



OREGON SHORES
CONSERVATION COALITION

A People's Primer for Protecting Oregon's Eelgrass
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Introduction

This Primer is intended to serve as an introduction to eelgrass habitats on the Oregon coast, a description of their ecological importance and the threats to their health, and a resource for people interested in helping their communities to begin the long process of protecting and preserving this vital component of Oregon's estuaries.

Eelgrass (*Zostera marina*)—a marine flowering plant found in bays and estuaries—is Oregon's most common seagrass. It can be found in all of Oregon's 22 major estuaries, from the Columbia River estuary at the Washington border to the Winchuck River estuary near the California border. Eelgrass has particularly high ecological value given the services it provides for wildlife, people, and the climate. Eelgrass is considered foundational because it creates highly structured habitat in what would otherwise be loose sand or sediment. Eelgrass in Oregon's estuaries helps to sustain salmon, water birds, Dungeness crab, oysters, forage fish, cultural resources, and jobs for many walks of life in coastal communities. The plant will be a key factor in the calculus of climate change adaptation for Oregon's coast: it helps store greenhouse gases, appears to mitigate ocean acidification, and safeguards coastal communities from the impacts of increased storms and floods. Unfortunately, this versatile seagrass is disappearing because of pollution, dredging, development, sea level rise, and other impacts.

One of the greatest obstacles in assessing risks to Oregon's eelgrass habitat is the lack of long-term data and monitoring (using a consistent methodology) on eelgrass extent. Limited monitoring of extent makes it difficult to quantitatively measure eelgrass habitat loss, which in turn makes identifying and monitoring specific threats to eelgrass habitat a challenge. Without knowledge of what is being managed—i.e., what threats Oregon's eelgrass is facing—decision-making with the potential to impact this foundational habitat is being carried out in the dark.

While there is some question as to the exact linear and bathymetric extent of eelgrass and its suitable habitat in Oregon's estuaries, the crucial fact remains that there have been documented losses of eelgrass habitat throughout the world and there is evidence that the Oregon Coast is following this disturbing global trend. Recent evidence of eelgrass disappearance in Coos Bay adds urgency to Oregon's need to transform and transition its existing approach to eelgrass management to ensure lasting protections for this crucial vegetation and its suitable habitat.

In order to make effective eelgrass protection possible in Oregon, we need an empowered and inclusive grassroots movement engaged at the local, state, and federal level, working alongside sovereign tribal governments and Indigenous-led organizations to achieve common goals. The expertise found within coastal communities (whether lived, academic, professional, or otherwise) is necessary to create sustainable, tailored, and ecologically sound decision-making related to precious eelgrass resources. The public can participate in processes at the local, state, and federal level to build this grassroots movement, and decision-makers, motivated by public demand, can take opportunities to expand participatory processes to make appropriate and informed decisions. Given the critical role of eelgrass in climate adaption, appropriate and informed decision-making related to this vegetation and its habitat will also play a crucial role in improving coastal climate resilience.

This primer has three sections: **Part I** one of this Primer is meant to serve as a quick reference guide summarizing the issues affecting Oregon's eelgrass habitat and known gaps in management frameworks. It concludes with some key examples of how interested members of the public can educate themselves on the issues, connect with relevant decision-makers, and participate in processes that may impact local eelgrasses. **Parts II and III** provide more detail on existing legal frameworks for protecting eelgrass and some suggestions for effective long-term strategies for closing management gaps.

The Oregon Shores Conservation Coalition (Oregon Shores), with support from the Pew Charitable Trusts, City of Coos Bay, and Crag Law Center, offers this Primer to help coastal community members and other concerned citizens understand the key issues, so that they can learn more about and effectively participate in planning to protect this vital coastal habitat. Oregon Shores would like to see our local, state, and federal decision-makers provide the strongest eelgrass habitat protections possible to ensure vibrant ecosystems and regenerative economies on the Oregon Coast for years to come. This Primer aims to help community members navigate local, state, and federal decision-making processes that can lead to better protections for eelgrass.

Part I: A People's Primer on How to Protect Eelgrass and its Habitat in Oregon

This section provides a quick reference guide for interested members of the public on how to get involved in decision-making processes that may impact Oregon's eelgrass, and lists key public participation opportunities offered by existing management frameworks.

1. What is Eelgrass and why should we protect it?

Two species of eelgrass¹ are present in Oregon's coastal zone: Native Oregon eelgrass (*Zostera marina*)² and invasive dwarf eelgrass (*Zostera japonica*).³ Native Oregon eelgrass occurs only in intertidal and shallow subtidal habitats with soft sediment and adequate light, and is primarily found in estuaries.⁴ Eelgrass plays an enormous role in ecosystem services for marine life and habitat, ocean health, and resilient coastal communities.

Eelgrass beds in Oregon's estuaries and bays provide an array of benefits for marine life and habitat, including, but not limited to:

- **Providing crucial nursery habitat for Dungeness crabs, salmon, halibut, and other animals that boost local coastal economies.** Eelgrass beds play an integral role in the ocean food chain by physically forming habitat where microorganisms such as plankton thrive. The swaying grasses also offer shelter and foraging areas for rockfish, salmon, and Dungeness crab. Pacific herring, a vital forage fish, lay their eggs on the long, slender leaves of eelgrass.
- **Feeding birds and marine mammals.** Migratory waterfowl, including the Pacific black brant, eat eelgrass. Eelgrass serves as the base of the food chain for several marine mammals.
- **Improving water quality and clarity.** Like a massive filter, eelgrass helps improve water quality by absorbing pollutants. Recent studies show a drastic reduction in harmful chemicals such as polychlorinated biphenyls (PCBs) in areas with eelgrass beds. Other studies on the West Coast have shown that bacteria found in the beds help prevent harmful algal blooms. Eelgrass also traps and retains sediment, resulting in clearer, cleaner water.
- **Oxygen production.** By pulling carbon dioxide out of the water during photosynthesis, eelgrass produces oxygen. This may help offset the effects of ocean acidification

¹ Seagrasses are the only flowering plants which grow in marine environments. There are about 60 species of fully marine seagrasses. While we refer primarily to Oregon's eelgrass in this guide, seagrasses wherever they are found provide similar ecosystem services and hence deserve careful management to protect their productivity.

² Or. Dept. of Fish & Wildlife [ODFW], *Native Eelgrass*, The Oregon Conservation Strategy, <https://www.oregonconservationstrategy.org/strategy-species/native-eelgrass/> (last visited Dec. 17, 2020).

³ David Young et al., Has the Rapidly Expanding Invasive Dwarf Eelgrass *Zostera japonica* in Yaquina Estuary, Oregon Impacted the Distribution of Native Eelgrass *Zostera marina* – a Critical Intertidal Habitat? – CERF, Coastal & Estuarine Res. Fed'n Biennial Meeting (2013), https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=NHEERL&dirEntryId=263037&CFID=70346472&CFTOKEN=85343958.

⁴ *Native Eelgrass*, The Oregon Conservation Strategy, *supra*.

Eelgrass beds in Oregon play a role in global ocean health and mitigating the harmful effects of climate change, including:

- **Carbon Sequestration.** Eelgrass absorbs carbon dioxide and methane—both climate-warming greenhouse gases—and stores them in its root system. This helps to reduce the harmful effects of climate change. By one scientific estimate, an acre of eelgrass can sequester 740 pounds of carbon per year, about the same amount emitted by a car traveling 3,860 miles.⁵
- **Providing Relief from Ocean Acidification.**⁶ Research suggests that eelgrass' carbon sequestration can act as a local buffer against the effects of ocean acidification. Ocean acidification inhibits the ability of some marine life, such as oysters and Dungeness crab, to form shells.⁷

For Oregon's coastal communities, eelgrass can play an important role in climate adaptation, including:

- **Protecting and stabilizing coastal shorelines.** Eelgrass beds provide natural buffers against coastal storms by absorbing the force from waves and, through their extensive root systems, preventing shoreline sediments from washing away. The underwater meadows filter pollutants from water and provide protection from shoreline erosion, storm surges, and rising sea levels.
- **Strengthening coastal economies.**⁸ Healthy beds support fish and shellfish that are integral to the commercial and recreational fishing industries—the economic engines of many coastal communities. They provide fertile ground for recreational fishing and encourage tourist activities, such as snorkeling and diving. Eelgrass also supports a wide array of wildlife that draws millions of visitors to the West Coast each year.

Despite being one of the most important and productive plants in marine environments, eelgrass and other seagrasses are under threat. Approximately 30 percent of the world's seagrass has vanished since the 1870s.⁹ Worldwide, coastal communities are losing an area of seagrass that would cover two football fields every hour.¹⁰ In Oregon, eelgrass has “inexplicably begun disappearing from some parts of Coos Bay.”¹¹ Some of the threats facing eelgrass in Oregon include:

⁵ Ashley Gallagher, *Blue Carbon Infographic*, Smithsonian Ocean, <https://ocean.si.edu/conservation/climate-change/blue-carbon-infographic> (last visited Dec. 17, 2020).

⁶ Jes Burns, *Can Kelp And Seagrass Help Oysters Adapt To Major Ocean Change?*, OPB (Jan. 31, 2018), <https://www.opb.org/news/article/kelp-seagrass-oysters-ocean-change/>.

⁷ *Seagrass and Kelp as an Ocean Acidification Management Tool in California*, California Ocean Science Trust, <https://www.oceansciencetrust.org/projects/sav/> (last visited Dec. 17, 2020).

⁸ Jessie Neumann, *Splendors of Seagrass*, The Ocean Foundation (July 8, 2015), <https://oceanfdn.org/splendors-of-seagrass/>.

⁹ See, e.g., Paul Shively, *Eelgrass is Essential to Ocean Health*, Pew Charitable Trusts (June 7, 2019), <https://www.pewtrusts.org/en/research-and-analysis/articles/2019/06/07/six-reasons-to-protect-eelgrass>.

¹⁰ *Id.*

¹¹ *Oregon's Eelgrass Is Disappearing, With Potentially Big Impacts*, Pew Charitable Trusts (July 16, 2019), <https://www.pewtrusts.org/en/research-and-analysis/articles/2019/07/16/oregons-eelgrass-is-disappearing-with-potentially-big-impacts>.

- **Dredging and other coastal developments;**
- **Sea level rise;**
- **Warming ocean waters;**
- **Eutrophication [an excess of nutrients causing harmful algae growth]; and**
- **Watershed disturbances, like logging, that release a lot of sediment into the water upstream from an estuary.**

Globally, seagrasses¹² play an enormous role in supporting food security, mitigating climate change, and supporting biodiversity in coastal areas.¹³ In the United States, some states (such as California) have begun the journey to assess the status of eelgrass in their coastal waters, and are slowly working toward establishing effective, ecosystem-based management (EBM) plans for its protection. Oregon and Washington have yet to implement similar eelgrass-specific assessment programs or protection policies. As a result, eelgrass beds in the Pacific Northwest remain under significant pressure. This pressure is compounded by critical gaps in scientific data, both globally and regionally, on eelgrass conditions, distribution, mapping, and status monitoring, as well as critical gaps in integrated coastal, estuarine, and ocean cross-jurisdictional management (i.e., coordinated local, state, federal, and international governance, working alongside tribal and first nations). These pressures create important opportunities for people and organizations in Oregon to improve the eelgrass knowledge-base and take effective, evidence-based actions to sustainably manage eelgrass.

2. Effective Participation in Eelgrass Decision-Making

The path to a broad West Coast seagrass policy starts with educating people and organizations on effective first steps toward stronger state policies in Oregon. Oregon's strong tradition of public participation in environmental policymaking and land use planning will be an essential tool for coastal communities in addressing threats to eelgrass. With active public engagement, it is still possible to safeguard much of the remaining 200 square miles of eelgrass habitat along the Pacific coast from present and future threats, and protect suitable habitat to enhance and restore this vital vegetation for the future.

Effective advocacy requires two foundational steps: (1) gathering information about the issues and the applicable legal or regulatory framework; and (2) preparing comments or testimony that raises issues of concern within the applicable regulatory framework.

- **Learn.** Become familiar with the decision-maker by learning about the process. This means learning how the system operates, as well as the appropriate context for opportunities to protect Oregon's eelgrass.
- **Comment and Testimony:** Attend, prepare written public comments for, and testify at a meeting. Written public comments or oral testimony could encourage decision-makers to develop and recommend an eelgrass mitigation plan that clearly gives priority to data collection to better inventory existing eelgrass beds in Oregon, and development of

¹² Eelgrass and seagrass are two forms of submerged aquatic vegetation (SAV).

¹³ Richard K.F. Unsworth, et al., *Global Challenges for Seagrass Conservation*, 48 *Ambio* 801 (2019).

criteria or guidance that prioritizes avoidance of impacts to eelgrass during environmental reviews of proposed developments with the potential to impact eelgrass.

Since we know eelgrass is under threat in Oregon, what are the initial steps that people, organizations, and local governments can take towards developing a plan to protect it? Specific plans may vary from estuary to estuary, but developing a systematic approach will help communities prepare meaningful and appropriate strategies. A good starting place for people, planners, and decision-makers is to gather existing data on threats and likely impacts to eelgrass (including climate change effects) by estuary/ecoregion to help answer the following questions:

- What common challenges to achieving eelgrass conservation goals exist in my estuary?
- How could those challenges pose a risk to addressing existing or future eelgrass threats in my estuary?
- How would loss of eelgrass acreage in Oregon's estuaries and coastal waters affect my community? and
- How may climate change impact eelgrass in Oregon's estuaries and coastal waters, and how will that in turn affect my community?

This information-gathering exercise will help focus issues of concern and can inform development of comments or testimony to help persuade decision-makers at the local, state, or federal level to adopt increased protections for seagrasses.

Here are some key considerations for public participation in existing processes at the local, state, and federal level:

- **Local government as well as state and federal agency decision-making processes can often be highly technical in nature.** This Primer along with its appendices will provide the basic information needed to comment on the importance of eelgrass beds and habitat to the health of the Oregon coast, identify the gaps in legal protections for this resource, and provide recommendations to improve protections for existing and potential eelgrass habitat in Oregon's estuaries.
- **Effective public participation requires developing familiarity with the relevant local government, state, or federal agency processes and procedures.** Lack of familiarity with navigating procedural rules used in formalized proceedings is frequently a barrier to public access in decision-making. Each local land use hearing, planning commission/city council/board of commissioner hearing, state agency board/commission hearing, state agency rulemaking hearing, state agency permit proceeding, federal commission hearing, federal agency rulemaking hearing, and federal agency permit proceeding has its own notice and comment rules and participatory structures. This Primer with its appendices offers resources to improve familiarity with procedural rules.

- **Effective public participation requires learning about existing public engagement opportunities outside of formal processes.** These include seminars on processes and substantive issues, as well as public meetings on permit proceedings and rulemaking at the local, state, and federal level.

One final consideration at the time of writing this primer is whether hybrid options to attend public meetings (i.e., via phone or video call) will still be available at the local, state, and federal level. Interested members of the public would do well to urge decision-makers to make all possible efforts to keep remote attendance an option for project review and rulemaking processes; this will broaden access to hearings and meetings where planning for Oregon's eelgrass habitats is considered.¹⁴

Oregon's coastal communities, as well as their local governments, can play an essential role in improving recognition and protection of this crucial vegetation.¹⁵ Seagrass protection must start with evidence-based, global-to-local education and response, supported by state and federal agencies and decision-makers. Effective strategies need to be implemented to prevent loss of existing eelgrass beds, reverse ongoing eelgrass disappearance, protect suitable eelgrass habitat, and recognize the fundamental role of eelgrass in Oregon's efforts toward coastal climate resilience.

3. Challenges for Effective Eelgrass Protection in Oregon

Lack of monitoring using a consistent methodology and significant scientific data gaps make a holistic assessment of the current status of eelgrass habitat in Oregon's coastal waters challenging.¹⁶ In general, consistent monitoring of the distribution of all eelgrass species is needed to document losses of this critical habitat type so as to inform effective action.¹⁷ The full extent of eelgrass habitat currently present in Oregon's estuaries and nearshore areas, relative to historic acreage in those places, seems to be limited to aerial imagery (e.g., Oregon's 1972-1973 Estuary Plan Book)¹⁸ and anecdotal information (Columbia River) that is not always used as a basis for decision-making for this resources. Modern data is otherwise over a decade old (Nehalem River, Sand Lake, Nestucca Bay, Salmon River, Siuslaw River, Umpqua River, Coquille River), and thus obsolete, as well as limited to aerial imagery (all estuaries in Oregon, except for Coos Bay) or limited in extent.¹⁹ In Barker Creek, Rogue River, and Chetco River,

¹⁴ As a general rule, Oregon Shores strongly argues that increasing and supporting public participation should be a goal for all regulatory processes.

¹⁵ See, e.g., Sarah Adams-Schoen, *Sink or Swim: In Search of a Model for Coastal City Climate Resilience*, 40 Colum. J. Envtl. L. 433 (2015) (for climate resilience, cities are especially important, and this role was recognized with Intergovernmental Panel on Climate Change's (IPCC) 5th assessment report).

¹⁶ See, Kate Sherman & Lisa A. DeBruyckere, *Eelgrass Habitats on the U.S. West Coast: State of the Knowledge of Eelgrass Ecosystem Services and Eelgrass Extent*, Pacific Marine and Estuarine Fish Habitat Partnership for The Nature Conservancy 2 (2018), available at http://www.pacificfishhabitat.org/wp-content/uploads/2017/09/EelGrass_Report_Final_ForPrint_web.pdf ("Using historical records and monitoring data to track changes to eelgrass habitat is a helpful tool. Monitoring change in eelgrass habitats through consistent sampling methodology is crucial to evaluating causes of decline and factors contributing to success of restoration efforts.").

¹⁷ *Id.* at 53.

¹⁸ *Id.* at 22.

