most desirable.

Port Development Plan:

The City of Newport's Urban Renewal Agency and the Port of Newport contracted with CH2M HILL of Corvallis to prepare an update of the port development element of the city's Comprehensive Plan (already mentioned in this section).

The first part of the port development plan is an executive summary of the entire plan. That section is repeated here.

Executive Summary

Industry Demands: The waterfront property bordering historic and scenic Yaquina Bay is used for a wide variety of activities. This diversity of uses contributes to the vibrancy of the Newport area. However, there is a tension between the various industries using the waterfront property as they compete for space to grow and expand their respective activities. The primary industries vying for use of bay front property are:

- Commercial shipping
- Commercial fishing
- Research and education
- Tourism

Commercial shipping provides the justification for continued federal participation in harbor and navigation channel maintenance activities. The channels not only provide access to the deep draft shipping lanes of the Pacific Ocean but also make Yaquina Bay a favored harbor for a large commercial fishing fleet, which in turn attracts many tourists to the bay front to observe off-loading and processing of the catch. Research and education activities support the commercial fishing industry and also attract visitors to the area. The combined presence of the Hatfield Marine Science Center and the deep draft navigation channel draws large ocean research vessels into the harbor for supplies, repairs, and to provide floating exhibitions open to the public. Thus, these major industries are all linked together.

Two hundred and fifty acres along the estuary are zoned for water-related or water-dependent use, and it is important to balance the needs of all to provide balanced growth in the local economy. The current needs of each of these industries are discussed below.

> The commercial shipping industry requires additional staging areas and needs to

reserve room for future expansion. Additions of a dedicated shipper or a second export commodity, such as wood chips or other forest products, is the type of activity that could generate the need for additional berths.

> Commercial fishing activities are restricted by lack of moorage, service and work docks, and upland support area for storage and repair work. Competition between ports often leads to marketing support facilities at rates that do not meet debt service in the name of economic development and job creation. This is done to attract commercial fishing vessels to a port because of the financial impact one of these boats can make on the local economy. Each boat is, in essence, an independent business, and the boats are increasingly being operated in a business-like manner.

> Research and education requirements are fairly straightforward: room for expansion and maintenance of the environmental parameters upon which they depend (e.g., water quality in the vicinity of seawater intake facilities).

> The tourism industry relies on the continued presence of the fishing fleet and access to the variety of activities that may be enjoyed along the waterfront, in addition to room for expansion.

Potential Development of Bay Front Areas: Parking is in short supply. Retail merchants, tourists, and commercial fisherman alike put this shortage at the forefront of their needs. Access to the bayfront could be enhanced by a multi-level parking structure with a capacity for approximately 400 vehicles. This would not solve all parking shortages nor completely eliminate congestion; however, construction of such a facility would provide the opportunity to establish one-way traffic along the bay and restrict all but commercial and emergency vehicles from the lower reach of Bay Boulevard.

The lower bayfront offers the potential for cold storage facilities, ice making and selling facilities, receiving docks and buying stations, and transient moorage space. If the now vacant Snow Mist site is not used for these activities, then it may be appropriate to allow other short-term uses. This should be permitted only if the short-term use allows easy conversion to the proposed primary use upon demonstrated need and demand for such a facility.

The area from Port Dock 5 to the Embarcadero should be dedicated, primarily, to the needs of the commercial fishing industry. However, some current uses, such as long term storage for crab pots and cod pots, are not appropriate considering the limited amount of upland area along the waterfront. The potential for major redevelopment of this area has been identified. This would enhance public enjoyment of the waterfront in addition to expanding facilities for the commercial fishing fleet.

The project requires filling of public tidelands between Port Docks 3 and 5. This

would provide space for a waterfront park area with a good view of the commercial fishing activities at Port Dock 5. Bay Boulevard could also be widened to provide additional street-side parking and one-way traffic lanes along this section. The remaining land would be converted to more efficient gear staging and short term storage, parking dedicated to the commercial fishermen, and marine retail lease space. A boardwalk running from Port Dock 3 to the Embarcadero would also allow tourists visual access to the activities of the fleet while maintaining the physical separation necessary for public safety.

Other elements of the overall development of this area's potential include relocating the U.S. Army Corps of Engineers' breakwater to expand the commercial fishing moorages. Realignment of the Port docks would also be considered, along with replacing the original Port Dock 3 transient moorage facility.

The benefits of this major redevelopment project will be limited if more moorage and long term gear storage facilities are not developed elsewhere. The Fishermen's Investment Company site offers the necessary land for long term gear storage, service and work docks, permanent and transient moorage for boats up to 300 feet in length, and marine industrial lease facilities. Developing this facility would be strategic for the Port. Then, the Port Dock 7 fill area could be completely redeveloped for more appropriate uses.

The port's International Terminals facility has the capability for minor expansions of cargo staging areas, or possibly for the addition of facilities for barges or commercial fishing vessels. However, available land limits the potential for growth at this location.

McLean Point has the largest parcel of undeveloped property on the lower bay. This property is privately owned, and plans for development have not been announced. It would be well suited for a wide variety of uses such as:

- Boat haulout and marine fabrication
- Gear storage and staging
- Service and work docks
- Fish receiving, buying and processing facilities
- Moorage
- Commercial shipping terminals
- Surimi processing

This undeveloped parcel of land is critical to the overall development of the lower bay. If it is not developed, then the Port of Newport should consider buying or leasing the property with the intent to develop it to meet the needs of the shipping or fishing industries.

The South Beach peninsula serves as the home for many recreational boaters and for the research and education community. Potential developments that are attractive to the long term use of this area include moorages for research vessels, continued expansion of the Marine Science Center, and continued development at the Newport Marina at South Beach complex.

Idaho Point offers limited potential for development. Possibly a small boat haulout facility servicing the smaller commercial fishing boats could be developed. The shallow channel to the area, its small land area suitable for development, and its isolation from other businesses and support facilities severely limit the potential for developing a major haulout facility.

Development Restrictions: Limited funding and environmental regulations will be the most likely restrictions to developing the identified projects. Projects that should be developed in the next five years are those without major environmental restraints or that are fairly small in scale. Other projects should be developed later, as market conditions dictate or as funds become available. Construction on the waterfront is not inexpensive, and foundation conditions along the north side of Yaquina Bay are complicated by a very dense Nye mudstone formation, locally called "hardpan."

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GOALS AND POLICIES
YAQUINA BAY AND ESTUARY

Goal: To recognize and balance the unique economic, social, and environmental values of the Yaquina Bay Estuary.

Policy 1: Balanced Use of Estuary. The City of Newport shall continue to ensure that the overall management of the

Yaquina Bay Estuary shall provide for the balanced development, conservation, and natural preservation of the Yaquina Bay Estuary as appropriate in various areas.

Policy 2: Cooperative Management. The city will cooperate with Lincoln County, the State of Oregon, and the Federal Government in the management of the Yaquina Bay Estuary.

Policy 3: Use Priorities. The general priorities (from highest to lowest) for management and use of Yaquina Bay Estuary resources as implemented through the management unit designation and permissible use requirements listed below shall be:

a.) Uses which maintain the integrity of the estuarine ecosystem;

b.) Water-dependent uses requiring estuarine location, as consistent with the

overall Oregon Estuarine Classification;

c.) Water-related uses which do not degrade or reduce the natural estuarine resources and values;

d.) Nondependent, nonrelated uses which do not alter, reduce, or degrade estuarine resources and values.

Policy 4: Riparian Vegetation. Riparian vegetation shall be protected along the Yaquina Bay shoreland where it exists. The only identified riparian vegetation within the UGB is that shoreland vegetation adjacent to Management Unit 9-A. This vegetation shall be protected by requiring a fifty (50) foot setback from the high water line for any development in the area. Adjacent public roads may be maintained as needed.

Policy 5: Dredged Material Disposal Sites. Dredged material disposal sites identified in the Yaquina Bay and River Dredged Material Disposal Plan, which are located within the Newport urban growth boundary, shall be protected. Development that would preclude the future use of these sites for dredged material disposal shall not be allowed unless a demonstration can be made that adequate alternative disposal sites are available.

Policy 6: Protection of Mitigation Sites. The city shall work with Lincoln County, the Port of Newport, and state and federal agencies to assure that potential mitigation or restoration sites are protected from new uses of activities that would prevent their ultimate use for mitigation or restoration. No potential mitigation sites have been identified or designated within Newport's urban growth boundary.

Policy 7: Bayfront Uses. The city shall encourage a mix of uses on the bayfront. Preference shall be given to water-dependent or water-related uses for properties adjacent the bay. Nonwater-dependent or related uses shall be encouraged to locate on upland properties.

Policy 8: Water-Dependent Zoning Districts. Areas especially suited for water-dependent development shall be protected for that development by the application of the W-1/"Water-Dependent" zoning district. Temporary uses that involve minimal capital investment and no permanent structures shall be allowed, and uses in conjunction with and incidental to water-dependent uses may be allowed.

Policy 9: Solutions To Erosion and Flooding. Nonstructural solutions to problems of erosion or flooding shall be preferred to structural solutions. Where flood and erosion control structures are shown to be necessary, they shall be designed to minimize adverse impacts on water currents, erosion, and accretion patterns. Additionally, or cobble/pebble dynamic revetments in MU 8 and 9-A to be allowed,

the project must demonstrate a need to protect public facility uses, that land use management practices and nonstructural solutions are inadequate, and the proposal is consistent with the applicable management unit as required by Goal 16.

Policy 10: Impact Assessment. Actions in the estuary which--by their size, duration, or location relative to important natural resources--would potentially alter the estuarine ecosystem shall be preceded by a clear presentation of the impacts of the proposed alteration. Such activities include dredging, fill, in-water structures, riprap, log storage, application of pesticides and herbicides, water intake or withdrawal and effluent discharge, flow-lane disposal of dredged material, and other activities which could affect the estuary's physical processes or biological resources.

The impact assessment need not be lengthy or complex, but it should enable reviewers to gain a clear understanding of the impacts to be expected. It shall include information on:

a.) The type and extent of alterations expected;

b.) The type of resource(s) affected;

c.) The expected extent of impacts of the proposed alteration on:

(1) Water quality and other physical characteristics of the estuary,

(2) Living resources,

(3) Recreation and aesthetic use, and

(4) Navigation and other existing and potential uses of the estuary; and

d.) The methods which could be employed to avoid or minimize adverse impacts.

Policy 11: Dredge and Fill. Dredge and fill activity shall be allowed only:

a.) If required for navigation or other water-dependent uses that require an estuarine location, or if specifically allowed by the applicable management unit;

b.) If a need (i.e., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights;

c.) If no feasible alternative upland locations exist;

d.) If adverse impacts are minimized; and

e.) If in intertidal or tidal marsh areas, the effects shall be mitigated by creation, restoration, or enhancement of another area to insure that the integrity of the estuarine ecosystem is maintained.

Policy 12: Alteration of the Estuary. Uses and activities other than dredge and fill activity which could alter the estuary shall be allowed only:

a.) If the need (i.e., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights;

b.) If no feasible alternative upland locations exist; and

c.) If adverse impacts are minimized.

Policy 13: Resource Capability Determinations - Natural Management Units. Within Natural Management Units, a use or activity is consistent with the resource capabilities of the area when either the impacts of the use on estuarine species, habitats, biological productivity, and water quality are not significant or the resources of the area are able to assimilate the use and activity and their effects and continue to function in a manner to protect significant wildlife habitats, natural biological productivity, and values for scientific research and education. In this context, "protect" means to save or shield from loss, destruction, injury, or for future intended use.

Policy 14: Resource Capability Determinations - Conservation Management Units. Within Conservation Management Units, a use or activity is consistent with the resource capabilities of the area when either the impacts of the use on estuarine species, habitats, biologic productivity, and water quality are not significant or the resources of the area are able to assimilate the use and activity and their effects and continue to function in a manner which conserves long term renewable resources, natural biologic productivity, recreational and aesthetic values, and aquaculture. In this context, "conserve" means to manage in a manner which avoids wasteful or destructive uses and provides for future availability.

Policy 15: Temporary Alterations in Natural and Conservation Management Units. A temporary alteration is dredging, filling, or other estuarine alteration occurring over no more than three years which is needed to facilitate a use allowed by the Comprehensive Plan and the Permitted Use Matrices of the Zoning Ordinance. The provision for temporary alterations is intended to allow alterations to areas and resources that would otherwise be required to be preserved or conserved.

Temporary alterations include:

> Alterations necessary for federally authorized navigation projects (e.g.,

access to dredged material disposal sites by barge or pipeline and staging areas or dredging for jetty maintenance);

> Alterations to establish mitigation sites, alterations for bridge construction or repair, and for drilling or other exploratory operations; and

> Minor structures (such as blinds) necessary for research and educational observation.

Temporary alterations require a resource capability determination to insure that:

> The short-term damage to resources is consistent with resource capabilities of the area; and

> The area and affected resources can be restored to their original condition.

Implementation Measure 1: All development within the Yaquina Bay Estuary shall be consistent with the management units contained in Newport's Comprehensive Plan and Zoning Ordinance.

Implementation Measure 2: The city shall continue to maintain the management unit classification system delineated in this plan and the Zoning Ordinance. The permitted use matrices contained in the Zoning Ordinance shall be maintained as is unless sufficient evidence can be presented to warrant change. Any change in the permitted uses matrices shall be considered an exception to Statewide Planning Goal 16 and shall be processed as such.

Implementation Measure 3: The Port of Newport and the city shall cooperate in the implementation of the Port Development Plan (dated July of 1989) or any other plan adopted by the port and consistent with the city's Comprehensive Plan.

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Sherri Marineau

From: Mark Arnold [redacted]
Sent: Monday, January 22, 2024 12:01 PM
To: Public comment
Subject: Written comments submitted for Newport Planning Commission Regular Session, 1/22/24
Attachments: Mark Arnold Comments for Newport Planning Commission, 1_22_24.pdf; NOAA Fact Sheet, Aquaculture Provides Beneficial Ecosystem Services.pdf

[WARNING] **This message comes from an external organization. Be careful of embedded links.**

Hi. I am submitting written comments to include in "Agenda Item 3 Citizen/Public Comment" at the Planning Commission Regular Session to be held this evening, January 22.

There are 2 files for my comments:
Mark Arnold Comments for Newport Planning Commission, 1.22.24
NOAA Fact Sheet, Aquaculture Provides Beneficial Ecosystem Services

I am submitting the NOAA Fact Sheet in a separate file so it will be more readable, instead of incorporating it as the final two pages of my written comments.

Thank you.

Mark Arnold
[redacted]

YAQUINA BAY ESTUARY MANAGEMENT PLAN (YBEMP)
Comments Submitted to Newport Planning Commission, January 22, 2024

My name is Mark Arnold. I live inside the Newport Urban Growth Boundary, own tideland inside and outside the City limits, and our family has a small oyster farm.

I understand you will soon be reviewing the proposed update to the YBEMP.

I would like to make a few comments, and submit some background information, before you start consideration of the Department of Land Conservation & Development (DLCD) proposal.

Existing Municipal Code provisions about Yaquina Bay estuary are good.

- It would be timely to provide several updates for Management Unit 9 (Idaho Flats, Kings Slough and an area upstream) and Management Unit 10 (Sally's Bend).
- No major revisions are needed at this time.
- Future amendments to the Code can be considered as desired.

DLCD's proposed update to the YBEMP has a lot of problems.

- Does not recognize that shellfish aquaculture benefits the estuary.
- Is detrimental to expansion of desirable oyster aquaculture using best practices.
- Is detrimental to desirable active restoration projects.
- Permits research "observations" but it makes it difficult to have any additional research.

DLCD is requesting that the entire estuary be re-zoned.

If the City proposes amending land use plans, re-zoning, or changing permissible uses, each owner of land in the estuary needs to be mailed a written notification in advance of public hearings. The notification needs to explain, in understandable detail, how the changes will affect permissible uses of the property.

In 1885, Oregon law confirmed a previous law that granted all marshland and tideland in the Yaquina Bay estuary into non-State ownership. Over the years, some large parcels have been re-conveyed to public owners like the Port of Newport and the Oregon Board of Higher Education. There are numerous owners of tideland.

If DLCD has not provided a detailed list of changes that their current proposal would make to the 1982 plan, then DLCD has not provided the details needed to notify property owners.

If DLCD cannot provide the needed details, I recommend that you consider making a limited number of timely updates to the existing Code.

If you are interested in having an advisory group to review or suggest possible updates to existing Code provisions about the Yaquina Bay estuary, I am willing to participate.

ADDITIONAL INFORMATION

DLCD'S PROPOSED UPDATE TO THE YBEMP IS DETRIMENTAL TO AQUACULTURE

DLCD's "final draft" Yaquina Bay Estuary Management Plan, with a cover date of August 2023 (but not available for review online until early October 2023), disregards the importance of aquaculture in general, and oyster farming in particular. The 2023 "final draft":

- Deleted Lincoln County's statement in the 1982 Estuary Management Plan in support of the potential for future development of aquaculture in Yaquina Bay. (Lincoln County Estuary Management Plan, issued September 1982, page 162.)

