



# Oregon Territorial Sea Plan: Part Three

## Rocky Habitat Management Strategy

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# Oregon Territorial Sea Plan: Part Three

## Rocky Habitat Management Strategy

### **A. The Rocky Habitat Management Strategy**

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#### 1. Purpose

**Strategy Goal:** This strategy aims to be a coordination and adaptive planning framework focused on the long-term protection of ecological resources and coastal biodiversity within and among Oregon's marine rocky habitats, while allowing appropriate use.

The Rocky Habitat Management Strategy is one of several elements of Oregon's ocean-resources management program. It provides clear policies and direction for strong, site-based management and the protection of unique ecosystems along the Oregon Coast. The strategy is a combination of policies, objectives, and site-specific recommendations supported by scientific information on the natural resources which exist in rocky habitat areas. The strategy relies on authorities and programs of local, state and federal agencies to carry out activities in the field.

#### 2. Objectives

This strategy acts as a framework to support the following objectives:

- a. To maintain, protect, or restore rocky habitats and biological communities;
- b. To implement a holistic management program through site designations and management recommendations that allows for enjoyment and use of Oregon's rocky habitats while protecting them from degradation and loss;
- c. To enhance appreciation and foster personal stewardship of Oregon's rocky habitats through education, interpretation, and outreach;
- d. To improve our knowledge and understanding of rocky habitat ecosystems by fostering research and monitoring efforts;
- e. To facilitate cooperation and coordination among local, state, and federal resource management agencies, and tribal governments, to ensure that marine resources and habitats are holistically managed.

#### 3. Rocky Habitat Importance

Oregon's rocky habitats are integral to the unique landscape and seascape of the Oregon Coast. From Tillamook Head looming above the Clatsop Plains south to the cliffs of Brookings, rocky habitats are a trademark of the Oregon Coast. These biologically rich and visually dramatic locations have high value to Oregonians as places

to enjoy, learn, and use. Rocky habitats provide a window to the marine environment, making them attractive places to visit for recreation, harvest, education, and research.

Oregon's rocky habitats harbor a variety of lifeforms uniquely adapted to live on the margin between the land and sea. The living resources found in rocky habitats include a productive mix of fish, invertebrates, and plant life, particularly in the intertidal areas, as well as seabirds and Pinnipeds that utilize adjacent cliffs and offshore rocks for shelter, feeding, and reproduction. Below the surface, rocky habitats offer stable footing for structure-forming marine plants such as kelps and seagrasses. These foundational species provide shelter and food for the diversity of unique and economically important organisms that live in submerged rocky habitats, and may also serve to help mitigate the effects of ocean acidification and other changes in seawater chemistry.

Oregon has long recognized the ecological value of rocky habitats, as well as the societal value associated with the variety of human uses occurring in these areas. Oregon's long history of managing rocky habitats to balance conservation and use reflects this recognition. Rocky habitat management needs to continue to adapt to changes in human use pressure, as the number of coastal residents and visitors increases, and development progresses. Additionally, recent advances in the understanding of climate change have exposed new threats including warming temperatures, sea level rise, and changing seawater chemistry, as well as potential cumulative impacts.

Oregon's marine rocky habitats belong to the public, with few exceptions. There are several state and federal agencies responsible for managing Oregon's rocky habitats in the public interest. Agency jurisdictional boundaries and authorities exist in a complex matrix and rely on a suite of management goals, objectives, and strategies. Section C. of this plan outlines the authorities of state and federal agencies that have jurisdiction over Oregon's rocky habitats.

The creation and stewardship of this strategy embraces a site-based management approach and protection of rocky habitat ecosystems that incorporates the voices of the diverse groups that share an interest in Oregon's rocky coast. The membership and mission of the Ocean Policy Advisory Council (OPAC) reflects legislative intent to make sure that the many governmental interests of coastal cities and counties, state and federal agencies, coastal Tribal Nations, and the diverse user groups on the coast are coordinated.

#### 4. Plan Implementation

Interagency coordination and cooperation has been critical to preparing and carrying out the Rocky Habitat Management Strategy and will remain essential in executing appropriate management. A collaborative, coordinated effort, based on a commitment to

cooperate, increases the likelihood of success and decreases the need to add laws and authorities for any individual management agency. The management agencies responsible for implementing natural resource protection and managing human uses have reviewed and agreed to prioritize the recommendations within the Rocky Habitat Management Strategy. It should be noted that although this strategy includes a substantial suite of recommendations for rocky habitat management, not all site management recommendations may be applied through state rule or statute.

## **a. Amending the Strategy**

### **i. General Strategy Amendments**

Due to constantly changing ocean conditions, coastal uses, and advancing scientific knowledge, this strategy will require periodic reconsideration and amendment to remain relevant. While there is not a specific timeline for updating the Rocky Habitat Management Strategy, or the Territorial Sea Plan (TSP) more broadly, management agencies and the public at large are offered the flexibility of presenting proposed modifications at any time. General amendment initiation criteria for the TSP are available in Part 1.F.2. and apply to management agencies recommending any modifications to the TSP (including the Rocky Habitat Management Strategy). Proposed amendments to site designations specific to the Rocky Habitat Management Strategy can be submitted through a community-based proposal process, outlined in the section below (A.4.a.ii.), and Section E.

### **ii. Site-Based Proposals**

The Rocky Habitat Management Strategy allows local community groups and the public at large to submit proposals for changes in site-specific rocky habitat management. Changes may include recommendations for new site designations, modifications of existing designations, or deletions of existing designations. All members of the public are eligible to submit proposals, with proposals representing local multi-stakeholder interests strongly encouraged.

Proposals are subject to multi-agency analysis and review which will be used by OPAC to evaluate the proposed designation changes. All rocky habitat within the territorial sea is eligible to be proposed for designation alteration under the community proposal process. Proposals will be collected by Oregon Coastal Management Program (OCMP) staff on a rolling basis and do not require an active TSP amendment period to be submitted. More information and details on the public proposal process can be found in Section E.

## 5. Strategy Elements

The management elements of the Rocky Habitat Management Strategy will be carried out primarily by state agencies such as Oregon Parks and Recreation Department (OPRD), Oregon Department of Fish and Wildlife (ODFW), and the Department of State Lands (DSL). The U.S. Fish and Wildlife Service (USFWS) manages offshore rocks and islands as National Wildlife Refuges<sup>1</sup>. In some cases, local governments, federal agencies, tribal governments, and other partner organizations may be involved. The timing for carrying out this plan will vary with the management needs, conditions and resources of each site, availability of financial and technical resources to agencies, and with the interests and involvement of local citizens and groups. This subsection outlines the major elements of this strategy for Oregon's rocky habitats<sup>2</sup>.

### a. Management Principles

Refer to definitions in Section B.1. for clarification of terminology.

- i. **Management to Follow Plan.** Management of rocky habitat areas should aim to be consistent with the recommended site management designations, management objectives, policies, and management recommendations in this strategy;
- ii. **Ecological Units.** The interconnected relationship between rocky shoreline areas, offshore sites, and submerged rocky habitat warrants related areas to be managed as an ecological unit;
- iii. **Ecosystem-Based Management.** Management recommendations and prescriptions should follow ecosystem-based management and adaptive management principles;
- iv. **Planning and Management.** Planning or recommended management actions by the Ocean Policy Advisory Council or any agency with respect to rocky habitat areas should:

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<sup>1</sup> Oregon Islands, Three Arch Rocks, and Cape Meares National Wildlife Refuge Comprehensive Conservation Plan and Wilderness Stewardship Plan. U.S. Fish and Wildlife Service, Oregon Coast National Wildlife Refuge Complex, Newport, Oregon.

<sup>2</sup> The intent of these principles is not to replicate or expand Oregon Marine Reserves under ORS 196.540 – 196.555.

- a. involve all appropriate management agencies, city or county planning agencies, affected Tribal Nations, and interested citizens and organizations;
- b. be based on the best available scientific information and local knowledge about the site, its resources, and uses as obtained through detailed site studies or as provided through comment and testimony by agencies and interested parties;
- c. include provisions for encouraging periodic monitoring of site use and condition of habitats and resources, where feasible, for the purpose of updating site management actions;
- d. comply with state and federal regulations and permitting;
- e. incorporate public educational, awareness, citizen and community science, and outreach programs as integral parts of local site management, where practicable.

## **b. Education & Public Awareness**

An informed and aware public is critical to protecting rocky habitat resources and carrying out the goals, objectives, and policies of the Rocky Habitat Management Strategy. It is essential for the continued ecological functioning and well-being of Oregon's rocky habitats that visitors interact responsibly in these areas. Fostering a culture of stewardship of rocky habitat resources will help protect the ecological, cultural and economic resources of Oregon's rocky coastline. Targeted messaging, including information on ways that individuals and groups can take action to positively affect these rocky habitats, is crucial.

Successful implementation of the Rocky Habitat Management Strategy needs a strategic communication plan focused on both coastwide and site-specific efforts that will foster stewardship of rocky habitat resources. Current education program providers should collaborate on a systematic approach to target audiences with agreed-upon messages. This will require both financial and institutional support and coordination to achieve maximum effectiveness.

As part of a strategic communication effort, new and already established locally-based and regionally supported programs are needed to disseminate accurate and timely rocky habitat knowledge and stewardship messages. The principles, policies, and objectives in the Rocky Habitat Management Strategy should be used as a guiding framework for the development of state-funded rocky habitat educational programs. Priority communication messages should focus on visitor best practices, current events, site-based information, experience opportunities, and awareness of threats to Oregon's

coastal rocky habitats. Communication strategies should range from on-site signage to broader-reaching tools such as digital information products and social media campaigns.

Research and monitoring of rocky habitat ecosystems is crucial to understanding human impacts, both immediate and long-term. These efforts will require financial and structural support to assess and inform adaptation to emerging threats to rocky habitat ecosystems (e.g. ocean acidification). Citizen and community science programs are a recommended strategy for engaging visitors to increase their awareness and commitment to protecting rocky habitats while also providing valuable data collection to help inform management.

### Education Actions

In addition to general site management principles, this strategy also recognizes that the following actions should be used to build a successful public awareness and engagement component into rocky habitat management:

1. Create a coastwide network and communication strategy that links private, local, tribal, state, and federal education and interpretive programs.
2. Foster existing education programs as needed to ensure they meet management and stewardship goals, and contribute to the understanding and long-term support of Oregon's rocky habitat resources.
3. Support existing education and interpretive programs as well as creation and implementation of new education and interpretive programs to fill gaps.
4. Work with education providers, interested users and groups to plan and implement coordinated educational programs, messaging, and awareness campaigns.
5. Support volunteer-based organizations in the conduct of outreach activities that assist agencies and are consistent with the communication strategy.
6. Use a variety of communication tools including digital and social media to meet the diverse needs of schools, agencies, public facilities, local governments, and non-governmental organizations.
7. Seek additional funding in order to provide financial assistance to agencies and organizations whose education programs support the Rocky Habitat Management Strategy objectives.
8. Work with agencies, researchers, tribal governments, and stakeholder groups to identify and support research and monitoring needs while also developing a



citizen and community science network that engages local communities and visitors.