¹⁹ Sherman & DeBruyckere, *supra*, at 20-22, 51 (Table 7).

eelgrass appears to be present in ShoreZone imagery and literature, but no spatial extent data exists.²⁰ A 2018 study indicates that 36 out of 54 estuarine areas identified in Oregon have no data present at all (66 percent of estuaries), including in four major estuaries (Winchuck River, Elk River, Necanicum River, and Depoe Bay).²¹ In five major estuaries, data shows eelgrass is present, but its extent is currently unknown (Chetco River, Pistol River, Rogue River, Sixes River, and Columbia River).²² Per Pew Charitable Trusts, roughly 200 square miles of known healthy and intact eelgrass remain in various bays and estuaries along the Pacific coast, including in Washington's Puget Sound and Willapa Bay, Oregon's Coos, Tillamook, Netarts, and Yaquina Bays, and San Francisco and Humboldt Bays in California. It is unclear how many healthy acres have been documented in Tillamook, Netarts, Yaquina Bay, and Coos.²³

4. **Natural and Anthropogenic Threats to Eelgrass in Oregon**

As noted above, some of the threats facing eelgrass in Oregon include:

- Dredging and other coastal developments;
- Sea level rise;
- Warming ocean waters;
- Eutrophication [an excess of nutrients causing harmful algae growth]; and
- Watershed disturbances, like logging, that release a lot of sediment into the water upstream from an estuary.

This Primer is focused on providing insight into existing legal frameworks for eelgrass management in Oregon, and supporting interested members of the public in navigating these frameworks. Learning about the natural and anthropogenic (i.e., human) threats to eelgrass and its suitable habitat is important for informed public participation, but an in-depth discussion of these topics is not the focus of the current version of this Primer. In addition to the overview of threats offered by this Primer, the following resources will support interested members of the public in learning more about the specific state of eelgrass and its habitats in Oregon and the Pacific Northwest:

- ***Eelgrass habitats on the U.S. West Coast - State of the Knowledge of Eelgrass Ecosystem Services and Eelgrass Extent***, A publication prepared by the Pacific Marine and Estuarine Fish Habitat Partnership for The Nature Conservancy (Apr. 2018): http://www.pacificfishhabitat.org/wp-content/uploads/2017/09/EelGrass_Report_Final_ForPrint_web.pdf.

This report is referenced frequently throughout this Primer, and is one of the most up-to-date documents on the state of knowledge on eelgrass ecosystems and habitat extent for Oregon. Beyond providing a thorough literature review of the presence and spatial extent of eelgrass, it offers provides a comprehensive discussion of eelgrass' ecosystem services as well as several helpful tables and figures to learn more about eelgrass. Figure 3 depicts the state of knowledge of

²⁰ *Id.* at 51.

²¹ *Id.* at 20-21.

²² *Id.* at 20-21.

²³ Oregon's Eelgrass is Disappearing, Pew Charitable Trusts, *supra*.

eelgrass presence in Oregon.²⁴ Table 5 depicts the ecosystem services of eelgrass habitats.²⁵ Table 6 outlines threats to eelgrass habitats on the West Coast, including water quality, land use, climate, and lack of human awareness.²⁶ Finally, Table 7 details known data gaps and limitations of eelgrass habitats.²⁷

- **Pew Charitable Trusts Eelgrass Toolkit:** <https://www.pewtrusts.org/en/research-and-analysis/articles/2019/11/12/eelgrass-is-essential-to-ocean-health>

Pew's Ocean Conservation program is a helpful resource for members of the public interested in learning more about eelgrass conservation topics relevant to Oregon and the West Coast. The above site lists Pew's most recent work related to eelgrass on the West Coast, which is an excellent way for members of the public to learn about potential key initiatives for protecting eelgrass and estuaries in Oregon. Finally, Pew's website also offers members of the public an email newsletter sign-up to receive notices regarding U.S. West Coast coastal habitat and marine conservation news, analysis, and opportunities to act.

- **EcoAdapt and the Climate Adaptation Knowledge Exchange (CAKEX):** <https://www.cakex.org/>

EcoAdapt, a Washington-based 501(c)(3) was founded to provide adaptation support, training, and assistance to make planning and management decision-making less vulnerable to climate change. EcoAdapt runs the Climate Adaptation Knowledge Exchange, also known as CAKEX. CAKEX includes a Climate Adaptation Toolkit for Marine and Coastal Protected Areas (<https://www.cakex.org/MPAToolkit>). The Toolkit contains an Adaptions Action Table (<https://www.cakex.org/MPAToolkit/adaptation-actions-table>), which lists management suggestions for eelgrass habitats/locations as well as for specific potential climate stressors/impacts.

A recent three-day virtual training series organized by the Commission for Environmental Cooperation (CEC) in collaboration with EcoAdapt, Parks Canada, and NOAA's Marine Protected Area (MPA) Center, entitled "Building Capacity for Climate Adaptation Planning in Atlantic Coastal and Marine Protected Areas,"²⁸ may be of particular interest to members of the public who wish to learn more about how local, state, and federal decision-makers can effectively evaluate climate change impacts to eelgrass. In the training, the participants used the Toolkit's rapid vulnerability assessment to engage in an eelgrass breakout group exercise,²⁹ and developed a comprehensive planning summary entitled "Climate Change

²⁴ Sherman & DeBruyckere, *supra*, at 21 (Fig. 3).

²⁵ *Id.*, 34-35, 37-38.

²⁶ *Id.*, 49.

²⁷ *Id.*, 57.

²⁸ Commission for Environmental Cooperation (CEC), et. al., *Building Capacity for Climate Adaptation Planning in Atlantic Coastal and Marine Protected Areas*, EcoAdapt Virtual Training Series, (Oct. 2020), <http://ecoadapt.org/workshops/cec-atlantic-canada>.

²⁹ CEC, Habitat Breakout Group Exercises – Eelgrass, From EcoAdapt virtual training series: Building Capacity for Climate Adaptation Planning in North Atlantic Coastal and Marine Protected Areas, (Oct. 2020), http://ecoadapt.org/data/documents/AtlanticTrainingModuleExercises_Fillable_FACILITATORS-EELGRASS.pdf.

Vulnerability Assessment & Adaptation Planning for Eelgrass Habitats of the North Atlantic.”³⁰ Initiating a similar vulnerability assessment and adaptation planning process amongst stakeholders and interested conservation groups on the West Coast could be a helpful starting point for evaluating existing eelgrass management frameworks.

5. **Key Examples: Possible Public Participation Opportunities to Protect Oregon's Eelgrasses**

Sustained public engagement is crucial to creating durable and meaningful eelgrass protection frameworks in Oregon. The public can take two key steps to begin the journey. First, members of the public can learn about effective ways to protect eelgrass and eelgrass habitat. This goal of this guide is to provide both a primer and a quick reference guide to support that educational journey. Second, members of the public can engage with local, state, and federal decision-makers in formal and informal processes that impact eelgrass. Each of these processes have their own notice and comment rules, procedures to submit testimony, and participatory structures. Since lack of familiarity with these processes can often be a barrier to participation, we begin with providing a summary of how and when a member of the public can engage in formal and informal decision-making processes related to eelgrass protection. Appendix A contains a more comprehensive list of potential avenues for participation, guidance on how to sign up for notices from relevant decision-makers, and further examples proposals and rulemaking that could affect eelgrass and eelgrass habitat.

5.1. **Local – Formal and Informal Processes**

Oregon's eelgrass occurs primarily in Oregon's estuaries. Land use in Oregon's Estuaries is governed by Goal 16, which is implemented by estuary adjacent cities and counties. There are many types of “formal”³¹ coastal city and county decision-making processes that could impact eelgrass and eelgrass habitat in Oregon's estuaries. Participatory structures for these formal land use decision-making processes will differ from city-to-city and county-to-county. Members of the public can lend their voices to inform land use decision-making that impacts eelgrass resources, evaluate development proposals that impact existing and potential eelgrass habitat, and even initiate changes to local ordinances and comprehensive plans to better reflect community needs on protecting submerged aquatic vegetation (SAV) like eelgrass by engaging in estuary management plan updates. Specifically:

- **“Quasi-judicial” land use permit hearings.** The “quasi-judicial” hearing process required under Oregon Revised Statute (ORS) 197.763 offers an opportunity for the public to comment on proposed development permits as well as comprehensive plan or ordinance changes that could impact eelgrass and eelgrass habitat. This could involve chances to submit testimony and evidence in public hearings before a local planning

³⁰ CEC et. al., Climate Change Vulnerability Assessment & Adaptation Planning for Eelgrass Habitats of the North Atlantic, Summary report from EcoAdapt virtual training series: Building Capacity for Climate Adaptation Planning in North Atlantic Coastal and Marine Protected Areas, (Oct. 2020), http://ecoadapt.org/data/documents/Eelgrass_SummaryReport_NorthAtlantic_Dec2020final.pdf.

³¹ A formal process is one that is required by statute for certain types of development permit proposals and local government legislative decisions.

commission as well as before a city council or county board of commissioners. The quasi-judicial hearing process is frequently initiated by application, and requires public notice of the application once deemed complete.

- **Estuary Management Plan Updates:** Oregon's estuary management plans are one of the few legal frameworks that explicitly reference eelgrass. Estuary management plans must be adopted into coastal county and city comprehensive plans with jurisdiction over Oregon's estuaries. As discussed below, Oregon's estuary management plans are on the cusp of going through a much-needed update. Interested members of the public can reach out to relevant planning departments, the Oregon Department of Land Conservation and Development (DLCD), to receive notices on when certain estuary management plans are scheduled to come under review and learn more about the update process.
- **Legislative Land Use Decisions:** Community members can propose targeted changes to local comprehensive plans and land use codes. Thus, legislative land use decisions are another avenue that the public could use to work with decision-makers to close legal gaps and expand eelgrass protections in Oregon's estuaries. Local governments can and frequently do have local code-based procedures for legislative land use decisions, including prehearing notice and other requirements. Appendix A provides more detail about proposing changes and participating in local legislative processes.

In addition to formal processes, informal processes at the local government and the regional level offer the public an excellent opportunity to begin a dialogue with local planning departments, planning commissions, city councils, boards of commissioners, and port commissioners on what meaningful eelgrass protection could look like for a coastal community. Examples of informal processes include providing general comment about the importance of eelgrass and eelgrass habitat at scheduled public meetings of local planning commissions, city councils, or boards of commissioners, as well as attending work sessions and informational meetings on proposed developments and comprehensive plan updates with the potential impact shorelands and estuaries. Regularly scheduled port commission meetings³² also offer the public a chance to learn about port projects in estuaries, and thus how port activities may impact eelgrass resources.

5.2. State – Formal and Informal

The DLCD and Oregon Department of State Lands (DSL) are two key state agencies whose formal and informal decision-making authorities have the potential to impact Oregon's eelgrass and estuaries. Some primary examples which offer avenues for public participation on issues related to eelgrass and eelgrass habitat are summarized below, and discussed in further detail in Appendix A.

5.2.1. Department of Land Conservation and Development (DLCD)

Of note for members of the public interested in protecting Oregon's eelgrass and eelgrass habitat, DLCD is the primary agency responsible for overseeing Oregon's federally approved

³² See, e.g., Oregon International Port of Coos Bay, <https://www.portofcoosbay.com/meetings>.

coastal management program, called the Oregon Coastal Management Program (OCMP) as well as assisting the Land Conservation and Development Commission (LCDC), local governments, and state agencies in the implementation of Oregon's statewide land use planning goals (Goals).³³ Actions under the OCMP and Oregon's land use planning system both have the potential to impact Oregon's eelgrass, and thus can offer members of the public opportunities to engage in protecting this resource. Some key examples include:

- **Estuary Management Plan Updates:** The DLCD is working with local governments with authority over Oregon's estuary management plans to update Oregon's outdated estuary management plans, most of which were drafted in the early 1980s. These estuary management plan updates provide the public a new opportunity to help protect eelgrass and eelgrass habitat by working with local decision-makers to draft stronger protections for eelgrass habitats that focus on prevention of loss and avoidance of impacts. The public can stay engaged in estuary management plan updates by learning about how estuary management plans protect species like eelgrass; attending informal informational meetings hosted by DLCD as well as local government on the process; and signing up for opportunities for public comment on individual estuary management plan processes. As of May 2021, the Yaquina Bay Management Plan and the Coos Bay Estuary Management Plan were both in the process of undergoing updates.
- **Post Acknowledgement Plan Amendments (PAPAs):**³⁴ State law requires local governments to submit all comprehensive plan change proposals to the DLCD before adoption.³⁵ These are known as Post Acknowledgement Plan Amendments (PAPAs). Estuary management plan updates will go through the process required for PAPAs prior to adoption. One way for the public to stay tuned for opportunities to comment on estuarine plan amendments with the potential to impact eelgrass is by signing up for DLCD's Plan Amendment Notification Service.
- **Federal Consistency Review (FCR):** DLCD is the lead agency responsible for coordinating federal consistency reviews pursuant to the Coastal Zone Management Act of 1972 (CZMA) and CZMA governing regulations in Title 15 CFR §930 and §923. These reviews ensure that federal agency activities affecting any coastal use or resource are consistent to the maximum extent practicable with the enforceable policies of the OCMP. Federal rulemaking and certain federal development permits are examples of activities that require federal consistency certification by DLCD.

The Land Conservation and Development Commission (LCDC) provides policy direction for the land use planning program and oversees DLCD operations. LCDC meetings typically allot 15 minutes for general public comment, and this can offer the members of the public an

³³ DLCD, *Oregon Statewide Land Use Planning Goals* – Introduction, 1 (2019), https://www.oregon.gov/lcd/Publications/compilation_of_statewide_planning_goals_July2019.pdf [OSPG 2019].

³⁴ DLCD, Plan Amendments (PAPA), (last accessed May 26, 2021), <https://www.oregon.gov/lcd/CPU/Pages/Plan-Amendments.aspx>.

³⁵ ORS 197.610.

excellent opportunity to begin a dialogue with the agency on the importance of assisting coastal communities in the planning required to evaluate what is needed for effective eelgrass protection.

5.2.2. The Oregon Department of State Lands (DSL)

The Oregon Department of State Lands has authority over Oregon's tidelands, and has served as the state agency partner for the South Slough National Estuarine Research Reserve in Charleston since 1974. DSL's Aquatic Resource Management Program (ARM) is responsible for administering Oregon's Removal-Fill Law, whose mission is to conserve and protect waters of the state, including wetlands.

DSL's removal fill permit review process, particularly for activities involving estuarine dredging and fill, is a key example of formal state participation opportunity where members of the public can make their voices heard about the importance of avoiding harms to eelgrass. Removal-fill permits for activities in Oregon's estuaries, particularly those proposing estuarine dredging, are frequently subject to a minimum 30-day public review that could involve opportunities to submit both written comment and oral testimony. Hence, signing up for DSL's removal-fill program public review list, and providing comment on removal-fill applications for projects within estuaries, offers another avenue that the public could use to ensure decision-makers avoid harms to seagrasses in Oregon's estuaries.³⁶

Informal engagement opportunities include attending a State Land Board meeting, which can help members of the public learn more about the DSL rulemaking process and stay engaged with DSL program activities impacting estuaries. Since the State Land Board typically only accepts comments from the public on consent or action agenda items, members of the public can review State Land Board agendas and provide written or oral testimony on matters relevant to eelgrass and eelgrass habitat when they arise.

5.3. Federal – Formal and Informal

Local government plans and ordinances must respond to state laws and policies, which in turn must respond to federal laws and policies. The two primary federal agencies with authority over federal activities and rulemaking relevant to Oregon's eelgrass and eelgrass habitat include several offices of National Oceanic and Atmospheric Administration (NOAA) and the U.S. Army Corps of Engineers (USACE). As with the state and local level, the public can participate in formal federal agency decision-making processes with the potential to impact eelgrass resources. Participatory structures for these decision-making processes will differ depending on the federal statute governing the particular action, and the relevant agency rules implementing said statute.

³⁶ Participating in a review process related to a state removal fill permit application with the potential to impact seagrasses will also prepare members of the public to participate in a parallel federal permit process under Section 404 of the Clean Water Act administered by the U.S. Army Corps of Engineers.

NOAA is the federal scientific agency that is responsible for the conditions of the ocean, major waterways, and the atmosphere.³⁷ NOAA's National Marine Fisheries Service (NMFS)³⁸ and NOAA's Office for Coastal Management (NOAA-OCM)³⁹ have authority under the Magnuson-Stevens Fishery Conservation and Management Act and the Coastal Zone Management Act of 1972 (CZMA), respectively, to work with Oregon's state and local governments to support eelgrass protection efforts on the Oregon Coast. Appendix A offers more detail as to how the public can engage in federal agency processes.

5.3.1. The National Marine Fisheries Service (NMFS)

Under authority derived from the Magnuson-Stevens Fishery Conservation and Management Act (MSA),⁴⁰ NMFS regulates commercial and recreational marine fishing in inland, coastal, and offshore waters of the United States, including the ecological functions within rivers and estuaries relevant to the health of those fisheries. The MSA establishes eight regional fishery management councils (RFMCs).⁴¹ RFMCs are required to formulate and recommend fishery management plans (FMPs) to NMFS, which are in turn enforced and implemented through regulations developed in collaboration with the regional NMFS office. The Pacific Fisheries Management Council (PFMC) is responsible for developing and recommending fishery management measures to NMFS for federal waters off Washington, Oregon, and California. Management measures recommended by PFMC are then implemented by NMFS West Coast Regional offices (WCR).⁴²

The PFMC designated eelgrass as an essential fish habitat (EFH) area of particular concern (HAPC)⁴³ for various federally managed fish species within the Pacific Coast Groundfish Fishery Management Plan (FMP). The PFMC is responsible for conducting a properly noticed, open process in an accessible public forum that encourages public input throughout all policy-development stages and at the time of final decision-making.⁴⁴ There are

³⁷ *About Our Agency*, NOAA, <https://www.noaa.gov/about-our-agency> (last visited Dec. 17, 2020).

³⁸ NMFS is informally known as "NOAA Fisheries."

³⁹ NOAA's Office for Coastal Management is a program office of NOAA's National Ocean Service (NOAA-NOS). See, *National Ocean Service Program Offices*, NOAA, <https://oceanservice.noaa.gov/programs/> (last visited Dec. 17, 2020).

⁴⁰ The MSA is also known as the "Magnuson-Stevenson Act."