- Deleted all the tables (matrices) that showed aquaculture activities that were approved or conditionally approved for individual Management Units within the estuary.

  In the 1982 plan, of 13 "Natural Management Units," 11 provided conditional approval for aquaculture, with some major alterations to the estuary permitted while others were conditionally allowed or prohibited. Each Management Unit had a matrix clearly showing what was allowed for each of 14 types of major alterations (e.g., navigation aids, pilings, etc.) Besides these categories of major alteration, there was no discussion about low-impact, removable "in water" aquaculture equipment that does not require any major physical changes. These matrices were deleted from the 2023 plan.

- In DLCD's proposal, there was a statement saying aquaculture could be conditionally approved for "Natural Management Units," but only if there was language for each individual Management Unit in support of aquaculture. Then the proposed plan systematically excluded the necessary language from every individual Natural Management Unit except for one reference to a project proposed in 1982 that was never implemented.

  See table on next page.

This means the general statement, appearing to say aquaculture could be conditionally permitted, was in fact misleading. Instead, DLCD's proposed municipal code language is asking for zoning restrictions that would prohibit all future new and expanded aquaculture in Natural Management Units. But, to comply with Oregon Department of Agriculture (ODA) and US FDA requirements, commercial shellfish aquaculture may need to be developed in Natural Management Units that have excellent water quality and are not in proximity to prohibited activities in Development Management Units. As a result, the DLCD's proposal, if approved without significant revision, would prohibit new development of aquaculture in the Yaquina Bay Estuary.

PROPOSED RESOURCE CAPABILITIES, MANAGEMENT OBJECTIVES, AND POLICIES FOR INDIVIDUAL NATURAL MANAGEMENT UNITS IN 2023 FINAL DRAFT YAQUINA BAY ESTUARY MANAGEMENT PLAN

	Is aquaculture specifically allowed or conditionally allowed under each heading?			
Natural Management Unit	Classification: Natural	Resource Capability	Management Objective	Special Policies
1a. Intertidal & subtidal area west of Yaquina Bay Bridge along north shore	No	No	No	No
9. Idaho Flats, all of Kings Slough, and intertidal area upstream	No	No	No	No
10. Sally's Bend	No	No	No	No
15. Parker Slough	No	No	No	No
18. McCaffery Slough intertidal & tidal marsh	No	No	No	No
19. Poole's Slough including tidal marsh	No	No	No	Yes, see note
20. Winant Slough & Johnson Slough including tidal marshes	No	No	No	No
21. Flescher Slough including tidal marsh	No	No	No	No
22. Blind Slough & Busher Flats including tidal marsh	No	No	No	No
23. Tidal marsh known as Grassy Point	No	No	No	No
24. Area along north shore from Grassy Point to Critestar's Moorage	No	No	No	No
27. Large tidal marsh from Nute Slough upstream to Port of Toledo paddle park	No	No	No	No
28. Three small sloughs on south shore	No	No	No	No
33. Major tract of tidal marsh north of Toledo Airport	No	No	No	No

Notes: Unit 1a. is a new "Natural" management unit proposed for 2023 Estuary Management Plan. Table excludes several new "Natural" management units in vicinity of Georgia-Pacific plant, Toledo and upstream with unlikely potential for aquaculture.

Poole's Slough and tidal marsh: Management Unit 19, under the Special Policies heading, there is reference to a Goal 16 Exception in the 1982 Estuary Management Plan for a large "out of bay" oyster culture facility in tidal marsh that was never built.

STATE OF OREGON SHELLFISH POLICY

Although shellfish production has been long established in the state and has been a priority, the State recently added an official policy statement to Oregon Revised Statutes (ORS):

"ORS 622.015 Shellfish policy. (1) The Legislative Assembly finds and declares that it is the policy of the State of Oregon to seek opportunities to:
"(a) Enhance and expand cultivated shellfish production;
"(b) Conserve, protect and restore wild populations of native shellfish; and
"(c) Improve water quality and the health of aquatic and marine habitats.
"(2) In furtherance of the policy declared by this section, it is the intent of the Legislative Assembly that the state develop and adopt a shellfish initiative to prioritize and implement strategies for achieving protection of native shellfish and the enhancement of shellfish production. [2015 c. 814 section 1]"
….

In addition, in statute, the State of Oregon assigned jurisdiction for aquaculture to the Oregon Department of Agriculture:

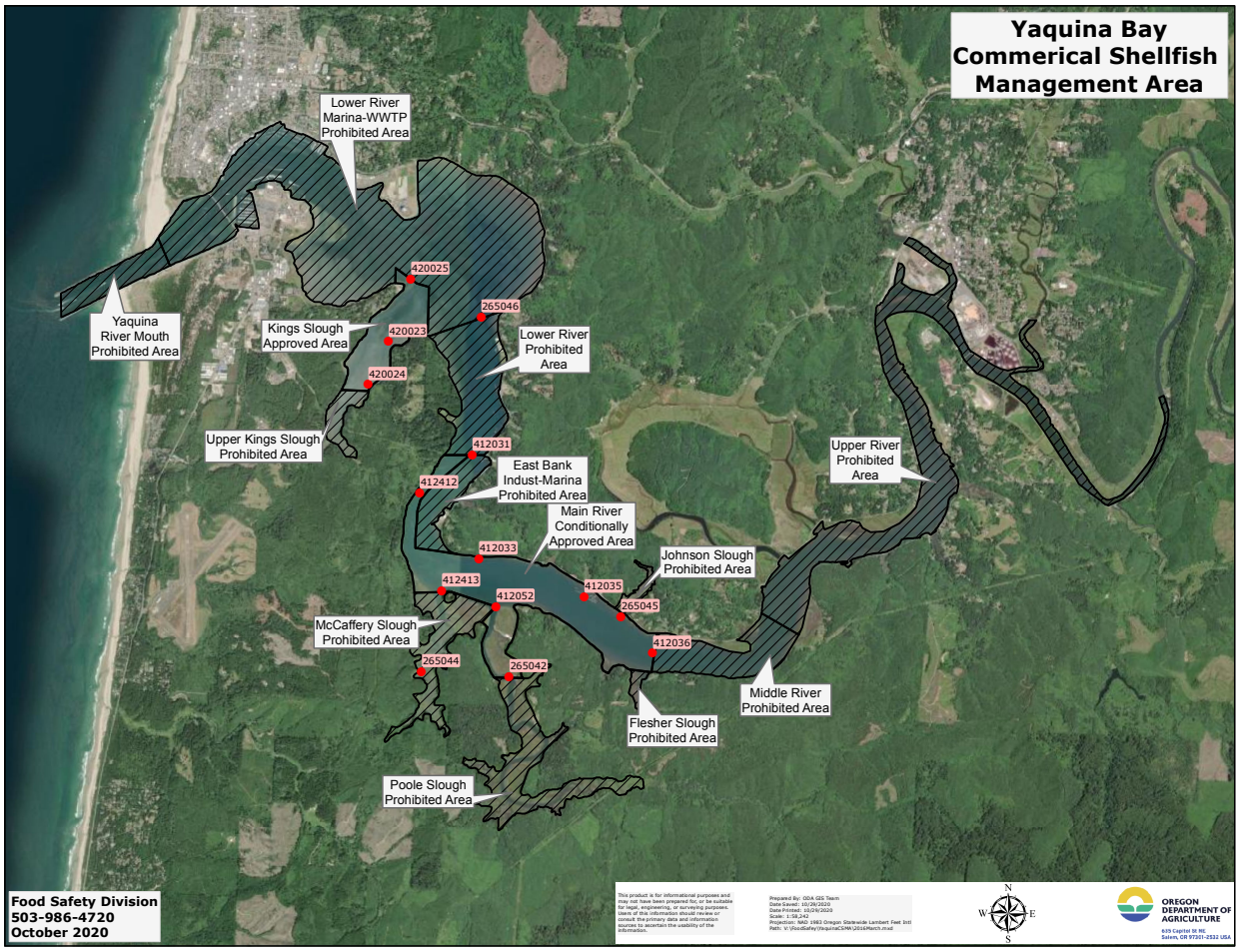
"ORS 622.220 Jurisdiction; rules; violations. (1) The commercial cultivation of oysters, clams and mussels is declared to be an agricultural activity subject to the regulatory authority of the State Department of Agriculture. The department shall be the lead agency responsible for state administration of programs and policies relating to the commercial cultivation of oysters, clams and mussels."
….
"ORS 622.240 Classifying lands for cultivation. The State Department of Agriculture shall investigate and classify those state lands that are suitable for oyster, clam or mussel cultivation…."

In Oregon statute, ORS Chapter 780 Improvement and Use of Navigable Streams, there is a prohibition against improvements that would interfere with oyster production:

"ORS 780.060 Construction not to interfere with oyster production. Nothing in this chapter authorizes the construction of a wharf, dock, pier, moorage or similar structure at any place where its construction and operation will substantially impair or interfere with the cultivation and taking of oysters subject to the provisions of ORS 622.210 to 622.300 and 622.320. [Note: ORS Chapter 622 is "Shellfish" and provides authorizations for the State Department of Agriculture with regard to shellfish production.]

OREGON DEPARTMENT OF AGRICULTURE (ODA)
YAQUINA BAY COMMERCIAL SHELLFISH MANAGEMENT AREA

The Oregon Department of Agriculture has identified 13 distinct areas in the Yaquina Bay Estuary. Of these 13 areas, only one is designated as an "Approved Area" for growing and harvesting shellfish for human consumption, and one additional area is designated as a "Conditionally Approved Area" for growing and harvesting shellfish for human consumption. All other 11 areas have the designation of being a "Prohibited Area" for growing and harvesting shellfish for human consumption. In the future, it might be possible, based on adequate water quality testing, for some locations in currently Prohibited Areas to be re-classified.



ODA'S "KINGS SLOUGH APPROVED AREA"
FOR GROWING SHELLFISH FOR HUMAN CONSUMPTION
IN MIDDLE AND NORTHERN, AND AT THE MOUTH OF, KINGS SLOUGH

The north end of the approved area includes over 10 acres of tideland inside the Newport City Limits adjacent to Idaho Point.

PRIVATE OWNERSHIP OF TIDELANDS

Pursuant to Oregon laws adopted in 1874, 1878, and 1885, and to an Oregon Supreme Court Decision in 1912 (Corvallis & Eastern R. Co. v. Benson, 61 OR 359), all tide and marsh land in Benton County (subsequently transferred to Lincoln County) was granted into private ownership (except for a small portion granted to the City of Newport at the Bayfront).

In subsequent years, some of the tideland parcels were conveyed to public entities including the Port of Newport and the Oregon Board of Higher Education. However, there may be 350 or more acres of privately-owned tideland in Management Unit 9 in Kings Slough, adjacent to the mouth of Kings Slough, and upstream. The private tideland owners are knowledgeable about their portion of the estuary and are stakeholders in the estuary.

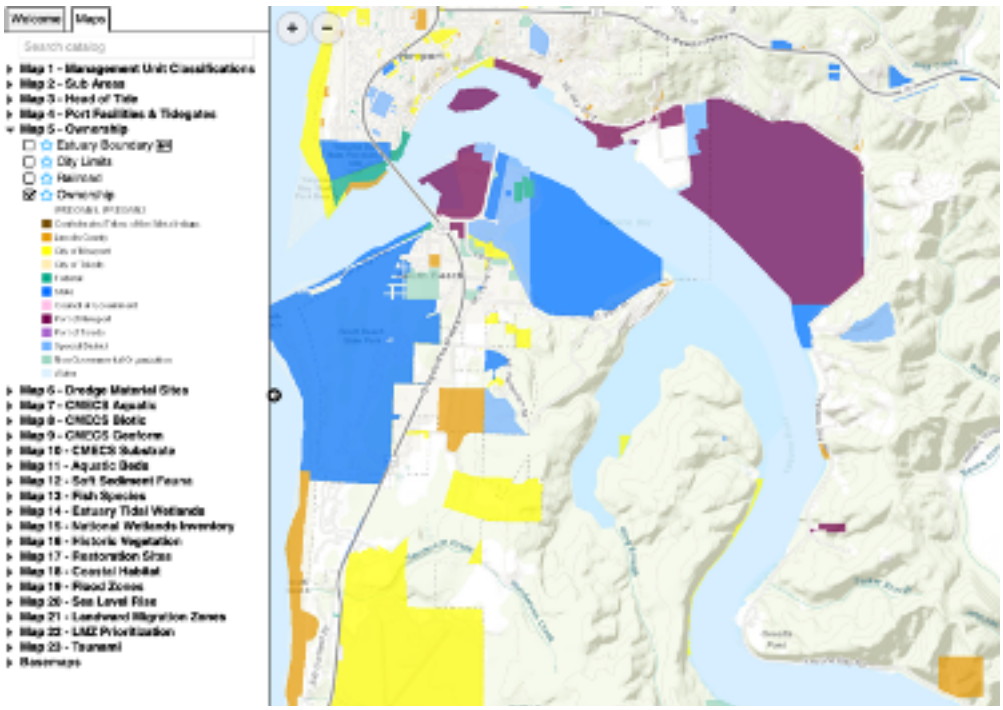
Privately-owned tideland is outlined in red, including over 10 acres inside the Newport City Limits adjacent to Idaho Point. Yellow is City of Newport tideland parcel in Kings Slough.

DLCD has a “Map Viewer” tool with a set of maps to accompany the 2023 “final draft” YBEMP. The maps are provided to inform government officials and other interested persons about the Yaquina Bay estuary. Besides “water,” the ownership map identifies tideland and upland owned by 11 ownership categories:

Confederated Tribes of the Siletz Indians
Lincoln County
City of Newport
City of Toledo
Federal
State
Council of Governments
Port of Newport
Port of Toledo
Special District
Non-Government Organization
Water

However, privately-owned tidelands are <u>not</u> identified at all. Instead, privately-owned tidelands are mistakenly identified as just “water.” This can mislead government officials and others into thinking there is no privately-owned tideland and, instead, that the privately-owned tideland is a publicly-owned waterway.

Portion of DLCD OCMP’s Ownership Map to Accompany YBEMP Update



NOAA FISHERIES

Office of Aquaculture

Shellfish and seaweed aquaculture can increase food production, create economic opportunities in coastal areas, and enhance natural harvests.

These aquatic crops provide important ecosystem services that can improve water quality around farm sites.

Aquaculture farms can also provide habitat for fish and crustaceans, benefiting wild populations.

Learn more:
fisheries.noaa.gov/aquaculture

Aquaculture Provides Beneficial Ecosystem Services

Freshly harvested oysters. Credit: NOAA Fisheries.

Removing Nitrogen, Improving Water Quality

Nitrogen is an essential nutrient, but too much of it in water—often from excess fertilizer in runoff—boosts the growth of algae. Algae overwhelms water bodies and reduces oxygen levels, killing fish, crabs, lobsters, and other aquatic life. Fortunately, shellfish aquaculture has emerged as a promising, low-cost tool to help improve water quality.

Around the nation, shellfish and seaweed farms (many of which are family-owned) are providing sustainable seafood and improving the surrounding environment. These farms are described as 'low-to-no input,' because feed, fresh water, and fertilizer typically aren't necessary for their crops. By raising shellfish and seaweed, farms improve access to local seafood and mitigate the harmful effects of excess nutrients, ocean acidification, and habitat loss.

As shellfish filter feed, they remove nitrogen by incorporating it into their shells and tissues. An adult oyster can filter up to 50 gallons of water a day, while a large quahog can clean about 24 gallons of water a day. A farm with 100,000 oysters per acre can potentially filter up to 5,000,000 gallons of water per day, per acre.

NOAA scientists are studying the nitrogen removal that shellfish aquaculture can provide to coastal communities. Coastal communities are increasingly adding shellfish aquaculture to help meet water quality goals. Waterfronts along the Chesapeake Bay and on Cape Cod are looking into seeding and growing shellfish as a way to reduce excess nitrogen in their local waters.

WHY FARM SEAFOOD?

Today, the United States ***imports between 70-85% of the seafood we eat*** *by value–more than any other country. Global and domestic demand for seafood continues to grow. Even as we maintain and rebuild our wild harvest fisheries, we cannot meet increasing domestic demand for seafood through wild-caught fisheries alone.*

Marine aquaculture provides a domestic source of economically and environmentally sustainable seafood that complements and supports our wild fisheries production.

Learn more:
fisheries.noaa.gov/aquaculture

LOW-TO-NO INPUT SHELLFISH AND SEAWEED FARMS

Around the nation, shellfish and seaweed farms, many of which are family-owned, are providing sustainable seafood and improving the surrounding environment. Shellfish and seaweed are often referred to as 'low-to-no input' farms, meaning that no feed, fresh water, or fertilizer are typically required to grow these crops. For many forms of bivalve shellfish aquaculture, production of juvenile shellfish 'seed' occurs within a hatchery where they are fed cultured algae until they reach a suitable size for planting on farms where they eat naturally available algae. As these farms improve access to local seafood, they are also mitigating impacts of excess nutrients, ocean acidification, and habitat loss.