## 6. Policies

The policies for rocky habitat management have been crafted to achieve consistency with state goals and priorities. These policies are mandatory and all actions of local governments and state agencies in relation to managing rocky habitat areas and resources shall be consistent with them. These policies are stated within the context of a broader suite of relevant regulations and management measures and, unless otherwise stated, are not intended to negate or supersede those. A subset of these policies are enforceable policies for federal consistency<sup>3</sup> review purposes and are specified in Appendix D. Refer to Section B.1. for rocky habitat classifications and definitions.

### a. Policy Statement

Oregon's rocky habitats, in the broadest definition, are unique and carry coastwide importance ecologically, economically, culturally, and recreationally. The Rocky Habitat Management Strategy recognizes the importance of these interconnected habitats and the resources within them regardless of designation or recommendation. Therefore, this strategy recommends management actions that protect ecological values and biodiversity within and among Oregon's coastal rocky habitats while allowing appropriate use.

### b. Policies

- A. Consistent with Statewide Land Use Planning Goal 19, actions that are likely to affect rocky habitats shall be developed and conducted to conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social values benefits.
- B. Protection of rocky habitat resources (i.e. living marine organisms and their habitat) shall be prioritized over development of non-renewable ocean resource uses.
- C. Education about rocky habitats should be fostered through the implementation of principles outlined in Section A.5.b.
- D. Public access to rocky habitat sites shall be preserved to the maximum extent practicable and minimize user conflict.
- E. Agencies may create temporary access restrictions at individual rocky habitat sites, when necessary, to ensure visitor safety, ensure resource and habitat

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<sup>3</sup> Federal Consistency: 15 CFR Part 930.

protection, and to manage for user conflicts. Any non-emergency, temporary access restriction must be accompanied by a scientific basis or decision rationale that describes the management concern and the duration of the access restriction.

- F. Standards for designations described in Section D. of this plan shall apply to activities occurring in rocky habitats. Managing agencies shall incorporate management recommendations outlined in Section D. into administrative rule or site management practices.
- G. Managing agencies shall administer regulations, permits and other agreements in a way that considers the long-term conservation of rocky habitats and organisms.
- H. Managing agencies' shall conduct education and information efforts for visitors to rocky habitat areas in a manner consistent with site-based management recommendations, Statewide Land Use Planning Goal 19, and education actions outlined in Section A.5.b.
- I. Harvesting, gathering, or scientific collection of marine plants and animals in rocky habitat areas, where allowed, shall be conducted in a manner that minimizes impacts and disturbance to habitats or other organisms.
- J. Marine development activities, not currently managed by a specific part of the Territorial Sea Plan, that cause significant adverse effects or permanent<sup>4</sup> impacts to the form or function of submerged rocky habitats, or the fisheries dependent upon them, are prohibited.
- K. Management actions shall consider adaptation and resilience to climate change, ocean acidification, and hypoxia effects on rocky habitat ecosystems, in accordance with relevant state action plans, guidance, or policy.
- L. Foster and promote research and monitoring, compatible with the Rocky Habitat Management Strategy, including effects of climate change, ocean acidification, and hypoxia.
- M. All affected Oregon federally recognized tribes shall be provided the opportunity for consultation regarding any action, including the planning, taking place in the rocky habitat areas.
- N. Impacts to cultural resources<sup>5</sup> or historic properties in rocky habitats shall be avoided, minimized, or mitigated, in consultation with affected Oregon federally recognized tribes and as determined by the State Historic Preservation Office or Tribal Historic Preservation Office, as appropriate.

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<sup>4</sup> "Temporary impacts" are adverse impacts to waters of this state that are rectified within 24 months from the date of the initiation of the impact. As defined by: OAR 141-085-0510(88).

<sup>5</sup> Resources vital to or the product of the perpetuation of traditional practices, ceremonies and lifeways.

- O. This plan and its implementation do not affect consent decrees or other agreements between the State of Oregon and any Oregon federally recognized tribe or any state agency policy recognizing tribal rights in rocky habitat areas.
- P. Managing agencies may propose site designations within rocky habitat areas as determined by the best available science.
- Q. Harvest of marine aquatic vegetation is prohibited except as regulated by state agencies for appropriate recreational, scientific, restoration, and educational use.
- R. Development activities occurring within or near an area with marine aquatic vegetation must have no significant adverse effects to the marine aquatic vegetation or its habitat.

## B. Oregon's Rocky Habitat

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### 1. Defining Oregon's Rocky Coast

Rocky habitats account for approximately 41% of Oregon's 362-mile coastline and 6% of the state's subtidal area. These areas include headlands, tidepools, rocky beaches and cliffs, as well as offshore rocks, islands, and reefs. Manmade rocky habitats (i.e. jetties, riprap, etc.) are not within the purview of the Rocky Habitat Management Strategy.

#### a. Rocky Substrate Definitions

The rock in rocky habitat consists of geologic substrate comprised of:

- Bedrock, or
- megaclasts (rock >4 meters or ~13 feet in diameter), or
- rock fragments, boulders, or cobble which, individually, are greater than 64 millimeters (~2.5 inches) in diameter, or
- any combination of the above.<sup>6</sup>

The rocks can comprise the majority of the substrate surface, rise above the substrate surface, or in some cases be covered with a thin layer of sand or mud (e.g. in the case of some surfgrass beds, the surfgrass is anchored on rock but the presence of surfgrass can cause a thin layer of sand to be deposited on the rock, thus obscuring the rock from the view on the surface).

Rocky habitat consists of outcrops or deposits of the above-described materials either along the shoreline or in submerged areas. The individual rock structures or fragments within a rocky habitat area are often interspersed with gravel or sediment and overlain with biogenic habitat features. This creates a complex mix of substrate characteristics that all contribute to the form and function of the rocky habitat. Thus, rocky habitat can have non-rock (sand, gravel, biological) components. These habitats are variously referred to as rocky reefs, rocky banks, rocky beaches, rocky intertidal areas, rocky subtidal areas, boulder fields, rocky debris fields, benches, rock pavement, sea stacks, wash rocks, pinnacles, and many other names (see Figure 1).

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<sup>6</sup> Federal Geographic Data Committee. (2012). FGDC-STD-018-2012: Coastal and marine ecological classification standard. FGDC, Reston, VA.

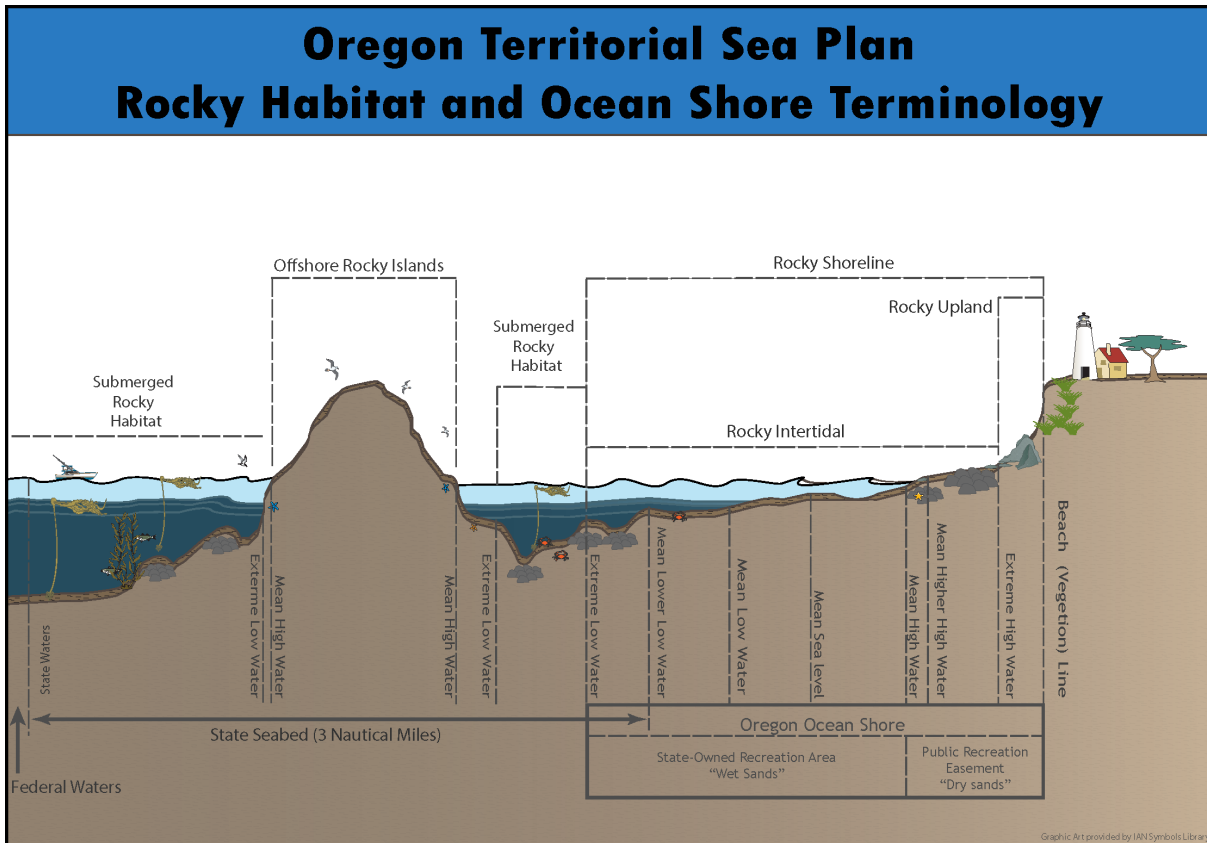


Figure 1. Rocky habitat and ocean shore terminology as defined by Oregon's Territorial Sea Plan.

## b. Rocky Habitat Type Classifications

To appropriately manage the resources within these rocky areas, the differences and similarities between the many rocky habitat types must be recognized. For the purpose of this management strategy, Oregon's rocky habitats are grouped into three major classifications based on proximity to shore, jurisdictional boundaries, and ecological zone (Figure 2). Within these main classifications, many other sub-classifications may be present including rocky intertidal and subtidal, cliffs, tidepools, etc. Additional descriptions of rocky habitat environments can be found in Appendix B.

- a. **Rocky Shoreline** – all rocky habitat between the statutory vegetation line described in ORS 390.770 and extreme low water (encompasses cliffs, tidepools, and rocky intertidal). These areas may be reached by foot from shore (regardless of hazard or convenience).
  - i. **Rocky Upland** – rocky habitat area between the statutory vegetation line and extreme high water line. In unvegetated areas, this is delineated at the 16-foot elevation contour.

- ii. Rocky Intertidal – rocky habitat area between extreme high water line and extreme low water line.
- b. Submerged Rocky Habitat – all rocky habitat below extreme low water, out to the deepest limits of the territorial sea. This area includes submerged rocky reefs, shallow rocky subtidal, and other submerged rocky habitats.
- c. Offshore Rocks and Islands – any rock or landform within the territorial sea separated from the mainland at mean high water which remains above the surface of the sea at mean high water<sup>7</sup>.