⁴¹ The RFMCs are composed of the director of the regional NMFS office, state fishery management officers, and individuals from each state who are recommended by state governors and appointed by the Secretary of Commerce. RFMCs include voting and non-voting members. For each RFMC, non-voting members include representatives of the U.S. Coast Guard, U.S. State Department, and U.S. Fish and Wildlife Service.

⁴² PFMC, *Regional Operating Agreement*, (July 2017), <https://www.pcouncil.org/documents/2019/10/pfmc-nmfs-regional-operating-agreement.pdf/> [hereinafter PFMC ROA]; *West Coast Region*, NOAA Fisheries, <https://www.fisheries.noaa.gov/region/west-coast#fisheries> (last visited Dec. 17, 2020).

⁴³ An HAPC is a subset of EFH that is rare, particularly susceptible to human-induced degradation, especially ecologically important, and/or located in an environmentally stressed area. HAPC designations are used to provide additional focus for conservation efforts. *California Eelgrass Mitigation Policy and Implementing Guidelines*, NOAA Fisheries at 4-5 (2014), available at https://www.cakex.org/sites/default/files/documents/comp_oct_2014_final.pdf ("compensatory mitigation should be recommended for the loss of existing eelgrass habitat function, but only after avoidance and minimization of effects to eelgrass have been pursued to the maximum extent practicable.") [hereinafter CEMP].

⁴⁴ PFMC ROA, 3.

several resources and public participatory structures available through the PFMC that could provide the following avenues to improve protections for eelgrass:

- **Learn.** Become familiar with the PFMC by learning about the Council process. This means learning how the system operates, as well as the appropriate context for opportunities to protect Oregon's eelgrass as EFH for Pacific Coast groundfish and salmon.
- **Comment and Testimony:**⁴⁵ Attend, prepare written public comments for, and testify at a council meeting⁴⁶ or an advisory sub-panel meeting. Written public comments or oral testimony could encourage the PFMC and NMFS to develop and recommend an eelgrass mitigation plan that clearly gives priority to avoidance of impacts, ranked above minimization and mitigation of impacts, to serve as guidance to NMFS staff and managers during EFH and FWCA consultations as well as NEPA reviews. Advisory body and technical committee meetings are generally more informal than full Council meeting, and may be a better opportunity to express general opinions and ideas as well as learn about the issues.

Informational meetings associated with regular meetings of the PFMC are excellent informal avenues for the public to engage with decision-making to protect Oregon's eelgrass.

5.3.2. NOAA and the Coastal Zone Management Act (CZMA)

NOAA has authority to partner with the DLCD, and approve future program changes to the OCMP that would serve to protect Oregon's eelgrass and eelgrass habitat. NOAA-OCM is responsible for the National Coastal Zone Management Program, one of three programs authorized by the CZMA. The National Coastal Zone Management Program comprehensively addresses the nation's coastal issues (such as eelgrass protection) through a voluntary partnership between the federal government and coastal states (like Oregon), and provides the basis for protecting, restoring, and responsibly developing the nation's diverse coastal communities and resources.⁴⁷ NOAA-OCM approval is required for the establishment of a state coastal zone management program—Oregon received NOAA approval for the OCMP in 1977.⁴⁸ DLCD is required to submit any changes to the Oregon Coastal Management Program, including new or revised enforceable policies, to NOAA-OCM for approval through the program change process.⁴⁹

NOAA's program change process⁵⁰ provides an opportunity for the public to offer comment and testimony on whether NOAA should approve proposed changes to a state coastal

⁴⁵ PFMC, *Getting Involved*, (last visited on May 26, 2021), <https://www.pcouncil.org/navigating-the-council/getting-involved/>.

⁴⁶ PFMC, *Council Meetings*, (last visited on May 26, 2021), <https://www.pcouncil.org/council-meetings/>.

⁴⁷ NOAA, *The National Coastal Zone Management Program*, (last visited on May 26, 2021), <https://coast.noaa.gov/czm/>

⁴⁸ NOAA, *States and Territories*, (last visited on May 26, 2021), <https://coast.noaa.gov/czm/mystate/#oregon>

⁴⁹ NOAA, *Program Change Process*, (last visited on May 26, 2021), <https://coast.noaa.gov/czmprogramchange/#/public/home>

⁵⁰ 15 CFR §§ 923.80 - 923.85.

management program.⁵¹ Interested members of the public can sign up⁵² to receive notices of proposed program changes to the OCMP, review materials related to the proposed change, and submit testimony encouraging NOAA to approve any future changes (including new enforceable policies) that go toward better protecting eelgrass habitats in Oregon. Members of the public can also reference coastal management program changes in California and Washington to learn more about how Oregon's West Coast neighbors might be making changes in their approved coastal zone management programs to protect eelgrass and eelgrass habitat.

5.3.3. The U.S. Army Corps of Engineers (USACE)

Many of Oregon's estuarine, nearshore, and wetland areas are waters of the United States and are thus subject to USACE's (also known as "the Corps) regulatory authority under the Clean Water Act and the Rivers and Harbors Act. The Corps' Portland District Regulatory Branch (Portland District) has jurisdiction over the state of Oregon, southern Washington ports, and restoration projects in the Columbia River estuary funded by the Bonneville Power Administration.⁵³

Individual Permit review: Certain estuarine dredging activities and in-water structure projects require an Individual Permit from the Portland District to ensure consistency with these two statutes and their implementing regulations. A standard Individual Permit is typically subject to a public interest review process, and a public notice will be issued to allow federal, state and local agencies, adjacent property owners, and the general public an opportunity to review and provide comment on the plan as well as request a public hearing for the project. Thus, interested parties can sign up for notices from Portland District by emailing the regulatory office, review relevant dredging projects to see if they will impact Oregon's eelgrass and eelgrass habitat, and offer comments on specific projects to encourage the Corps to make decisions that avoid harm to eelgrass and eelgrass habitat. The public may also request a public hearing before the agency. As noted above, in Oregon, the Corps' 404 permit and DSL removal fill permit share a joint permit application.⁵⁴ Examples of construction activities subject to review by the Corps and DSL that could impact eelgrass and eelgrass habitat include channel dredging (whether by private corporations or port entities) and the construction of in-water structures (such as docks and marinas).

6. Frameworks for Evaluating Existing Eelgrass Laws and Policies in Oregon

Effective protections for eelgrass require coastal communities to engage with decision-makers to develop laws, regulations, and policies to address multiple threats, as well as understand tribal government concerns and work alongside tribal nations to achieve common goals. A primary priority for enhancing protection of eelgrass ecosystems is improving legislation, policies, and planning frameworks to consider multiple pressures and cumulative

⁵¹ 15 CFR § 923.81 - Program change procedures, deadlines, public notice and comment, and application of approved changes.

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⁵³ USACE Portland District, *Missions-Regulatory*, (last visited May 26, 2021), <https://www.nwp.usace.army.mil/Missions/Regulatory/>.

⁵⁴ USACE Portland District, *How to apply for a permit*, (last visited May 26, 2021), <https://www.nwp.usace.army.mil/Missions/Regulatory/Apply/>

impacts from marine and land-based activities, and base policies on an integrated approach that takes into account traditional ecological knowledge and the best available science. In Oregon, eelgrass decision-making and resource planning actions will be successful if they:

- Clearly define and offer evidence-based avenues to address threats to eelgrass,
- Protect suitable eelgrass habitat,
- Obtain consent from impacted tribal governments through a government-to-government process, and meaningfully address the concerns of Indigenous peoples; and
- Increase public education, engagement, and participation in decision-making.

This process should begin with information gathering. Local, state, and federal agency planning teams should identify planning topics relevant to eelgrass and the current and expected stresses to eelgrass habitat arising from the built, natural, and human systems in each coastal area. After identifying planning topics and stressors, planning teams should create task forces to conduct eelgrass habitat vulnerability assessments for each impacted area.⁵⁵ The vulnerability assessment will help determine the sensitivity of each system.

Effective legal management frameworks could start by considering the following questions:

- Are eelgrass habitats explicitly identified as an ecosystem of environmental and traditional cultural significance by existing laws, regulations, and policies?
- What are the main anthropogenic threats to eelgrass and how are they managed?
- Have cumulative impact policies been developed?
- Do plans consider multiple pressures?
- Are eelgrass habitats stable or recovering?⁵⁶

The six main global challenges to eelgrass conservation are summarized here for the purposes of the Primer's "eelgrass diagnostic":

(1) Achieving Societal Recognition of Eelgrass Importance: a lack of public awareness of what eelgrasses are and a limited societal recognition of the importance of eelgrasses in coastal systems is identified as one of the most significant of these challenges, the consequences of which undergird the five other challenges.

⁵⁵ See, e.g., *Vulnerability Assessment and Adaptation Strategies for Eelgrass Habitats in North Atlantic Coastal and Marine Protected Areas*, EcoAdapt (2020), available at http://ecoadapt.org/data/documents/AtlanticTrainingModuleExercises_Fillable_FACILITATORS-EELGRASS.pdf (breakout group exercise used at virtual training series held on October 6, 13, and 20, 2020).

⁵⁶ Laura L. Griffiths, et al., *Critical Gaps in Seagrass Protection Reveal the Need to Address Multiple Pressures and Cumulative Impacts*, 183 *Ocean & Coastal Mgm't* 104946, 104948 (2020) (Table 2: Key questions to decide what legislative, policy, and planning actions are needed to adequately protect seagrass habitats).

- (2) Obtaining and Maintaining Data on Status and Condition in Oregon's Estuaries: the status of many eelgrass beds are unknown, and up-to-date information on status and condition is essential;
- (3) Identifying Local Threats to Better Target Management Action: understanding threatening activities at the local level (including dredging, shoreline armoring, sea level rise, warming ocean waters, and coastal watershed disturbances like upstream logging) is crucial to appropriately target management actions accordingly;
- (4) Balancing the Needs of People and Planet: expanding understanding of interactions between the socio-economic and ecological elements of eelgrass systems (e.g., in some areas, conflicts appear to exist between the needs of biodiversity conservation and the continued supply of seafood) is essential to balance the needs of people and the planet;
- (5) Generating Scientific Research to Support Conservation Actions: eelgrass research should be expanded to generate scientific inquiries that support conservation actions; and
- (6) Conservation Action in an Era of Climate Change: increased understanding of the linkages between eelgrass and climate change is required for climate resilient EBM.⁵⁷

Identifying possible challenges to eelgrass protection goes hand-in-hand with beginning the process of determining what state and local gaps exist in eelgrass protection, identifying what creates those gaps, and ensuring those gaps are closed in the development of future management frameworks for this crucial resource.

⁵⁷ Unsworth, et al., Global Challenges for Seagrass Conservation, *supra*.

Part II: Existing Legal Frameworks in Oregon

Several entities and agencies with different authorities and geographic scopes have a role in decision-making related to Oregon's eelgrass. An understanding of these players and how their authorities interact to create management frameworks is important for members of the public who are interested in participating in decision-making related to Oregon's eelgrass.

Local governments, state agencies, and federal agencies, alongside sovereign tribal governments, each have a stake in eelgrass management. Local government plans and ordinances must respond to state laws and policies, which in turn must respond to federal laws and policies. Each must meaningfully respond to the assertion of tribal sovereign power, or else should be updated to include a requirement to do so. As a rule of thumb, when participating in any rulemaking or permit review process with the potential to impact Oregon's eelgrass beds or estuarine habitat, the following considerations will assist in a comprehensive understanding of relevant management frameworks:

- For coastal city or county land use permitting processes or planning, consider what other state or federal permitting processes or regulatory planning obligations apply, and how the local government's action must be responsive to each.
- For any state permit review or planning processes, consider (1) what federal permitting processes or regulatory obligations may apply; (2) how the state must be responsive to each; and (3) how the state must consider applicable local government processes.
- For any federal permit review or planning processes, consider (1) what federal statutes and regulations apply and (2) how the federal process is required to take into account state and local land use and regulatory obligations.
- For local, state, and federal decision-making, consider which tribal nations or Indigenous-led organizations may have impacted interests, and consider whether these interests have been meaningfully considered. Remember that consultation does not equal consent.

Sections 7 through 10 of this Primer describes institutional players, their respective authorities to make decisions related to eelgrass, and their jurisdictions (i.e., the extent of the exercise of their respective authority). Section 11 uses the ongoing Jordan Cove Energy Project proposed for Coos Bay as a case study for understanding existing management frameworks in Oregon. Section 12 expands on the conversation started in Section 3, and discusses in further detail key decision-making touchpoints related to eelgrass within existing legal frameworks as well as opportunities to improve management of eelgrass and eelgrass habitats.

7. Role of Tribal Nations and Indigenous People

This Primer cannot, and does not seek to, speak for the interests of tribal nations and Indigenous people. Instead, the goals of this section are to:

1. Highlight the importance of eelgrass as a cultural resource for some tribal nations and tribal fisheries;
2. Highlight the importance of eelgrass habitat to the health of estuarine environments within the traditional Indigenous homelands of different tribes;

3. Provide interested members of the public with resources to develop a basic understanding of tribal sovereignty and the political, government-to-government relationship of tribal nations and people to the United States in context of decision-making related to eelgrass; and
4. Highlight the importance of expanding inherent tribal sovereignty over eelgrass and its habitats in Oregon.

Indigenous people of many different tribal affiliations have existed and lived along the coastlines and estuaries of the land that is now referred to as Oregon for as long as 10,000 years. Today, descendants still live, work, and continue to make important contributions to their communities on the Oregon coast, and many are members of federally recognized tribes including the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians (CTCLUSI), Coquille Indian Tribe, Confederated Tribes of Siletz Indians, Confederated Tribes of Grand Ronde, and Confederated Tribes of the Umatilla Indian Reservation.⁵⁸ Thus, Indigenous peoples have both lived alongside and in relationship with Oregon's eelgrass habitats and estuaries for thousands of years. Eelgrass is an important cultural resource for some tribal nations, including but not limited to the CTCLUSI. Further, tribal nations and Indigenous peoples may have different, complex cultural and land management practices related to Oregon's estuaries and shoreline areas. Understanding the role of tribal sovereignty and governance is vital for members of the public interested in developing effective and sustainable management frameworks to protect Oregon's eelgrass and eelgrass habitat.

The following are some resources for non-Indigenous people to learn more about the Indigenous lands on the Oregon coast where eelgrass and its habitat are present:

- Native Land Digital Map:⁵⁹ The Native Land Digital Map “does not represent or intend to represent official or legal boundaries of any Indigenous nations,” and notes that “[t]o learn about definitive boundaries, contact the nations in question.”⁶⁰ Instead, the map is an educational tool to “create and foster conversations about the history of colonialism, Indigenous ways of knowing, and settler-Indigenous relations.”
- “The Land You Live On:”⁶¹ This new and revised Teacher's Guide released by Native Land on March 2019 discusses how to use the Native Land Digital Map, the pros and cons of the map itself, the importance of learning more about colonialism, and provides further resources to learn more.⁶²

⁵⁸ In addition to the federally recognized tribes in the Oregon coast region, there are other Indigenous people of different tribal affiliations who may not be federally recognized, but continue to have a unique relationship to the coastal lands and estuaries, as well as to the eelgrass habitats that support these places. This connection predates European colonization and exists regardless of federal recognition status.

⁵⁹ Native Land Digital, *Native Land Map*, <https://native-land.ca/>.

⁶⁰ Native Land Digital, *Why it Matters*, <https://native-land.ca/about/why-it-matters/>.

⁶¹ Native Land, *The Land You Live On - An Education Guide*, (2019), <https://native-land.ca/resources/teachers-guide/>.

⁶² Id.

Federally recognized tribes⁶³ can assert their sovereign powers through government-to-government avenues in local land use, state, and federal decision-making processes related to eelgrass. For instance, tribes with treaty-reserved fishing rights can assert their powers to create fish commissions to coordinate and assist member tribes in their role as natural resource co-managers of West Coast fisheries.⁶⁴ Further, the PFMC⁶⁵ has reserved one voting seat to “an Indian tribe with federally recognized fishing rights from California, Oregon, Washington, or Idaho in accordance with Section 302(b)(5) of the Magnuson-Stevens Act.”⁶⁶

Understanding the role of tribal and Indigenous decision-making in the continued existence of eelgrass on the Oregon coast requires that the public gain a better understanding of different Indigenous community values, the relationships to the land, and how ecosystems function. A better understanding of these contexts is vital for successful efforts to protect eelgrass and eelgrass habitat for future generations.

8. **Role of Local Governments**

Three main types of local government decision-making processes have the potential to impact eelgrass on the Oregon coast. Local governments such as coastal cities and counties are responsible for:

- Adopting local comprehensive plans and estuary management plans, and periodic updates to ensure that each are responsive to community needs.⁶⁷
- Administering land use regulations and reviewing local land use permits for Oregon's non-federal land.⁶⁸

⁶³ Some non-federally recognized tribes are choosing to assert power to fight for federal recognition. The Chinook people are the original inhabitants of the lands around the mouth of what is now known as the Columbia River, an area where eelgrass is present, whose members have been fighting to regain federal recognition status for decades. The Chinook Indian Nation, *Recognition - Seeking Justice Since 1851*, (Last Visited May 26, 2021), <https://chinooknation.org/recognition/>; Tony A. Johnson, *GUEST COLUMN: Right a wrong: Restore federal recognition to Chinook Indian Nation*, Chinook Observer, (May 17, 2021), https://www.chinookobserver.com/opinion/guest-column-right-a-wrong-restore-federal-recognition-to-chinook-indian-nation/article_ce486768-b724-11eb-b391-fb210152987c.html.

⁶⁴ See, e.g., Northwest Indian Fisheries Commission (NWIFC), *About Us*, (last visited May 27, 2021) (NWIFC is a natural resources management support service organization for 20 treaty Indian tribes in western Washington), <https://nwifc.org/about-us/>; See, e.g., Columbia River Inter-Tribal Fish Commission (CRITFC), *CRITFC Mission & Vision*, (last visited May 27, 2021) (The Columbia River Inter-Tribal Fish Commission coordinates management policy and provides fisheries technical services for the Yakama, Warm Springs, Umatilla, and Nez Perce tribes), <https://www.critfc.org/about-us/mission-vision/>; See, e.g., Klamath River Intertribal Fish and Water Commission (KRITFWC), *About Us*, (last visited May 27, 2021) (KRITFWC is a non-profit organization established to address fisheries and related natural resource issues affecting tribal treaty rights), <http://www.klamathfish.org/about-us/>.