KELP FARMS REDUCE EFFECTS OF OCEAN ACIDIFICATION

Our oceans are absorbing carbon dioxide from the atmosphere, which in turn makes the oceans more acidic and alters their chemistry. Many marine animals such as oysters, clams, sea urchins, corals, and some plankton, use calcium carbonate to build and maintain their shells and other vital structures. Ocean acidification reduces the available calcium carbonate in the water, making it harder for animals to survive and grow.

Many seaweeds, including kelp, are capable of growing in acidic ocean waters. They pull carbon dioxide from their environment, reducing its availability and potential to form carbonic acid—the main perpetrator of ocean acidification. This reduction can provide a localized buffering effect that benefits many marine species that utilize calcium carbonate. Additionally, seaweeds produce oxygen which can mitigate low-oxygen areas known as 'dead zones' at a local scale, while reducing excess nutrients and improving habitat for marine species.

AQUACULTURE FARMS STIMULATE DIVERSITY

Wild oyster reefs provide important habitat for fish and crustaceans. Species like mussels, barnacles, and sea anemones settle on them, providing abundant food resources. Reefs also provide nursery habitat for commercially valuable species including anchovies, blue crab, flounder, and herring.

However, wild oyster populations are at historic lows as prior overharvest and a steady decline in water quality have diminished oyster reef habitat on all of our coasts. In response, the NOAA Fisheries Northeast and Northwest Science Centers are studying the beneficial effects that oyster farms may provide for wild species. Researchers placed GoPro cameras on oyster farm gear in Connecticut and Washington to document species interactions. The footage shows that commercially and recreationally important species like black sea bass, scup, and tautog use the shellfish aquaculture gear for shelter from predators, to feed on algae on the gear, and even for courting mates.

To further these efforts, the Northeast Fisheries Science Center's Milford Laboratory maintains a guide for farmers who wish to install their own GoPro cameras. NOAA Fisheries is also advising partners in Massachusetts, New Jersey, and Maryland on similar projects. This valuable data will help shape farming practices that can increase biodiversity and support aquatic ecosystems.

YAQUINA BAY ESTUARY MANAGEMENT PLAN (YBEMP)
Comments Submitted to Newport Planning Commission, March 11, 2024

My name in Mark Arnold. I live inside the Newport Urban Growth Boundary and own tideland inside and outside the City Limits. I have been helping my son and daughter-in-law start a very small oyster farm in Kings Slough. We have a major interest in the Yaquina Bay EMP.

The YBEMP "Needs and Gaps Assessment" (September 2022, page 5):

- Recommended developing a "Policy to Support Aquaculture Industry."
- Recommended revision of "Estuarine Use Standards."
- Categorized these actions as "Tier 2."
- Said Tier 2 actions "would accomplish desirable modernization objectives but ... would be impractical to complete within the limits of resources and/or time constraints of the current update process."

In addition, the YBEMP Project Team provided responses to a number of public comments. In these responses, the Project Team said:

"Updating any Tier 2 or 3 recommendations from the Needs & Gaps Assessment ... will need to be performed by the local jurisdictions of Lincoln County and the Cities of Newport and Toledo. ...[T]he Project Team has included a recommendation that Tier 2 and 3 recommendations be completed." (Part of response to "Email #1" and responses to many other comments.)

In other words, the Project Team has acknowledged the August 2023 "final draft" is an incomplete update, and has said local jurisdictions need to complete the work.

I can understand why the Project Team was unable to provide an update for aquaculture. No one on the project team has any educational or job experience related to aquaculture.

By helping start an oyster farm, I have learned a lot about oyster farming over the last 10 years. My son is a biologist with significant knowledge about the ecology of the estuary and about shellfish aquaculture, including experience at Hatfield.

Based on our experience, and additional research, I have written needed updates about aquaculture and about our area of the estuary.

I am requesting updates to the EMP and providing my requests at this time, so you can consider them in advance of your future work sessions.

It is essential that people who have knowledge about the ecology of the estuary, and about shellfish aquaculture, be allowed to participate in writing an up-to-date, usable EMP.

Thank you for your consideration.

MARK ARNOLD'S REQUEST FOR ADDITIONS AND EDITS TO THE AUGUST 2023 "FINAL DRAFT" UPDATE TO THE YAQUINA BAY ESTUARY MANAGEMENT PLAN (YBEMP)

Submitted by Mark Arnold
March 11, 2024

MARK ARNOLD'S REQUEST FOR ADDITIONS AND EDITS
TO THE AUGUST 2023 "FINAL DRAFT" UPDATE TO
THE YAQUINA BAY ESTUARY MANAGEMENT PLAN (YBEMP)

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PREFACE

Why it is necessary to make revisions to the YBEMP so it will be updated to 2024.

The proposed "update" of the Yaquina Bay Estuary Management Plan (YBEMP) is only a partial update. (The plan submitted to local jurisdictions was the "draft final" YBEMP with a cover date of August 2023.)

The August 2023 draft update was based on a "Needs and Gaps Assessment" written in September 2022. The "Executive Summary" explains that, "Each modernization need and corresponding recommended action was assigned a priority .... Some of the specific updates of the YBEMP have constraints (e.g., time and capacity) that make some of the recommended actions infeasible for completion with this planning process." (YBEMP Needs and Gaps Assessment, September 8, 2022, page 4.)

"The priority categories are:

- "Tier 1: Actions that can and should be accomplished through the current update process. ....
- "Tier 2: Actions that would accomplish desirable modernization objectives but which, due to their scope and/or complexity, would be impracticable to complete within the limits of resources and/or time constraints of the current update process."
- "Tier 3: Actions that cannot be practicably achieved through local planning processes without additional policy support and/or technical assistance from outside agencies." (Needs and Gaps Assessment, pages 4-5.)

The following categories were excluded from the August 2023 update and deferred until future consideration as Tier 2 activities:

- Revise Part V Estuarine Use Standards
- Revise Part IX Future Development Sites
- Develop Policy to Support Aquaculture Industry

(Needs and Gaps Assessment, page 5.)

The following category was excluded as a Tier 3 activity:

- Develop State-Wide Estuarine Climate Change Policy

(Needs and Gaps Assessment, page 5.)

Instead, a major "modernization objective" was to:

"Further Goal 16 [Statewide Goal 16 Estuarine Resources] or local policy objectives. Actions that revise or add to substantive content of the plan needed to fulfill Goal 16 requirements or local policy objectives." (Needs and Gaps Assessment, page 4.)

However, the Department of Land Conservation and Development (DLCD) has not made any substantive revisions to its Goal 16 Estuarine Resources rule after 1984.

- "Goal 16 has been only nominally amended since the original development of the YBEMP...; these amendments are technical in nature and have not changed overall policy .... The lone exception to this is the amendment to Goal 16 ... that was adopted in 1984." (Needs and Gaps Assessment, page 15.)

So, a stated purpose of the proposed current "update" is to implement the 1984 rule that has not been updated in 40 years.

Instead of bringing aquaculture policies into the twenty-first century, the 2023 "update" is a move backwards from the 1982 YBEMP because it:

- Deleted Lincoln County's statement in the 1982 Estuary Management Plan in support of the potential for future development of aquaculture in Yaquina Bay. (This statement was deleted when the update deleted Part IX Future Development Sites.)

- Deleted all the tables (matrices) that showed aquaculture activities that were approved or conditionally approved for individual Management Units within the estuary. These tables provided substantial clarity about what aquaculture activities could, and could not, be undertaken for each Management Unit.

- Failed to revise Part V Estuarine Use Standards to bring them up-to-date. Bringing these standards up-to-date could provide clarity about what aquaculture activities can, and cannot, be undertaken and, by doing so, provide needed standards to replace the clarity lost when the matrices were deleted.

Instead of moving into the future, DLCD and its contractor, in the "update," have supported reversion to the pre-1982 practice of dredging for oysters below mean low tide in Yaquina Bay, tide levels suitable for native eelgrass and native oyster restoration projects, and excluded more modern shellfish aquaculture "best practices" in other areas of the estuary.

By DLCD and its contractor adhering to the Goal 16 rule, not updated following 1984, they ignored important policies in support of aquaculture by the Federal government, State of Oregon, local entities, and conservation groups.

FEDERAL POLICY IN SUPPORT OF AQUACULTURE: NOAA

NOAA Marine Aquaculture Policy (2011):
"It is the policy of NOAA, within the context of its marine stewardship missions and its strategic goals with respect to healthy oceans and resilient coastal communities and economies, to:
"1. Encourage and foster sustainable aquaculture development that provides domestic jobs, products, and services and that is in harmony with healthy, productive, and resilient marine ecosystems, compatible with other uses of the marine environment..."
....

"Aquaculture Provides Beneficial Ecosystem Services" (Fact Sheet 2022), NOAA Fisheries Office of Aquaculture:

- "Shellfish and seaweed aquaculture can increase food production, create economic opportunities in coastal areas, and enhance natural harvests."
- "These aquatic crops provide important ecosystem services that can improve water quality around farm sites."
- "Aquaculture farms can also provide habitat for fish and crustaceans, benefitting wild populations."

In this fact sheet, under "Removing Nitrogen, Improving Water Quality":

- "Nitrogen is an essential nutrient, but too much of it in water -- often from excess fertilizer in runoff -- boosts the growth of algae. Algae overwhelms water bodies and reduces oxygen levels, killing fish, crabs, lobsters, and other aquatic life. Fortunately, shellfish aquaculture has emerged as a promising, low-cost tool to help improve water quality."

- "Around the nation, shellfish and seaweed farms (many of which are family-owned) are providing sustainable seafood and improving the surrounding environment. These farms are described as 'low-to-no input,' because feed, fresh water, and fertilizer typically aren't necessary for their crops. By raising shellfish and seaweed, farms improve access to local seafood and mitigate the harmful effects of excess nitrogen, ocean acidification, and habitat loss."

- "As shellfish filter feed, they remove excess nitrogen by incorporating it into their shells and tissues. An adult oyster can filter up to 50 gallons of water a day... A farm with 100,00 oysters per acre can potentially filter up to 5,000,000 gallons of water per day."

STATE OF OREGON SHELLFISH POLICY

Although shellfish production has been long established in the state and has been a priority, the State added an official policy statement to Oregon Revised Statutes (ORS):

"ORS 622.015 Shellfish policy. (1) The Legislative Assembly finds and declares that it is the policy of the State of Oregon to seek opportunities to:
"(a) Enhance and expand cultivated shellfish production;
"(b) Conserve, protect and restore wild populations of native shellfish; and
"(c) Improve water quality and the health of aquatic and marine habitats.
"(2) In furtherance of the policy declared by this section, it is the intent of the Legislative Assembly that the state develop and adopt a shellfish initiative to prioritize and implement strategies for achieving protection of native shellfish and the enhancement of shellfish production. [2015 c. 814 section 1]"
....

In addition, in statute, the State of Oregon assigned jurisdiction for aquaculture to the Oregon Department of Agriculture (ODA):

"ORS 622.220 Jurisdiction; rules; violations. (1) The commercial cultivation of oysters, clams and mussels is declared to be an agricultural activity subject to the regulatory authority of the State Department of Agriculture. The department shall be the lead agency responsible for state administration of programs and policies relating to the commercial cultivation of oysters, clams and mussels."
....
"ORS 622.240 Classifying lands for cultivation. The State Department of Agriculture shall investigate and classify those state lands that are suitable for oyster, clam or mussel cultivation...."

STATE OF OREGON LAW ASSIGNING RESPONSIBILITY TO DLCD FOR PROVIDING SHELLFISH MARICULTURE RECORDS

"ORS 274.945 Collection of shellfish mariculture records. (1) The Department of Land Conservation and Development shall receive, consolidate and organize the public records of federal, state or local government, special government bodies or other public bodies related to shellfish mariculture in this state. The department shall establish an electronic system to store and share the public record information. ....

(2) The department shall organize data and other material contained in the public records stored by the electronic system into formats suitable for access by governments, industry groups, public interest groups and other stakeholders.

(3) Except as provided in this subsection, the department shall make output from the electronic system publicly accessible. .... [2019 c.654 §1]

PORT OF NEWPORT SUPPORT FOR AQUACULTURE

In addition to Lincoln County's support for aquaculture in its 1982 YBEMP, the Port of Newport has included aquaculture and aquaculture research in its Strategic Business Plan.

The Port of Newport's 2019 Strategic Business Plan Update supports research:
"The marine research and education sectors are well established in Newport; an estimated 300 people work at the Hatfield Marine Science Center, including OSU faculty, graduate students, researchers, and staff from other agencies.... The marine research and education sectors and growth opportunities [include] .... aquaculture."

The Port of Newport's 2019 Strategic Business Plan Update supports aquaculture:
"Aquaculture is a rapidly growing sector of the international economy and represents an opportunity for development in Newport as well."
"Opportunities for growing aquaculture in the Newport area include the expansion of existing operations, as well as the development of new ones."
"Oyster cultivation could be expanded in Yaquina Bay. There is demand for intertidal land for oyster cultivation with the appropriate characteristics."

THE NATURE CONSERVANCY'S SUPPORT FOR AQUACULTURE

Excerpts from "Perspectives: The Aquaculture Opportunity," by The Nature Conservancy, September 24, 2017 (posted online on The Nature Conservancy's website, www.nature.org).

"When practiced well, aquaculture is one of most low-impact, resource-efficient ways of producing food. In fact, some forms of aquaculture, such as oyster cultivation, can actually help to restore coastal ecosystems."

"This offers a reason for hope. We'll likely see another 3 billion people on the planet by 2050, leading to a massive increase in demand for food, land and water. We have to find ways to feed the planet without increasing pressure on both terrestrial and marine habitats. Aquaculture, done well, offers a huge potential not just for producing food for a growing planet, but to provide livelihoods to coastal communities and, in the case of shellfish or seaweed culture, help recover lost ecosystem services. If we get it right, aquaculture could be our best hope to sustainably feed the planet."

[There is mention of poor practices with some finfish farming and shrimp ponds in the past, and improved practices that have subsequently been developed.]

"All forms of food production can have environmental impact, of course, including aquaculture. But new technology and lessons from the last forty years have led to better practices that are being adopted by substantial segments of the industry."

"Shellfish and seaweed are even more efficient feeders [than finfish] – they rarely require any additional inputs, feeding instead on ambient phytoplankton and nutrients. And in some cases, shellfish and seaweed don't just require minimal inputs – they can actually improve the health of their immediate environment by removing impurities. Oysters can filter 50 gallons of water

a day. Seaweed, too, is incredibly efficient at removing excess nutrients from the water, which can improve the health of eutrophic estuaries, like many in the United States, as well as carbon dioxide, which can mitigate ocean acidification in localized areas. Shellfish and seaweed farms also provide habitat for wild fish species and increase diversity of species in sea beds, as can other forms of aquaculture infrastructure."

[Note: Definitions: "eutrophication: the process by which a body of water becomes enriched in dissolved nutrients (such as phosphates) that stimulate growth of aquatic plant life usually resulting in the depletion of dissolved oxygen."
"eutrophic: characterized by the state resulting from eutrophication."]

"**Benefits of Aquaculture:**

1. "**Mitigate Pollution**. Shellfish and seaweed aquaculture can improve water quality by extracting nitrogen and phosphorous from coastal waterways. As filter feeders, bi-valve shellfish can improve water clarity. These factors can lessen the symptoms of eutrophication, which effects 415 estuaries worldwide."

2. "**Habitat Provision**. 85 percent of native oyster populations have been lost worldwide and many seaweed communities are similarly in decline. Shellfish and seaweed aquaculture can provide some of the benefits of these lost habitats."

3. "**Support Fish Populations**. Shellfish and seaweed aquaculture gear provides refuge for macro-fauna including fish, crustaceans, and other invertebrates."

4. "**Reduce Local Climate Change Impacts**. Seaweed aquaculture can reduce carbon dioxide and oxygenate waterways, and thereby locally mitigate the effects of ocean acidification. Through increased water clarity, shellfish aquaculture may promote the growth of eelgrass beds, a carbon sink."

"Bringing these efforts to scale, though, will require influencing a booming aquaculture industry."

NEED TO REVISE THE YAQUINA BAY ESTUARY MANAGEMENT PLAN

<u>To reflect Federal government, the State of Oregon, and local policies to support aquaculture, and especially shellfish aquaculture, it is necessary to revise the August 2023 "final draft" YBEMP. In addition, revisions are needed to incorporate knowledge gained by research over the past forty years and to reflect aquaculture "best practices" recommended by NOAA and environmental groups</u>.