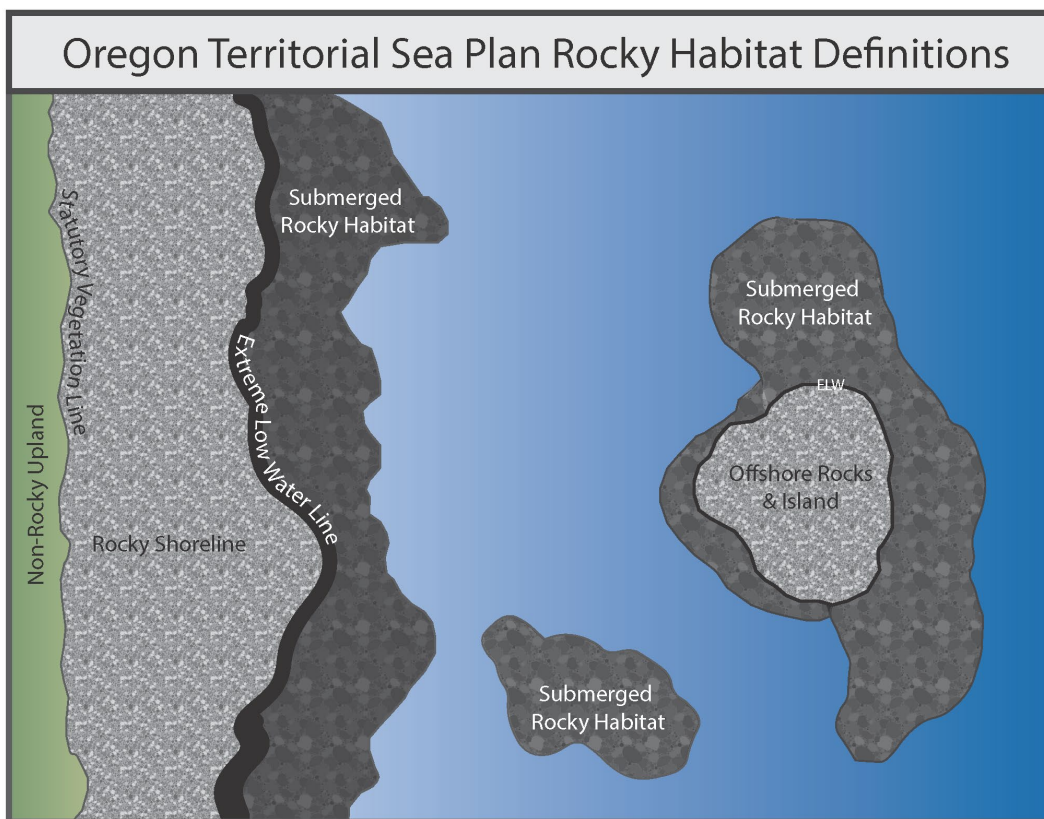


Figure 2. Idealized representation of different rocky habitats on the Oregon Coast.

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<sup>7</sup> As defined by the U.S. Fish and Wildlife Service.

## 2. Setting Context

This section provides a contextual overview of some key factors that influence and shape rocky habitats along the Oregon Coast.

### a. Ocean Currents

Oregon's rocky coast is part of the California Current Large Marine Ecosystem (CCLME), an eastern boundary upwelling system situated at the land-sea interface. This dynamic system is responsible for making Oregon's broader territorial sea immensely productive, yet vulnerable to disturbance. Scientific study and exploration has taken place to better understand this system, yet the unique ocean currents, geology, and ecology of the area are still being actively investigated. More information is needed to build a better understanding of the system and potential impacts to the rich ecological and economic resources associated with the CCLME.

Oregon's coastal waters are part of the much larger CCLME oceanographic current system that connects cold subarctic waters from the Gulf of Alaska with tropical waters near the equator. The California Current is responsible for moving water southward along the Oregon Coast, while a deeper countercurrent, called the Davidson Current, moves water northward. In the most general sense, the California Current, along with seasonal northerly winds, are responsible for spring/summer deepwater upwelling in the narrow ribbon of sea along the coast<sup>8</sup>. This nutrient-rich upwelling water frequently leads to drastic increases in seasonal nearshore primary productivity, and provides a strong ecological basis for supporting the region's fertile coastal ecosystems and fisheries. Although this upwelling underpins seasonal productivity regimes in the nearshore environment, it also makes the Oregon Coast more vulnerable to hypoxic events, and exacerbates the impacts of ocean acidification. This risk is due to ongoing ocean deoxygenation associated with climate change and the naturally elevated carbon dioxide in the surfacing deep sea water. The addition of excess carbon dioxide being absorbed from the atmosphere results in decreased buffering capacity of the system to moderate primary productivity and respiration in these surface waters<sup>9</sup>. The impacts of climate change effects on the CCLME and Oregon's coastal waters are being actively

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<sup>8</sup> A wide array of characteristics may impact local and regional upwelling including bathymetry, terrestrial inputs, etc.

<sup>9</sup> Hypoxic conditions occur when oxygen levels in the water column become too low for marine life to survive, while ocean acidification describes a suite of changes in seawater carbon chemistry that may include a decrease in seawater pH, and can create conditions where marine organisms have difficulty forming calcium carbonate structures (e.g. shell material).

researched by scientists locally and around the world in order to better understand and predict impacts to marine resources.<sup>10</sup>

## **b. Geology**

Much like the ocean currents that support Oregon's coast, the region's rocky formations are also complex and have been evolving over geologic timescales. The prominent headlands that protrude into the sea along the coast, including Yaquina Head, Cape Lookout, and Seal Rock, are composed primarily of basalt. Many of the offshore rocks and islands in this area were once headlands that have since been eroded by wind and waves, leaving only the disconnected hard basalt islands behind. Some of the most iconic of these remnant structures include Haystack Rock (both Cannon Beach and Pacific City), Gull Rock, and Otter Rock.

The geomorphology changes as you move down the Oregon Coast. Cape Arago, south of Coos Bay on the south-central coast, is composed of uplifted and tilted sedimentary rock. South of the Coquille River, rocky headlands and offshore rocks are primarily composed of ancient metamorphic rock<sup>11</sup>. Although the coast has seen millennia of oceanographic processes, more episodic events have also helped to form the coast as we know it today. This has included the rise and fall of sea level, tectonic uplift and subsidence, and periodic earthquakes and tsunamis from the Cascadia subduction zone as well as distant faults.

## **c. Biology**

Oregon's rocky coast is home to uniquely adapted organisms that have evolved to live in the harsh environment on the border of land and sea. Rocky habitat plants and animals are often exposed to disturbances including high wave energy, changing water levels, freshwater inflow, and many others. Distribution of these organisms is often dependent on physical factors including temperature and exposure (to air, water, and sunlight), as well as biological factors such as predation and competition. These factors often help to characterize the rocky intertidal and subtidal into distinct zones. The zones are often based on dominant species such as mussels, barnacles, sea stars, anemones, urchins, and algae. These zones can also be used to define less common organisms such as nudibranchs, limpets, and sponges. Management pertaining to highly mobile species must also be considered in rocky habitats, including Pinnipeds

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<sup>10</sup> Acknowledgement – Ocean Currents section reviewed for accuracy by Dr. George Waldbusser (Oregon State University).

<sup>11</sup> Metamorphic features on the south coast have been dated to have been in the region for over 200 million years.



(seals and sea lions), Cetaceans (whales), marine fishes, and seabirds, which also utilize rocky habitats for feeding, reproduction, and protection.

An exhaustive list of rocky habitat organisms is outside the scope of this document, and species are actively being discovered and identified. The full scope of biological diversity living on or near Oregon's rocky coast is still not fully understood. Continued scientific study will reveal the magnitude of variety in this dynamic niche environment.

#### **d. Stressors & Sustainability**

The environment that sustains rocky habitats also makes the resources in these areas uniquely vulnerable to trampling, pollution, marine debris, and changing oceanographic conditions. The Rocky Habitat Management Strategy acknowledges the fragility of rocky habitat areas and is focused on promoting sustainable and adaptable management and conservation of rocky habitat areas and associated resources. Additionally, since these sensitivities and stressors may be increased by the effects of climate change, adaptive standards of protection for Oregon's marine resources are warranted and should be reviewed as more data and information is discovered about potential impacts.

As coastal populations increase and Oregon becomes a more popular tourist destination, concerns regarding degradation of coastal resources are becoming exacerbated. Although rocky intertidal organisms are adapted to living in a harsh and dynamic environment, they are also susceptible to human trampling, or impacts from pets and bicycles. As these areas become more accessible to foot traffic, visitor awareness of their impact on the ecosystem becomes increasingly important.

Recreational and commercial harvest of organisms, as well as collection of organisms for scientific and educational purposes, often raises concerns about overuse. Currently, harvest of rocky intertidal organisms is primarily recreational. Although there is little active commercial harvest of marine organisms in rocky intertidal areas, this strategy recognizes that harvest species and techniques are dynamic and the future may bring new commercial ventures and recreational harvest interests. Developing fisheries and plant harvest should be well-studied and understood, prior to the implementation of broad-scale open harvest, to avoid stress on the ecosystem and species.

More recently, the potential impacts of unmanned aerial vehicles (i.e. drones) have been recognized in rocky areas. Drones provide visitors a glimpse into rocky habitat areas never seen from public viewpoints, and help managing agencies to better understand areas with limited access. However, recreational drones may inadvertently disturb seabird colonies and Pinnipeds, possibly impacting reproductive success and animal health.

Oceanographic stressors, such as ocean acidification and hypoxia, disease outbreak, warming waters, and increased frequency of severe storms, will also have a growing

impact on rocky habitats. It is estimated that rocky habitats may be the first areas to see change due to these shifting regional and global trends. These changes may also increase opportunities for non-native and invasive species to colonize rocky habitat areas. Land-based runoff and pollution, along with marine debris can increase the susceptibility of rocky ecosystems to other stressors. The cumulative impact of these stressors can affect the ecological health of Oregon's iconic rocky areas.

This strategy encompasses a broad view of the entire Oregon Coast to provide a larger ecosystem context for meeting local management needs and setting priorities for action. An ecosystem-based approach is important due to the inherent interconnection between sites on the coast, as well as throughout the Pacific Ocean. The management and use of one site can affect the ecological function and resiliency of another site. This requires management actions to be scale-dependent, with applications ranging from site level, to the regional or coastwide scale.

### 3. Rocky Habitat Uses

#### a. Tribal Significance

Tribes all along the coast have origin stories, telling of the creation of the earth. While there is scientific evidence that can trace Tribal settlement to at least 15,000 years ago, Tribes recognize that they have occupied the land since time immemorial. Oregon's rocky habitats are unique features of history long predating European settlement. The tribes of Oregon have a meaningful connection to the rocky areas along the coast. Much like mudflats in estuaries, many rocky habitats were accessible areas where resources (such as shellfish and marine aquatic vegetation) could be gathered predictably. Additionally, these places are locations for ceremonies, traditional cultural practices, and a general sense of identity. The Rocky Habitat Management Strategy cannot begin to appropriately summarize the rich lineage of tribal use of the coast and traditional connection to rocky habitats. The appropriate tribes should be contacted to learn more about the individual cultural history surrounding these areas<sup>12</sup>. Additional information may be found in the Oregon Department of Education's *Essential Understandings of Native Americans in Oregon*<sup>13</sup>.