⁶⁵ PFMC, *Tribes*, (last visited May 21, 2021), <https://www.pcouncil.org/fishing-communities/tribes/>.

⁶⁶ 16 U.S.C. § 1852(b)(5).

⁶⁷ Local governments are also responsible for adopting land use zoning rules to implement comprehensive plans and estuary management plans, as well as updating said rules accordingly.

⁶⁸ OSPG 2019, 1-2.

- Working closely with DLCD as coastal program partners within the OCMP, the State of Oregon's implementation of the national CZMA program.⁶⁹

Under Oregon's statewide land use planning program, coastal cities and counties are responsible for adopting local comprehensive plans (including estuary management plans), zoning land to implement the plan, administering land use regulations, and handling land use permits for Oregon's non-federal land.⁷⁰ City and county comprehensive plans include statements of issues and problems to be addressed, various inventories and other technical information, the goals and policies for addressing the issues and problems, and implementation measures. Plans must be created in accordance with and ultimately consistent with state standards outlined in statute, statewide planning goals, and administrative rules. LCDC reviews local plans for goal compliance, and when LCDC approves a local government's plan, the plan becomes "acknowledged" as consistent with the goals. Upon acknowledgment, the comprehensive plan becomes the controlling document for land use in the area covered by that plan.⁷¹

Federal consistency review is a provision under the CZMA which requires that federal actions that have reasonably foreseeable effects on any land or water use or natural resource of the coastal zone (also known as coastal effects) should be consistent with the enforceable policies of a coastal state's federally approved coastal management program.⁷² An enforceable policy is a state policy that is legally binding under state law (e.g., through constitutional provisions, laws, regulations, land use plans, ordinances, or judicial or administrative decisions), and by which a state exerts control over private and public coastal uses and resources, and are incorporated in a state's federally approved coastal management program.⁷³ As discussed in Section 9.1, the primary authorities for the Oregon Coastal Management Program (Oregon's federally approved CZMA program) are the Oregon Land Use Planning Act and Oregon's 19 statewide land use planning goals.⁷⁴ Through the OCMP, coastal comprehensive plans and land use regulations, including those related to eelgrass in Oregon's estuaries, can be submitted for approval to NOAA-OCM as "enforceable policies." In other words, once approved, enforceable policies become applicable criteria for certain federal activities (including rulemaking) and permit requests within Oregon's coastal zone for the purposes of DLCD's federal consistency review.

Members of the public interested in protection eelgrass should become familiar with local government decision-making processes with the potential to impact Oregon's estuaries. Broad and informed public engagement in the estuary management plan update process will be crucial to ensure that issues relevant to eelgrass are considered.

⁶⁹ DLCD, *Coastal Zone Management*, <https://www.oregon.gov/lcd/OCMP/Pages/Coastal-Zone-Management.aspx>.

⁷⁰ OSPG 2019, 1-2.

⁷¹ OSPG 2019, 2.

⁷² NOAA, *CZMA Federal Consistency Review Overview*, 5 (Feb. 2020),

<https://coast.noaa.gov/data/czm/consistency/media/federal-consistency-overview.pdf> [FCR Overview]; 16 U.S.C. § 1456(c)(1)(A).

⁷³ FCR Overview, 5.

⁷⁴ NOAA-OCM, *States – Oregon*, (last visited May 26, 2021), <https://coast.noaa.gov/czm/mystate/#oregon>.

9. **Role of State Agencies**

State agencies conduct project review, implement regulatory programs, and can authorize rulemaking as well as planning processes that impact eelgrass. In addition, state agencies coordinate with federal agencies to implement certain federal programs within the coastal zone, which can also impact Oregon's estuaries through project review and rulemaking. State agencies support local decision-making with technical assistance on planning activities relevant to the coastal zone. Local decision-making must be responsive to state authority, and both in turn must be responsive to federal authority. Oregon's DLCD and DSL are two key agencies with programs and decision-making powers that can impact Oregon's eelgrass beds.

9.1. **Oregon Department of Land Conservation and Development**

DLCD is a state agency that works in partnership with local governments, as well as state and federal agencies, to address the land use needs of the public, communities, regions, and the state. The Land Conservation and Development Commission (LCDC) provides policy direction for the land use planning program and oversees DLCD operations.⁷⁵ DLCD also provides government to government collaboration and consultation with Oregon's nine federally recognized tribes on issues of interest.⁷⁶

Several DLCD programs involve actions that could impact eelgrass beds and habitat in Oregon's coastal zone. Specifically, DLCD:

- Serves as the lead administrative agency for the Oregon Coastal Management Program, with funding and technical expertise from NOAA-OCM. The OCMP consists of a network of coastal partners (including 10 state agencies, 33 coastal cities, and 7 coastal counties) with authority (i.e., enforceable policies) in the coastal zone. In addition, several federal agencies contribute to managing Oregon's coastal resources. Four coastal tribes manage coastal resource lands and are critical partners in protecting the natural, cultural, and historic heritage of Indigenous people on the Oregon coast. DLCD is the lead state agency responsible for administering the CZMA and governing regulations in Title 15 CFR §930 and §923.
- Provides planning guidance and technical assistance to each city and county in the state in consideration of regional and state planning needs, including coastal counties and cities. As discussed above, under the statewide land use planning program, city and county governments are called upon to adopt and maintain a comprehensive plan and an implementing zoning code consistent with 19 statewide planning goals. DLCD is supporting local governments up and down the coast in updating their estuary management plans. coordinating estuary management plan updates.

⁷⁵ DLCD, *About DLCD*, (last visited May, 26, 2021), <https://www.oregon.gov/lcd/About/Pages/About-DLCD.aspx>.

⁷⁶ DLCD, *Biennial Report 2019-2021*, 7 (Jan. 2021), https://www.oregon.gov/lcd/About/Documents/2019-21_Biennial_Report.pdf [DLCD Biennial Report 2019-2021].

- Reviews post acknowledgement comprehensive plan amendments (PAPAs), such as estuary management plan updates, to ensure consistency with the statewide planning goals.⁷⁷
- Addresses climate change mitigation, adaptation, and sequestration through its role as an agency that supports comprehensive planning in partnership with local governments and state entities throughout Oregon.⁷⁸ Under its climate change program, DLCD is developing Oregon's Climate Change Adaptation Framework and Climate Equity Blueprint.

Members of the public interested in protecting eelgrass in Oregon can start with these four programs to engage with DLCD, learn about the agency's activities, and seek opportunities to participate in decision-making about issues relevant to eelgrass and estuaries.

9.2. Oregon Department of State Lands

The Oregon Department of State Lands (DSL) is the administrative arm of the State Land Board (SLB), Oregon's longest-serving board. Established by the Oregon Constitution in 1859, the Land Board has been composed of the Governor (chair), Secretary of State and State Treasurer throughout its history.⁷⁹

Over time, the agency has been given other duties by the Oregon Legislature which may have the potential to impact Oregon's eelgrass beds and estuarine habitat, including:

- Administering the state's Removal-Fill Law (1967) and implementing the Wetlands Conservation Act (1989)
- Serving as the state partner to NOAA for the national South Slough National Estuarine Research Reserve in Charleston (1974)⁸⁰

As with DLCD, Members of the public interested in protecting eelgrass in Oregon can start with these programs to engage with DSL, learn about the agency's activities, and seek opportunities to participate in decision-making about issues relevant to eelgrass and estuaries.

10. Role of Federal Agencies and Programs

Local government plans and ordinances and state rules and policies (e.g., permit review, rulemaking, and estuarine planning) typically must be responsive to and consistent with federal obligations within Oregon's coastal zone. Federal authorities that could impact eelgrass and its suitable habitat in Oregon's estuaries include:

⁷⁷ DLCD, *Comprehensive plan updates*, (last visited May, 26, 2021), <https://www.oregon.gov/lcd/CPU/Pages/Comprehensive-Plan-Updates.aspx>.

⁷⁸ DLCD, *Land Use Planning and Climate Change*, (last visited May 26, 2021) <https://www.oregon.gov/lcd/CL/Pages/index.aspx>

⁷⁹ ORS §§ 273.553 – 273.558

⁸⁰ DSL, *About Us*, (last visited May 26, 2021). <https://www.oregon.gov/dsl/About/Pages/AboutAgency.aspx>

- Several federal agencies are vested with the responsibility for managing Oregon's coastal resources, including through project review and rulemaking.⁸¹
- Federal agencies work with DLCD to implement the CZMA and the OCMP in Oregon, and certain federal activities are subject to federal consistency review by DLCD.
- Federal agencies and programs can also play an important role in providing funding and technical assistance for increased education, engagement, and research for effective protection strategies for eelgrass on the Oregon coast.

NOAA⁸² is the federal scientific agency that is responsible for the conditions of the oceans, major waterways, and the atmosphere.⁸³ As discussed in Section 5.3, NOAA's NMFS and NOAA-OCM⁸⁴ have authority under the MSA and the CZMA, respectively, within Oregon's coastal zone. USACE (also known as "the Corps") is an engineer formation of the United States Army that has three primary mission areas: engineer regiment, military construction, and civil works. The Corps' Civil Works mission contains its regulatory and permit program, and which has the potential to impact Oregon's eelgrass resources.

Above all, local, state, and federal laws are charged with being responsive the needs and desires of Oregon's coastal communities. Public education and engagement are crucial for successful development and implementation of a framework for eelgrass resilience where each level of institutional management is tailored to community needs and the highest standards of ecosystem-based management. The federal programs and policies discussed in Sections 8.1 through 8.3 below offer several opportunities for people and groups to participate in decision-making to protect Oregon's eelgrass.

10.1. The National Marine Fisheries Service, the Pacific Fishery Management Council (PFMC), and the Magnuson-Stevens Act.

As discussed in Section 5.3.1., NMFS is the federal agency responsible for regulating commercial and recreational ocean fisheries in the United States.⁸⁵ The agency's stated mission is to conserve and manage these fisheries to promote sustainability as well as prevent lost economic potential associated with overfishing, declining species stock, and degraded habitats. This includes anadromous fish such as salmon and steelhead, groundfish, and halibut.⁸⁶ NMFS regulates commercial and recreational ocean fishing in the United States under its authority derived from the Magnuson-Stevenson Act, and helps states conserve coastal areas as part of the MSA's mandate to protect Essential Fish Habitat (EFH). Established in 1976, the MSA is the primary law governing marine fisheries conservation and management in U.S. federal waters.

⁸¹ DLCD, *About Coastal Zone Management*, (last visited May 26, 2021)

<https://www.oregon.gov/lcd/OCMP/Pages/About.aspx>.

⁸² NOAA is housed within the United States Department of Commerce.

⁸³ *About Our Agency*, NOAA, <https://www.noaa.gov/about-our-agency> (last visited Dec. 17, 2020).

⁸⁴ NOAA's Office for Coastal Management is a program office of NOAA's National Ocean Service (NOAA-NOS). See, *National Ocean Service Program Offices*, NOAA, <https://oceanservice.noaa.gov/programs/> (last visited Dec. 17, 2020).

⁸⁵ DLCD, *Federal Agency Program Partners*, (last visited May 25, 2021)

<https://www.oregon.gov/lcd/OCMP/Pages/Federal.aspx#3c52a224-71e5-4469-bad4-f99acf4b2900>.

⁸⁶ *Id.*

As noted, the MSA establishes eight regional fishery management councils (RFMCs).⁸⁷ Under the MSA, these RFMCs are required to formulate and recommend fishery management plans (FMPs) to NMFS. For each FMP formulated, the RFMC must identify essential fish habitat (EFH) for the managed fishery.⁸⁸ RFMCs are also required to identify any habitats that fall within “Habitat Areas of Particular Concern” (HAPC) as a discrete subset of EFH, and recommend these to NOAA Fisheries consistent with the MSA.⁸⁹ HAPCs are considered high-priority areas for conservation, management, or research because they are important to ecosystem function, sensitive to human activities, and/or especially vulnerable to degradation. The below graphic illustrates HAPC⁹⁰ in relation to EFH:



Figure 1 NOAA HAPC Web Graphic

The Pacific Fishery Management Council and NMFS⁹¹ are responsible for fisheries management measures for federal waters off Washington, Oregon, and California.⁹² Given its high ecological value, eelgrass is designated by the PFMC as EFH for both salmon and groundfish in the Pacific Northwest. Because of significant declines in this foundational habitat and its importance to the region's fisheries, PFMC further designated eelgrass as HAPC for Pacific Coast groundfish.⁹³ In addition, PFMC designated marine and estuarine SAV, including eelgrass, as HAPC for Pacific Coast salmon.⁹⁴ As discussed in Section 14 below, NMFS has

⁸⁷ The RFMCs are composed of the director of the regional NMFS office, state fishery management officers, and individuals from each state who are recommended by state governors and appointed by the Secretary of Commerce. RFMCs include voting and non-voting members. For each RFMC, non-voting members include representatives of the U.S. Coast Guard, U.S. State Department, and U.S. Fish and Wildlife Service.

⁸⁸ 16 U.S.C. § 1853(a)(7).

⁸⁹ 50 C.F.R. § 600.815(a)(8).

⁹⁰ NOAA, *HAPC on the West Coast*, (last visited May 26, 2021), <https://www.fisheries.noaa.gov/west-coast/habitat-conservation/habitat-areas-particular-concern-west-coast>.

⁹¹ The preparation, review, approval, and implementation of fishery management actions and the implementing rules and regulations under the Magnuson-Stevens Act (MSA) comprise a complex process in which the Regional Fishery Management Councils and NMFS, acting on behalf of the Secretary of Commerce (Secretary), have distinct, yet sometimes overlapping, roles. PFMC ROA, 2.

⁹² The PFMC has 14 voting representatives from Oregon, Washington, California, and Idaho. NOAA Fisheries' West Coast Region encompasses fisheries and fish habitat within the coasts and watersheds of Washington, Oregon, California, and Idaho, including 317,690 square miles of the eastern Pacific Ocean, more than 7,000 miles of tidal coastline, as well as the ecological functions within the states' vast rivers and estuaries.

⁹³ 50 C.F.R. § 600.815(a)(8); *Pacific Coast Groundfish Fishery Management Plan*, Pacific Fishery Management Council at 106 (2016), available at <https://www.pcouncil.org/documents/2016/08/pacific-coast-groundfish-fishery-management-plan.pdf/> (§ 7.3.1.3 on seagrass).

⁹⁴ 50 C.F.R. § 600.815(a)(8); Appendix A to the Pacific Coast Salmon Fishery Management Plan: Identification and Description of Essential Fish Habitat, Adverse Impacts, and Recommended Conservation Measures for Salmon, Pacific Fishery Management Council at 10-12 (2014), available at <https://www.pcouncil.org/documents/2019/08/salmon-efh-appendix-a.pdf/> (§§ 2.4.4-5 designating estuaries and marine and estuarine SAV as HAPC).

crafted specific guidance for eelgrass protection in California, but has yet to apply any specific guidance for Oregon and Washington.

Learning more about how the PFMC and NMFS recommend fisheries management measures for HAPC, as well as how these entities collaborate with Oregon state agency and tribal representatives to develop those measures, will be important for members of the public interested in engaging in decision-making related to eelgrass.

10.2. NOAA's Office for Coastal Management

Several of NOAA-OCM's programs are immediately relevant to members of the public interested in getting involved in issues related to Oregon's eelgrass. Specifically, NOAA-OCM is responsible for administering the following programs authorized by the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451-1464):

- The National Coastal Zone Management Program (CZMP): As discussed above, the OCMP is the state of Oregon's implementation of this national CZMA program, as amended by the Coastal Zone Management Act Reauthorization Amendments of 1990 (CZARA).⁹⁵ Funding for and changes to the OCMP are subject to review and approval from NOAA-OCM (16 U.S.C. §§1455-1456). NOAA-OCM also provides technical expertise in support of state programs.
- The National Estuarine Research Reserve System (NERRS) pursuant to 16 U.S.C. 1461: NERRS is a network of 29 coastal sites, established by the CZMA, designated to protect and study estuarine systems through a partnership program between NOAA-OCM and the coastal states.⁹⁶ NOAA-OCM provides funding and national estuarine research guidance, and each site is managed on a daily basis by a lead state agency or university with input from local partners. As discussed above, the South Slough National Estuarine Research Reserve (Reserve) is a 4,771-acre natural area located in the Coos estuary on the southern Oregon coast, and was designated in 1974 as the first unit of NERRS.⁹⁷ DSL serves as the state partner to NOAA-OCM responsible for daily management of the Reserve. Eelgrass is an important component of South Slough's ecosystem.

As noted above, NOAA-OCM's "program change" process offers a potential avenue for public engagement on issues related to eelgrass. The South Slough Estuarine Resource Reserve "coordinates research, education, and stewardship programs that serve to enhance a scientific and public understanding of estuaries and contribute to improved estuarine management,"⁹⁸ and thus serves as an excellent resource for members of the public to learn more about issues impacting Oregon's estuaries.

10.3. U.S. Army Corps of Engineers (USACE)

⁹⁵ CZARA requires coastal states to address "non-point source" (NPS) pollution.

⁹⁶ NOAA-OCM, *National Estuarine Research Reserves Overview*, <https://coast.noaa.gov/nerrs/about/>.

⁹⁷ 2017-2022 South Slough National Estuarine Research Reserve Management Plan, PDF 13, https://coast.noaa.gov/data/docs/nerrs/Reserves_SOS_MgmtPlan.pdf.

⁹⁸ DSL, *South Slough National Estuarine Research Reserve*, (last visited May 26, 2021), <https://www.oregon.gov/dsl/SS/Pages/About.aspx>.