REASONS FOR REQUESTED ADDITIONS (APPENDICES) AND EDITS TO THE AUGUST 2023 "FINAL DRAFT" YAQUINA BAY ESTUARY MANAGEMENT PLAN

A lot of work has been done to date to prepare the Update to the Yaquina Bay Estuary Management Plan (YBEMP). However, the current YBEMP update is based on DLCD's Goal 16 Estuarine Resources rule that has not been updated since 1984. (See note.)

Because the plan is so comprehensive, and the update so ambitious, the August 2023 "final draft" update YBEMP can still be, and should be, improved so it can incorporate additional important considerations, including:

- Changes that have occurred in the Newport area and the Yaquina Bay estuary since the current plan was adopted in 1982 that, so far, have not been included in the update.

- Additional US Army Corps Nationwide Permit (NWP) regulations including NWP requirements for commercial shellfish, seaweed, and finfish aquaculture.

- The leadership role of NOAA for conducting research and for making "best practice" recommendations about estuaries, fisheries, aquaculture, and climate change.

- The most recent and ongoing scientific research about estuaries and their ecology, including interactions of physical characteristics and aquatic biological species, and about coordinated management of ecologically-beneficial organisms.

- The potential of the lower Yaquina Bay estuary (and in particular, Sally's Bend, Idaho Flat, and King Slough) for supporting research and scientific studies about the estuary and its ecology, about enhancing biological productivity, and about developing "best practice" shellfish aquaculture compatible with a balanced ecology of the estuary.

- Engagement of owners of tideland who know more about their portion of the estuary than anyone else.

- The role of the Oregon Department of Agriculture (ODA) in regulating shellfish aquaculture in estuaries including Yaquina Bay.

- Opening a new ODA "Approved Area" for growing and harvesting shellfish for human consumption. This supports desirable goals for improving water quality, increasing carbon capture in oyster shells, providing locally available seafood to consumers, and supporting the local economy.

Note: "Goal 16 has been only nominally amended since the original development of the YBEMP...; these amendments are technical in nature and have not changed overall policy .... The lone exception to this is the amendment to Goal 16 ... that was adopted in 1984." (YBEMP Needs and Gaps Assessment, September 8, 2022, page 15.)

B. Requested new appendix so YBEMP will include policies relevant for 2024 and the future.

POLICY TO FACILITATE AND ENCOURAGE A BALANCE OF ECOLOGICALLY-BENEFICIAL ORGANISMS IN NATURAL AND CONSERVATION MANAGEMENT UNITS

NEED TO FACILITATE AND ENCOURAGE USES AND ACTIVITIES THAT BENEFIT THE ECOLOGY OF THE ESTUARY

Nature, by itself, cannot restore the pre-existing natural environment after it was permanently destroyed by human activities.

Instead of pursuing an approach of "protecting the existing situation," the preferred approach should be "to seek a balance of ecologically-beneficial organisms to preserve the biological resources and where possible, enhance the biological capabilities" of Natural and Conservation Management Units.

The preferred approach would facilitate and encourage scientific studies to explore how to facilitate a "balance of ecologically-beneficial organisms," active restoration projects that would enhance having a "balance of ecologically-beneficial organisms," and shellfish aquaculture that improves water quality and enhances habitat for other organisms where aquaculture would be compatible with having a "balance of ecologically-beneficial organisms."

In effect, Natural Management Units should really be considered as "areas reserved for protecting and enhancing biological productivity," and Conservation Management Units should be considered as "biological areas with limited, grandfathered past practices."

BACKGROUND/EXPLANATORY NOTES:

Some past practices have caused significant degradation to the previously existing "natural" environment in Natural and Conservation Management Units, in addition to many modifications in Development Management Units.

Most of the original native Olympia oyster beds were destroyed. The destruction was summarized in a scientific article published in 1931. ("The Yaquina Oyster Beds of Oregon," by Dr. Nathan Fasten, Professor of Zoology at Oregon State College, published in The American Naturalist, September-October issue, 1931.)

1. *Early Period.* [About 1860 to 1870.] "... during this period large numbers of schooners came up the Yaquina River and dredged out tremendous quantities of oysters, virtually taking them out by scow loads, and transporting them by boat to the San Francisco markets for consumption. No thought was given at this time to conservation ..."

2. *Middle Period*. [About 1870 to 1923.] "... during this time the beds were worked heavily and continuously, and no thought was given to replenishing the supply. Many of the beds became so depleted that they were virtually exhausted."

3. Recent Period. [This dates from the year 1923 up until publication of the article in 1931.] "When this concern [the company that took over private leases and leased the State's natural oyster beds] got control of them they were already in a dangerous state of depletion. Instead of surveying them carefully for purposes of applying measures which would build them up and conserve the fast diminishing supply of oysters, they rather increased the damage by their heavy dredging and tonging operations. Many of the beds which were in a state of partial depletion were practically wiped out by such methods...."

"Since 1923, there has been no let-up and the exploitation of the oyster beds has increased...."

"In order to increase yields, many of the adult oysters with spat were dredge and tonged up from the natural beds...."

"... transferring them [adult oysters with young growing spat on their shells] on to depleted areas in the main channel of the stream is decidedly bad, for the oysters are soon covered in mud and silt to an extent where they are virtually buried. The result is that many of them are either killed off or their normal growth is greatly interfered with. Finally, when mud and silt cover the shells they no longer serve as cultch, for this debris makes it impossible for the free-swimming larvae to come in contact with the clean surfaces of the shells in order to affix themselves."

Historical activities in Natural Management Unit 9 have been very detrimental to the pre-existing natural conditions. These activities included:

- Building a railroad pier, starting at a railroad terminal at Idaho Point and extending 2,340 feet into the estuary where a log dump was built at the edge of the main channel of Yaquina Bay. The end of the pier appears to be at the south edge of Management Unit 8, adjacent to Management Unit 9. Construction of the railroad, railroad terminal, and pier was undertaken during World War I, and use continued until 1935 when the railroad line was shut down and equipment and the pier removed. Before the pier was removed, a train engine ran off the end of the pier and sank into the mud, presumably at the south edge of Management Unit 8, and never recovered.

- Construction of a log dump along the west bank of King Slough in 1951. The construction included dredging an estimated 30,500 cubic yards of material from the mud flat and dumping it at other locations in King Slough.

- Logging on some hillsides adjacent to the estuary, where large logs were pulled down the hills by large metal cables into the estuary. Each log brought with it a substantial amount of soil into the estuary.

The creation of log dumps and log storage areas, and pulling logs down hillsides into the estuary, was done in many locations in the Yaquina Bay estuary, changing the substrate and the physical and biological characteristics of the estuary forever.

Because these, and other, past activities have forever modified the natural environment of the estuary, it is impossible for nature, left to its own devices, to restore what was previously destroyed. Instead, to provide a desirable ecological environment for the future, actions need to be taken pro-actively to compensate for the past destruction.

C. Requested new appendix so YBEMP will include policies relevant for 2024 and the future.

POLICY FOR MAKING DETERMINATIONS ABOUT NATURAL RESOURCES, NATURAL RESOURCE VALUES, AND NATURAL RESOURCE CAPABILITIES OF INDIVIDUAL NATURAL AND CONSERVATION MANAGEMENT UNITS

NEED TO IDENTIFY SOURCE(S) OF INFORMATION

For maps and other sources of information about the location and extent of "natural resources," "natural resource values," and/or "natural resource capabilities," the original source(s) of the information must be identified along with the date(s) the information was collected and the methodology used to collect the information. It is insufficient to show a map of aquatic flora and/or fauna without identifying the original source(s), date(s) and methodology used as the basis for the map. This information must be readily available to anyone seeking this information about the estuary, including people considering new uses and activities in the estuary and applicants requesting new uses and activities in the estuary.

NEED TO PROVIDE "DUE PROCESS" TO APPLICANTS MAKING REQUESTS FOR NEW ESTUARINE USES AND ACTIVITIES IN NATURAL AND CONSERVATION MANAGEMENT UNITS

When an applicant makes an application for a new use or activity, and when the planning office or other entity reviewing the application compares the application with the "natural resources," "natural resource values," and/or "natural resource capabilities" of the applicable Management Unit, the planning office or other entity must provide the applicant with the basis for comparison along with documentation about the basis of comparison. The applicant must be given an opportunity to provide comments for the record about the maps and/or other information used by the planning office or other entity; and the applicant must be given an opportunity to provide additional information that may include, but not be limited to, more recent information about the Management Unit's "natural resources," "natural resource values," and/or "natural resource capabilities."

BACKGROUND/EXPLANATORY NOTES:

As part of the YBEMP update, DLCD's contractor posted on the YBEMP Update web site a series of maps about the Yaquina Bay estuary.

The contactor's YBEMP Update web site says:

"Estuary management plans rely on data and information that describe the physical, biological, social and economic conditions of the estuarine area, and define the boundaries of individual management units. This information has been mapped …." The web site then has a link to YBEMP maps posted by the contractor for use by local planning agencies and others.

None of the maps showing the flora and fauna and other physical and biological features identifies the original source(s) of information, the date(s) the information was collected, nor the methodology used to collect the information.

By failing to identify key information, including the date(s) the information was collected, and by providing this information as part of the current update, the implication is that the information is recent and relevant to current and future decisions about the estuary.

However, as an example, one of the maps ("Eelgrass extent, PMEP") was based on out-of-date information that was collected using an approach that would no longer be considered acceptable by current scientific standards. [PMEP is a reference to The Pacific Marine and Estuarine Fish Habitat Partnership.]

The "Eelgrass extent, PMEP" map used for the YBEMP update is the same as a map published jointly by The Nature Conservancy and The Pacific Marine and Estuarine Fish Habitat Partnership in "Eelgrass Habitats on the U.S. West Coast: State of the Knowledge of Eelgrass Ecosytem Services and Eelgrass Extent" (2018), a compendium of all information that PMEP was able to compile including all available previously published information. That publication provided:

- A map of "Maximum Observed Extent" of eelgrass in the Yaquina Bay estuary (page 83).
- An explanation that the secondary source of information for the map was The Oregon "Estuary Plan Book" (page 22), published in 1987 by the Department of Land Conservation and Development.
- The relevant map and description of habitat classification was provided previously on pages 86 and 87 of The Oregon "Estuary Plan Book." The identified "habitat," described subsequently as eelgrass, was previously described in The Oregon "Estuary Plan Book" as "seagrass" or "seagrass/algae." There was no further scientific identification about what constituted "seagrass" and whether it included native eelgrass (*Zostera marina*), invasive Japanese eelgrass (*Zostera japonica*) and/or other species. There was no identification of "algae" or whether this category was limited to macroalgae attached to the substate or also included additional, floating algae that appears seasonally.
- The primary source of information, used for The Oregon "Estuary Plan Book," was based on "aerial photographs ... interpreted for habitat classification by the Oregon Department of Fish and Wildlife (ODFW). (page 22)
- The date provided for the aerial photographs, interpreted by ODFW, was 1978 (page 23).

So, DLCD's contractor, to accompany the YBEMP "final draft" update, provided a map of "eelgrass extent" based on aerial photographs taken forty-five years previously, in 1978, and where the description of the aquatic vegetation was not limited to native eelgrass (*Zostera marina*), the type of eelgrass most significant for providing habitat for fish spawning and nursery areas.

Although other maps provided to accompany the YBEMP update are presumably based on much more recent information, the original source(s), date(s) and methodology must be provided for each map in order for the information to be useful to planners and applicants, and to provide "due process" to applicants so applicants can review this information, provide comments about the relevance of the information, and provide more recent information as part of the application review and approval/disapproval process.

D. Requested new appendix so YBEMP will include policies relevant for 2024 and the future.

POLICIES FOR ALL NEW ESTUARINE USES AND ACTIVITIES IN NATURAL MANAGEMENT UNITS

NAVIGATION AIDS (beacons, buoys, etc.) ARE PERMITTED.

NAVIGATION AIDS FOR AQUACULTURE EQUIPMENT SHOULD USE THE FOLLOWING GUIDELINES:

- Corners and the perimeter of shellfish plats should be marked when they are located in areas used for navigation. The U.S. Coast Guard recommends use of yellow "special marks" to alert boat operators to a special feature in an area used for navigation. Yellow is used so they are not confused with U.S. Coast Guard navigation markers.

- In other areas not typically used for navigation, but used occasionally by small boats, when shellfish are grown using equipment in the water column or on the surface of the water, and the equipment is not readily visible, the shellfish equipment should be identified by buoys or floats. This is not needed for shellfish grown on the bottom. Yellow buoys or floats are preferred to white because yellow is more easily visible.

NEW MARINA AND PORT FACILITIES (harbor, boat basin, moorage dockage) ARE DISALLOWED.

NEW STRUCTURES ARE DISALLOWED:

- New dock
- New pier
- New wharf
- New piling
- New dolphin
- New jetty
- New groin
- New pile dike
- New breakwater

NEW STRUCTURES CONDITIONALLY ALLOWED:

- Sturdy, durable end-posts, used to secure ends of long-lines, can be conditionally permitted for shellfish aquaculture.

MAINTENANCE AND REPAIR OF EXISTING STRUCTURES ARE PERMITTED.

NEW DIKES ARE DISALLOWED. MAINTENANCE AND REPAIR OF EXISTING FUNCTIONAL DIKES ARE PERMITTED.

DREDGING, DREDGED MATERIAL DISPOSAL, EXCAVATION, AND MINERAL AND AGGREGATE EXTRACTION ARE DISALLOWED:

- Dredging, except when necessary for maintenance of existing functional tidegates and associated drainage channels and bridge crossing support structures
- Dredged material disposal in estuarine areas of shorelands
- Excavation shorelands to create new estuarine surface area
- Mineral and aggregate extraction

DREDGING, when necessary for maintenance of existing functional tidegates and associated drainage channels and bridge crossing support structures, IS PERMITTED.

FILL (the placement of material in the estuary to create new shoreland area) IS DISALLOWED.

NEW SHORELINE STABILIZATION STRUCTURES (rip rap or bulkheads) ARE DISALLOWED, except where active erosion threatens existing permitted uses or structures. However, THEY MAY BE CONDITIONALLY ALLOWED TO PROTECT EXISTING PERMITTED USES OR STRUCTURES. MAINTENANCE ARE REPAIR OF EXISTING SHORELAND STABILIZATION STRUCTURES ARE PERMITTED.

NEW OUTFALLS (including sanitary sewer discharges, storm drainage facilities, and industrial waste discharges) ARE DISALLOWED, except in the following situation. ESTUARINE WATER WITHDRAWN FROM THE ESTUARY FOR USE IN ONSHORE AQUACULTURE ACTIVITES MAY BE CONDITIONALLY APPROVED FOR RELEASE BACK INTO THE ESTUARY IF IT MEETS ALL APPLICABLE OREGON DEPARTMENT OF AGRICUTURE (ODA) AND OTHER WATER QUALITY STANDARDS.

SUBMERGED CROSSINGS (power, telephone, water, sewer, gas or other transmission lines which cross the estuary, usually embedded into the bottom of the estuary) MAY BE CONDITIONALLY ALLOWED.

WATER HANDLING OF LOGS (log dumping, storage, transportation by floating in estuary) IS DISALLOWED.

PASSIVE RESTORATION PROJECTS (replacing or restoring original estuarine attributes by planting vegetation or other natural biological means) ARE PERMITTED.

ACTIVE RESTORATION PROJECTS (replacing or restoring original estuarine attributes by remedial actions such as installing artificial oyster reefs, removing existing dikes, or other physical alterations) MAY BE CONDITIONALLY ALLOWED.

AQUACULTURE ACTIVITIES ARE SUBJECT TO SPECIAL POLICIES FOR INDIVIDUAL NATURAL MANAGEMENT UNITS.

BACKGROUND/EXPLANATORY NOTES:

The 1982 YBEMP included a one-page detailed matrix that identified specific uses and activities that were permitted, conditionally allowed, or disallowed for each individual Management Unit. These matrices provided substantial clarity to planning officials, potential applicants requesting new uses in the estuary, and other users of the YBEMP.

The August 2023 YBEMP "final draft" update deleted every single matrix for every Management Unit. This deleted the substantial clarity that existed previously in the 1982 plan.

In place of the deleted matrices, policies are provided above for Natural Management Units for each potential use or activity described in YBEMP Part V – Estuarine Use Standards.

E. Requested new appendix so YBEMP will include policies relevant for 2024 and the future.

RESEARCH ACTIVITIES, SCIENTIFIC STUDIES, AND DEMONSTRATION PROJECTS
SPECIAL POLICY FOR MANAGEMENT UNITS 9, 10, 18 and 19
(Future YBEMP amendments may extend this policy to additional Management Units)

GOAL 16 EXCEPTION TO ALLOW RESEARCH ACTIVITIES, SCIENTIFIC STUDIES, AND DEMONSTRATION PROJECTS

Permitted research activities, scientific studies and demonstration projects

Besides research and educational observation, additional research activities, scientific studies, and demonstration projects are allowed and hereby permitted by this Exception to:

- Provide educational opportunities,
- Increase knowledge about the estuary,
- Develop environmentally-desirable and ecologically-balanced approaches to:
    - Offset past human activities detrimental to the estuary,
    - Enhance the biological productivity of the estuary,
    - Prevent undesirable invasive species from crowding out desirable native species, and
    - Identify science-based approaches to increase the biological resiliency of the estuary to respond to current, ongoing, and anticipated climate and other environmental changes.