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<sup>12</sup> Visit the Legislative Commission on Indian Services to learn more about and get contact information for Oregon Tribes at: <https://www.oregonlegislature.gov/cis>

<sup>13</sup> Oregon Department of Education (n.d.) Essential Understandings of Native Americans in Oregon. Oregon Educator Network. <https://www.oregonednet.org/groups/sb-13-tribal-historyshared-history/resources/essential-understandings-native-americans-oregon>

## **b. Significance to Oregonians and Visitors**

Oregonians, as well as out-of-state visitors, continue to be attracted to the dynamic rocky habitats along the coast. These areas provide a variety of opportunities for different onlookers including tidepooling, SCUBA diving, harvesting, and wildlife viewing. These activities often provide a window into the sea where onlookers can learn firsthand about the exotic marine life hiding just below the water's surface. Even for those visitors unable to leave the pavement, Oregon's rocky coastline is often visually accessible from Highway 101, which runs parallel to much of the Oregon Coast, and includes a multitude of overlooks allowing drivers and cyclists to easily enjoy the inspiring views. Regardless of activity, visitors quickly find a place-based connection to the coastline and its diverse habitats and organisms, which has helped to shape Oregon's shared cultural values that are tied to the land, resources, and history of the coast.

Overall, the landscape of Oregon's rocky coast is one of tradition, recreation, discovery, inspiration, and learning. This strategy intends to honor the significance surrounding rocky habitat resources and to respect traditional uses in consultation with tribal partners.

## **c. Recreation**

Rocky habitat areas account for millions of annual visits to the Oregon Coast. Oregon's rocky habitats are a tremendous resource for recreation, exploration and hands-on, field-based learning, especially the easily accessible rocky intertidal areas (e.g. tidepools). Like sandy beaches, access to these rocky shoreline resources is critical to the bioregional identity of Oregonians. With ecotourism and experience-based vacations becoming more popular, the number of visitors to rocky coastal areas continues to increase along with the potential ecological impacts of recreation. This strategy recognizes that recreation in rocky habitat areas is critical to Oregonians and coastal economies. Balanced management is needed to ensure long-term stewardship of these important resources. The strategy further recognizes that it is the diversity of landscapes and natural resources that drives this strong recreational interest, supporting the need for a balanced approach.

Offshore rocky reefs contain some of Oregon's premier recreational fishing grounds in the territorial sea. Recreational fishers primarily target various rockfish species, lingcod, and cabezon on offshore reefs. Oregon's recreational charter boat industry also depends on healthy fish populations on these reefs. In addition to providing a recreational resource, these fisheries are essential to the coastal economy.

## **d. Research & Monitoring**

Credible information is necessary to prepare, carry out, and evaluate management programs. Oregon's coastal rocky habitats have long provided a location for scientific discovery and research. Research at rocky habitat sites has improved our understanding of marine environments and illuminated some of the defining ecological principles of marine ecosystems. Long-term monitoring in Oregon's rocky habitats has allowed us to better understand coastal ecosystems, and observe changes from natural and human-caused events, including climate change and ocean acidification.

This strategy recognizes that the key to effective assessment and adaptive management is active, responsive research and monitoring programs. The strategy encourages additional support for existing research and monitoring programs as well as the development of new programs capable of detecting and responding to rapidly emerging challenges.

## **e. Education**

For many Oregonians, exploring rocky shores is often the first and sometimes only place they may encounter the rich biodiversity of the Pacific Ocean. Providing a living classroom like no other marine ecosystem can, coastal rocky habitats inspire a sense of wonder and spark curiosity in children and adults alike.

The Oregon Coast has long supported the educational missions of schools, aquariums, universities, and life-long learners. Rocky habitats are living laboratories which host a suite of these institutions year-round. Educational programs directly aid the management efforts of these diverse and fragile rocky ecosystems by helping to instill knowledge and a stewardship ethic.

An informed citizenry, with a strong connection to and sense of personal stewardship of the resource, will be the most effective means of managing, protecting, and conserving Oregon's rocky habitat resources. The strategy supports education and interpretation initiatives that increase awareness of and engagement with marine resources.

Overall, this strategy recognizes that to meet increasing visitation and impact challenges in rocky habitat areas, a robust, coastwide awareness and engagement strategy is essential. This strategy encourages additional support for existing education and interpretation programs, as well as the development of new programs, as necessary.

## **f. Commercial Uses**

Oregon's offshore rocky reefs support vibrant commercial fisheries. The primary commercial fisheries occurring on offshore reefs in the territorial sea include the nearshore groundfish fishery and sea urchin fishery. The nearshore groundfish fishery

targets a number of rockfish species, kelp greenling, cabezon, and other rocky reef species. Fishermen sell the fish to both live fish and fresh fish markets. A number of other commercial fisheries occur in the territorial sea, but not necessarily on rocky reefs, including Dungeness crab, salmon, trawl-caught groundfish, and sardine. Commercial fisheries occurring in the territorial sea and beyond have long been an integral part of the fabric of Oregon coastal communities, and are critical to Oregon's coastal economy.

In contrast to the use of offshore rocky areas for commercial fishing, commercial harvest in rocky shoreline areas has historically focused around invertebrate fisheries, with mussels being the most common commercially harvested species over the past 30 years. Past commercial harvest has also included sea stars and other invertebrates for gift shops and the aquarium trade. Total harvest of invertebrates in rocky shoreline areas has decreased dramatically from 20,000–40,000 pounds per year in the early 1990s to <100–1,800 pounds per year since 2010. This strategy recognizes that adapting global markets and changing environments may ignite interest in the development of more substantial commercial ventures in these habitats. For example, recent interest in gooseneck barnacle harvest has initiated discussion of the needs required to manage a sustainable commercial fishery. Impacts of commercial harvest of rocky shoreline species, or use of the rocky habitats, requires an extensive understanding of potential risks and impacts to the ecosystem as a whole.

# C.Rocky Habitat Management

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## 1. Statewide Land Use Planning Goal 19

Oregon's land use planning is founded on nineteen Statewide Land Use Planning Goals. These goals express the state's policies on land and sea use related topics. Goals 16–19 address marine influenced environments, with Goal 19 focusing on ocean resources. In addition to addressing matters such as dumping of dredge spoils and discharge of waste products into marine waters, Land Use Planning Goal 19 frames management of rocky habitats and specifies that agency action regarding resources in the territorial sea “shall be developed and conducted to conserve the long-term values, benefits, and natural resources of the nearshore ocean and the continental shelf.”

## 2. Agencies & Governments

### a. Federal Agencies

- **U.S. Fish and Wildlife Service (USFWS)** is in charge of managing several National Wildlife Refuges and enforcing fish and wildlife laws. It is jointly responsible for enforcing the Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA) with the National Oceanic & Atmospheric Administration. The list of endangered and threatened species can be found online. National Wildlife Refuges (NWR) along the coast include the Oregon Islands NWR and Three Arch Rocks NWR which include all offshore islands in Oregon's territorial sea along with several mainland portions: Coquille and Crook Points, and Cape Meares NWR.
- **The National Oceanic and Atmospheric Administration (NOAA)** Multiple offices within NOAA have a role in coastal and rocky habitat management in Oregon. Primarily, this includes NOAA Fisheries and NOAA's Office for Coastal Management. NOAA Fisheries (also known as the National Marine Fisheries Service or NMFS) is in charge of fisheries management as well as being jointly responsible for implementation of both the ESA and the MMPA with USFWS. In Oregon's marine environments, NOAA Fisheries is the agency primarily responsible for activities related to marine mammal species and their habitats, including the Pinnipeds that rest on Oregon's rocky coast. NOAA's Office for Coastal Management (OCM) is responsible for implementation of the National Coastal Zone Management Program, providing annual funding, federal consistency authority, technical and policy assistance, as well as access to a variety of data, tools and training. In addition, the NOAA Office of Response and Restoration oversees and coordinates development of the Oregon Marine Debris Action Plan.

- **Bureau of Land Management (BLM)** owns and manages public lands throughout the state, including some that front Oregon’s rocky shorelines, primarily Yaquina Head Outstanding Natural Area (YHONA).
- **U.S. Forest Service (USFS)** owns and manages public lands in national forests and grasslands throughout the state, including several large forests (Rogue River, Siskiyou and Siuslaw) within the coastal zone and one that fronts the coast (Siuslaw National Forest), home to Cape Perpetua Scenic Area and Cascade Head Scenic Research Area.
- **Environmental Protection Agency (EPA)** is responsible for developing and enforcing environmental laws to protect human health and the environment, such as the Clean Water and Clean Air Acts. The EPA also conducts environmental research to further its mission of protecting human health and the environment, as well as promoting education, volunteer efforts, and offering financial assistance to state-level environmental programs.

## b. State Agencies

- **Oregon Parks and Recreation Department (OPRD)** has two main roles in managing areas within Oregon’s coastal zone; the first is as a landowner. OPRD manages more than 70 parks, waysides, and other facilities along the coast that offer shoreline access. The second is the agency’s statutory authority for managing Oregon’s ocean shore recreation area. The “ocean shore” is defined as the land lying between extreme low tide of the Pacific Ocean and the statutory vegetation line, or the line of established upland shore vegetation, whichever is farther inland, and does not include estuaries (ORS 390.605). Within the Ocean Shore State Recreation Area, OPRD issues ocean shore alteration permits, including those for shore protective structures (e.g. riprap), natural product removal use permits, and scientific research and collection permits. OPRD developed the Ocean Shore Management Plan for this area and is responsible for protecting a variety of natural and cultural resources, managing many shoreline uses, and providing public access, recreational facilities, and recreational opportunities.
- **Oregon Department of Fish and Wildlife (ODFW)** manages fish and wildlife and their habitats. It implements fish and wildlife laws and programs (including recreational and commercial fishing rules), issues scientific collection permits, and advises other agencies on biological issues. ODFW also implements the fish and wildlife management recommendations in the rocky habitat sites designated in this strategy as well as managing other protected areas such as Marine Reserves and Marine Protected Areas.

- Oregon Department of State Lands (DSL)** has jurisdiction over the submerged and submersible land of the territorial sea. DSL has both proprietary ownership and regulatory responsibilities within the territorial sea. DSL authorizes uses of the seafloor, including placement of submarine cables, installation of wave and wind energy devices and research equipment, kelp removal, and the placement of other structures. DSL also administers Oregon’s removal-fill law which governs the removal, fill, and alteration of sediments, rock, and other materials comprising the submerged and submersible land underlying the territorial sea (SB 11, 1999). Additionally, DSL has rules that designate Marine Reserves and Marine Protected Areas. See Figure 3 below for jurisdictional spatial context.
- Oregon Department of Land Conservation and Development (DLCD)** houses the Oregon Coastal Management Program (OCMP). It ensures that projects from the federal to local level are consistent with the state’s federally-approved Coastal Zone Management (CZM) program, which includes the 19 statewide land use planning goals. In partnership with several other organizations, DLCD has developed Oregon’s Coastal Atlas, which has information on rocky habitats and other coastal areas in Oregon. OCMP is also the main staff agency supporting the Ocean Policy Advisory Council.