The Corps' regulatory program is tasked with "protecting the Nation's aquatic resources and navigation capacity, while allowing reasonable development through fair and balanced decisions."⁹⁹ It administers and enforces Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (CWA) of 1972, both of which regulate activities with the potential to impact eelgrass in Oregon's estuaries.¹⁰⁰ Oregon's estuaries in many cases are considered navigable waters for the purposes of Section 10. Under Section 404 of the CWA, a Corps permit is required for the discharge of dredged or fill material into waters of the United States. As discussed in Part I, the Corps' Portland District Regulatory Branch has jurisdiction over the state of Oregon, southern Washington ports and restoration projects in the Columbia River estuary funded by the Bonneville Power Administration (BPA).¹⁰¹

The Corps' personnel evaluate permit applications for essentially all construction activities that occur in the nation's waters, including wetlands and estuaries. The Corps issues two types of permits: General and Individual permits, each of which have the potential to impact Oregon's eelgrass.¹⁰² In addition to Individual Permit review, Corps rulemaking on permit review procedures under both programs (including nationwide permits) also provide the public an opportunity to participate in decision-making that may impact Oregon's eelgrass resources.

⁹⁹ USACE, *Civil Works - Regulatory Program and Permits*, <https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/>

¹⁰⁰ Id.

¹⁰¹ US Army Corps of Engineers, *Portland District Website - Regulatory Mission Overview*, <https://www.nwp.usace.army.mil/Missions/Regulatory/>.

¹⁰² USACE, *Portland District - How to apply for a permit*, (includes types of permits), <https://www.nwp.usace.army.mil/Missions/Regulatory/Apply/>.

11. **Jordan Cove – A Case Study on Permitting Actions That Could Impact Oregon's Eelgrass Beds and Eelgrass Habitat**

Permitting processes and project reviews that impact eelgrass beds and habitats in Oregon can have far-reaching effects on individuals, communities, economies, and ecosystems. These are often initiated by application by public and private entities. Thus, understanding existing eelgrass policy through the legal and institutional context of permitting processes and project reviews is important:

- **Public Participation:** Interested members of the public can review application materials, and strengthen an environmental decision by providing the authoring local, state, or federal decision-maker with facts or perspectives relevant to whether the application meets governing criteria related to eelgrass. The goal of written comments and oral testimony is to support appropriate and informed decision-making by the relevant authority.¹⁰³
- **Informed Analysis:** Reviewing existing permitting and project review procedures can help interested members of the public understand how eelgrass policies are implemented, and whether eelgrass is adequately protected and managed under existing policy.

This section begins using the permitting processes between 2018 and 2020 for the ongoing proposed Jordan Cove Energy Project for Coos Bay as an illustration of existing state, local, and federal as well as tribal government project review procedures related to eelgrass in Oregon. It concludes with questions members of the public can use as a framework for analysis of the issues.

11.1. **Jordan Cove - Existing Eelgrass Management Frameworks at Play**

As noted above, estuarine dredging, in-water structures, and even mitigation proposals are key examples of projects that may impact Oregon's eelgrass. The application review processes for the proposed Jordan Cove Energy Project (Jordan Cove), an liquefied natural gas (LNG) export terminal intended for Coos Bay's North Spit, involved several permit requests for all three aspects of the Jordan Cove project between late 2018 through 2020. As such, this ongoing project is an excellent case study for:

- Illustrating existing regulatory frameworks for eelgrass in Oregon;
- Assessing whether eelgrass is adequately protected by Oregon's estuary management plans and state rules related to estuarine dredging; and
- Assessing local, state, and federal government responsiveness to tribal sovereigns; and
- Assessing federal responsiveness to the public's desire for better planning and protection of eelgrass beds and habitat.

¹⁰³ For more information on effective commenting, see Environmental Law Institute, *Step-by-Step Tips for Writing Effective Public Comment*, (Dec. 2013), <http://eli-ocean.org/wp-content/blogs.dir/2/files/Written-Commenting.pdf>.

The below table and following subsections describe the permits Jordan Cove required to conduct its dredging activities at the local, state, and federal level, for each process discuss how:

- Existing rules required eelgrass to be considered;
- Eelgrass was actually considered; and
- The outcome of each permit.

Please note that this is not a complete list of permits for the Jordan Cove Energy Project, but just one example of a specific component of Jordan Cove that involved several proposed dredging activities that could impact eelgrass.

Activities Proposed	Affected areas	Permits required:	Decision-Makers	Impacted Tribes	Consulting Agencies
<p>Jordan Cove proposed to widen the federal navigation channel in Coos Bay to allow increased LNG tanker traffic between the North Spit and foreign markets.</p> <p>The proposal involves dredging, dredge material transport via several underwater and in-water pipelines, floating in-water surface structures, dredge material disposal in areas adjacent to wetlands, and mitigation.</p>	<p>The construction and operation of Jordan Cove's proposed LNG terminal on the North Spit and expanded LNG export scheme could have direct and indirect impacts on existing eelgrass beds and potential eelgrass habitat in the Lower Bay in perpetuity</p>	<p>Local Land Use, including:</p> <p>Estuary management plan amendments</p> <p>Estuarine Development permits</p> <p>Conditional Use Permits</p>	<p>Coos County</p> <p>City of Coos Bay</p> <p>City of North Bend</p>	<p>CTCLUSI</p> <p>Coquille Band of Indians</p>	<p>ODFW</p> <p>South Slough Estuarine Reserve</p>
		<p>State Removal Fill</p>	<p>DSL</p>		
		<p>State Federal Consistency Certification</p>	<p>DLCD</p>		
		<p>Federal Clean Water Act Section 404/ Rivers Harbor Act Section 10 Approval (Section 404/10)</p>	<p>USACE</p>		

11.1.1. Jordan Cove - Land Use – Estuarine Development Permits

Jordan Cove required multiple local land use permits from the cities of Coos Bay and North Bend as well as Coos County to move forward with its proposed activities, including permits from:

- The City of Coos Bay to allow new and ongoing maintenance dredging to facilitate increased LNG tanker traffic in areas of the estuary with known eelgrass beds; in-water dredge material transport and offloading through and adjacent to eelgrass beds and habitat; and additional dredging to mitigate adverse impacts to eelgrass from its proposed new and ongoing maintenance dredging activities.
- The City of North Bend to conduct under- and overwater dredge material transport through installation of an underwater and overwater “temporary” dredge material transport pipeline, and a floating dredge material offloading facility that would impact the same eelgrass habitat as the proposed activities within the City of Coos Bay.

- Coos County to allow new and ongoing maintenance dredging for increased LNG tanker traffic; excavation in areas with the potential presence of eelgrass for LNG tanker berthing; and “temporary” in-water and overwater dredge material disposal pipeline activities that would cross known and potential eelgrass habitat in the around the North Spit.

Jordan Cove submitted these land use applications in late 2018 and through 2019. The estuary management plan provisions governing the impacted areas for the City of Coos Bay and the City of North Bend acknowledged the existence of eelgrass beds.¹⁰⁴ However, the estuary management plans governing impacted areas within Coos County did not.¹⁰⁵ The local estuary management policies governing these permits requests are also enforceable policies under the OCMP for the purposes of DLCDC's federal consistency review. Additionally, the estuary management plan governing all these local jurisdictions includes a policy requiring government-to-government negotiation between impacted tribes (including the CTCLUSI) and local governments to ensure protection of cultural resources prior to the beginning development.

Between February 2019 to January 2020, members of the public provided comments to these local governments raising concerns about the potential for Jordan Cove's activities to damage eelgrass beds in the proposed project areas. A research coordinator from the South Slough National Estuarine Research Reserve highlighted Jordan Cove's failure to consider the potential presence of eelgrass in the areas to be dredged, and reliance on outdated data to delineate the presence of eelgrass. Sovereign tribes asserted their power to protect cultural resources pursuant to government-to-government negotiation requirements, and also offered expert testimony to explain the importance of eelgrass as a cultural resource and to the health of Coos Bay as well as concern about adverse impacts. In spite of these potential impacts to eelgrass and cultural resources, each local jurisdiction approved Jordan Cove's permit requests between December 2019 and January 2020.

11.1.2. Jordan Cove - Joint Permit Application for Removal Fill

In addition to and concurrent with the local land use permits required for the respective management units and areas, Jordan Cove also needed a removal-fill permit from DSL and a CWA Section 404/Rivers and Harbors Act Section 10 permit from the Corps to move forward with its proposal and associated dredging activities.

DSL received a joint permit application from JCEP in November 2018, and deemed the application complete in mid-December 2019. From there, DSL opened a 60-day public comment period to accept written and oral testimony at five scheduled public hearings in Klamath County, Jackson County, Douglas County, Coos County, and Salem.¹⁰⁶ By the close of comment and testimony in February, 2019, DSL received oral testimony from 3,500 people and written

¹⁰⁴ CBEMP Management Unit 52-NA. Regarding existing eelgrass beds, both cities' codes and comprehensive plans acknowledged that the impacted aquatic unit “contains extensive eelgrass beds with associated fish and waterfowl habitat, and shall accordingly be managed to maintain these resources in their natural condition in order to protect their productivity.”

¹⁰⁵ 5-DA (CCZLDO Sec. 3.2.270), 5-WD (CCZLDO Sec. 3.2.260)

¹⁰⁶ OAR 141-085-0560 - Public Review Process for Individual Removal - Fill Permit Applications; ORS 196.825 - Criteria for issuance of [Removal Fill] permit

testimony from over 49,000 people, many of whom shared information and perspectives on Jordan Cove's potential adverse impacts to eelgrass in Lower Coos Bay, the project's failure to avoid those impacts, and the inadequacy of Jordan Cove's proposed eelgrass mitigation in East Coos Bay.

Under Oregon law, DSL has the authority to deny permits for projects that are inconsistent “with the protection, conservation, or best use of Oregon’s waters and that unreasonably interfere with navigation, fishing, or public recreation.”¹⁰⁷ Where a project is deemed allowable, but involves “unavoidable impacts” to protected aquatic resources, it is required to provide “mitigation” for its impacts. For the purpose of mitigation, eelgrass is defined as an aquatic resource of special concern under DSL’s rules, as well as a Category 2 “Essential and Limited” habitat under the Oregon Department of Fish and Wildlife’s (ODFW)¹⁰⁸ Habitat Mitigation Policy for the purposes of mitigation recommendations. Both emphasize “in-kind on a landscape scale”¹⁰⁹ and “in-kind, in-proximity mitigation,”¹¹⁰ respectively. DSL completed review of public comment in April 2019,¹¹¹ and sent Jordan Cove a letter to request additional information. DSL specifically asked Jordan Cove to directly address substantive public comments raising concerns about impacts to eelgrass.¹¹² In November 2019, DSL reiterated this request in part, stating that ODFW’s comments related to inconsistencies with the Habitat Mitigation Policy had not been addressed and needed to be prior to a final decision on the project.

In July 2019, the Corps opened a 30-day supplemental public comment period in part to seek further comment on the same project modifications made by Jordan Cove in Lower Coos Bay as in its “Omnibus II” applications to Coos County. These specifically involved a proposed shoreline stabilization measure called a “pile dike rock apron” and a proposed in-water “submerged temporary dredge material pipeline” route that caused permanent impacts to eelgrass beds. The Corps received multiple requests from concerned members of the public to extend the public notice comment period as well as hold public hearings regarding the proposed project modifications. In August 2019, the Corps extended the public comment period for another 30 days, and pledged to “work with the applicant directly to address issues raised through public comment to determine if a public hearing is necessary.”¹¹³

¹⁰⁷ OAR 141-085-0565(5).

¹⁰⁸ OAR Chapter 635, Division 415.

¹⁰⁹ DSL, *A Guide to the Removal-Fill Permit Process*, 34 (2019), https://www.oregon.gov/dsl/WW/Documents/Removal_Fill_Guide.pdf.

¹¹⁰ ODFW, *What is the Fish and Wildlife Habitat Mitigation Policy?*, (last visited May 21, 2021), https://www.dfw.state.or.us/lands/mitigation_policy.asp

¹¹¹ DSL, *State requests additional information for Jordan Cove removal-fill permit* (Apr. 2019), https://web.archive.org/web/20210525053015/https://www.oregon.gov/dsl/News/Documents/StateRequestsAdditionalInformationforJordanCoveRemovalFillPermit_4.11.19.pdf

¹¹² DSL, *DSL Removal-Fill Permit Application No. 60697-RF - Request for Additional information*, 7 of 9 (Apr. 2019), [https://www.oregon.gov/dsl/WW/Documents/DSL%20letter%20to%20Jordan%20Cove%20\(April%2010,%202019\).pdf](https://www.oregon.gov/dsl/WW/Documents/DSL%20letter%20to%20Jordan%20Cove%20(April%2010,%202019).pdf) [DSL RFAI].

¹¹³ USACE, *Jordan Cove LNG Project comment period extended 30 days*, (Aug. 5, 2019), <https://www.nwp.usace.army.mil/Media/Public-Notices/Article/1938031/jordan-cove-lng-project-comment-period-extended-30-days/>.

Section 10 of the River and Harbors Act prevents unauthorized obstruction or alteration of US waterways, including wetlands. The Corps oversees and regulates any work activities (such as dredging, beach nourishment, and geotechnical surveys) or construction of structural features (such as piers, boat docks or ramps, wharfs, weirs, booms, breakwaters, bulkheads, and jetties) that would affect an eelgrass bed's location, condition, or support capacities. Seagrasses are also protected by Section 404 of the Clean Water Act. Seagrasses such as eelgrass are considered a wetland under Section 404 of the Clean Water Act (CWA) and thus protected from fill activities, stormwater runoff, and other water quality issues. Digging into seagrass beds for burying cables, dredging, and other seafloor activities require federal and state permits.

As with DSL's policies, eelgrass is defined as a "Special Aquatic Site" under 40 CFR § 230.43 (Vegetated shallows) and a wetland for the purposes of the Corps' review under Section 404 of the Clean Water Act, both of which dictate the type of compensatory mitigation required for unavoidable impacts to eelgrass habitat. However, at the time of Jordan Cove's dredging applications, neither DSL or USACE's agency rules (nor DLCD's enforceable policies and NMFS' EFH guidance) contained explicit requirements that required Jordan Cove to avoid impacts to eelgrass in Oregon's estuaries prior to developing mitigation.

11.1.3. Jordan Cove - DLCD Federal Consistency Review (FCR)¹¹⁴

Jordan Cove and the related Pacific Connector Pipeline required two major federal permits/licenses needed for the proposed project: the Army Corps Section 404/10 permit and the Federal Energy Regulatory Commission's authorizations under sections 3 and 7 of the Natural Gas Act. As discussed above, the former permit proposed activities that risked significant direct and indirect impacts to existing eelgrass beds and potential habitat (mudflats, intertidal areas, as well as eelgrass beds adjacent to deep tidal habitat).¹¹⁵ Each of these federal licenses or permits activities that are subject to review for consistency by the DLCD under the OCMP.¹¹⁶

In April, 2019, DLCD received a joint federal consistency review application from Jordan Cove. In its application, Jordan Cove certified to DLCD that its proposed dredging, dredge material transport via several underwater and in-water pipelines, floating in-water surface structures, dredge material disposal, and mitigation activities complied with the enforceable policies governing the local land use permits discussed in Section 9.1.1. and the DSL removal-fill permit discussed in Section 9.1.2 above. At that time, Jordan Cove had not received these local land use permits or approval from DSL for its proposed removal-fill activities.

DLCD initiated the formal federal consistency review process in May 2019. This process included a three-month public comment period, as required by 15 CFR § 930.2, beginning July 2019. The OCMP received approximately 20,000 public comments on Jordan Cove's proposed project, which DLCD logged, reviewed, and considered for review purposes. Approximately 80 percent of public comments were opposed to the project, and many of those opposed expressed

¹¹⁴ DLCD, *Federal Consistency Review*, (last visited May 26, 2021), <https://www.oregon.gov/lcd/OCMP/Pages/Federal-Consistency.aspx>. Please note that this webpage also includes more information about DLCD's FCR of Jordan Cove.

¹¹⁵ DSL RFAI, 7 of 9.

¹¹⁶ 15 CFR §930.53; OCMP Table 7.

concern about adverse impacts to archeological and historical sites, adverse impacts to water resources, insufficient compensatory mitigation, and lack of compliance with the statewide planning goals.

DLCD found that Jordan Cove had not demonstrated compliance with the enforceable policies of the OCMP in large part because of lack of sufficient information to assess impacts associated with its proposed dredge and fill activities in Coos Bay, and denied federal consistency certification for Jordan Cove in February 2020.¹¹⁷ Of note, DLCD referenced insufficient analysis of avoidance of impacts to eelgrass beds throughout its discussion. However, in its supplemental considerations for Jordan Cove, DLCD emphasized that a future application could be consistent if it considered alternative, more appropriate mitigation sites.

11.2. Jordan Cove – Conclusions and Frameworks for Analyses

Considering the outcomes of these permit processes may serve useful to interested members of the public curious about whether existing management frameworks governing project review within Oregon's estuaries are sufficient to protect and adequately manage eelgrass:

- All but one of the local land use approvals for Jordan Cove's proposed dredging and related dredge material disposal activities under the jurisdictions of the City of Coos Bay, City of North Bend, and Coos County were later overturned (i.e., reversed or remanded) by Oregon's Land Use Board of Appeals (LUBA) between the summer of 2020 and the spring of 2021.¹¹⁸ However, none of these cases cited potential adverse impacts to eelgrass, Jordan Cove's failure to meaningfully consider alternatives to avoid those impacts, or Jordan Cove's failure to develop a sufficient eelgrass mitigation plan as a basis for reversal and remand.
- Jordan Cove's approval from the City of Coos Bay to conduct dredging (for the purposes of eelgrass mitigation) adjacent to existing eelgrass habitat was not challenged. Mitigation is allowed in the impacted City of Coos Bay estuarine aquatic unit, but

¹¹⁷ DLCD, *JCEP Federal Consistency Decision Letter (Objection)*, 50-51 (Feb. 19, 2020) [DLCD Denial], https://www.oregon.gov/lcd/OCMP/FCDocuments/FINAL-CZMA-OBJECTION_JCEP-DECISION_2.19.2020.pdf.