To encourage and support a desirable ecologically-balanced estuary, the allowed research activities, scientific studies, and demonstration projects include co-management of biological resources including submerged aquatic vegetation, fish, and shellfish. In addition, this Exception allows the use of equipment and active restoration.

To qualify for this Exception, the research activities, scientific studies and demonstration projects must satisfy the following requirements.

Requirements:

- Do not interfere with navigation or commerce.

- Conducted under programs of, or approved by, Oregon State University's Hatfield Marine Science Center, other educational institutions, Federal Government or State of Oregon Government agencies, the Confederated Tribes of Siletz Indians, or other organizations approved by the appropriate local government. These organizations are sponsoring organizations for the projects.

- Permission is granted by the owner of the tideland or, if the tideland is leased, by the lessee of the tideland with the owner's and lessor's permission(s), or if the Oregon

Department of State Lands (DSL) has authority over unleased State submerged or submersible land, by the Oregon Department of State Lands.

- The sponsoring organizations accept all liability for the projects and release the tideland owner(s), lessor(s) and lessee(s) of any and all liability for the projects.

- The sponsoring organizations become familiar with, and comply with, any applicable requirements of U.S. Army Corps of Engineers, Oregon Department of State Lands, Oregon DEQ, and other applicable Federal or State regulations. Depending on the nature of the project, consideration should be given to whether any of the following U.S. Army Corps of Engineers Nationwide Permits (NWP) are applicable to an individual project, along with other possible NWPs not listed below:

    - NWP 4 Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities
    - NWP 5 Scientific Measurement Devices
    - NWP 6 Survey Activities
    - NWP 27 Aquatic Habitat Restoration, Establishment, and Enhancement Activities
    - NWP 48 Commercial Shellfish Mariculture Activities
    - NWP 54 Living Shorelines
    - NWP 55 Seaweed Mariculture Activities

F. Requested new appendix so YBEMP will include policies relevant for 2024 and the future.

CERTAIN SHELLFISH AQUACULTURE ACTIVITIES
SPECIAL POLICY FOR MANAGEMENT UNITS 9 AND 10

GOAL 16 EXCEPTION TO ALLOW CERTAIN SHELLFISH AQUACULTURE ACTIVITIES

Permitted commercial shellfish aquaculture activities under this Exception

Shellfish aquaculture activities are allowed and hereby permitted using methods to minimize adverse impacts on desirable levels of beneficial organisms in the estuary, when they meet the requirements specified below. (Note: Invasive nuisance organisms are not beneficial.)

Permitted aquaculture activities include the following:

- Growing oysters in the water column including use of stakes, racks, trays, cages, baskets, tubes, mesh "grow-out" bags, and similar equipment. Similarly, oysters can be grown in cages or "grow-out" bags floating on or near the surface of the water. In addition, use of buoys, floats, and long-lines (where cages or grow-out bags are suspended from lines held up by poles inserted in the mud/tide flats) are permitted.

- Commercial harvesting of mussels when grown on aquaculture equipment suspended in the water column.

- Commercial harvesting of cultivated clams using commonly-accepted growing methods (such as beach culture or in-ground bag culture), equipment (such as trays, predator exclusion netting and/or in-ground mesh bags), and harvesting methods (such as using clam rakes and/or clam forks to rake the top layer of the tide flats), providing natural clam beds are not depleted.

Existing pilings, docks and/or other in-water structures, if previously or newly permitted by the U.S. Army Corps and approved by Lincoln County, can continue to be used, maintained and repaired.

Maintenance and repair of existing boat ramps are allowed, however, additional dredging or fill (beyond the boat ramp) for navigational access is not permitted under this Exception. Existing boat ramps do not need to be available for public use.

This Special Policy and Exception does not permit harvesting "on bottom" oysters by large mechanical dredges or large mechanical tongs that drag or dig into tide flats and mud flats, because these techniques are not now used nor anticipated in Management Units 9 and 10.

Conditionally permitted commercial shellfish aquaculture activities under this Exception

Use of existing pilings, docks and/or other in-water structures not previously approved by Lincoln County.

If meeting U.S. Army Corps of Engineers and other government requirements, and if used solely as part of aquaculture growing operations, sturdy, durable end-posts (more substantial than easily removable poles or stakes) can be conditionally permitted for the purpose of securing the ends of long-lines in order to hold them in place.

Onshore aquaculture support facilities, located in upland adjacent to tideland, can be conditionally allowed providing they comply with applicable Oregon Department of Agriculture (ODA), environmental, and other government regulations including the applicable County or City Code including any conditional use requirements.

When onshore tanks are used for shellfish, onshore facilities can intake estuarine water for the shellfish and return estuarine water to the estuary, providing it is done in compliance with all applicable ODA, environmental, and other government regulations.

A boat ramp suitable for a small boat, canoe, and/or kayak can be conditionally permitted for aquaculture use providing it has the approval of both the owner of the upland and the owner of the tideland, does not extend lower than mean low tide, does not require additional dredging or fill (beyond the boat ramp) for navigational access, and complies with U.S. Army Corps Nationwide Permit (NWP) No. 36 Boat Ramps. It does not need to be available for public use.

Requirements to qualify for this Exception

Implemented on tideland by the owner of the tideland or with the permission of the owner of the tideland or, in the situation where management of tideland is delegated to the Oregon Department of Agriculture (ODA), on tideland leased by ODA for aquaculture, or implemented on tideland in other situations where the operator has a lease to use the tideland.

It is not sufficient for commercial clam harvesters to have an Oregon Department of Fish and Wildlife (ODFW) commercial clam harvesting permit; commercial clam harvesters who do not own nor lease tideland cannot harvest clams on tideland owned or leased by others without the additionally required permission(s) from owners and/or lessees.

Satisfy requirements of U.S. Army Corps of Engineer Nationwide Permit (NWP) No. 48 Shellfish Aquaculture, and other applicable Corps requirements, and relevant Corps Nationwide Permit General Conditions, including:

- No activity may substantially disrupt the necessary life cycle movements of species of aquatic life indigenous to the waterbody including species that normally migrate through the area.

- Activities in fish spawning areas during spawning season must be avoided to the maximum extent practicable.

- Activities in waters that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

- No activities may disrupt native shellfish (Ostrea conchaphila) restoration projects.

Satisfy additional U.S. Army Corps of Engineers Portland District Regional Conditions, including:

- Additional Regional Conditions for Nationwide Permit (NWP) No. 48 Shellfish Aquaculture.

- A pre-construction notification to the Portland District Engineer if activities affect an "Aquatic Resource of Special Concern" including native eelgrass (Zostera marina) beds, and compliance with the District Engineer's determination.

Considerations about ecological impacts shall be based on the current situation in the estuary and the best available scientific research. This includes impacts (beneficial, detrimental, and no significant impacts) including seasonal impacts on aquatic life including fish migrations, fish spawning areas, breeding areas for migratory birds, native shellfish, and native eelgrass.

No "fill" material is placed in the estuary according to the Yaquina Bay Estuary Management Plan definition of "fill" as "The placement of material in estuarine areas to create new shoreland or raise the elevation of land." This definition is consistent with the regulatory definition of "fill material" issued by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency pursuant to Section 404 of the U.S. Clean Water Act: "material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of a water of the United States." This allows installation, management, and removal of aquaculture equipment and cultivated shellfish in the water column.

No "dredging" is done in the estuary according to the Yaquina Bay Estuary Management Plan definition of "dredging" as "The removal of sediment or other material from a water body, usually for the purpose of deepening a channel, mooring basin or other navigation area," except when a conditional permit is provided for a small boat ramp to use for aquaculture purposes. This allows installation, management, and removal of aquaculture equipment and cultivated shellfish in the water column.

The shellfish grower must comply with regulations of the Oregon Department of Fish and Wildlife (ODFW) related to shellfish health certificates, shellfish transport permits, and restrictions on species importation.

Before commercial harvesting of shellfish for human consumption, the shellfish grower must meet all applicable requirements issued by the Oregon Department of Agriculture (ODA) for growing and harvesting shellfish for human consumption, including having the necessary ODA license(s). In addition, the operator must satisfy applicable requirements of the National Shellfish Sanitation Program (NSSP) and its "Guide for the Control of Molluscan Shellfish" issued by the U.S. Food and Drug Administration.

G. Requested new appendix so YBEMP will include policies relevant for 2024 and the future.

SEAWEED AQUACULTURE/MARICULTURE
SPECIAL POLICY FOR MANAGEMENT UNITS 7, 9 AND 10

(NO GOAL 16 EXCEPTION REQUIRED, PROVIDING ALL SEAWEED FACILITIES ARE LOCATED ONSHORE AND MEET ALL THE SPECIAL POLICY REQUIREMENTS)

Prerequisites Before Local Jurisdictions Will Consider Any Request for a Conditional Permit

State of Oregon regulatory policies and programs must be established for the regulation of seaweed mariculture. At a minimum, there must be regulatory programs in place to require:

- No introduction of new species not already in the estuary.
- No introduction of aquatic nuisance species into the estuary.
- No introduction of pathogens into the estuary.
- No degradation of water quality, including no increase in bacteria levels, in the estuary.
- Any seaweed grown for human consumption must be an allowable type of seaweed for human consumption and must meet all Federal and State requirements for growing seaweed for human consumption.

After the Above Prerequisites Are Satisfied, Seaweed Mariculture Activities May Be Permitted Conditionally

Seaweed mariculture is permitted conditionally, providing it meets the following requirements:

Seaweed mariculture facilities, including tanks for growing seaweed commercially, are located on upland adjacent to tideland or submerged land. The facilities must be located higher than mean higher high tide.

All intake of water from the Yaquina Bay estuary, and all release of water from growing tanks back into the estuary, must meet all applicable Federal and State laws and regulations, including but not limited to:

- U.S. Army Corps of Engineers Nationwide Permit (NWP) No. 7, Outfall Structures and Associated Intake Structures
- U.S. Army Corps of Engineers Nationwide Permit (NWP) No. 55 Seaweed Mariculture Activities
- U.S. EPA Clean Water Act Section 401 Water Quality Certification
- Oregon Department of Agriculture (ODA) regulations
- Oregon Department of Fish and Wildlife (ODFW) regulations
- Oregon Department of Environmental Quality (DEQ) regulations
- All applicable City Code and County Code requirements, including FEMA-stipulated standards for new construction in the 100-year flood plain.

No seaweed may be grown commercially in the Yaquina Bay estuary, lower than the level of mean higher high tide. The depth of water in the Yaquina Bay estuary is not deep enough to grow seaweed commercially except in areas in the main channel reserved for navigation.

H. Requested new appendix so YBEMP will include policies relevant for 2024 and the future.

SPECIAL POLICY FOR FINFISH AQUACULTURE
APPLICABLE TO THE YAQUINA BAY ESTUARY

(NO GOAL 16 EXCEPTION REQUIRED)

No commercial finfish aquaculture can be undertaken in the Yaquina Bay estuary. The Yaquina Bay estuary is too shallow to facilitate current "best practices" for finfish aquaculture.

NOAA's current approach for identifying appropriate locations for finfish farms is to identify "off-shore" locations a suitable distance from shore with sufficient water depth and appropriate water circulation to support finfish aquaculture, while preventing any adverse impacts on protected species (e.g., marine mammals), protected habitats, existing fisheries, and other users of ocean waters such as shipping.

I. Requested new appendix so YBEMP will include policies relevant for 2024 and the future.

SPECIAL POLICY FOR CONSERVATION AND SCENIC PRESERVATION EASEMENTS APPLICABLE TO THE YAQUINA BAY ESTUARY

(NO GOAL 16 EXCEPTION REQUIRED)

Conservation and scenic preservation easements are a property right. The ability to grant them is retained by the property owner until, at its discretion, the property owner makes an agreement to grant an easement.

The Yaquina Bay Estuary Management Plan does not provide any authority to State or local governments to assert conservation or scenic preservation easements over tideland or adjacent upland. Of course, such easements may be allowed but are not required.

The policy for conservation and scenic preservation easements is governed by Oregon Revised Statutes (ORS) 271.715 through 271.795.

ORS 271.715 provides definitions as follows:

271.715 Definitions for ORS 271.715 to 271.795. As used in ORS 271.715 to 271.795, unless the context otherwise requires:

(1) "Conservation easement" means a nonpossessory interest of a holder in real property imposing limitations or affirmative obligations the purposes of which include retaining or protecting natural, scenic or open space values of real property, ensuring its availability for agricultural, forest, recreational or open space use, protecting natural resources, maintaining or enhancing air or water quality, or preserving the historical, architectural, archaeological or cultural aspects of real property.

(2) "Highway scenic preservation easement" means a nonpossessory interest of a holder in real property imposing limitations or affirmative obligations the purposes of which include retaining or protecting natural, scenic or open space values of property.

(3) "Holder" means:

(a) The state, any county, metropolitan service district, soil and water conservation district, city or park and recreation district ... acting alone or in cooperation with any federal or state agency, public corporation or political subdivision;

(b) A charitable corporation, charitable association or charitable trust, the purposes or powers of which include retaining or protecting the natural, scenic or open space values of real property, assuring the availability of real property for agricultural, forest, recreational or open space use, protecting natural resources, maintaining or enhancing air or water quality, or preserving the historical, architectural, archaeological or cultural aspects of real property; or

(c) An Indian tribe as defined in ORS 97.740.

(4) "Third-party right of enforcement" means a right provided in a conservation easement or highway scenic preservation easement to enforce any of its terms granted to a governmental body, charitable corporation, charitable association or charitable trust, that, although eligible to be a holder, is not a holder.

ORS 271.725 reads in part:

271.725 Acquisition and creation of conservation or highway scenic preservation easement. (1) The state, any county, metropolitan service district, soil and water conservation district, city or park and recreation district ... may acquire by purchase, agreement or donation, but not by exercise of the power of eminent domain, unless specifically authorized by law, conservation easements in any area within their respective jurisdictions wherever and to the extent that a state agency or the governing body of the county, metropolitan service district, soil and water conservation district, city, park and recreation district ... determines that the acquisition will be in the public interest.

(2) Except as otherwise provided in ORS 271.715 to 271.795, a conservation easement or highway scenic preservation easement may be created, conveyed, recorded, assigned, released, modified, terminated or otherwise altered or affected in the same manner as other easements.

(3) The state, any county, metropolitan service district, soil and water conservation district, city or park and recreation district ... may acquire by purchase, agreement or donation, but not by exercise of the power of eminent domain unless specifically authorized by law, highway scenic preservation easements in land within 100 yards of state, county or city highway rights of way. These easements may be acquired only in lands that possess significant scenic value in themselves and contribute to the overall scenic beauty of the highway.

(4) No right or duty in favor of or against a holder and no right in favor of a person having a third-party right of enforcement arises under a conservation easement or highway scenic preservation easement before its acceptance by the holder and recordation of the acceptance.

(5) Except as provided in ORS 271.755 (2), a conservation easement or highway scenic preservation easement is unlimited in duration unless the instrument creating it otherwise provides.

(6) An interest in real property in existence at the time a conservation easement or highway scenic preservation easement is created is not impaired by it unless the owner of the interest is a party to or consents to the conservation easement or highway scenic preservation easement

Additional provisions also apply as written in ORS 271.729 through 271.795.

J. Requested edits to apply policies relevant for 2024 to the situation in the estuary in 2024.

EDITS TO SALLY'S BEND SUB-AREA: SUB AREA POLICIES
(Bottom of page 23 and top of page 24 of August 2023 "final draft")

NOTE:
Language included in August 2023 update, "final draft" YBEMP is edited as follows:
[~~Deletion~~] = Language deleted from the "final draft" is shown by brackets and strikethrough.
Insertion = Language to be inserted is shown in italics.

Sub-Area Policies

1. The primary objective in the Sally's Bend sub-area shall be *to encourage a balance of ecologically beneficial organisms,* to preserve and protect natural resources, *and to enhance the biological capabilities of the area.*
2. *Due to the size and proximity to the Hatfield Marine Science Center, this area is ideal for research and scientific studies to learn about the estuary and environmental trends affecting it, explore feasible and desirable approaches to protect and enhance a balanced ecology, and demonstrate best practices.*
3. It is recognized that some alteration of the sub-area will be required in conjunction with the maintenance and possible expansion and/or deepening of the deep water navigation channel turning basin. Other alterations shall be limited to those that are consistent with the overall protection of natural resource values, or those undertaken in conjunction with restoration projects.
4. [~~To maintain recreational values, commercial shellfish harvest by mechanical means should not be permitted above extreme low water~~.] *Recreational values, in particular, recreational clam harvesting, shall be maintained.*
5. Low intensity land uses which do not adversely impact estuarine natural resource values shall be preferred on adjacent shorelands.
6. Identified areas of important wildlife habitat shall be protected.