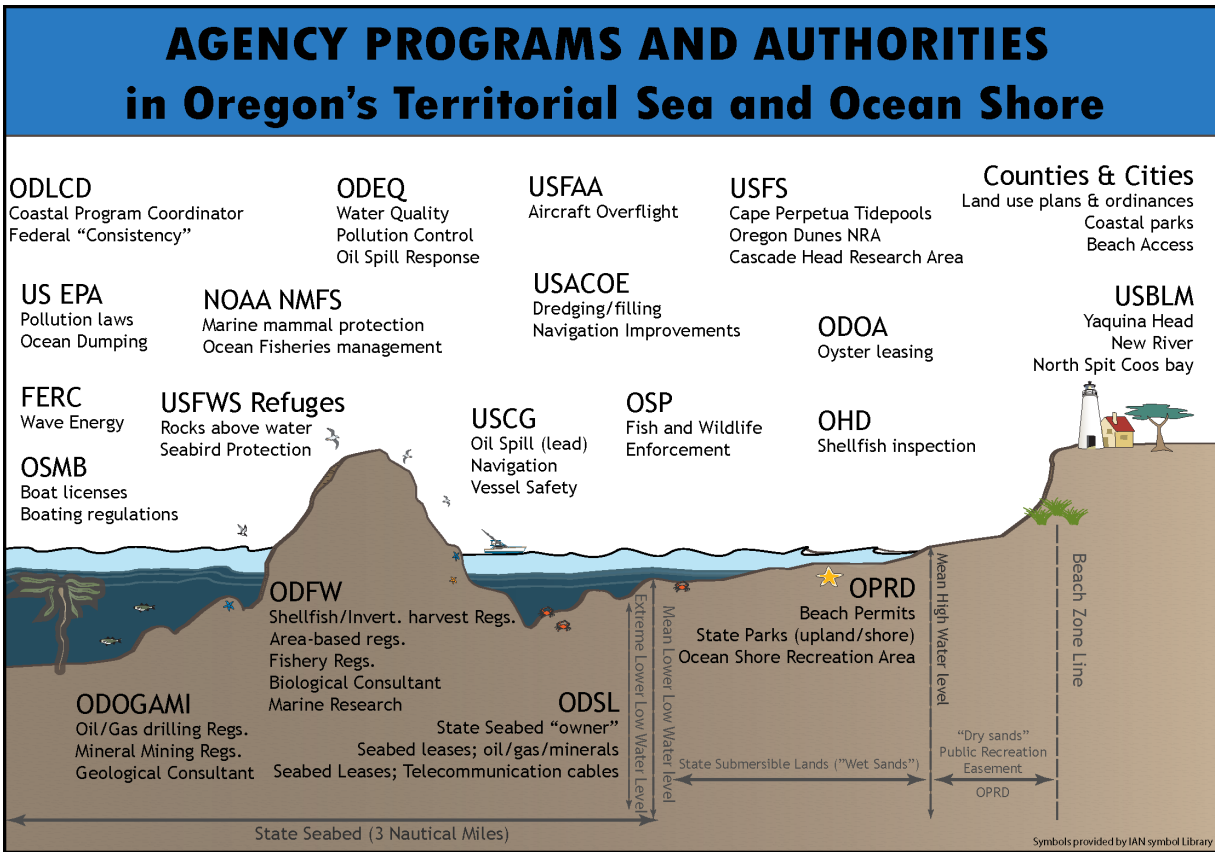


Figure 3. Regulatory responsibilities and authority in Oregon's territorial sea and ocean shore zone.



- **Oregon Department of Environmental Quality (DEQ)** has authority for protecting water and air quality in Oregon’s territorial sea, including oil spill prevention and response, and enforcing laws such as the Clean Water Act.
- **Oregon State Marine Board (OSMB)** regulates boating activity within the territorial sea.
- **Oregon State Police (OSP)** enforces fish and wildlife regulations and other state environmental laws and rules.

### **c. Oregon’s Coastal Tribes**

While many tribes have ties to areas along the Oregon Coast, federally recognized Tribal Nations within the state’s coastal zone include the Confederated Tribes of Coos, Lower Umpqua & Siuslaw Indians, the Coquille Indian Tribe, the Confederated Tribes of Siletz Indians, and the Confederated Tribes of the Grand Ronde Community of Oregon. Oregon’s federally recognized Tribal Nations are each their own sovereign government and may have treaty-protected gathering rights, consent decrees, and other legal mechanisms that shall be respected (in consultation with the tribes as appropriate) when making any resource management decision. Additionally, it may be appropriate to expand definitions of cultural sites to include all those that have associated traditionally used resources, such as gathering sites.

## **3. Rules & Regulations**

Much like Oregon’s diverse coastal ecosystems, the associated rules, regulations, and authorities governing the use of rocky habitat resources are also complex in nature. This section includes a brief description of the primary coastwide and site-based state and federal rules and regulations regarding Oregon’s rocky habitats.

The site management goals and recommendations in Section D. should not be confused with applied agency management designations. Instead, the intent of this strategy is that agencies will work toward implementing the site management recommendations outlined in the strategy.

\*An exhaustive description of all of the regulations is beyond the scope of this plan; instead, this section offers a summary of current regulations and management measures enforced within Oregon’s rocky habitats with references to more detailed materials.

### **a. Federal Laws & Regulations**

#### **i. Threatened & Endangered Species**

Endangered Species Act (16 USC §§ 1531-1543)

A number of bird and mammal species that use Oregon's rocky habitat areas, either as residents or when migrating, are protected as threatened or endangered species under federal law. The U.S. Fish and Wildlife Service: Environmental Conservation Online System<sup>14</sup> should be consulted for the most up-to-date list of listed species. Consultation with USFWS and NMFS should occur, as appropriate.

Federal regulations prohibit the unauthorized "taking" of any species listed by federal regulation as "threatened" or "endangered". The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct (16 USC § 1532 (19)). These federal regulations determine the protection standards for these animals or plants even when they occur in state waters. Federal regulations authorize the designation of "critical habitat" for threatened or endangered species that can have consequences for human activities within or adjacent to designated areas.

## **ii. National Wildlife Refuge System/National Wilderness System**

National Wildlife Refuge System Administration Act (16 USC § 668dd-668ee) and Oregon Islands National Wildlife Refuge; Wilderness Act (16 USC §§ 1131-1136)

Almost all the rocks and islands along the Oregon Coast are in the Oregon Islands National Wildlife Refuge, Three Arch Rocks National Wildlife Refuge, or Cape Mears National Wildlife Refuge, and are administered by the U.S. Fish and Wildlife Service. There are extensive regulations for managing these rocks and islands under many different laws. The chief regulations of interest for rocky habitats relate to prohibiting trespass (no climbing or landing on), and harassing wildlife, whether intentional or unintentional. In addition, the operation of unmanned aircraft (e.g. drones) is illegal on refuge islands. Most rocks under National Wildlife Refuge System jurisdiction are also in the Oregon Islands Wilderness designated by the U.S. Congress.

## **iii. Migratory Species**

Migratory Bird Treaty Act of 1918 (16 USC §§ 703-712) and the Migratory Bird Conservation Act of 1929 (16 USC § 715-715r)

Oregon's rocky coast offers habitat for many migratory bird species that are protected by federal law, including the Migratory Bird Treaty Act of 1918 and the Migratory Bird Conservation Act of 1929. Thus, these habitat areas are of interest not just to the State of Oregon or the United States, but also other nations. Federal regulations protecting migratory species are an important part of Oregon's rocky habitat management.

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<sup>14</sup> <https://ecos.fws.gov/ecp0/reports/species-listed-by-state-report?state=OR&status=listed>

#### **iv. Marine Mammals**

##### Marine Mammal Protection Act (16 USC §§ 1361-1407)

Several species of marine mammals make Oregon's rocky coast their home for all or part of the year. All these mammals are protected by the Marine Mammal Protection Act. Under this law it is unlawful to "take" a marine mammal; this means that it is unlawful to harass, hunt, capture, or kill, or attempt to do these things to any marine mammal (16 USC § 1362 (13)).

#### **b. Coastwide Rules & Regulations**

##### **i. Marine Fish & Invertebrate Harvest**

The ultimate goal of managing fish and invertebrate harvest is to allow for public use and enjoyment of these resources while ensuring their long-term sustainability. Oregon Department of Fish and Wildlife (ODFW) manages marine fish and invertebrates through a program of harvest or take regulations, area closures, collection of research and monitoring data to determine species or habitat status, and recommending habitat protections to permitting or land management agencies. This section provides a general summary of the regulatory aspects of management that were in place as of May 2020. Refer to OAR chapter 635 for a full listing of the regulations.

Managing species harvest employs multiple layers of regulations tailored to the purpose, species, and area of harvest. Separate sets of regulations apply to sport (recreational) harvest, commercial harvest, and take for scientific or educational purposes. ODFW draws on a suite of tools to accomplish management goals including license and permit requirements, limiting participation in fisheries, restrictions on harvest gear or methods, limits on catch (annual or seasonal quotas, trip limits, daily bag limits, etc.), size or sex restrictions, seasonal closures, and area closures. ODFW applies these tools singularly or in combination depending on the species, area, fishery, and many other factors. For some species, harvest regulations may remain constant for years, while for others, regulations change on an annual or shorter timeframe.

##### Sport Harvest of Marine Fish and Invertebrates

Marine sport fishery regulations apply to the Pacific Ocean, coastal bays, and beaches. An angling (fishing) license is required to take and land marine fish, including halibut, lingcod, rockfish, flounder, surfperch, greenling, cabezon, sole, salmon, and others. Special tags are required for some species. A shellfish license is required for recreational harvest of shellfish and other marine invertebrates.

Management of sport harvest in Oregon's rocky habitats relies primarily on the rules and regulations placed on daily catch limits (bag limits), type of equipment or harvest method used, seasons, and area closures. ODFW's Oregon Sport Fishing Regulations

and supplemental materials, available at license sales locations or on the ODFW website, provide details of the regulations.

### Commercial Harvest of Marine Fish and Invertebrates

Commercial fisheries management employs a wide array of regulations, many of which are specific to the individual fishery. Commercial fisheries most likely to occur in Oregon's rocky intertidal and adjacent subtidal areas include intertidal invertebrate harvest, subtidal harvest of urchins and other invertebrates, harvest of nearshore fish species, and a sporadic and small-scale harvest of fish in intertidal areas for the aquarium trade.

Harvest of intertidal invertebrates requires a Commercial Shellfish Harvest Permit or Intertidal Animal Harvest Permit, in addition to other licenses that are required of a commercial fisher. These permits contain standard language indicating areas closed to commercial harvest, and ODFW has the authority to place additional requirements on the permit concerning allowable species, seasons, harvest areas, catch limits, and harvest gear and techniques.