¹¹⁸ These local government decisions approving Jordan Cove's various dredging activities were successfully appealed at LUBA by several conservation groups and community-based organizations (including Citizens for Renewables, Surfrider Foundation, Oregon Shores, and Rogue Climate) as well as community members. In the case of the City of Coos Bay permit approval, the CTCLUSI asserted its sovereign power and successfully appealed the decision at LUBA with the aforementioned organizations appearing in support of the CTCLUSI's petition.

See, e.g., Or. Shores Conserv. Coal. v. City of North Bend, _Or LUBA_ (LUBA No 2019-118, July 17, 2020), <https://www.oregon.gov/luba/Docs/Opinions/2020/07-20/19118.pdf>; *Or. Shores Conserv. Coal. v. Coos Cnty.*, _Or LUBA_ (LUBA Nos 2019-137/2020-006, Dec 22, 2020), <https://www.oregon.gov/luba/Docs/Opinions/2020/12-20/19137%2020006.pdf>; *Or. Shores Conserv. Coal. v. Coos Cnty.*, _Or LUBA_ (LUBA No 2020-002, May 4, 2021), <https://www.oregon.gov/luba/Docs/Opinions/2021/05-21/20002.pdf>; *Confederated Tribes of Coos et al v. City of Coos Bay*, _Or LUBA_ (LUBA No 2020-012, May 4, 2021), <https://www.oregon.gov/luba/Docs/Opinions/2021/05-21/20012.pdf>.

dredging is prohibited. Despite comment from ODFW and expert testimony obtained by CTCLUSI raising concerns about the appropriateness of the proposed mitigation site and method, the City Council agreed with Jordan Cove's distinction between "prohibited" dredging activities and its proposed dredging to "recontour" and "enhance" the area for eelgrass mitigation. This mitigation site was identified as inappropriate compared to alternatives by DSL, DLCD, and ODFW. However, the City of Coos Bay permit remains valid until October, 2021.

- Anticipating permit denial, Jordan Cove withdrew its pending DSL removal-fill application in January, 2020. DSL released incomplete draft findings for the proposed project following Jordan Cove's withdrawal. While the document does not represent a determination by DSL as to whether the withdrawn application was consistent with Removal-Fill criteria, the document appears to prioritize mitigation rather than avoidance of direct and indirect impacts to known and potential eelgrass habitat.¹¹⁹
- All of the above permits were required to establish consistency with OCMP enforceable policies for the purposes of DLCD federal consistency review. DLCD's denial was based in part on ORS Chapter 196, containing Oregon's removal-fill provisions. In this instance, enforceable local land use policies were not directly cited as a basis for denial. DLCD's decision denying federal consistency referenced eelgrass impacts, but appears to indicate that a supplemental consideration for the proposed project in order to establish consistency would be to consider alternative eelgrass mitigation sites, rather than meaningful avoidance of impacts.
- DLCD's federal consistency review decision appears to be the only decision that issued findings on direct and indirect coastal effects as well as cumulative impacts.
- These state findings and decisions, respectively, were issued under frameworks where eelgrass is federally recognized as EFH and a HAPC under the MSA as well as a Special Aquatic Site under Section 404 of the CWA. Further, DSL and ODFW agency rules designate eelgrass as an aquatic resource of special concern under DSL's rules as well as a Category 2 "Essential and Limited" habitat, respectively.
- Coos County, the City of Coos Bay, and the City of North Bend are required to follow a process to protect "Historical, Cultural and Archaeological Sites" under CBEMP Policy #18. In context of Jordan Cove's dredging permit requests, CBEMP Policy #18 required Coos County and the City of Coos Bay to make findings "as to whether the project as proposed by [Jordan Cove] would protect the cultural and archaeological values of the affected sites as described by the [CTCLUSI]."¹²⁰ Of particular relevance here, CTCLUSI provided testimony identifying several impacted sites, some within the estuary, to both the City of Coos Bay and Coos County.¹²¹ Instead of initiating the process required by CBEMP Policy #18,¹²² both the City and the County found that

¹¹⁹ See, e.g., *DSL Draft Findings – Jordan Cove Energy Project and Pacific Connector Gas Pipeline*, PDF 9 (Feb. 2020), https://www.oregon.gov/dsl/WW/Documents/FindingsDraftWord_group_ForRelease.pdf.

¹²⁰ Br. of amicus curiae Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians at 2, *Or. Shores Conserv. Coal. v. Coos Cnty., _Or LUBA_* (LUBA No 2020-002, May 4, 2021); Pet. for Review at 30-35, *Confederated Tribes of Coos et al v. City of Coos Bay, _Or LUBA_* (LUBA No 2020-012, May 4, 2021).

¹²¹ Please note that this is not a comprehensive list. The CTCLUSI exercised its sovereign power to provide testimony and expertise in several local, state, and federal permitting processes related to Jordan Cove and the Pacific Connector Gas Pipeline.

¹²² As previously held by LUBA, "CBEMP Policy #18 clearly contemplates that resolution of issues raised by the Tribes, which may change the scope, scale and footprint of the development proposal considerably, or even

CBEMP Policy #18 was not applicable. Given that LUBA reversed the City of Coos Bay and Coos County permits on other, unrelated criteria, LUBA did not address the question of whether the local governments' determinations related to CBEMP Policy #18 were proper under the law.¹²³ It is worth working alongside impacted tribes to understand whether the government-to-government processes set forth in local estuary management plans can be strengthened to increase tribal sovereignty over cultural resources as well as improve protection of lands and habitats of significance identified by tribal governments.

- DSL and DLCDC both work with tribal sovereign governments in accordance with government-to-government relations policies. With respect to DLCDC's denial for Jordan Cove, impacts to "rivers, streams, wetlands, shoreline, intertidal resources, and subtidal habitats" of concern to impacted tribes were discussed in DLCDC's coastal effects analysis.¹²⁴ It is worth working alongside impacted tribes to understand whether government-to-government tribal relations for each of these agencies can be strengthened to increase tribal sovereignty over cultural resources as well as improve protection of lands and habitats of significance identified by tribal governments.

Using Jordan Cove as a case study analysis of Oregon's current eelgrass management framework illustrates several key issues. On the one hand, it demonstrates the possibility of protecting eelgrass and its suitable habitat via these permitting processes that are governed by estuary management plans, state agency rules, and federal project review. On the other hand, absent updated data on eelgrass presence and extent as well as explicit criteria governing management and protection of eelgrass and suitable habitat, the permitting processes left the door open to relying on dubious mitigation rather than avoidance of harms to eelgrass (which generally has low mitigation success). This could suggest that Coos Bay and Oregon's estuaries more broadly require stronger, eelgrass specific protections at the local, state, and federal level.

It is important to note that as of the time of writing this Primer, the Jordan Cove project has not been declared to be suspended or withdrawn, although no new applications have been made to seek permits that have been denied or successfully appealed. If new applications are eventually made, Jordan Cove may be subject to further review by each of the aforementioned decision-makers as well as tribal governments.

12. Potential Management Actions and Programs to Address Gaps in Existing Legal Frameworks

Jordan Cove as a case study points to several opportunities for interested members of the public to evaluate existing management frameworks for eelgrass in Oregon, and to engage with decision-makers about whether these existing frameworks are adequate to protect eelgrass.

12.1. Local, State, & Federal: Oregon Estuary Management Plan Updates

cause it to be denied outright, will be completed before the development is approved." *Or. Shores Conserv. Coal. v. Coos Cnty.*, 76 Or LUBA 346, (LUBA 2016-095, Nov. 27, 2017), *aff'd without opinion*, 291 Or. App 251, *rev. den.* 363 Or 481, 424 P3d 728 (2018).

¹²³ See LUBA 2020-002, *supra n. 118*, at 43; See LUBA 2020-012, *supra n. 118*, at 36-37.

¹²⁴ See DLCDC Denial, *supra*, at 25; See FCR Overview, *supra*, at 4-5 (defining coastal effects as "at the heart of" federal consistency review).

DLCD is currently working with coastal governments to update its estuary management plans, originally written in the 1980s. As of May 2021, both the Yaquina Bay section of the Lincoln County Estuary Management Plan and the Coos Bay Estuary Management Plan (CBEMP) are undergoing review, as discussed in Part I.

Taking into account the provisions of the CBEMP which governed the local land use permit review processes for Jordan Cove in Coos Bay and operated as enforceable policies for purposes of federal consistency review, members of the public may want to consider the following when participating in decision-making related to estuary management plan updates along the Oregon Coast:

- Oregon's original estuary management plans for mixed-use development estuaries such as Coos Bay, Tillamook Bay, and the like tend to emphasize development and minimize ecological concerns.
- The original estuary management plans do not address climate change issues.
- The original estuary management plans were acknowledged before species like Coho salmon were even listed as endangered. The original estuary management plans do not address or incorporate state and federal policies and programs that have emerged since each plan was acknowledged.
- The original estuary management plans are based on outdated inventories that do not comprehensively describe known eelgrass beds or potential eelgrass habitat.
- The original estuary management plans do not require or consider eelgrass habitat restoration as a tool for meeting Goal 16.
- The original estuary management plans did not involve a meaningful government-to-government engagement between impacted coastal tribal governments and Indigenous people, nor address legacy impacts to the estuary including disturbance of cultural resources.

Finally, members of the public should note that any modifications and updates to Oregon's estuary management plans must undergo the program change process through NOAA-OCM to be approved as enforceable policies of the OCMP.

Part III: Comparative Case Studies and Examples

13. Action Examples for Oregon: Comparative State Programs and Strategies

Comparative analysis of existing seagrass management systems, policies, and scientific research in other regions of the U.S. can provide important context and an opportunity for informing decision-making related to Oregon's eelgrass.¹²⁵ Evaluating scientific and institutional models derived from California and Washington, and even Atlantic regions, and analyzing their appropriateness for the Pacific Northwest, could suggest modifications and provide model language and policies for improving existing frameworks in Oregon. Studying other models may also highlight, by comparison, areas where Oregon's eelgrass systems and management histories are unique, and thus could warrant development of specific new rules and policies to improve management.¹²⁶

14. California

In 2014, NMFS issued guidance related to eelgrass habitats known as the California Eelgrass Mitigation Policy (CEMP). As noted by NMFS, the CEMP and its related guidelines support but do not expand upon NMFS' existing authorities under the MSA, the Fish and Wildlife Coordination Act (FWCA), and the National Environmental Policy Act (NEPA).¹²⁷ The CEMP is meant to serve as specific guidance for staff and managers within NMFS for developing recommendations concerning eelgrass issues during EFH and FWCA consultations and NEPA reviews throughout California.¹²⁸

The CEMP and its guidelines apply only in California. To date, the NMFS' West Coast Regional Office has not issued a comparable policy for Oregon and Washington. Accordingly, this may provide a pathway for interested people and groups to seek opportunities to engage with the Pacific Fisheries Management Council to assess whether expansion of the CEMP or creation of new, estuary-specific policies based on the CEMP would be appropriate for eelgrass habitats in Oregon and Washington.

14.1. History of the California Eelgrass Mitigation Plan (CEMP)

In 2014, NMFS' WCR released the CEMP to provide guidance on eelgrass mitigation efforts. NMFS and California state resource management officials worked together to develop the CEMP and companion state regulations, which set forth:

- Eelgrass survey protocols to evaluate impacts from coastal development projects;
- Eelgrass mitigation requirements to ensure "no net loss of habitat function;"

¹²⁵ EPA, *Seagrass science and policy in the Pacific Northwest proceedings of a seminar series*, 62 (1994), <https://nepis.epa.gov/Exe/ZyPDF.cgi/91024XGC.PDF?Dockey=91024XGC.PDF>

¹²⁶ Id.

¹²⁷ *California Eelgrass Mitigation Policy and Implementing Guidelines*, NOAA Fisheries at 3-4 (2014), available at https://www.cakex.org/sites/default/files/documents/cemp_oct_2014_final.pdf [CEMP].

¹²⁸ Id.

- Restrict industrial activities that could harm eelgrass habitat (including strict requirements for restoration); and
- Require some consideration of avoidance of impacts to eelgrass habitat.¹²⁹

The 2014 CEMP expanded a previous policy, the 1991 Southern California Eelgrass Mitigation Policy (SCEMP), to govern all of California's eelgrass.¹³⁰

14.2. California's OPC 2020 Proposed Recommendations to NMFS

The CEMP has provided critical policy and technical guidance for local, state, and federal agencies reviewing project permits under state and federal law and regulations. The CEMP has also ensured that many projects first avoid, then minimize, and finally mitigate any adverse impact to eelgrass. Increased understanding and concern about eelgrass since the publication of the CEMP in 2014 has led to several major legislative and administrative initiatives over the past five years that have a focus on the protection, restoration, and understanding of eelgrass in California. In conjunction with NOAA's five-year review of the CEMP,¹³¹ and based on this eelgrass learning journey, California's Ocean Protection Council's (OPC) staff recommended in September 2020 that the OPC adopt a proposed resolution on supporting substantive updates to the 2014 CEMP. In particular, California regulators identified key areas in the CEMP related to mitigation ratios, buffer zones, avoidance measures, and the incorporation of emerging science that would benefit from a substantive update. California Eelgrass Mitigation Policy updates that would improve outcomes for eelgrass include, but are not limited to:

- "Using the best available science to discretely define mitigation ratios, buffer zones, and avoidance measures to effectively maintain and restore ecosystem function;
- Increasing the focus on the protection and restoration of degraded and historical eelgrass beds that are designated as Essential Fish Habitat;
- More clearly prioritizing avoidance of impacts above minimization and mitigation;
- Better defining adverse impacts to suitable eelgrass habitat and providing a mechanism for ensuring there will be places for eelgrass to migrate with sea level rise;

¹²⁹ Id.

¹³⁰ It should be noted that the CEMP seems less stringent in terms of requirements to avoid or minimize impacts prior to development of mitigation plans, stating "Compensatory mitigation should be recommended for the loss of existing eelgrass habitat function, but only after avoidance and minimization of effects to eelgrass have been pursued to *the maximum extent practicable*." Compare this to the approach of the SCEMP, which required that avoidance and minimization must be pursued "to *the fullest extent possible prior to the development of any mitigation program*."

¹³¹ See, *Ocean Protection Council Meeting – September 17, 2020 – Teleconference*, California Ocean Protection Council, <https://www.opc.ca.gov/2020/08/ocean-protection-council-meeting-september-17-2020-teleconference/> (agenda item 6 discussing a possible resolution updating the CEMP; last visited Dec. 17, 2020).

- Incorporating emerging science on the role eelgrass plays in mitigating climate change impacts (e.g., sea level rise, acidification, hypoxia, carbon flux,¹³² wave energy attenuation);
- Requiring baseline assessments to use multi-year surveys to account for inter-annual and seasonal variability.”¹³³

The OPC passed the resolution at its meeting on September 17, 2020. As of the time of writing, it is unclear how NMFS intends to consider the OPC's resolution within its five-year review process. This offers a potential avenue for members of the public in Oregon to understand NMFS' process for coordinating with state natural resource agencies to improve eelgrass protections.

14.3. Action Opportunity for Oregon's Eelgrass

The 2014 CEMP has been a valuable first step for California to meet the ambitious goals of protecting existing eelgrass as well as create additional habitat by 2025. However, it is important to note that this policy applies only to the state of California and not the entire West Coast. In sum, the PFMC's HAPC designation does not automatically confer or guarantee additional protections or restrictions upon an area containing SAV or eelgrass beds, but is meant to “help to prioritize and focus conservation efforts.”

As noted above, NOAA has yet to work together with Oregon state natural resources staff at DLCD, DSL, and Department of Fish & Wildlife (ODFW) to implement similar eelgrass policies for Oregon's coastal waters and estuaries. Accordingly, people and groups can urge the PFMC to recommend that NMFS WCR strongly consider initiating a coordinated, multi-state agency process to craft an Eelgrass Mitigation Policy for Oregon that would incorporate, at a minimum, the improvements suggested by the OPC. Opportunities for people to participate are listed in further detail in Appendix A.

15. Conclusion and Avenues for Further Research

This Primer is meant to be a starting point for continued inquiry into the current state of legal and institutional contexts for eelgrass protection, and the scientific knowledge base concerning eelgrass beds and potential habitat in Oregon and Washington. It is an effort to begin compiling relevant resources in a single document to facilitate such an exploration. Environmental policy and scientific research related to eelgrass management must be mutually supportive, and work alongside and not in contravention to the interests of Tribal sovereigns and people. Such an interdependent approach is necessary to set priorities for management and policy development, and ecological research.

¹³² Also known as a “carbon cycle.”

¹³³ See COPC, Item 6: Staff Recommendation - Resolution Supporting Updates to the National Marine Fisheries Service's California Eelgrass Mitigation Policy, 3 (Sept. 17, 2020), https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20200917/Item6_CEMP-Resolution-Staff-Rec.pdf.

Several topics and areas of study relevant to understanding eelgrass and improving management frameworks are not addressed in-depth in the current Primer, but our hope is that future editions of this document will offer further details and updates on the same. These include:

- **Coastal water quality and non-point source impacts to Oregon's eelgrass**

Threats to eelgrass from degradation of water quality continue to be less well documented here than in Atlantic estuaries (e.g., Chesapeake Bay), and must be adequately identified to support effective management frameworks.

- **Oregon's Coastal Nonpoint Pollution Control Program (CNPCP):**

Coastal water quality impacts to eelgrass are acknowledged and managed indirectly under the requirements of the Coastal Zone Management Act Reauthorization Amendments of 1990 (CZARA), which obligate coastal partner states to address "non-point source" (NPS) pollution. The DLCD manages Oregon's Coastal Nonpoint Pollution Control Program (CNPCP) under the OCMP. NOAA-OCM and EPA conditionally approved Oregon's coastal nonpoint pollution program in 1998, and one of the conditions required the state to develop additional management measures for forestry practices in Oregon.¹³⁴ Forest pesticides have been found downstream in Oregon's coastal waters,¹³⁵ and are identified in Oregon's Nearshore Conservation Strategy¹³⁶ as a water quality degradation factor impacting eelgrass. In January 2015, NOAA-OCM and EPA determined that, because of the unmet condition related to forestry practices, Oregon had not submitted an approvable coastal nonpoint pollution program, which by statute resulted in the withholding of 30 percent of CZMA Section 306 and CWA Section 319 grants.¹³⁷ In March 2016, the agencies informed the state that it had not made sufficient progress in meeting the condition to receive the withheld funds for financial year 2015.¹³⁸ DLCD's website on the matter notes that while Oregon has made some efforts to meet the additional management measures for forestry condition and reestablish its grant funding,¹³⁹ NOAA and EPA did not find these measures acceptable. Further, DLCD notes that "no formal assessment has been completed since 2015," and "[i]t is not known when the state will seek a reassessment from EPA and NOAA."¹⁴⁰

¹³⁴ 80 F.R. 10667.