BACKGROUND/EXPLANATORY NOTES:

- The reference to mechanical harvesting of shellfish should be deleted. There should be no dredging or similar mechanical harvesting of shellfish below extreme low water. Native eelgrass grows typically in intertidal areas below mean low water and in adjacent subtidal areas. Native eelgrass at this water level of the Sally's Bend Sub-Area should be protected.
- The primary recreational use in the Sally's Bend Sub-Area is recreational clamming at Idaho Flat in Management Unit 9 and Sally's Bend in Management Unit 10.

K. Requested edits to apply policies relevant for 2024 to the situation in the estuary in 2024.

EDITS TO MANAGEMENT UNIT 9

NOTE:
Language included in August 2023 update, "final draft" YBEMP is edited as follows:
[~~Deletion~~] = Language deleted from the "final draft" is shown by brackets and strikethrough.
Insertion = Language to be inserted is shown in italics.

Management Unit 9: YAQUINA BAY

Description
Management Unit 9 includes the Idaho Flat tideflat between the Marine Science Center and Idaho Point, all of King Slough, and the intertidal area [~~upriver~~] *upstream* from the mouth of King Slough known as [~~Racoon~~] *Raccoon* Flat (see Figure 15).

More than 600 acres of tideland are estimated to be included in Management Unit 9. This includes 250 acres at Idaho Flat, 235 acres in King Slough and at the mouth of King Slough, and over 120 acres upstream from the mouth of King Slough. Of this total, about 260 acres are inside the Newport City Limits, most notably Idaho Flat and a smaller area just east of Idaho Flat.

This is one of the largest tideflats in the estuary with a number of natural resource values of major significance, including eelgrass beds, shellfish beds, low salt marsh, fish spawning and nursery areas and waterfowl habitat.

The area is used [~~extensively~~] for recreational purposes, [~~primarily angling, clamming and waterfowl hunting~~] *with significant recreational clamming in Idaho Flat (accessed primarily from the Hatfield Marine Science Center location) and occasional angling and waterfowl hunting.* [~~*A private boat ramp (formerly the site of a small marina) is present at Idaho Point*~~.] *There are several private boat ramps, including one at Idaho Point (formerly the site of a small marina).*

[~~The~~] *Nearly all of the Idaho Flat* intertidal flat area [~~west of Idaho Point is in public ownership (~~] *is owned by the* State of Oregon Board of Higher Education, *and considered to be part of the OSU Hatfield Marine Science Center campus. [)]. There is significant potential for OSU to use this area in support of research and education, especially as OSU implements an expansion of the OSU Hatfield marine sciences program, an expansion already underway. A much smaller area of tideland is leased by the Port of Newport to the Oregon Coast Aquarium.*

Most of the intertidal area of King Slough is privately owned and was used historically for log storage. *Log storage will no longer be done in this area. Instead, current owners of most of the tideland in the middle and northern portions of King Slough and adjacent to the mouth of King Slough have done extensive water quality testing, received Oregon Department of Agriculture approval to grow and harvest shellfish for human consumption, and have started a small-scale*

oyster farm using equipment where oysters are grown in the water column, which minimizes adverse impacts to organism growing in the mud flats. There is potential to expand aquaculture activities in the future using methods and equipment consistent with protecting the ecology of the estuary. The NOAA Office of Aquaculture issued a Fact Sheet in 2022 "Aquaculture Provides Beneficial Ecosystem Services" in part because shellfish, and in particular oysters, filter water and improve water quality as well as improve habitat for small crustaceans and small fish. [~~There is a small, low intensity aquaculture operation (tipping bag system) on the east side of King Slough~~.]

[~~A substantial portion of the Racoon Flat intertidal area along the west shore above the mouth of King Slough is owned~~] *The intertidal area upstream from King Slough (Raccoon Flat) is privately-owned, with the area closest to King Slough having the same owner as tideland in King Slough. A larger area upstream* is owned by the Yakona Nature Preserve [~~and Learning Center~~], *an Oregon-registered charitable organization, which also owns adjacent forested upland, with the stated purpose "To develop and maintain a sanctuary for flora and fauna native to the Oregon central coast and to create an educational space in which people can learn about the natural environment and the Native American history of the area encompassing the preserve."*

Alteration to the unit is minimal, with a few scattered pilings and limited areas of riprapped shoreline."

Classification: Natural

[~~As a major tract of tideflat, this unit has been classified natural in order to preserve the natural resources of the unit~~.]

Management Unit 9 has very large tideflats with various water depths (shallow intertidal areas, deeper intertidal areas, and subtidal channels) and some variation of substrate (sand, mud, unconsolidated substrate) that naturally support a variety of organisms beneficial to the estuary. The most significant natural resources to be preserved are eelgrass and clam beds.

Resource Capability

Management Unit 9 is a very large area, with more than 600 acres. As a large area, it is capable of supporting a diversity of beneficial biological resources

There is a sizable clam bed at Idaho Flat with cockles, gaper, butter and littleneck clams. This flat shifts from sand to mud, moving west to east. The access point from shore is at the Hatfield Marine Science Center at the west. Idaho Flat is a very popular recreational clamming area at minus tide levels. In addition, there is a clam bed at Raccoon Flat, with cockles most prevalent and, less common, gaper and littleneck clams. However, the clam bed at Raccoon Flat is inaccessible, except by boat, and located on privately owned tideland and is not used by recreational clammers.

Native eelgrass (Zostera marina) provides a significant ecological benefit when is used by forage fish, most notably Pacific herring, as a spawning "structure" and habitat for herring egg broods

until the larval herring emerge. Native eelgrass prefers growing on substrate where it can root and in deeper intertidal water, below mean low tide, and adjacent subtidal water where is it not susceptible to desiccation (drying out) at low tide. In 2012, there were relatively small areas of native eelgrass, most notably along the northern edge of Idaho Flat adjacent to the main channel of Yaquina Bay, and small area near the mouth of King Slough. It has been reported there was a loss of eelgrass in Idaho Flat in 2021, compared with 2011.

There are no known populations of native Olympia oysters (Ostrea lurida) in Management Unit 9. Native Olympia oysters grow naturally in subtidal areas on solid substrate; these characteristics are missing from Management Unit 9. After a feasibility study considering locations in the main channel of King Slough having sufficient water depth, a research biologist concluded that any native oysters and spat would be covered and smothered by silt flowing in the channel.

A portion of Management Unit 9 has a unique biological capability for growing shellfish for human consumption, as determined by extensive and ongoing water quality testing. As a result, the Oregon Department of Agriculture (ODA) has classified an area in the middle and north portions of King Slough, and at the mouth of King Slough, as an "Approved Area" for growing shellfish for human consumption. This area is the only ODA "Approved Area" in the entire Yaquina Bay estuary for growing shellfish for human consumption (while Management Units 16 and 17 comprise an ODA "Conditionally Approved Area" for growing shellfish for human consumption). At this time, shellfish cannot be grown for human consumption in the other 31 Management Units, although it is possible several other areas could be re-classified if there is satisfactory water quality testing. As such, this "Approved Area" is an area of special biological productivity, with important resource value.

In addition, this area is ideal for research, scientific studies, and demonstration projects to learn about the estuary and environmental trends affecting it, explore feasible and desirable approaches to protect and enhance a balanced ecology, and demonstrate best practices. This is especially appropriate because the Oregon Board of Higher Education owns 250 acres of Idaho Flat tideland that is adjacent to the Hatfield Marine Science Center.

Management Unit 9 is a highly sensitive area with resource values of major importance to the estuarine ecosystem. In order to maintain resource values, *besides scientific studies and shellfish aquaculture,* alterations in the unit shall be kept to a minimum. Minor alterations which result in temporary disturbances (e.g., limited dredging for submerged crossings) are consistent with resource values in this area; other more permanent alterations will be reviewed individually *for consistency with the resource capabilities of the area.*

<u>Management Objective</u>

~~[Management Unit 9 shall be managed to preserve and protect natural resources and values.]~~ *The primary objective shall be to seek a balance of ecologically-beneficial organisms to preserve the biological resources and, where possible, enhance the biological capabilities of this large area. There should be knowledgeable, coordinated management of beneficial biological*

resources including submerged aquatic vegetation, fish and crab spawning and nursery areas, natural clam beds, and compatible shellfish aquaculture. The preservation of one species or organism does not preclude other species or organisms that are also beneficial to the ecology of the estuary. For example, cultivated oysters provide many of the same ecosystem benefits as native Olympia oysters, grow in areas of tideflats where Olympia oysters will not grow, and are less susceptible to die-offs from summer heat waves or temporary winter sub-freezing temperatures. Where beneficial, limited commercial aquaculture, that is not detrimental to other desirable estuarine resources, is compatible with the management objective of this Management Unit 9. Similarly, scientific studies that may include some limited, temporary alterations, are compatible with this management objective, because the studies increase knowledge about the estuary, its organisms, approaches for enhancing future biological productivity of the estuary, future "best practices" for managing the estuary, and approaches for responding to future climate and other environmental changes. Recreational clamming has a limited impact on the clam beds and is consistent with maintaining the biological capabilities of Management Unit 9. However, commercial clam harvesting should be monitored and managed to prevent overharvesting from natural clam beds, and should only be allowed with permission by the tideland owners.

Special Policies

1. [~~Limited maintenance dredging and other maintenance activities may be permitted for the maintenance of the existing boat ramp in Management Unit 9. Expansion of this use or the establishment of new marina uses is not permitted~~.]
2. [~~Major portions of Management Unit 9 are held in private ownership. Because the preservation of critical natural resources requires that uses in this area by severely restricted, public or conservation acquisition of these privately owned lands is strongly encouraged~~.]
1. *Policy to facilitate and encourage a balance of ecologically-beneficial organisms in natural and conservation management units.*
2. *Policy for making determinations about natural resources, natural resource values, and natural resource capabilities of individual Natural and Conservation Management Units.*
3. *Policies for all new estuarine uses and activities in Natural Management Units.*
4. *City of Newport Special Policy: "Goal 16 exceptions have been taken for the waste seawater outfall for the Oregon Coast Aquarium and for increased storm water runoff through an existing drainage system."*
5. *City of Newport Special Policy: "A cobble/pebble dynamic revetment for shoreline stabilization may be authorized ... for protection of public facilities (such as the Hatfield Marine Science Center facilities)."*
6. *Special Policy and Goal 16 Exception to allow research activities, scientific studies, and demonstration projects in specified Management Units.*
7. *Special Policy and Goal 16 Exception to allow certain shellfish aquaculture activities in specified Management Units.*
8. *Special Policy for seaweed aquaculture/mariculture (that requires that State of Oregon regulatory program(s) be implemented as a prerequisite before consideration of any conditional permit applications) in specified Management Units.*

9. *Special Policy for finfish aquaculture (to prohibit commercial finfish aquaculture in the Yaquina Bay estuary).*
10. *Special Policy for conservation and scenic preservation easements.*

BACKGROUND/EXPANATORY NOTES:

The owner of tideland is opposed to the owner of upland dredging the tideland. The tideland owner considers any such dredging, without permission of the tideland owner, to be trespass. If the upland owner previously requested and received government dredging permits without notifying the government agencies that the tideland had different ownership, then the upland owner may have made significant omissions from permit applications.

When the 1982 YBEMP was adopted, there were different owners of tideland in Management Unit 9. In 1982, the privately-owned tideland in Management Unit 9 was owned by Georgia-Pacific Corporation and by Times Mirror Land and Timber Company, both corporations interested in harvesting and using timber. Times Mirror owned the property with the log dump on the west side of King Slough. In 1982, there was substantial public concern about use of the estuary for dumping, storing and transporting logs and a public desire to limit those practices.

The current private owners of tideland in Management Unit 9 are opposed to the past log storage and transportation practices, and those practices are now disallowed. Instead, the current tideland owners are concerned about the ecology of the estuary. One owner, Yakona Nature Preserve, a non-profit owning forested upland along with tideland upstream from the mouth of King Slough, is dedicated to preserving the natural environment. Owners of tideland in the middle and north portions of King Slough, and adjacent to the mouth of King Slough, are interested is shellfish aquaculture using "best practices" compatible with preserving the natural environment. The current owner of tideland at the south portion of King Slough, along with owning significant forested upland, has undertaken no activities in the estuary after purchasing the property in 1992.

Besides research and scientific studies, the only commercial activity planned for Management Unit 9 is shellfish aquaculture using "best practices." Even if this tideland were to be placed in a conservancy, under Oregon conservancy law (ORS 271.715), a conservation preservation easement may include conserving real property for a variety of desirable purposes including agriculture, and aquaculture is categorized as agriculture. So, aquaculture can be retained as a desirable purpose under a conservancy agreement.

L. Requested edits to apply policies relevant for 2024 to the situation in the estuary in 2024.

EDITS TO MANAGEMENT UNIT 10

NOTE:

Language included in August 2023 update, "final draft" YBEMP is edited as follows:
[~~Deletion~~] = Language deleted from the "final draft" is shown by brackets and strikethrough.
Insertion = Language to be inserted is shown in italics.

Management Unit 10: YAQUINA BAY

Description

Management Unit 10 includes the Sally's Bend area between Coquille Point and McLean Point and bounded on the south by the authorized federal navigation channel (see Figure 16). [~~Much of this unit is owned by the Port of Newport~~.] A number of minor alterations are present, including pilings and riprap along the shoreline.

There are 550 acres of tideland at Sally's Bend. The Port of Newport owns 503 acres and leases out another 16 acres, the Oregon Board of Higher Education owns 16 acres, and others own 15 acres. Of the total, 43 acres adjacent to McLean Point are inside the Newport City Limits. In addition to this tideland, Management Unit 10 includes a subtidal area between the tideflat and the federal navigation channel.

The unit consists of one of the largest tideflats in the estuary, with a number of natural resource values of major significance including eelgrass beds, shellfish and algal beds, fish spawning and nursery areas, and wildlife and waterfowl habitat. The historically large eelgrass meadow present in MU 10 has become much smaller over time, indicating a significant loss of habitat. Eelgrass and associated habitat make this area extremely important for Endangered Species Act (ESA) listed fish species, commercially important fisheries species, recreationally important clams, and migratory birds. It is recognized as "Essential Fish Habitat" under the Magnuson-Stevens Fishery Conservation and Management Act. Additionally, a significant area in the middle of MU 10 is utilized by pinnipeds (seals and sea lions) as a haul out region, which are species supported under the Marine Mammal Protection Act. Recovering populations of native Olympia oysters have also been surveyed at the South corner of the management unit off Coquille Point.

Uses in this area are limited to shallow draft navigation, recreational use, and some minor commercial harvest of clams. The Sally's Bend recreational clamming area in this unit is the largest in Yaquina Bay. There are no public boat launches or other recreational infrastructure to access the water via boat, but public access is available at the NW Natural Gas plant *at McLean Point* on the west side and Coquille Point to the east. An Olympia oyster restoration project was initiated by ODFW in 2021, on the state-owned tidelands region of MU 10 (on the southern corner).

The Port of Newport's 2019 Strategic Business Plan Update supports research:
"The marine research and education sectors are well established in Newport; an estimated 300 people work at the Hatfield Marine Science Center, including OSU faculty, graduate students, researchers, and staff from other agencies.... The marine research and education sectors and growth opportunities [include] .... aquaculture."

The Port of Newport's 2019 Strategic Business Plan Update supports aquaculture:
"Aquaculture is a rapidly growing sector of the international economy and represents an opportunity for development in Newport as well."
"Opportunities for growing aquaculture in the Newport area include the expansion of existing operations, as well as the development of new ones."
"Oyster cultivation could be expanded in Yaquina Bay. There is demand for intertidal land for oyster cultivation with the appropriate characteristics (soil conditions and water quality, etc.)"

Classification: Natural
[~~As a major tract of tideflat with eelgrass beds, this unit has been classified natural in order to preserve natural resources in the unit~~.]
Sally's Bend is a very large tideflat with various water depths (shallow intertidal areas, deeper intertidal areas, and subtidal channels) and some variation of substrate (sand, mud, unconsolidated substrate) that naturally support a variety of organisms beneficial to the estuary. The most significant natural resources to be preserved are eelgrass and clam beds. The small area with Olympia oysters should also be protected.

Resource Capability

Sally's Bend is a very large area, with 550 acres. As a large area, it is capable of supporting a diversity of beneficial biological resources.

There is a sizable clam bed with cockles and, less common, littleneck and gaper clams. The area is very muddy so recreational clammers need to be cautious. The access points from shore are at the McLean Point on the west and at Coquille Point on the east side of Sally's Bend.