Management of subtidal fisheries varies by species. For invertebrates, species such as urchins, Dungeness crab, and pink shrimp are controlled with longstanding limited entry systems along with a myriad of other regulations. Commercial urchin harvest is not allowed in waters shallower than 10 feet, so there is no commercial urchin harvest in rocky intertidal areas. There are also seasonal urchin harvest closures on Orford Reef and around Pyramid Rock on Rogue Reef. Harvest of subtidal invertebrate species not regulated with a limited entry program or other specific regulations are subject to the Commercial Shellfish Harvest Permit described above. Management of fish species caught in subtidal environments includes a complex array for regulations set both regionally by the Pacific Fishery Management Council and by the West Coast states.

#### **ii. Marine Plant Harvest**

Structure-forming plants and algae provide shelter and food for the diversity of unique and economically important organisms that live in Oregon's submerged rocky habitats. Marine aquatic vegetation in these areas is critical to the success of the ecosystem, yet sensitive to pollution, trampling, warming, overgrazing, eutrophication, and ocean acidification, among other effects.

The removal of natural products, including plants, from the Ocean Shore State Recreation Area (otherwise known as the "ocean shore", the area between extreme low tide and the line of vegetation) is prohibited by law except in compliance with regulations of the Oregon Parks and Recreation Department (OPRD) (ORS 390.705).

There are no permits required for the souvenir collection of marine plants on the ocean shore; however, OPRD has rules that apply to collection and that define and restrict

souvenir collection in protected areas (OAR 736-021-0090; 736-029-0010). Commercial harvest on the ocean shore is uncommon and regulated under ocean shore alteration permit requirements outlined by ORS 390.725 and OAR chapter 736, division 20. Below extreme low tide, removal of marine plants is regulated under ORS chapter 274, and administered by the Department of State Lands (DSL). Individuals may harvest up to 2000 pounds of wet kelp per year for personal consumption from submerged lands (below extreme low tide) within the territorial sea without a lease from DSL (ORS 274.895).

### **iii. Rocky Shoreline Access**

The ocean shore is, by law, a public recreation area managed by the Oregon Parks and Recreation Department (OPRD) who is charged with preserving and maintaining the public's free and uninterrupted use of Oregon's shoreline (OAR 736-021). In addition, OPRD is mandated to manage the ocean shore for the preservation and protection of recreational uses and natural resources. OPRD has the legislative authority to regulate certain activities and "improvements" within its jurisdiction between extreme low tide and the line of vegetation. Such regulation of uses or activities may result in certain restrictions in response to safety or resource concerns. These regulations may restrict construction of shoreline protection structures, beach accesses, pipelines and conduits, signage, removal of natural products, and other issues that may have an impact on the ocean shore (OAR chapter 736).

## **c. Site-Based Regulations**

### **i. State Site Designations (Rocky Habitat Management Strategy Designations)**

The Rocky Habitat Management Strategy is intentionally flexible to allow site designations to be adaptive to change. Due to the adaptive nature of the strategy, a static list of designations is not appropriate for incorporation into the text of the strategy as they may go out of date before the full plan needs to be updated. Rather, Appendix E provides a map of the currently designated sites along with text descriptions of their management. For historical context, an overview of the original 1994 recommended designations as well as the implemented designations as of May 2021 are available in Appendix F.

### **d. Scientific & Educational Permitting**

Oregon Department of Fish and Wildlife (ODFW) and Oregon Parks and Recreation Department (OPRD) administer permitting programs for scientific research and education programs proposing projects in rocky habitat areas. ODFW scientific research permits are required for any project proposing the take of marine organisms for scientific or educational purposes. An OPRD permit is necessary for any project proposed to take

place on lands owned and managed by the department and is required for activities pertaining to natural and cultural resources involving the collection and take of organisms. Take can include actions that cause mortality of the organism, capture and release (regardless of whether or not there is mortality), and tagging and release. In some cases, observation of organisms can also require the take permit, but this applies mostly to wildlife or listed threatened or endangered animals where observational studies can disturb the organisms.

Both programs require permittees to submit documentation prior to the beginning and after the conclusion of projects. Departmental websites should be consulted for a full description of permitting rules and requirements.

Additional permits may be required by state or federal agencies based on the proposed activity and location. Users are encouraged to contact local site authorities to determine appropriate permitting.

### **e. Rapid Response**

The dynamic and unique features that make the Oregon Coast most memorable also present many challenges to managing disaster and threat response. An extreme wave climate and low accessibility can hamper response attempts, while the interconnectivity of marine ecosystems allows for accelerated spread of potential issues. Due to the inherent complexity of these ecosystems, this strategy recognizes that no single plan or method may be appropriate for responding to all events. Therefore, the best response to sudden and unforeseen events is agency and stakeholder coordination. Individual response plans for imminent threats and impacts to rocky habitats should occur in a timely manner once recognized<sup>15</sup>.

Two key factors to successful threat mitigation is early detection and rapid deployment of response efforts. Sustained monitoring should follow these efforts to track the threat and any recovery or changes that may have occurred in the environment. Foreseeable threats to rocky habitats should be discussed and preemptively planned for by agencies. Early detection can greatly reduce the overall damage caused by a threat and potential cost in combatting it.

Oregon's rocky coast is not unaccustomed to expeditious onsets of threats. For example, in 2013, an outbreak of sea star wasting syndrome substantially impacted sea star populations in Oregon and along the West Coast. The impacts of this sudden decline in sea star populations has led to considerable and persistent impacts to the rocky intertidal ecosystems along the West Coast that are still being studied and

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<sup>15</sup> Agency action prior to rapid response planning may be required to assure immediate safety of life and resources.

actively monitored by a number of institutions. More commonly, threats include the sudden onset of marine debris washing ashore into intertidal areas. In these instances, a more general plan may be created to determine appropriate removal and jurisdiction in accordance relevant action plans.

### **i. Oil Spill Response Planning for Oregon’s Coastal Rocky Habitats**

Oil spill response planning in Oregon is the responsibility of both the Oregon Department of Environmental Quality (DEQ) and facilities that store, transport, or process large amounts of petroleum related products. Vessels and facilities have their own plans for stopping spills before they can spread. Oregon DEQ regulates these facility plans and also develops plans for areas that contain many potential sources of oil spills or that are especially vulnerable to harm from oil spills. The Oregon Coast is one such area. Updated oil spill response plans released by DEQ in 2019 provide new strategies for the containment and collection of spilled oil in the Oregon coastal region. These strategies intend to keep oil away from sensitive natural, cultural, historic, and socioeconomic resources. Where possible, these oil spill response plans for the coast will include strategies to protect rocky habitat areas for the species that live there and the people who visit them. These plans include information for notifying resource managers and affected facilities when spills happen. View DEQ web resources<sup>16</sup> for more information on DEQ’s work to update the coastal oil spill response plans.

### **ii. Boating/Closure Areas**

The State Marine Board has authority to adopt regulations for boating activity in state waters. The Marine Board has adopted regulations (OAR 250-20-309) to establish a seasonal boating closure around Three Arch Rocks to protect wildlife.

## **f. Ecosystem-Based Management**

This strategy intends management to be adaptable to changing information and conditions with the goal of maintaining long-term ecosystem viability and sustainability. To do this, management prescriptions shall be applied following principles of ecosystem-based management (EBM). Although EBM is an ever-evolving concept, the general principles and takeaways have been agreed upon since the 1970s. This transdisciplinary framework considers ecosystem connections, coupled social-ecological influence, system uncertainty, adaptive and integrative management, stakeholder involvement, and sustainability, all using the integration of scientific

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<sup>16</sup> <https://arcg.is/0XWemL>

knowledge and appropriate monitoring with a precautionary approach.<sup>17</sup> More broadly, EBM is a holistic management approach informed by science and monitoring, which managers use to better consider the tradeoffs in resource uses and protections in order to sustain biodiversity and productivity in a system<sup>18</sup>. The adaptive component of EBM is comprised of a suite of flexible strategies and tools that can be applied where uncertainty exists. This management structure can be altered based on the intricacies of an issue.

This plan contains no direct prescriptions for applying EBM into the management of rocky habitat resources. Instead, the key principles and elements of EBM have been woven into each section of the Rocky Habitat Management Strategy, as additional scientific knowledge and monitoring takes place, agencies shall incorporate best practices into site-based management prescriptions and actions. Additionally, this strategy supports:

- a) Continued updates to and refinement of the coastwide rocky habitat resource inventory using information from ongoing scientific research and monitoring;
- b) Regional communication and collaboration with coastal partners including California, Washington, British Columbia, and Alaska in order to appropriately manage and understand larger ecosystem events and trends;
- c) Ongoing inventory and monitoring of rocky habitat ecosystems and species to quickly account for variations and adapt management accordingly;
- d) Increasing understanding of rocky habitat ecosystems through scientific study and gathering of local ecological knowledge;
- e) Incorporation and growth of monitoring activities to support best management measures for ecosystem sustainability and use. Scientific study and monitoring should be implemented through a diversity of forms based on level of information, cost, and frequency of need.

Oregon's rocky habitat environment lends itself well to EBM due to its inherent complexities, vulnerabilities, and interconnection with land, sea, and society. Without the use of an applied and adaptable management system, rocky habitats cannot be properly managed and sustained for current and future generations.

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<sup>17</sup> Long, R. D., Charles, A., & Stephenson, R. L. (2015). Key principles of marine ecosystem-based management. *Marine Policy*, 57, 53-60.

<sup>18</sup> National Oceanic and Atmospheric Administration (NOAA), Ecosystem-Based Management Core Characteristics; <https://ecosystems.noaa.gov/EBM101/WhatIsEcosystem-BasedManagement.aspx>



# D.Rocky Habitat Site Management Designation Standards & Practices

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There are three types of site-based designations associated with the strategy: 1) Marine Research Area, 2) Marine Garden (Marine Education Area), and 3) Marine Conservation Area. The goals for each designation are outlined below, followed by a table of associated standards and management practices. See Appendix E for a map of the currently designated areas. Management designations require appropriate rationale prior to implementation.

## Marine Research Area

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Goal - Maintain the natural system to support scientific research and monitoring while maintaining ecological integrity.

Characterization - Relatively intact system that has, or may benefit from, scientific study and monitoring.

## Marine Garden (Marine Education Area)

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Goal - Protect rocky habitat resources to support public enjoyment, learning opportunities and maintain ecological integrity. These sites should be prioritized for providing enhanced education, enjoyment, public access, and resource awareness.

Characterization - High public visitation and educational potential.

Note - Oregon's Marine Gardens are high-use, high-visibility sites, with an established history of site-specific management as early as the 1960s. Consequently, the term 'Marine Garden' enjoys relatively broad recognition and is retained from the suite of recommended designations outlined in the 1994 Rocky Shores Management Strategy. In practice, these sites are intended to be managed as 'Marine Education Areas', consistent with the designation scheme delineated in this section.

## Marine Conservation Area

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Goal - Conserve the natural system to the highest degree possible by limiting adverse impacts to habitat and wildlife.

Characterization - Relatively intact system with high ecological value.

### Variable management based on site needs

This designation allows for different types of management prescriptions based on site conservation goals and needs.

## **Federal Designations**

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Management of federally designated sites, and the federal designations themselves cannot be altered through the Rocky Habitat Management Strategy, but the strategy recognizes these designations in order to provide a more consistent framework of coastal management areas. These areas include the Oregon Islands, Cape Meares, and Three Arch Rocks National Wildlife Refuges.