¹³⁵ Monica Samayoa, *Forest pesticides found downstream in coastal Oregon waters*, OPB (<https://www.opb.org/article/2021/03/17/forest-pesticides-found-downstream-in-coastal-oregon-waters/>)

¹³⁶ ODFW, *Nearshore conservation strategy factors impacting eelgrass*.
<https://www.oregonconservationstrategy.org/oregon-nearshore-strategy/factors-stressors-affecting-species-and-habitat/>.

¹³⁷ Jeff Payne and Dennis McLerran, *Letter to Jim Rue and Dick Pedersen* (Jan. 30, 2015), available at https://www.oregon.gov/lcd/OCMP/Documents/Letter_OR_CZARA_Disapproval_20150130.pdf.

¹³⁸ Jeff Payne and Dennis McLerran, *Letter to Richard Whitman* (Mar. 9, 2016), available at <https://s3.amazonaws.com/wapopartners.com/wweek-wp/wp-content/uploads/2016/03/11162428/epaOregon1.pdf>.

¹³⁹ Specifically, the state forestry board in April 2017 adopted new rules for shade buffer along streams. Oregon Department of Land Conservation and Development, *Coastal Water Quality*, <https://www.oregon.gov/lcd/OCMP/Pages/Water-Quality.aspx> (last visited Nov. 19, 2020).

¹⁴⁰ Id.

The impacts of the withheld grants, which totaled about \$2.6 million as of spring 2019,¹⁴¹ have been considerable. According to the Department of Land Conservation and Development's webpage, the "reduction of funding for the OCMP has resulted in the suspension of planning assistance grants for local governments in the coastal zone and the loss of two staff positions."¹⁴² A 2016 evaluation of the Oregon Coastal Management Program provides more detail that "Oregon has not been able to fill a staff position that deals with climate change adaptation, and another coastal program position that provided technical support for ocean and estuary planning; travel and supplies are also affected."¹⁴³ The cuts also mean that "the coastal program is no longer able to provide any planning assistance or technical assistance grants to coastal local governments with Section 306 funding."¹⁴⁴

Addressing water quality degradation resulting from Oregon's forest practices and restoring this funding is of vital importance for the future of management and planning for eelgrass in Oregon's estuaries. For instance, this funding could support much needed updates to inventories of existing eelgrass beds and potential habitat off the Oregon coast.

- **Additional comparative studies with seagrass systems and policy agendas and activities in other regions of the U.S.**

Massachusetts and several other states along the eastern seaboard have their own programs for management SAV. Evaluating scientific and institutional models derived from Atlantic and Gulf regions regarding their appropriateness for the Pacific Northwest is a key avenue of research for better understanding how best to protect Oregon's eelgrass.

- **Threatened Species Under the Endangered Species Act that Depend on Eelgrass Habitat.**

Coho salmon, chinook salmon, and cutthroat trout all consume fauna that depend on eelgrass and eelgrass substrate,¹⁴⁵ and are thus themselves dependent on this foundational habitat. Each of these species are themselves in danger of overexploitation, and certain populations are listed as threatened under state and federal statutes.¹⁴⁶ Links between these species and Oregon's threatened eelgrass beds show the importance of improving mapping of eelgrass extent as well as further research into the interdependencies among species,¹⁴⁷ which in turn could support an evaluation of whether existing endangered species policies under Oregon's

¹⁴¹ Id.

¹⁴² Id.

¹⁴³ NOAA Office for Coastal Management, *Final Evaluation Findings: Oregon Coastal Management Program, November 2006 to September 2016* PDF 8 (2017), available at <https://coast.noaa.gov/data/czm/media/OregonCMP2017.pdf>.

¹⁴⁴ Id.

¹⁴⁵ Sherman & DeBruyckere, *supra*, at 38.

¹⁴⁶ ODFW, *Threatened, Endangered, and Candidate Fish and Wildlife Species*, (2021) https://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_candidate_list.asp.

¹⁴⁷ A. Randall Hughes, et. al., *Associations of concern: declining seagrasses and threatened dependent species*, *Front Ecol, Environ*, 2009; 7(5): 242–246, <https://esajournals.onlinelibrary.wiley.com/doi/pdf/10.1890/080041>

Threatened or Endangered Wildlife Species laws (ORS §§ 496.182-496.192)¹⁴⁸ and the federal Endangered Species Act provide adequate protection for this habitat.

- **Oregon's new Climate Adaptation Framework (CCAF) and Climate Equity Blueprint (CEB).**

Beginning in 2020 and building on previous efforts from 2010, DLDC has been coordinating the development of a Climate Change Adaptation Framework (CCAF) and Climate Equity Blueprint (CEB) for the State of Oregon.¹⁴⁹ The Framework explores the impacts of climate change in Oregon and identifies how state agencies can effectively respond to them. Framework recommendations are designed to strengthen interagency coordination and consideration of equity, diversity, and inclusion in program planning and delivery. Although aimed at state agency action, many of its programs and projects must be implemented in collaboration with local government and community partners.

Amongst the reasons cited for why Oregon must adapt, the 2021 CCAF identifies "large scale ecosystem shifts such as loss of key submerged aquatic vegetation (SAV) habitats" and their impacts on fisheries.¹⁵⁰ Developing specific adaptation strategies (e.g., inventory, extent mapping, and policy development) for eelgrass and its suitable habitat, through public process as well as government-to-government collaboration with impacted tribes, for future incorporation into the CCAF is another possible avenue of future study.

Conclusion

Our hope is that future versions of this Primer will delve into these topics and more. Oregon is in the early stages of a much-needed, comprehensive discussion of eelgrass issues. Our goal is to make sure that this discussion about the science and policy of eelgrass conservation continues and expands, and extends to a wider audience. This Primer provides a "white paper" which we hope will enrich a statewide reconsideration of our estuaries and their eelgrass habitats, with a view toward sustaining and enhancing them.

¹⁴⁸ https://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_species.asp

¹⁴⁹ DLCD, *Oregon's Climate Adaptation Framework*, (last visited May 26, 2021), <https://www.oregon.gov/lcd/CL/Pages/Adaptation-Framework.aspx>

¹⁵⁰ DLCD, Oregon's 2021 CCAF and CEB, 2, https://www.oregon.gov/lcd/CL/Documents/2021_CLIMATE_CHANGE_ADAPTATION_FRAMEWORKandBlueprint.pdf.

About Oregon Shores

The Oregon Shores Conservation Coalition was founded in 1971 to protect the public interest in Oregon's beaches created by the Beach Bill. Oregon Shores became a 501 (c) (3) non-profit in 1991. The organization's mission has widened over the years to encompass conservation of the environment of the entire coastal region, from the crest of the coastal mountains to the edge of the continental shelf. Our mission statement:

In Oregon, the beaches belong to the people. As part of Oregon's tradition of environmental stewardship, the Oregon Shores Conservation Coalition serves as a guardian of the public interest for Oregon's coastal region. Oregon Shores is dedicated to preserving the natural communities, ecosystems and landscapes of the Oregon coast while conserving the public's access. Oregon Shores pursues these ends through education, advocacy, and engaging citizens to keep watch over and defend the Oregon coast.

Among Oregon Shores' key program activities:

- Oregon Shores has a long history of advocating for protection of beach, headland and tidepool areas, and the Land Use Program has been involved in literally hundreds of land use and other regulatory issues. Among many other successes (often in partnership with a local group) are preservation of Coquille Point, Fishing Rock, Yaquina Head, Indian Point in the Coos estuary and the extraordinary 804 Trail near Yachats. Oregon Shores was a leader in advocating for creation of the South Slough National Estuarine Research Reserve, which has spearheaded key research on spatial mapping of eelgrass in Oregon.¹⁵¹
- Oregon Shores was one of the founding groups of what was then Oregon Ocean, subsequently renamed Our Ocean, the coalition working to create a network of marine reserves off our coast. The Ocean Program played a leading role in the campaign to create Oregon's first marine reserves; we continue to make support for these reserves a priority, as a founding member of the Oregon Marine Reserves Partnership. We are currently at the forefront of efforts to assure careful environmental assessment of wave energy impacts as well as benefits, and are active participants in Oregon's new Rocky Habitat Management Strategy, seeking to better protect our rocky shore areas.
- Our Climate Program focuses on adaptive planning, with the goal of building the resiliency of both natural and human communities in the face of sea level rise, increased storm surges, and other likely impacts due to climate change.
- CoastWatch engages more than 1,600 volunteers in monitoring the shoreline; it is the only program in the nation through which the citizens of a state (and some citizens of other states who love the Oregon coast) have adopted their state's entire shoreline. CoastWatch reports assist public resource managers and conservation groups in protecting the shoreline, and CoastWatchers get involved in innumerable ways as individuals, from organizing their own

¹⁵¹ Sherman & DeBruyckere, *supra*, at 22.

debris pick-ups to participating in surveys to advocating for stronger regulations or opposing unnecessary shoreline armoring projects.

Our vision is of a coastal region protected by a powerful grassroots movement—statewide, but strongly rooted in the communities of the coast—that demands sustainability, conservation of resources, protection of ecosystems and habitats and reconfiguration of human communities so as to work with nature and preserve the coastal environment for all generations.

To learn more about Oregon Shores and how you can get involved, please visit our website: <https://oregonshores.org/>

About Crag Law Center

Founded in 2001, Crag is a client-focused law center that supports community efforts to protect and sustain the Pacific Northwest's natural legacy. Crag provides free and low-cost legal services to folks who are working on the ground to protect our environment, climate and communities. We believe that conservation and community groups deserve access to high-quality lawyers regardless of their ability to pay, and understand that effective legal aid extends far beyond lawsuits. We help our clients and partners understand the complex legal landscape and identify a set of tools to help them achieve their goals for a healthy environment and a sustainable future. Many of Crag's clients are battling well-funded corporations with large teams of attorneys, and Crag's advocacy elevates those who would not otherwise have a voice in decisions directly affecting their frontline communities.

By nature, Crag's work is long-term. Our strategy is to push back against the erosion of environmental protections on public lands, elevate the voices of tribes and other traditionally underrepresented groups, and advance climate policy that will preserve the prosperity and safety of generations to come. Our team provides legal advice and representation, campaign strategy tools, educational support, and advocacy to help our clients achieve their goals for a healthy environment. We aim to make our environmental laws work for everyone, support civic engagement, and hold decision-makers accountable for land management and environmental protections.

If you would like more information about how the Crag Law Center can provide assistance, please visit our website: <https://crag.org/>

About the Coastal Law Project:

The Coastal Law Project is a collaborative partnership formed in 2004 between the Oregon Shores Conservation Coalition and Crag Law Center to protect and preserve the Oregon coast and its ecosystems for all people. You can learn more about our history here (<https://oregonshores.org/land-use/coastal-law-project>) and our work here (<https://crag.org/our-work/communities/coastal-law-project/>).

The Oregon coast is the pride of the state, crucial as a public resource for recreation, marine-based economies, and vital species habitat. However, it is under ever present and increasing

threat from climate change, harmful resource extraction schemes (including fossil fuel infrastructure), and ill-advised shoreline development proposals, as well as the ongoing loss of public beach access due to hardened protection structures. Through a range of tools including legal representation, public education about conservation laws and land use, and policy advice, the Coastal Law Project works with coastal communities to protect sensitive coastal and marine ecosystems, preserve and promote equitable public beach access, and defend coastal watersheds. The partnership draws upon the respective expertise and knowledge of our two organizations to identify and address issues critical for the preservation of the Oregon Coast. Together, Crag and Oregon Shores hope to work alongside people and communities to help preserve Oregon's treasured coastal regions for generations to come.

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Anuradha Sawkar, associate attorney at Crag Law Center, authored this Primer. This Primer was edited by Phillip Johnson, executive director of the Oregon Shores Conservation Coalition.

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Appendix A: Resources for Public Participation

LOCAL: ESTUARY MANAGEMENT PLAN UPDATES

What are estuary management plans?

Oregon's eelgrass is principally found in Oregon's estuaries. Oregon Statewide Planning Goal 16 (Goal 16) governs Estuarine Resources. It provides the principal guidance for the planning and management of Oregon's estuaries. The overall objective of Goal 16 is

[t]o 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 estuaries¹⁵²

Goal 16 requires individual estuary plans to designate appropriate uses for different areas within each estuary based on biological and physical characteristics and features, and to provide for review of proposed estuarine alterations to assure that they are consistent with overall management objectives and that adverse impacts are minimized. Most Goal 16 requirements are implemented through locally adopted estuary plans, but some are applied by state agencies through their review of various permit applications.

Goal 16 Resources:

- DLCD - *Goal 16: Estuarine Resources*: <https://www.oregon.gov/lcd/OP/Pages/Goal-16.aspx>

This website contains information on Goal 16, the full text of the Goal, as well as relevant implementing rules and regulations.

- DLCD – *Estuary Planning*: <https://www.oregon.gov/lcd/OCMP/Pages/Estuary-Planning.aspx>

This website explains estuary classification and management units, both of which govern estuary planning, in further detail.

Why Update Oregon's Estuary Management Plans?

Estuary management plans and zoning are part of coastal communities' comprehensive plans, and allow local jurisdictions to manage their estuaries for the benefit of the public and natural resources in a way that meets community needs.

Most of Oregon's estuary management plans are nearly 40 years old. Updating estuary management plans will allow Oregon to adopt plans based on a more inclusive process (i.e., in collaboration with coastal tribes and with robust public participation); updated mapping technology; improved understanding of ecosystem processes; a better understanding of how

¹⁵² OAR 660-015-0010(1) [Goal 16], 1 (last visited May 26, 2021), available at <https://www.oregon.gov/lcd/OP/Documents/goal16.pdf>.

estuaries fit into coastal community needs; and the benefit of nearly 40 years of experience of implementing the plans.

The update of the Yaquina Bay estuary management plan section of the Lincoln County Estuary Management plan, as well as the Coos Bay Estuary Management Plan are currently underway. The Yaquina Bay update will like offer a blueprint for subsequent estuary management plan updates in Oregon. These are discussed in further detail below.

Estuary Management Plan Update Resources

- DLCD, *Biennial Report 2019-2021*, 40-41 (Jan. 2021), https://www.oregon.gov/lcd/About/Documents/2019-21_Biennial_Report.pdf.

Estuary management plan updates are part of DLCD's five strategic goals. The program achievements section of DLCD's Biennial Report discusses the progress of estuary management plan update.

- Jennifer Browning & Elizabeth Ruther, *In Oregon, 2 Coastal Projects Could Help Salmon—and Communities*, Pew Charitable Trusts, (Mar. 2, 2021), <https://www.pewtrusts.org/en/research-and-analysis/articles/2021/03/02/in-oregon-2-coastal-projects-could-help-salmon-and-communities>
- Lisa Phipps, *Yaquina Bay Estuary Management Plan Update*, DLCD presentation to the City of Newport Planning Commission, (Apr. 2021), https://legistarweb-production.s3.amazonaws.com/uploads/attachment/pdf/874533/YBEMP_update_presentation_to_Newport_City_Council_4-5-21.pdf

PARTICIPATING IN OREGON'S ESTUARY MANAGEMENT PLAN UPDATES

Participating in local estuary management plan updates will require familiarity with DLCD, impacted tribal governments, and each relevant local government's planning department, planning commission, and current estuary management plan. The resources below are meant to help interested members of the public to get started with the process, particularly with respect to Yaquina Bay and Coos Bay. However, please keep in mind that the approach will be similar for subsequent update processes.

Writing Effective Comments and Providing Effective Testimony

- Environmental Law Institute, *Step-by-Step Tips for Writing Effective Public Comment*, (Dec. 2013) <http://eli-ocean.org/wp-content/blogs.dir/2/files/Written-Commenting.pdf>.

The above guide was published by the Environmental Law Institute, and adapted from Elizabeth D. Mullin's excellent pamphlet entitled *The Art Of Commenting: How To Influence Environmental Decisionmaking With Effective Comments*.¹⁵³ It is meant to support members

¹⁵³ Elizabeth D. Mullin, *The Art Of Commenting: How To Influence Environmental Decisionmaking With*

of the public with drafting effective comments to government agencies and decision-makers.

Oregon Department of Land Conservation and Development (DLCD)

- **DLCD – Oregon Coastal Management Program:**

<https://www.oregon.gov/lcd/OCMP/Pages/index.aspx>

DLCD is the lead agency responsible for the Oregon Coastal Management Program, which in turn assists local governments with estuary planning (<https://www.oregon.gov/lcd/OCMP/Pages/Estuary-Planning.aspx>).¹⁵⁴

- **DLCD – Plan Amendments (PAPA):** <https://www.oregon.gov/lcd/CPU/Pages/Plan-Amendments.aspx>

Once coastal counties and cities decide to adopt amendments to their relevant estuary management plans through a legislative land use process at the local level, these proposed estuary plan amendments must be submitted to the DLCD for approval through the Post Acknowledgment Plan Amendment process.

- **DLCD - Notices of Proposed or Adopted Amendments:** <https://www.oregon.gov/lcd/NN/Pages/PAPA-Notices.aspx>

- **DLCD's Plan Amendment Notification Service:**

https://db.lcd.state.or.us/PAPA_Subscription/Login.aspx?ReturnUrl=%2fPAPA_Subscription%2f

DLCD created the above Plan Amendment Notification Service for anyone interested in receiving an automatic notification of comprehensive plan proposals or adoptions received. Interested persons can create an online user account to sign-up for the notification service. Subscribers may select the cities and counties of interest, and when DLCD receives a proposed or adopted amendment from that jurisdiction, it will send an email notification to the subscriber.