Native eelgrass (Zostera marina) provides a significant ecological benefit when is used by forage fish, most notably Pacific herring, as a spawning "structure" and habitat for herring egg broods until the larval herring emerge. Native eelgrass prefers growing on substrate where it can root and in deeper intertidal water, below mean low tide, and adjacent subtidal water where is it not susceptible to desiccation (drying out) at low tide. In 2012, native eelgrass was located in a portion of the middle of Sally's Bend and the area closest to the main channel of Yaquina Bay and along the main channel of Yaquina Bay. It has been reported there is less density of eelgrass at Sally's Bend in 2021 than 2011.

Native Olympia oysters (Ostrea lurida) grow naturally in subtidal areas on solid substrate; these characteristics are missing from much of the Sally's Bend tideflat area. However, some limited areas of subtidal channels at Sally's Bend, or subtidal areas along the boundary of the tideflats

and the main channel of Yaquina Bay, may be feasible for active Olympia oyster restoration projects with the additional of solid material to compensate for areas with inadequate natural solid substrate, providing the oysters do not get covered in silt.

Significant portions of the Sally's Bend tideflat do not have the sufficient water depth or solid substrate necessary for native eelgrass or for native Olympia oysters. These areas can support other biological resources that are beneficial to the estuary.

Water characteristics including salinity level, and nearly complete tidal exchange of water during each tide cycle, support shellfish aquaculture. However, it is important that any commercial clamming or shellfish aquaculture activities not have a significant adverse impact on native eelgrass or native Oylmpia oysters.

Close proximity to Hatfield Marine Science Center facilitates scientific studies of the estuary that are beneficial to the estuary as well as supportive of research and education programs

Management Unit 10 is similar in character and resource values to Management Unit 9. Due to the importance and sensitive nature of the resources in this area, *besides scientific studies, active restoration projects, and shellfish aquaculture,* permitted alterations shall be limited to those which result in only temporary, minor disturbances (e.g., several submerges crossings have been located in this area). More permanent alterations will be reviewed individually for consistency with the resource capabilities of the area.

Management Objective

[~~Management Unit 10 shall be managed to preserve and protect natural resources and values.~~]
The primary objective shall be to seek a balance of ecologically-beneficial organisms to preserve the biological resources and, where possible, enhance the biological capabilities of this large area. There should be knowledgeable, coordinated management of beneficial biological resources including submerged aquatic vegetation, fish and crab spawning and nursery areas, natural clam beds, and compatible shellfish aquaculture. The preservation of one species or organism does not preclude other species or organisms that are also beneficial to the ecology of the estuary. For example, cultivated oysters provide many of the same ecosystem benefits as native Olympia oysters, grow in areas of tideflats where Olympia oysters will not grow, and are less susceptible to die-offs from summer heat waves or temporary winter sub-freezing temperatures. Where beneficial, limited commercial aquaculture, that is not detrimental to other desirable estuarine resources, is compatible with the management objective of this Management Unit 10. Similarly, scientific studies that may include some limited, temporary alterations, are compatible with this management objective, because the studies increase knowledge about the estuary, its organisms, approaches for enhancing future biological productivity of the estuary, future "best practices" for managing the estuary, and approaches for responding to future climate and other environmental changes. Recreational clamming has a limited impact on the clam beds and is consistent with maintaining the biological capabilities of Management Unit 10. However, commercial clam harvesting should be monitored and managed to prevent overharvesting from natural clam beds.

Special Policies

1. *Policy to facilitate and encourage a balance of ecologically-beneficial organisms in natural and conservation management units.*
2. *Policy for making determinations about natural resources, natural resource values, and natural resource capabilities of individual Natural and Conservation Management Units.*
3. Because [~~this unit is~~] *some subtidal areas may be* suitable for native oyster re-establishment and restoration efforts are underway, impact to existing Olympia oysters shall be avoided.
4. Deepening and widening of the federal navigation channel and turning basin into this management unit, which would impact the significant ecosystems within Sally's Bend, shall be avoided.
5. *Policies for all new estuarine uses and activities in Natural Management Units.*
6. *Special Policy and Goal 16 Exception to allow research activities, scientific studies, and demonstration projects in specified Management Units.*
7. *Special Policy and Goal 16 Exception to allow certain shellfish aquaculture activities in specified Management Units.*
8. *Special Policy for seaweed aquaculture/mariculture (that requires that State of Oregon regulatory program(s) be implemented as a prerequisite before consideration of any conditional permit applications) in specified Management Units.*
9. *Special Policy for finfish aquaculture (to prohibit commercial finfish aquaculture in the Yaquina Bay estuary).*
10. *Special Policy for conservation and scenic preservation easements.*

CONCERNS ABOUT DELETING CLARITY FROM 1982 YBEMP

Submitted by Mark Arnold
March 11, 2024

CONCERNS ABOUT DELETING MATRICES FROM 1982 YBEMP
AND REPLACING THEM WITH PROPOSED GENERAL ZONING LANGUAGE

The August 2023 YBEMP "final draft" made two major changes, and the result was to delete specific guidance in the 1982 YBEMP and replace it with general language lacking specificity, creating uncertainty, and subject to arbitrary decision-making.

- The 1982 plan included a one-page matrix for each Management Unit that provided substantial clarity about what activities were permitted, could be allowed conditionally, or were disallowed in each individual Management Unit. All the matrices in the 1982 plan were removed, leaving no clarity in their place for individual Management Units.

- Proposed Zoning Code language was added. The proposed Code language reads like a policy statement, without clear criteria, so different users can reach different conclusions about whether the Code requirements have, or have not, been satisfied.

Under the proposed Zoning Code language, decisions about allowable uses are based on the following concepts:

- "Aquatic area alteration"
- "Public trust rights"
- "Consistent with the Management Unit objective"
- "Consistent with the purposes of the Management Unit classification"
- "Consistent with the resource capabilities of the area"

BUT:

- There is no definition of what constitutes an "aquatic area alteration.
- There is no definition of "public trust rights" nor criteria to determine how to balance them with other allowable, beneficial activities.
- There are no criteria to determine consistency with the Management Unit objective.
- There are no criteria to determine consistency with the Management Unit classification.
- There are no criteria to determine consistency with the resource capabilities of the area.

This means the substantial clarity in the 1982 plan, which was thrown out, was replaced by proposed, imprecise Code language. This means the burden of proof may be placed on anyone making a proposal to do anything in the estuary: the burden is to prove the proposed use complies with the Code language. But, it is impossible to prove consistency with undefined concepts where there is no criteria.

The following pages provide more detailed information about the 1982 matrices, the proposed replacement Zoning language, and concerns about the lack of clarity in the proposed Zoning language.

ALTERATIONS FOR AQUACULTURE IN INDIVIDUAL NATURAL MANAGEMENT UNITS
AS SHOWN IN PERMITTED USE MATRICES IN 1982 YAQUINA BAY ESTUARY MANAGEMENT PLAN
(INCLUDED IN THE 1982 LINCOLN COUNTY ESTUARY MANAGEMENT PLAN)

When interpreting the 1982 YBEMP, prior to initiation of the YBEMP update, Lincoln County planners referred to the matrices for individual Management Units to provide guidance about what alterations to the estuary were permitted, conditionally allowed, or disallowed for each individual Management Unit.

At the top of the matrix, there are identified the alterations of concern to Lincoln County:

- Shoreline stabilization (structural)
- Dikes (new)
- Fill
- New Dredging
- Maintenance Dredging
- Navigation Aids (beacons, buoys, etc.)
- Breakwaters
- Pile Dikes
- Groins
- Wharves
- Piers
- Docks
- Pilings
- Dolphins
- Special Policy (a category allowing for identification of other concerns for an individual Management Unit, as written under the "Special Policies" heading for the Management Unit)

Under types of activities listed, on the left side of each matrix, one of the activities is "Aquaculture Facilities." In the matrix for each individual Management Unit, there is identification of which aquaculture alterations are permitted, conditionally allowed, or disallowed for that Management Unit.

The matrices in the 1982 YBEMP provided clear guidance to planners, and to those affected by decisions of the planners, about what aquaculture alterations could be undertaken in each Management Unit.

Following is the 1982 YBEMP matrix for Management Unit 9 which includes the tideflats between the Marine Science Center and Idaho Point (Idaho Flat), King Slough, and an intertidal area at the mouth of, and upstream from, King Slough.

PERMITTED USE MATRIX

Management Unit No. Yaquina 9
Classification Natural

P = Permitted w/standards
C = Conditional
N = Not Allowed
X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	Navigation Aids (beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
	Commercial /Recreational															
N	Water dependent															
N	Water related															
N	Non-water related															
N	Marina	N	N	N	N	C	N	N	N	N	N	N	N	N	N	2
N	Boat launching															
	Industrial															
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
	Public															
N	Overhead crossings															
P	Submerged crossings	N	N	N	P	N	P	N	N	N	N	N	N	N	N	1
N	Bridge crossings															
N	Storm water outfall															
N	Sanitary outfall															
	Port Facilities															
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	
C	Aquaculture Facilities	N	N	N	N	N	P	N	N	N	N	N	N	C	C	
	Restoration															
C	Active	C	N	N	C	C	N	N	N	N	N	N	N	N	N	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

Following is the 1982 YBEMP matrix for Management Unit 10, Sally's Bend.

PERMITTED USE MATRIX

Management Unit No. Yaquina 10
Classification Natural

P = Permitted w/standards
C = Conditional
N = Not Allowed
X = Not Applicable

		Shoreline stabilization (structural)	Dikes (new)	Fill	New Dredging	Maintenance Dredging	Navigation Aids (beacons, buoys, etc.)	Breakwaters	Pile Dikes	Groins	Wharves	Piers	Docks	Pilings	Dolphins	Special Policy
	Commercial /Recreational															
N	Water dependent															
N	Water related															
N	Non-water related															
N	Marina															
N	Boat launching															
	Industrial															
N	Log dumping															
N	Log storage															
N	Mining															
N	Oil or Gas Extraction															
N	Industrial outfalls															
N	Marine ways															
N	Water dependent industrial															
N	Water related industrial															
N	Non-water related industrial															
	Public															
N	Overhead crossings															
P	Submerged crossings	N	N	N	N	N	P	N	N	N	N	N	N	N	N	A
N	Bridge crossings															
N	Storm water outfall															
N	Sanitary outfall															
	Port Facilities															
N	Deep draft (over 23')															
N	Medium draft (10'-22')															
N	Shallow draft (0-9')															
P	Navigation improvement	N	N	N	N	N	P	N	N	N	N	N	N	N	N	
C	Aquaculture Facilities	N	N	N	N	N	P	N	N	N	N	N	N	C	C	
	Restoration															
P	Active	C	N	N	P	C	N	N	N	N	N	N	N	N	N	
P	Passive	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

For the August 2023 "final draft" YBEMP update, the Project Team decided to delete the matrices from that 1982 plan and replace them with proposed zoning ordinance language. Language is highlighted in yellow that relates to research, aquaculture, and restoration.

APPENDIX F - ESTUARY ZONING DISTRICTS

New appendix proposed as part of the 2023 update

The following is template language for the adoption of Natural, Conservation and Development estuary zoning districts into the zoning code for Lincoln County, the City of Newport, and the City of Toledo.

Section XXX Estuary Natural Zone E-N

In an E-N zone the following regulations shall apply:

1. **Application:**
   The provisions of the E-N zone shall apply to those estuarine aquatic areas within the boundaries of Natural Management Units as designated in the Lincoln County Estuary Management Plan. As used in this section, "estuarine aquatic area" means estuarine waters, submerged lands, tidelands and tidal marshes up to Mean Higher High Water or the line of non-aquatic vegetation, whichever is further landward.
2. **Uses Permitted Outright:**
   The following uses and their accessory uses are permitted subject to the Special Policies of the applicable Management Unit and the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, and 1.1901 to 1.1999:
   (a) Undeveloped low intensity recreation requiring no aquatic area alteration.
   (b) Research and educational observations requiring no aquatic area alteration.
   (c) Projects for the protection of habitat, nutrient, fish, wildlife and aesthetic resources requiring no aquatic area alteration.
   (d) Passive restoration requiring no aquatic area alteration.
   (e) Bridge crossing spans not requiring the placement of support structures within the E-N zone.
3. **Conditional Uses Permitted:**
   The following uses may be permitted subject to the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.1699 and 1.1901 to 1.1999:
   (a) Undeveloped low intensity recreation that requires aquatic area alteration.
   (b) Research and educational observations that requires aquatic area alteration.
   (c) Navigation aids such as beacons and buoys.
   (d) Projects for the protection of habitat, nutrient, fish, wildlife and aesthetic resources that require aquatic area alteration.
   (e) Passive restoration that requires estuarine aquatic area alteration.
   (f) On-site maintenance of existing functional tidegates and associated drainage channels, including, as necessary, dredging and bridge crossing support structures.
   (g) Riprap for the protection of uses existing as of October 7, 1977.
   (h) Riprap for the protection of unique resources, historical and archeological values and public facilities.

4. **Additional Conditional Uses Permitted Subject to Resource Capability Test:**
The following uses and their accessory uses may be permitted subject to the provisions of subsection (7) of this section and the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.1699 and 1.1901 to 1.1999:
   (a) Aquaculture that does not involve dredge or fill or other estuarine aquatic area alteration except that incidental dredging for harvest of benthic species or the use of removable structures such as stakes or racks may be permitted.
   (b) Communication facilities.
   (c) Active restoration of fish and wildlife habitat, water quality, or estuarine productivity.
   (d) Boat ramps for public use not requiring dredge or fill.
   (e) Pipelines, cables and utility crossings including incidental dredging necessary for their installation.
   (f) Installation of tidegates in existing functional dikes.
   (g) Bridge crossing support structures and dredging necessary for their installation.
   (h) Temporary alterations.
5. **Special Standards:**
Dredging, filling or other alterations of the estuary shall be allowed only:
   (a) In conjunction with a use authorized in accordance with subsections (3) and (4) of this section;
   (b) If a need (i.e., a substantial public benefit) is demonstrated;
   (c) The use or alteration does not substantially interfere with public trust rights;
   (d) If no feasible alternative upland locations exist; and
   (e) If adverse impacts are minimized.
6. **Impact Assessment**
All decisions authorizing uses in the E-N zone that involve alterations of the estuary that could affect the estuary's physical processes or biological resources shall include a written impact assessment. The impact assessment need not be lengthy or complex. The level of detail and analysis should be commensurate with the scale of expected impacts. For example, for proposed alterations with minimal estuarine disturbance, a correspondingly simple assessment is sufficient. For alterations with the potential for greater impact, the assessment should be more comprehensive. In all cases it shall provide a summary of the impacts to be expected. It should be submitted in writing to the local jurisdiction. It shall include:
   (a) The type and extent of alterations to be authorized;
   (b) The type of resources affected;
   (c) The expected extent of impacts on water quality and other physical characteristics of the estuary, biological resources, recreation and aesthetic use, navigation and other existing and potential uses of the estuary;
   (d) The expected extent of impacts of the proposed alteration should reference relevant Climate Vulnerabilities as described in applicable sub-area(s) and management unit (applicants are encouraged to document the use of any applicable data and maps included in the inventory such as sea level rise and landward migration zones) when considering future:

Concerns about deleting clarity from 1982 YBEMP – Page 6

i. continued use of the proposed alteration given projected climate change impacts
ii. water quality and other physical characteristics of the estuary,
iii. living resources,
iv. recreation and aesthetic use,
v. navigation, and
vi. other existing and potential uses of the estuary; and

(e) Methods to be employed to avoid or minimize adverse impacts.

7. **Conditional Use Requirements:**
All conditional uses in the E-N zone shall comply with the following standards:
(a) The use is consistent with the management objective of the individual management unit; and
(b) The use complies with any applicable Special Policies of the individual management unit.

8. **Additional Requirements for Conditional Uses Subject to Resource Capability Test:**
In addition to all other applicable provisions of this section, conditional uses set forth in subsection (4) of this section are subject to the following requirements:
(a) The use shall be consistent with the purposes of the Natural Management Unit classification;
(b) The use shall be consistent with the resource capabilities of the area. A use is consistent with the resource capabilities of the area when:
i. The negative impacts of the use on estuarine species, habitats, biological productivity and water quality are not significant; or
ii. The resources of the area are able to assimilate the use and its effects and continue to function in a manner to protect significant wildlife habitats, natural biological productivity and values for scientific research and education.

Section XXX Estuary Conservation Zone E-C

In an E-C zone the following regulations shall apply:

1. **Application:**
The provisions of the E-C zone shall apply to those estuarine aquatic areas within the boundaries of Conservation Management Units as designated in the Lincoln County Estuary Management Plan. As used in this section, "estuarine aquatic area" means estuarine waters, submerged lands, tidelands and tidal marshes up to Mean Higher High Water or the line of non-aquatic vegetation, whichever is further landward.

2. **Uses Permitted Outright:**
The following uses and their accessory uses are permitted subject to the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, and 1.1901 to 1.1999 and the Special Policies of the applicable Management Unit:
(a) Undeveloped low intensity recreation requiring no estuarine aquatic area alteration.