## **Tribal Nations Rights and Designations**

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Management of Tribal designations, harvest rights, or other Tribal Nation agreements with the state cannot be altered through the rocky habitat site designation proposal processes. Federally recognized Tribal Nations may have, or obtain, Consent Decrees or other intergovernmental agreements which outline separate rights or harvest regulations.

**Table 1 REGULATORY STANDARDS & MANAGEMENT PRACTICES**

	Marine Research Area	Marine Garden (Marine Education Area)	Marine Conservation Area
<b>Fish Harvest</b>	<p><u>Commercial</u> – No additional site-based fish harvest regulations. Coastwide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Recreational</u> – No additional site-based fish harvest regulations. Coastwide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Scientific &amp; Educational</u> – Requires a permit from Oregon Department of Fish and Wildlife or Oregon Parks and Recreation Department, which may be issued if the research does not impede the management goals of the Marine Research Area.</p>	<p><u>Commercial</u> – No additional site-based fish harvest regulations. Coastwide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Recreational</u> – No additional site-based fish harvest regulations. Coastwide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Scientific &amp; Educational</u> – Requires a permit from Oregon Department of Fish and Wildlife or Oregon Parks and Recreation Department, which may be issued if the research aligns to further the management goals of the Marine Garden.</p>	<p>Marine Conservation Areas with broad conservation goals may be proposed with regulations closing harvest in all categories.</p> <p>Specific fish harvest regulations will be established based on the proposed management goals of the site.</p> <p>Individual site management must include a clear justification for all proposed regulations for <u>commercial</u>, <u>recreational</u>, <u>scientific</u> and <u>educational</u> fish harvest.</p>
<b>Invertebrate Harvest</b>	<p><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take except at a subset of sites which allow species-specific harvest of clams, Dungeness crab, red rock crab, mussels, piddocks, scallops, and shrimp.</p> <p><u>Scientific &amp; Educational</u> – Requires a permit from Oregon Department of Fish and Wildlife or Oregon Parks and Recreation Department, which may be issued if the research does not impede the management goals of the Marine Research Area.</p>	<p><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take except for single mussels for bait.</p> <p><u>Scientific &amp; Educational</u> – Requires a permit from Oregon Department of Fish and Wildlife or Oregon Parks and Recreation Department, which may be issued if the research aligns to further the management goals of the Marine Garden.</p>	<p>Marine Conservation Areas with broad conservation goals may be proposed with regulations closing harvest in all categories.</p> <p>Specific invertebrate harvest regulations will be established based on the proposed management goals of the site.</p> <p>Individual site management must include a clear justification for all proposed regulations for <u>commercial</u>, <u>recreational</u>, <u>scientific</u> and <u>educational</u> invertebrate harvest.</p>
<b>Marine Aquatic Vegetation Harvest</b>	<p><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take</p> <p><u>Scientific &amp; Educational</u> – Requires authorization from Oregon Parks and Recreation Department or the Department of State Lands, which may be issued if the research does not impede the management goals of the Marine Research Area.</p>	<p><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take</p> <p><u>Scientific &amp; Educational</u> – Requires authorization from Oregon Parks and Recreation Department or the Department of State Lands, which may be issued if the research aligns to further the management goals of the Marine Garden.</p>	<p>Marine Conservation Areas with broad conservation goals may be proposed with regulations closing harvest in all categories.</p> <p>Specific marine aquatic vegetation harvest regulations will be established based on the proposed management goals of the site.</p> <p>Individual site management must include a clear justification for all proposed regulations for <u>recreational</u>, <u>scientific</u> and <u>educational</u> marine aquatic vegetation harvest.</p>

**Users should refer to individual site designation for a complete understanding of site regulations**

## NON-REGULATORY STANDARDS & MANAGEMENT PRACTICES

Marine Research Area	Marine Garden (Marine Education Area)	Marine Conservation Area
<ul style="list-style-type: none"> <li>• In regards to physical public access to areas:                             <ul style="list-style-type: none"> <li>○ Avoid enhancement of <u>future</u> physical public access on public lands to rocky habitats except in instances of safety concerns.</li> <li>○ Maintain but avoid enhancing capacity of <u>current</u> physical access.</li> <li>○ Enhance visual access to these sites.</li> <li>○ Prioritize access to these sites for low impact research.</li> </ul> </li> <li>• When possible, researchers in these areas should report project outcomes and metadata to the permitting agency for incorporation into a publicly accessible repository.</li> <li>• Other actions and practices that aid in reaching site goals.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase, enhance, and maintain visual and physical access on public lands to rocky habitats to be inclusive of diverse uses while prioritizing the protection of ecological and cultural resources<sup>19</sup>.</li> <li>• Encourage educational and interpretive programming that increases informed visitation to the site and minimizes impacts to site resources.                             <ul style="list-style-type: none"> <li>○ Educational programs should aim to reduce the impacts of trampling and wildlife disturbance, as well as monitor impacts of visitor use.</li> </ul> </li> <li>• Increase and enhance messaging around rules and regulations, and highlight general rocky habitat etiquette and stewardship.</li> <li>• Other actions and practices that aid in reaching site goals.</li> </ul>	<ul style="list-style-type: none"> <li>• Variable non-regulatory management practices are applicable in Marine Conservation Areas.</li> <li>• Individual site management must outline clear non-regulatory management mechanisms that aid in reaching the site goals.</li> </ul>

**Users should refer to individual site designation for a complete understanding of site regulations**

<sup>19</sup> Resources vital to or the product of the perpetuation of traditional practices, ceremonies and lifeways.

## E. Site-Based Proposal Overview

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**Purpose:** To best incorporate local knowledge and maintain an up-to-date management strategy, members of the public, agencies, and other entities are invited to submit site-based management proposals for review and potential incorporation into the strategy. These proposals may outline desired *additions, deletions, or modifications* to rocky habitat site designations. Sites delineated in existing regulation (2020 Oregon Department of Fish and Wildlife Sport Fishing Regulations) are considered the starting point for any proposed changes. Existing site designations that overlap Marine Reserves and Marine Protected Areas will remain in place. Additional historical context for designation implementation can be found in Appendix F. All regulatory management measures in the Rocky Habitat Management Strategy are recommendations and require adoption by the appropriate agency commission(s) to be incorporated into state law or rule. Independent processes are responsible for changes to species-specific and action-specific rules, regulations, and non-regulatory management mechanisms. These processes are outside the scope of the Rocky Habitat Management Strategy.

### 1. Proposal Process Approach

This is intended to be a biennial process in which proposing entities can submit proposals for review after the 2021 Rocky Habitat Management Strategy has been adopted. Proposal process steps, timelines, criteria, and review procedures for this process have been informed by the outcomes of an initial (pilot) Proposal Process and evaluation workshop.

The process for proposing a site includes multiple phases which will be coordinated with the meeting schedules of the Ocean Policy Advisory Council (OPAC) and the Land Conservation and Development Commission (LCDC), the Territorial Sea Plan advisory and rulemaking bodies, respectively. Figure 4 below provides an overview of the site designation proposal process, including general tasks and timelines. The first two phases: 1) Process Initiation and 2) Proposal Development and Submission, will be administered by the Oregon Coastal Management Program (OCMP) at the Department of Land Conservation and Development, and include a proposal process notification and issuance of a Request for Proposals (RFP). The OCMP will also coordinate a pre-proposal meeting with the potential proposers and management agencies that have a jurisdictional nexus with the proposals. Proposals will be submitted to the OCMP following conduct of the pre-proposal meeting, which will then initiate the review phases of the proposal process. The review phases of the proposal process begin with a completeness and feasibility review conducted by management agencies, followed by a Technical Evaluation Group (TEG) proposal evaluation and review. The results of the proposal review steps will be transmitted to the OPAC for their consideration and potential recommendation. The OPAC recommended amendments to the site

designations in Part Three will then be transmitted to the LCDC to complete the adoption of the recommended amendments via rulemaking. The proposal process is structured to take approximately two years (LCDC rule review and possible adoption is not included in that period) so that it can be informed by, or inform, agency budgetary processes or needs. Additional details on the proposal process are provided below in Section E.3.

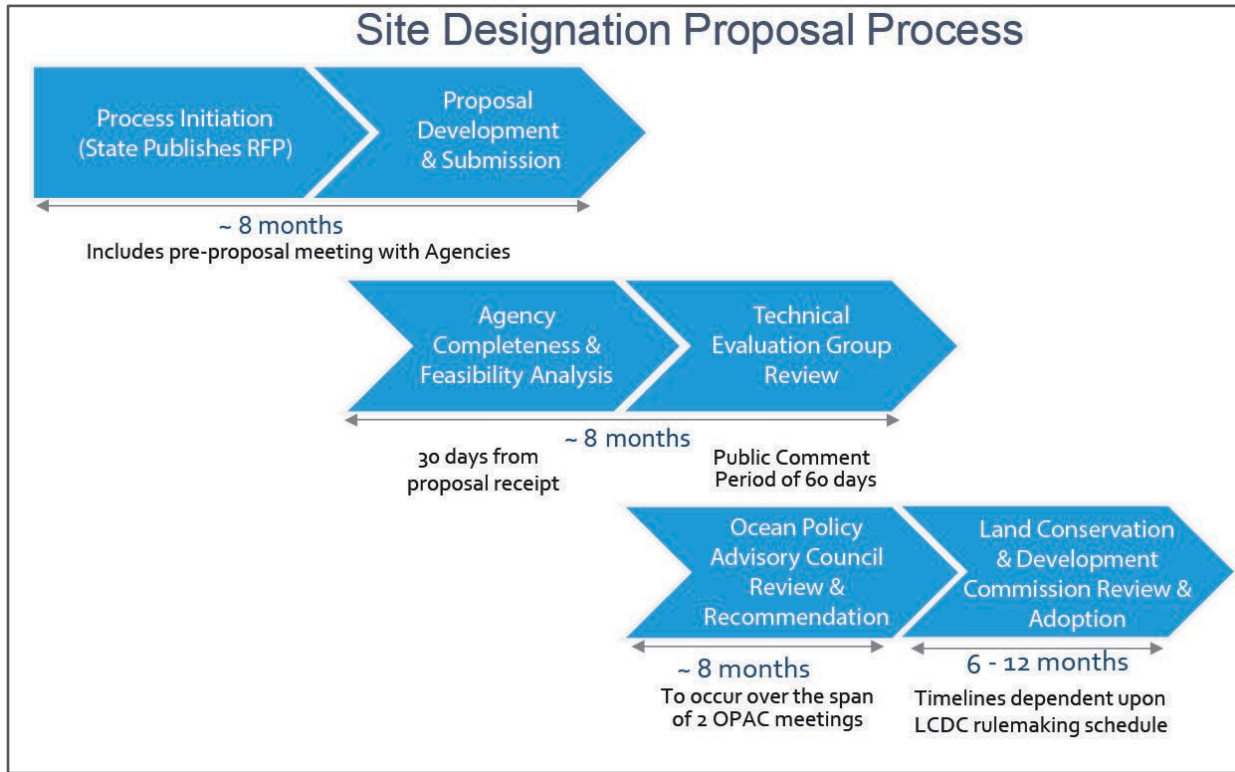


Figure 4. Rocky Habitat Site Designation Proposal Process

## 2. Creating and Submitting a Proposal

The Rocky Habitat Management Strategy site proposal process focuses on allowing for adaptable and holistic management at the site level and is not intended to manage on a species-specific level<sup>20</sup>. For this reason, not all regulatory concepts are appropriate for the site-based management proposal process. Members of the public and other interested entities should review the site designation types and associated regulatory and non-regulatory management measures (Section D) to assure they align with desired outcomes of a proposal. Where the desired outcome cannot be met with a site designation proposal, members of the public and interested entities should outline their concern or desired regulatory change in a formal letter to the OPAC or relevant agency commission.