- **Subscribe to DLCD Notices:** <https://www.oregon.gov/lcd/About/Pages/Subscriptions.aspx>

Interested members of the public can receive general updates from DLCD on coastal land use planning and OCMP topics by subscribing to email delivery by topic here.

- **DLCD Administration and Biennial Reports:**

<https://www.oregon.gov/lcd/About/Pages/Administration-and-Support.aspx>

Interested members of the public can learn more about the executive functions of DLCD and DLCD on the Department's administrative and support webpage. In addition, DLCD

Effective Comments, 2nd Ed., (Envtl L. Inst. 2013).

¹⁵⁴ DLCD, *Biennial Report 2019-2021*, 40-41 (Jan. 2021), https://www.oregon.gov/lcd/About/Documents/2019-21_Biennial_Report.pdf.

is required by state Statute (ORS 197.060) to submit to the legislature a biennial report prior to the end of each even-numbered year. The statute mandates the report to describe the activities and accomplishments of the department (including related to estuary planning), LCDC, state agencies, local governments and special districts in carrying out ORS chapters 195, 196, and 197. These biennial reports are also available through DLCD's administrative and support webpage.

- **Land Conservation and Development Commission:**
<https://www.oregon.gov/lcd/Commission/Pages/index.aspx>

YAQUINA BAY ESTUARY MANAGEMENT PLAN

2021 Estuary Management Plan Update Status: Undergoing update as of May 2021¹⁵⁵

Yaquina Bay, Relevant Jurisdictions, Tribal Governments, and Stakeholders: Lincoln County implements the Yaquina Bay estuary management plan in coordination with the City of Newport and the City of Toledo. Yaquina Bay is within the ancestral homelands of the Confederated Tribes of the Siletz Indians. DLCD invited the Confederated Tribes of the Siletz to participate in the Yaquina Bay Estuary Management Plan Update process.

Yaquina Bay, Relevant Estuary Planning Documents:

- **Lincoln County Estuary Management Plan – Yaquina Bay Sub-Area (Sept. 1982):**
https://www.co.lincoln.or.us/sites/default/files/fileattachments/planning_amp_development/page/3820/estuary_management_plan_searchable.pdf
- **Lincoln County Estuary Management Plan, Yaquina Bay Management Units 1-34.:**
https://www.co.lincoln.or.us/sites/default/files/fileattachments/planning_amp_development/page/3820/estuary_management_plan_searchable.pdf

The Yaquina Bay Estuary Management Plan Update will amend the portions related to the Yaquina Bay Sub-Area.

- **City of Newport Comprehensive Plan**, Chapter 7 The Bay Area Yaquina Bay and Estuary Section: <https://www.newportoregon.gov/dept/cdd/CompPlanDocuments.asp>
 - Chapter 7 - The Yaquina Bay and Estuary Section (https://www.newportoregon.gov/dept/cdd/documents/Chptr7_Yaquina-Bay-Estuary-Section.pdf) is undergoing update. The update will provide interested members of the public an opportunity to give their thoughts on provisions to better map, monitor, and protect Oregon's eelgrass.
- **The City of Newport** offers the plan its entirety or in sections:
<https://www.newportoregon.gov/dept/cdd/documents/CombinedCompPlanDocument.pdf>

¹⁵⁵ Id.

- Chapter 8b – Administration of the Plan:
https://www.newportoregon.gov/dept/cdd/documents/Chptr8b_Administration-of-the-Plan.pdf

Chapter 8b discusses the administration, including the amendment process, of the comprehensive plan.

- **City of Toledo Comprehensive Plan:**
<https://www.cityoftoledo.org/sites/default/files/fileattachments/planning/page/1061/compplan.pdf>
- The Yaquina Bay Estuary Management Plan Update will amend Article 16: Estuarine Resources of the City of Toledo's existing comprehensive plan:
<https://www.cityoftoledo.org/sites/default/files/fileattachments/planning/page/1061/compplan.pdf>

Yaquina Bay Relevant Planning Contacts and Public Comment Resources:

- **Confederated Tribes of the Siletz Indians:** <http://www.ctsi.nsn.us/chinook-indian-tribe-siletz-heritage/>

This website contains information accessible to members of the public interested in learning more about the Confederated Tribes of the Siletz Indians government, heritage, and history.

- **Lincoln County:**
 - Lincoln County Planning Department Website:
<https://www.co.lincoln.or.us/planning/page/planning-division>

Lincoln County Public Notices – Email Planning Staff to ask about how you can receive notices about land use applications and rulemaking that might impact Lincoln County's estuaries.
- **City of Newport:**
 - City of Newport Community Development Department Website:
<https://www.newportoregon.gov/dept/cdd/default.asp>

Includes the City of Newport's planning and building divisions, and contact information for planning staff relevant to learning more about estuary management plan updates.
 - City of Newport Planning Commission and City Council Public Notices:
<https://www.newportoregon.gov/common/connect.asp>

Sign-up here to receive email notices of Planning Commission and City Council Agendas and Packets, as well as Public Comment opportunities related to Yaquina Bay.

- City of Newport Planning Public Notices website:
<https://www.newportoregon.gov/dept/cdd/publicnotices.asp>

This site contains public notices for pending applications as well as proposed plan/ordinance amendments, such as estuary management plan updates. Email the Planning Director or check the Planning Commission Agenda Packet seven days to review relevant application materials and planning staff reports.

- **City of Toledo:**

- City of Toledo Planning Department Website: <https://www.cityoftoledo.org/planning>
- City of Toledo Public Notices: <https://www.cityoftoledo.org/newsletter/subscriptions>

Sign-up here to receive notices of Planning Commission and City Council Meetings

COOS BAY ESTUARY MANAGEMENT PLAN (CBEMP)

CBEMP 2021 Update Status: Currently undergoing update (“DLCD continues to participate and offer support to the Partnership for Coastal Watersheds in the Coos Bay Estuary Management Plan update process.”)¹⁵⁶

CBEMP Relevant Jurisdictions, Tribal Governments, and Interested Stakeholders: Coos County implements the Coos Bay Estuary Management Plan (“CBEMP”), in coordination with the City of Coos Bay and the City of North Bend. Coos Bay is within the ancestral homelands of the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians (CTCLUSI). The Partnership for Coastal Watersheds (PCW) is a collaborative effort among public- and private-sector citizens in the Coos Bay community to develop locally-driven approaches to responsible development, and to help prepare for climate-related changes on Oregon’s south coast.

CBEMP Relevant Estuary Planning Documents:

- Coos County Comprehensive Plan Website – Coos Bay Estuary Management Plan (July 1984): <https://www.co.coos.or.us/planning/page/comprehensive-plans>

The CBEMP is part of the Coos County Comprehensive Plan, codified at Volume 2, Parts 1-3, and will be amended by the ongoing estuary management plan update. Coos County offers the CBEMP in three separate, but related parts as a non-text-searchable PDF document. The update will provide interested members of the public an opportunity to give their thoughts on provisions to better map, monitor, and protect Oregon’s eelgrass.

¹⁵⁶ DLCD Biennial.

- CBEMP Vol. 2, Part 1 contains CBEMP Plan Provisions:
https://www.co.coos.or.us/sites/default/files/fileattachments/planning/page/21510/vol_2_part_1_-_cbemp.pdf
- CBEMP Vol. 2, Part 2 contains CBEMP Inventories and Factual Base:
https://www.co.coos.or.us/sites/default/files/fileattachments/planning/page/21510/vol_2_part_2.pdf
- CBEMP Vol. 2, Part 3 contains CBEMP “Linkage” findings and existing goal exceptions:
https://www.co.coos.or.us/sites/default/files/fileattachments/planning/page/21510/vol_2_part_3.pdf
- City of Coos Bay Comprehensive Plan:
http://coosbay.org/uploads/PDF/Community%20Development/Estuary_Management/Estuary_Plan_-_Vol_3_DRAFT.pdf

The City of Coos Bay's Comprehensive Plan, Volume 3 contains the City of Coos Bay's CBEMP for management units (including those containing known eelgrass beds) under the City of Coos Bay's jurisdiction. It is also subject to change through the CBEMP update process.

- City of North Bend Functional Plans:
<https://www.northbendoregon.us/publicworks/page/city-functional-plans>

The City of North Bend's implementation of its comprehensive plan will be impacted by the CBEMP update process, including aquatic and upland units within the City of North Bend's jurisdiction that contain eelgrass.

- The City of North Bend's Comprehensive Plan:
https://www.northbendoregon.us/sites/default/files/fileattachments/public_works/page/2721/comprehensive_plan_2019_final.pdf

The City of North Bend's Comprehensive Plan states that the City of North Bend “will follow the implementation strategies, policies and allowable uses outlines in the Coos Bay Estuary Management Plan.” The City of North Bend's Functional Plan website includes text-searchable versions of Coos County's CBEMP, including Part 1, Part 2, and Part 3 discussed above.

- City of North Bend, CBEMP, Vol. 2, Pt. 1:
https://www.northbendoregon.us/sites/default/files/fileattachments/public_works/page/2721/cbemp_vol_ii_pt_1_searchable.pdf
- City of North Bend, CBEMP, Vol. 2, Pt. 2:
https://www.northbendoregon.us/sites/default/files/fileattachments/public_works/page/2721/cbemp_vol_ii_pt_2_inventories_factual_base_searchable.pdf

- City of North Bend, CBEMP, Vol. 2, Pt. 3:
https://www.northbendoregon.us/sites/default/files/fileattachments/public_works/page/2721/cbemp_vol_ii_pt_3_linkage_goal_exceptions_searchable.pdf
- The City of North Bend provides a helpful list of the City's estuary management units:
https://www.northbendoregon.us/sites/default/files/fileattachments/public_works/page/2721/northbend_cbemp_searchable_amd.ord_1994.pdf

CBEMP Relevant Planning Contacts and Public Comment Resources:

- **The Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians (CTCLUSI):** <https://ctclusi.org/>

This website contains information accessible to members of the public interested in learning more about the CTCLUSI's government, heritage, and history. In addition, the website offers the following resources:

- CTCLUSI Abundance StoryMap: <https://ctclusi.org/abundance-storymap/>

The Abundance StoryMap is provided by the modern Tribal government of CTCLUSI to give voice to the CTCLUSI's stories and culture and enrich public school curriculum in Oregon.

- CTCLUSI Department of Natural Resources & Culture: <https://ctclusi.org/department-of-natural-resources-culture/>

The CTCLUSI's Department of Natural Resources was established to conserve and manage resources on Tribally-held lands and to work with other governments to influence conservation and management of resources throughout the Tribes' Ancestral Territory.

Coos County:

- County Planning Department Website: <https://www.co.coos.or.us/planning>
- Coos County's Planning Department listed the CBEMP update as one of its planning projects for 2021: <https://www.co.coos.or.us/planning/page/planning-projects>
- Coos County Public Notices – Email the Planning Director at planning@co.coos.or.us to ask about how you can receive notices about land use applications and rulemaking that might impact Coos Bay, including the planned CBEMP update.
- Coos County Planning Submitted Applications:
<https://www.co.coos.or.us/planning/page/land-use-applications-submitted>

- Coos County Planning Maps: <https://www.co.coos.or.us/planning/page/maps-zoning-and-development>

City of Coos Bay

- City of Coos Bay Community Development Department Website - Includes the City's planning division: <http://coosbay.org/departments/community-development-department#planning-division>
- City of Coos Bay Planning Public Notices: Email the Community Development Administrator or Planner to ask about how you can receive public notices about land use applications and rulemaking that might impact Coos Bay, including the planned CBEMP update (<http://coosbay.org/directory/staff>). The Community Development Department can also assist you on obtaining relevant application and rulemaking proposal materials.
- The City of Coos Bay's Friday Update Newsletter is also a great way to stay up-to-date on what's happening in the area: <https://us15.list-manage.com/subscribe?u=7c581877e2e6e8bef7aacdc2e&id=edbaa163a6>

City of North Bend

- City of North Bend Public Works – Planning and Zoning: <https://www.northbendoregon.us/publicworks/page/planning-zoning>
- City of North Bend Public Notices: Sign-up here to receive emails about public notices and agendas: <https://www.northbendoregon.us/newsletter/subscriptions>
- Email the City of North Bend Planning Staff for assistance with obtaining application and rulemaking materials. Additionally, the City of North Bend's Planning Commission meeting site usually contains relevant application and rulemaking update materials under the "View Details" section: https://www.northbendoregon.us/meetings?field_microsite_tid_1=28
- Partnership for Coastal Watersheds (PCW): <https://www.partnershipforcoastalwatersheds.org/>
- PCW COOS ESTUARY LAND USE ANALYSIS South Slough National Estuarine Research Reserve University of Oregon Institute for Policy Research and Engagement | 2019: <http://www.partnershipforcoastalwatersheds.org/wordpress/wp-content/uploads/2019/11/COOS-Estuary-Land-Use-Analysis-20191025.pdf>

PUBLIC PARTICIPATION - STATE AND FEDERAL RESOURCES

- **Oregon Department of State Lands:** <https://www.oregon.gov/DSL/News/Pages/Subscribe.aspx>

Subscribe to DSL Notice Lists related to the South Slough Estuarine Reserve, Waterways & Wetlands Program, Rulemaking, and Aquatic Resource Planning.

- **NOAA PFMC:** <https://www.pcouncil.org/navigating-the-council/getting-involved/>

PFMC's "Get Involved" website explains how to comment and get to know the Council: PFMC, *Getting Involved*.

- **NOAA-OCM:** <https://coast.noaa.gov/czmprogramchange/#/public/home>
NOAA, Coastal Zone Management Act Program Changes Email Notification Sign-up

- **NOAA-Digital Coast:** <https://coast.noaa.gov/digitalcoast/>

NOAA Digital Coast is a resource for coastal communities and interested members of the public to learn about and address issues commonly associated climate change, as well as learn more about the CZMA and state CZMA programs.

OREGON COASTAL ATLAS – ESTUARY RESOURCES

- About Estuaries in Oregon: <https://www.coastalatlantlas.net/index.php/learn/places/6-estuaries>
- Estuary Data Viewer (About): <https://www.coastalatlantlas.net/index.php/tools/planners/63-estuary-data-viewer>
- Estuary Data Viewer Tool: <https://www.coastalatlantlas.net/estuarymaps/>

Appendix B: Tribal Sovereignty and Governance

Appendix B contains a non-comprehensive list of resources that can support interested members of the public to begin learning about the historical and present context of inherent tribal sovereignty versus the grant of self-government; how existing Indigenous land practices could impact eelgrass within Oregon's estuaries; and the political (i.e., government-to-government) relationship between tribal nations and local, state, and federal decision-making processes. These resources are by no means a comprehensive list, nor do they represent the totality of the diverse and complex perspectives of Indigenous people who live in Oregon.

Coastal Tribes:

In addition to the CTCLUSI and the Confederated Tribes of Siletz Indians (discussed above in Appendix A in relation to the Yaquina Bay and Coos Bay estuary management plans), the following tribal government websites will assist interested members of the public to learn more about coastal tribes with traditional ancestral homelands on what we now call the Oregon Coast:

- Coquille Indian Tribe: <https://www.coquilletribe.org/>
- Confederated Tribes of Grand Ronde: <https://www.grandronde.org/>
- Confederated Tribes of the Umatilla Indian Reservation: <https://ctuir.org/>
 - Columbia Inter-tribal Fish Commission – CTUIR: https://www.critfc.org/member_tribes_overview/the-confederated-tribes-of-the-umatilla-indian-reservation/
- Chinook Tribe: <https://chinooknation.org/>
- Chinook Tribe – Additional Resources Telling the Story of the Chinook Nation's Fight for Federal Recognition:
 - Eilis O'Neill, Unrecognized Tribes Struggle Without Federal Aid During Pandemic, NPR, Apr. 17, 2021, <https://www.npr.org/2021/04/17/988123599/unrecognized-tribes-struggle-without-federal-aide-during-pandemic>.
 - Anna V. Smith, *Members of Chinook Indian Nation liken lack of federal recognition to slow-motion 'genocide'*, OregonLive, Apr. 3, 2021, <https://www.oregonlive.com/pacific-northwest-news/2021/04/members-of-chinook-indian-nation-liken-lack-of-federal-recognition-to-slow-motion-genocide.html>.

Tribal Governments - Articles and Publications:

- Shaun Chapoose, Chairman, Ute Indian Tribe of the Uintah & Ouray Reservation, Uta, *Resolution #ECWS-17-001 – Recognition and Reaffirmation of American Indian Tribes' Right to Sovereignty, Self-Determination, and a Government-to-Government Relationship with the United States*, National Congress of American Indians [NCAI], (2017), <https://www.ncai.org/resources/resolutions/recognition-and-reaffirmation-of-american->

[indian-tribes-right-to-sovereignty-self-determination-and-a-government-to-government-relationship-with-the-united-states](#)

- NCAI, *Tribal Nations & the United States: An Introduction*, (Feb. 2020), <https://www.ncai.org/about-tribes>
- Dina Gilio-Whitaker, *The Problem with The Ecological Indian Stereotype*, KCET (Feb. 7, 2017), <https://www.kcet.org/shows/tending-the-wild/the-problem-with-the-ecological-indian-stereotype>.
- Cheryl L. Daytec, *Fraternal Twins with Different Mothers: Explaining Differences between Self-Determination and Self-Government Using the Indian Tribal Sovereignty Model as Context*, 22 MINN.J.INT'L L.HUMPHREY SUPP.25 (2013), <https://poseidon01.ssrn.com/delivery.php?ID=232099087122075127124017077005126066097017010085053050121006120066072073099114100025006004049123024013001005077064124068002082058006064047010091117011124120021076113034038031104093086017003069070098078119011098125099102008088100096111071030018125094020&EXT=pdf&INDEX=TRUE>.
- Diver S. 2018. "Native water protection flows through self-determination: understanding tribal water quality standards and "treatment as a state." *J Contemp Water Res Educ*. 163(1):6-30, <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1936-704X.2018.03267.x>