(b) Research and educational observations requiring no estuarine aquatic area alteration.
(c) Projects for the protection of habitat, nutrient, fish, wildlife and aesthetic resources requiring no estuarine aquatic area alteration.
(d) Passive restoration requiring no estuarine aquatic area alteration.
(e) Bridge crossing spans not requiring the placement of support structures within the E-C zone.

3. **Conditional Uses Permitted:**
The following uses may be permitted subject to the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.1699, and 1.1901 to 1.1999 and the Special Policies of the applicable Management Unit:
(a) Undeveloped low intensity recreation that requires estuarine aquatic area alteration.
(b) Research and educational observations that requires estuarine aquatic area alteration.
(c) Navigation aids such as beacons and buoys.
(d) Projects for the protection of habitat, nutrient, fish, wildlife and aesthetic resources that require estuarine aquatic area alteration.
(e) Passive restoration that requires estuarine aquatic area alteration.
(f) On-site maintenance of existing functional tidegates and associated drainage channels, including, as necessary, dredging and bridge crossing support structures.
(g) Riprap for the protection of uses existing as of October 7, 1977.
(h) Riprap for the protection of unique resources, historical and archeological values and public facilities.
(i) Aquaculture that does not involve dredge or fill or other estuarine aquatic area alteration except that incidental dredging for harvest of benthic species or the use of removable structures such as stakes or racks may be permitted.
(j) Communication facilities.
(k) Active restoration of fish and wildlife habitat, water quality, or estuarine productivity.
(l) Boat ramps for public use not requiring dredge or fill.
(m) Pipelines, cables and utility crossings requiring only incidental dredging.
(n) Installation of tidegates in existing functional dikes.
(o) Bridge crossing support structures and dredging necessary for their installation.

4. **Additional Conditional Uses Permitted Subject to Resource Capability Test:**
The following uses and their accessory uses may be permitted subject to the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.1699, and 1.1901 to 1.1999, the Special Policies of the applicable Management Unit, and the provisions of subsection (7) of this section:
(a) High intensity water dependent recreation, including, but not limited to, boat ramps and marinas, and including new and maintenance dredging for such uses.
(b) Other water dependent uses requiring the occupation of estuarine surface area by means other than fill
(c) Minor navigational improvements.
(d) Mining and mineral extraction, including dredging necessary for such extraction.
(e) Aquaculture requiring dredge, fill or other alteration of estuarine aquatic area.

(f) Temporary alterations.

5. **Special Standards**

Dredging, filling or other alterations of the estuary shall be allowed only:

(a) In conjunction with a use authorized in accordance with subsections (3) and (4) of this section;

(b) If a need (i.e., a substantial public benefit) is demonstrated;

(c) If the use or alteration does not substantially interfere with public trust rights;

(d) If no feasible alternative upland locations exist; and

(e) If adverse impacts are minimized.

6. **Impact Assessment**

All decisions authorizing uses in the E-C zone that involve alterations of the estuary that could affect the estuary's physical processes or biological resources shall include a written impact assessment. The impact assessment need not be lengthy or complex. The level of detail and analysis should be commensurate with the scale of expected impacts. For example, for proposed alterations with minimal estuarine disturbance, a correspondingly simple assessment is sufficient. For alterations with the potential for greater impact, the assessment should be more comprehensive. In all cases it shall provide a summary of the impacts to be expected. It should be submitted in writing to the local jurisdiction. It shall include:

(a) The type and extent of alterations to be authorized;

(b) The type of resources affected;

(c) The expected extent of impacts on water quality and other physical characteristics of the estuary, biological resources, recreation and aesthetic use, navigation and other existing and potential uses of the estuary;

(d) The expected extent of impacts of the proposed alteration should reference relevant Climate Vulnerabilities as described in applicable sub-area(s) and management (applicants are encouraged to document the use of any applicable data and maps included in the inventory such as sea level rise and landward migration zones) when considering future:

i. continued use of the proposed alteration given projected climate change impacts

ii. water quality and other physical characteristics of the estuary,

iii. living resources,

iv. recreation and aesthetic use,

v. navigation, and

vi. other existing and potential uses of the estuary; and

(e) Methods to be employed to avoid or minimize adverse impacts.

7. **Conditional Use Requirements:**

(a) All conditional uses in the E-C zone shall comply with the following standards:

i. The use is consistent with the management objective of the individual management unit; and

ii. The use complies with any applicable Special Policies of the individual Management Unit.

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8. **Additional Requirements for Conditional Uses Subject to Resource Capability Test:** In addition to all other applicable provisions of this section, conditional uses set forth in subsection (4) of this section are subject to the following requirements:
   (a) The use shall be consistent with the purposes of the Conservation Management Unit classification;
   (b) The use shall be consistent with the resource capabilities of the area. A use is consistent with the resource capabilities of the area when:
      i. The negative impacts of the use on estuarine species, habitats, biological productivity and water quality are not significant; or
      ii. The resources of the area are able to assimilate the use and its effects and continue to function in a manner which conserves long-term renewable resources, natural biological productivity, recreational and aesthetic values and aquaculture.

Section XXX Estuary Development Zone E-D

In an E-D zone the following regulations shall apply:

1. **Application:**
   The provisions of the E-D zone shall apply to those estuarine aquatic areas within the boundaries of Development Management Units as designated in the Lincoln County Estuary Management Plan. As used in this section, "estuarine aquatic area" means estuarine waters, submerged lands, tidelands and tidal marshes up to Mean Higher High Water or the line of non-aquatic vegetation, whichever is further landward.
2. **Conditional Uses Permitted:**
   The following uses may be permitted subject to the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.699, and 1.1901 to 1.1999:
   (a) High intensity water dependent recreational uses including, but not limited to, boat ramps, marinas and similar facilities.
   (b) Water dependent commercial uses.
   (c) Water dependent industrial uses.
   (d) Marine terminals.
   (e) Commercial boat basins and similar moorage facilities.
   (f) Navigation activities and improvements.
   (g) In-water disposal of dredged material
   (h) Water storage of products used in industry, commerce or recreation.
3. **Additional Conditional Uses Permitted Subject to Management Unit Purpose:**
   The following uses and their accessory uses may be permitted subject to the provisions of subsection (8) of this section and the applicable provisions of LCC 1.1401 to 1.1499, 1.1501 to 1.599, 1.1601 to 1.699, and 1.1901 to 1.1999:
   (a) Undeveloped low intensity recreation.
   (b) Research and educational observations.
   (c) Navigation aids such as beacons and buoys.

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(d) Projects for the protection of habitat, nutrient, fish, wildlife and aesthetic resources.
(e) Passive restoration.
(f) On-site maintenance of existing functional tidegates and associated drainage channels, including, as necessary, dredging and bridge crossing support structures.
(g) Riprap for the protection of uses not permitted in the E-D zone that were existing as of October 7, 1977.
(h) Riprap for the protection of unique resources, historical and archeological values and public facilities.
(i) Communication facilities.
(j) Active restoration of fish and wildlife habitat, water quality, or estuarine productivity.
(k) Pipelines, cables and utility crossings.
(l) Installation of tidegates in existing functional dikes.
(m) Bridge crossings, including support structures and dredging necessary for their installation.
(n) Mining and mineral extraction.
(o) Aquaculture.
(p) Temporary alterations.
(q) Water related and non-water related commercial and industrial uses not requiring dredge or fill.

4. **Aquatic Area Alterations Permitted:**
Subject to the requirements of subsection (5) of this section, the following types of aquatic area alterations may be permitted in conjunction with the development and conduct of uses set forth in subsection (2) and (3) of this section:
(a) Dredging, except that dredging is not permitted in conjunction with water related or non-water related commercial and industrial uses permitted pursuant to subsection (3)(q) of this section.
(b) Fill, except that fill is not permitted in conjunction with water related or non-water related commercial and industrial uses permitted pursuant to subsection (3)(q) of this section.
(c) In-water structures, including but not limited to pilings, dolphins, docks, piers, wharfs, breakwaters, groins, jetties and similar structures.
(d) Shoreline stabilization including riprap, bulkheads and similar structures.

5. **Special Standards:**
Dredging, filling or other alterations of the estuary shall be allowed only:
(a) In conjunction with a use authorized in accordance with subsections (3) and (4) of this section, except that dredging and/or filling is not permitted in conjunction with water related or non-water related commercial and industrial uses permitted pursuant to subsection (3)(q) of this section;
(b) If a need (i.e., a substantial public benefit) is demonstrated;
(c) The use or alteration does not substantially interfere with public trust rights;
(d) If no feasible alternative upland locations exist; and
(e) If adverse impacts are minimized.

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6. **Impact Assessment:**
All decisions authorizing uses in the E-D zone that involve alterations of the estuary that could affect the estuary's physical processes or biological resources shall include a written impact assessment. The impact assessment need not be lengthy or complex. The level of detail and analysis should be commensurate with the scale of expected impacts. For example, for proposed alterations with minimal estuarine disturbance, a correspondingly simple assessment is sufficient. For alterations with the potential for greater impact, the assessment should be more comprehensive. In all cases it shall provide a summary of the impacts to be expected. It should be submitted in writing to the local jurisdiction. It shall include:
   (a) The type and extent of alterations to be authorized;
   (b) The type of resources affected;
   (c) The expected extent of impacts on water quality and other physical characteristics of the estuary, biological resources, recreation and aesthetic use, navigation and other existing and potential uses of the estuary;
   (d) The expected extent of impacts of the proposed alteration should reference relevant Climate Vulnerabilities as described in applicable sub-area(s) and management unit (applicants are encouraged to document the use of any applicable data and maps included in the inventory such as sea level rise and landward migration zones) when considering future:
      i. continued use of the proposed alteration given projected climate change impacts
      ii. water quality and other physical characteristics of the estuary,
      iii. living resources,
      iv. recreation and aesthetic use,
      v. navigation, and
      vi. other existing and potential uses of the estuary; and
   (e) Methods to be employed to avoid or minimize adverse impacts.
7. **Conditional Use Requirements:**
All conditional uses in the E-D zone shall comply with the following standards:
   (a) The use is consistent with the management objective of the individual management unit; and
   (b) The use complies with any applicable Special Policies of the individual management unit.
8. **Additional Requirements for Conditional Uses Subject Management Unit Purpose:**
In addition to all other applicable provisions of this section, conditional uses set forth in subsection (3) of this section are subject to the following requirements:
   (a) The use shall be consistent with the purposes of the Development Management Unit classification;
   (b) The use shall be consistent with the designation of adjacent shorelands, including where such shorelands are reserved for water dependent uses, or designated for waterfront redevelopment.

CONCERNS ABOUT PROPOSED NEW ESTUARY ZONING LANGUAGE
FOR NATURAL MANAGEMENT UNITS (PROPOSED NEW ZONE E-N)
AND CONSERVATION MANAGEMENT UNITS (PROPOSED ZONE E-C)

There is no definition of "aquatic area alteration." This a major omission because the concept about whether there is or is not an "aquatic area alteration" is used extensively in the proposed zoning language for making most determinations about what is permitted, permitted conditionally, or disallowed for proposed activities in the estuary.

"Special Standards" that must be met to qualify for "Conditionally Use Permitted" and "Additional Conditional Uses Permitted Subject to Resource Capability Test" for Natural Management Units and Conservation Management Units.

- There are no criteria to determine whether a "substantial public benefit" is or is not demonstrated.

- There is no definition of "public trust rights" in the proposed zoning language.

    - Based on some (but not all) legal interpretations, a few people may argue that "public trust rights" include the "right to navigation, commerce, fishing and recreation." People making this argument can argue that nothing can be placed in the water anywhere in the estuary because it would interfere with their "public trust right" to recreational boating. They can sue to block desirable governmental approvals.

    - On the other hand, there are court decisions saying that "public trust rights," as applied in English common law, do not necessarily apply to different situations in the United States. State laws can modify and limit "public trust rights" as previously applied in English common law. And, a claim to a public trust right does not necessarily prevent other desirable activities in the public interest.

    - Unnecessary legal complications and obstacles may be avoided, and desirable zoning decisions defended in court, by deleting language about "public trust rights" from the zoning language.

"Conditional Use Requirements" must be "consistent with the management unit objective of the individual management unit" for Natural Management Units and Conservation Management Units.

- Does this mean the "use" must be specifically mentioned under the heading "Management Objective" for each management unit?

- If specific language is not required under this management unit heading in the YBEMP, then what are the criteria to determine whether or not the use is "consistent"?
- Who decides whether a "use" is consistent or inconsistent?
- If there are no criteria, then this creates an opportunity for arbitrary and capricious application of the YBEMP requirements.

"Conditional Use Requirements" must comply "with any applicable Special Policies of the individual management unit" for Natural Management Units and Conservation Management Units.

- Does this mean that the "use" must be specifically mentioned under the heading "Special Policies" for each management unit?
- Or, does this mean that a "use" must not be contrary to all "Special Policies" for each management unit?

Under "Additional Requirements for Conditional Uses Subject to Resource Capability Test," for Natural Management Units, the proposed zoning language says: "The use shall be consistent with the purposes of the Natural Management Unit classification. Similarly, for Conservation Management Units, the proposed zoning language says: "The use shall be consistent with the purposes of the Conservation Management Unit classification."

- Does this mean that the "use" must be specifically mentioned under the heading "Classification" for each Natural Management unit and each Conservation Management Unit?
- If specific language is not required under this management unit heading in the YBEMP, then what are the criteria to determine whether or not the use is "consistent"?
- Who decides whether a "use" is consistent or inconsistent?
- If there are no criteria, then this creates an opportunity for arbitrary and capricious application of the YBEMP requirements.

Under "Additional Requirements for Conditional Uses Subject to Resource Capability Test," for Natural Management Units and Conservation Management Units, the proposed zoning language says: "The use shall be consistent with the resource capabilities of the area when:

(i) The negative impacts of the use on estuarine species, habitats, biological productivity and waterway quality are not significant; or

(ii) The resources of the area are able to assimilate the use and its effects and continue to function in a manner to protect significant wildlife habitats, natural biological productivity and values for scientific research and education.

- Does this mean that the "use" must be specifically mentioned under the heading "Resource Capability" for each Natural Management unit and each Conservation Management Unit?

- If specific language is not included under this management unit heading in the YBEMP, then what are the criteria to determine whether or not the use is "consistent"? What are the prescriptive standards? What are the performance standards? How can a determination be made about whether a use is consistent with the "Resource Capability" of the individual management unit if there are no standards?
- Who decides whether a "use" is consistent or inconsistent?
- If there are no criteria, then this creates an opportunity for arbitrary and capricious application of the YBEMP requirements.

Tentative Planning Commission Work Program

(Scheduling and timing of agenda items is subject to change)

February 26, 2024 Work Session

- Planning Commission FY 24/25 Goal Setting Session
- City Zoning Requirements for Public/Private Schools

February 26, 2024 Regular Session

- Final Order and Findings File No. 1-CUP-24, Coffee Shop at 146 SW Bay Blvd
- Public Hearing on File No. 3-Z-23, Removing Regulatory Barriers for Needed Housing

March 11, 2024 Work Session

- Discuss Implementation Steps for SB 1537 "Governors Housing Bill" (Enrolled)
- Finalize Planning Commission FY 24/25 Goals

March 11, 2024 Regular Session

- Approval of Commission's FY 24/25 Goals

March 25, 2024 Work Session

- Review of Draft Comprehensive Plan Amendments to Implement the Estuary Management Plan

April 8, 2024 Work Session

- Review Draft Land Use and Map Amendments to Implement Updated Estuary Management Plan
- Status of South Beach Island Annexation Project
- Review Draft Amendments to Implement SB 1537

April 8, 2024 Regular Session

- Initiate Legislative process to Amend the City's Comprehensive Plan and Zoning Code to Implement the Updated Estuary Management Plan
- Public Hearing on File No. 1-VAR-24, Harbor Freight Sign Variance

April 22, 2024 Work Session

- Overview of Comprehensive Plan Refinement Project (Beth Young)
- Discuss updated schedule and outreach for City Center Revitalization Plan
- Overview of Draft Wastewater Master Plan (Engineering Staff)

April 22, 2024 Regular Session

- TBD

May 13, 2024 Work Session

- Review Draft Comprehensive Plan Refinement Project Plan Amendments (Beth Young)
- Scope of Work for Water System Master Plan Update

May 13, 2024 Regular Session

- Initiate legislative process on Draft Comprehensive Plan Refinement Project Plan Amendments
- Placeholder for Public Hearing on Next Phase of Wilder Planned Development
- Public Hearing on Draft Amendments to Implement SB 1537

May 28, 2024 Work Session

- Review Draft Comprehensive Plan and Code Updates to Adopt the Wastewater Plant Master Plan
- Scope of Work for Updating Newport's System Development Charge Methodology

May 28, 2024 Regular Session

- Hearing on Comprehensive Plan/Zoning Amendments Implement the Updated Estuary Mgmt Plan