Nominating entities should review the Purpose, Objectives, Amending the Strategy, Policies, and Defining Oregon's Rocky Coast sections of Part Three of the Territorial Sea Plan, as well as the entirety of this section prior to determining if a designation proposal is warranted.

Each proposal should include the information prompted by the Rocky Habitat Site-Based Designation Proposal Form, which will be available in the Rocky Habitat Web Mapping Tool (<http://Oregon.SeaSketch.org/>). Proposers will need to answer all questions on the form to the maximum extent possible, as well as any pertinent information not included in the prompts that the nominating entity would like reviewers to consider. Please provide rationale for any unavailable information or answers. Contact OCMP staff for information on any necessary accommodations, technical assistance, or general questions.

Proposal content is collected through the online tool by uploading attachments, sharing the proposal boundaries map file, and completing any interactive forms. The tool allows proposing entities to submit proposals directly to OCMP staff once complete. All applicable content must be addressed in submissions for the proposal to be deemed complete. Appendix C. and specific questions noted in the RFP provide the required proposal information and questions for a complete submission.

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<sup>20</sup> Some designations may receive higher consideration if they regularly support species listed as threatened or endangered under the Oregon or Federal Endangered Species Acts.

### 3. Proposal Process Phases

#### Phase One – Process Initiation and **RFP Issuance**



Goal: To communicate the initiation of the proposal process and document process priorities, information resources, timelines, and evaluation criteria.

The OCMP will begin the process by consulting with relevant agencies to develop and issue a Site-Based Designation Request for Proposals notice. The purpose is to provide clear guideposts for all involved in the process. The State shall define and find agreement among managing agencies regarding priorities and technical review criteria of proposals to meet the goals of the Rocky Habitat Management Strategy. The Scientific and Technical Advisory Committee (STAC) and Oregon Ocean Science Trust (OOST) will be invited to assist in the development or review of the focus and goals each proposal cycle. From RFP issuance, the public will be notified of process timelines, phases, and prioritized evaluation criteria.

Notice of the process shall be provided following the OPAC spring meeting in order to encourage proposal idea generation ahead of RFP issuance. OPAC may also review and establish process constraints such as the focus or goals for the proposal cycle, geographic restrictions, and or a cap on the number of proposal submissions to be evaluated.

The elements of the RFP may include:

- State priorities for site selection (derived during state agency coordination meetings).
- The evaluation criteria and scoring system (noting any changes from last proposal cycle). Once initiated, this will not change during the process.
- Descriptions of proposal concepts that are not feasible and will result in disqualification (i.e., elements that must not be included in proposal for full evaluation).



## Phase Two - Proposal Development and Submission



Goal: Identify desired management changes and generate completed proposal.

### Building a Proposal

Individuals, Community Groups, Tribal Nations, or Agencies will generate the idea for a proposed management change for a site-based designation. The proposing entity builds a proposal using the Rocky Habitat Web Mapping Tool. The Tool is provided for visualization of the resource inventory information. It will be used to generate GIS files for submission to the OCMP, in addition to submission of the completed proposal form.

Each proposal must consist of one place-based submission containing all the information the nominating entity wants considered (one site recommendation per proposal). If any necessary proposal elements are missing, or if clarifying information is needed, the proposal will be returned with comments on specific additional information required. The merit of proposals will be evaluated independently from one another unless otherwise requested by the proposing entity.

### Pre-Proposal Meeting

Nominating entities are required to participate in a pre-proposal meeting with the relevant management agencies. OCMP staff are available to answer questions throughout proposal development and will facilitate the conduct of the pre-proposal meetings. OCMP staff will collect the pre-proposal materials to determine the appropriate agencies to include in the pre-proposal meeting. Staff will also organize, schedule, host the event, and provide a meeting summary to participants afterwards. Staff may communicate with other natural resource agencies as needed (e.g., Department of Fish and Wildlife, Parks and Recreation Department, Department of State Lands) to best support nominating entities. Entities in need of special accommodation should contact OCMP staff.

### Proposal Refinement and Submission

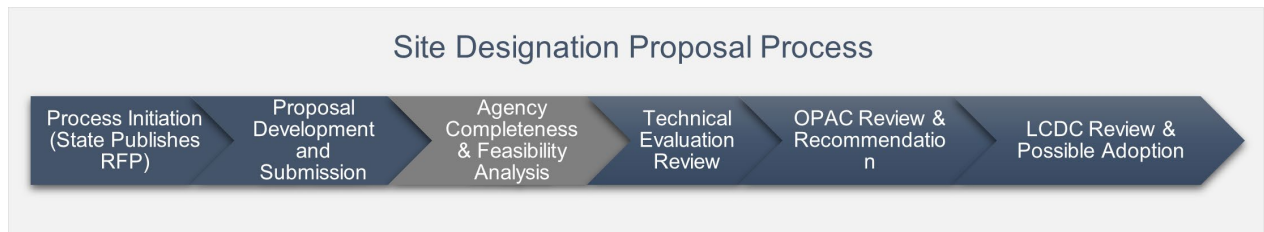
Proposing entities will consider feedback from the agencies and develop a full proposal. If OPAC has established a cap on the number of proposals to consider during the cycle, then agencies may invite full proposals to be developed from among a selection of the pre-proposals. Letters of invitation to submit a full proposal will be sent to those entities that the agencies determine most closely align with the goals of the proposal cycle.

Development of a full proposal will include the following tasks:

- Answer proposal questions using data reports, local knowledge, and information provided through communications with natural resource agencies.
- Conduct community engagement to gauge proposal support and concerns (to occur throughout proposal synthesis).
- Submit the completed proposal form and the GIS files generated through the Rocky Habitat Web Mapping Tool to OCMP.

All proposals must be submitted via the online Rocky Habitat Web Mapping Tool, which will allow proposal materials to be uploaded and attached to a proposal boundary map that was generated using the Tool. Proposals submission deadlines will be specified in the RFP and occur approximately eight months from the issuance of the RFP.

### Phase 3 – Agency Feasibility & Completeness Analysis



Goal: Begin proposal reviews and initiate Tribal Nations input. Agencies include ODFW, OPRD, DSL, OSP, and DLCD, and may include others based on the details of individual proposals.

OCMP staff will receive and review the proposals submitted by the closing date (specified in the RFP) in a timely manner to ensure it is complete and incorporates all the information necessary for the review process to be initiated. If any necessary proposal elements are missing, or if clarifying information is needed that would prohibit a full evaluation, the proposal will be rejected and returned with comments on specific additional information required. Multiple proposals from a single entity will be evaluated independently from one another unless otherwise indicated by the proposing entity.

#### Agency Completeness Review Steps

1. OCMP staff receive the proposals and publish all submitted public proposals to the Oregon Ocean Information website at <https://www.OregonOcean.info/>.
2. Agencies evaluate completeness of proposals to determine if all necessary information has been included in the proposal, and if the proposer has taken all necessary steps to create a complete proposal.
3. Incomplete proposals will not move forward in the review process. Proposers will be contacted with necessary information for completing and resubmitting the proposals.

4. Proposals may be revised and resubmitted within 30 days of notice that the proposal was deemed incomplete.
5. If the 30-day deadline for resubmittal is exceeded, then resubmissions may occur during the following biennial proposal process cycle.

#### Agency Feasibility Review Steps

1. Agencies review complete proposals and create a report presenting an analysis of each proposal’s implementation feasibility.
  - a. Feasibility review should consider six main categories including: legality, agency processes required, interactions with other site-based management designations, credible information, acknowledged management issues, and alignment with other state management strategies.
2. The OCMP shall work with other agencies to collect and compile individual reports into a single published form that will serve as the record of the feasibility review.
3. The Agency Completeness and Feasibility Report will be packaged together with the proposal, and GIS information into one Proposal Packet per site being considered.
4. OCMP staff will provide the Proposal Packet to the four federally recognized coastal Oregon Tribal Nations and invite coordination and consultation. Formal government-to-government consultation with federally recognized Tribal Nations may be required during this step to assure any conflicts with cultural and natural resources are addressed<sup>21</sup>.
5. The Proposal packets will also be provided to the Technical Evaluation Group.

#### Phase 4. Technical Evaluation Group Review



**Goal: Complete a merit-based review for the proposals based upon the evaluation criteria documented in the RFP.**

#### Technical Evaluation Group Composition

A technical evaluation group (TEG) will be established at the beginning of the proposal cycle to serve as a review body for conducting a merit-based evaluation. The TEG will

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<sup>21</sup> Any Tribal Nation input will remain confidential, to the extent possible by public records laws, to avoid possible impacts to sensitive cultural resources.

be composed of agency staff, especially those with specific thematic or geographic knowledge, in addition to a member of the Scientific and Technical Advisory Committee (STAC) and another member of an academic research institution representing relevant scientific or management expertise.

#### Technical Evaluation Group Proposal Review

The TEG will receive the Proposal Packet of information along with a Rocky Habitat Site Designation Proposal Evaluation Guide. The Guide will include both qualitative and quantitative evaluation components that are related to the proposal cycle goals specified in the RFP. The Rocky Habitat Management Strategy goals, objectives, and policies will be foundational in the criteria used to score the proposals. The Guide may be updated in each proposal cycle upon review by the OPAC.

The OCMP staff will transmit the Proposal Packet to the TEG. Individual TEG members will review the proposals and complete their individual evaluations and identify questions or issues needing further exploration. OCMP staff will then facilitate the conduct of a TEG proposal evaluation workshop and invite presentations from the proposing entities. The workshop format will allow exploration of the proposal and allow for clarification questions to be asked of and addressed by the proposers. Following the presentations, the TEG will collate the individual proposal evaluation results into a summary evaluation that will include both qualitative and quantitative assessment components. The reports will be provided to OCMP staff, where they will be published online on the <https://OregonOcean.info/> website and noticed for a 60-day public comment period. OCMP staff will organize and provide the comments to the TEG, which may convene a workshop to finalize the proposal evaluations. This could include re-evaluation and re-scoring a proposal if additional information changes the results of the initial evaluation.

\*Tribal Consultation may occur during this phase of the process; at the earliest opportunity a complete evaluation is available for review.

Once completed by the TEG, the final proposal evaluation materials will be packaged together with the Proposal Packet and transmitted to OPAC for their consideration.

### Phase 5 – Ocean Policy Advisory Council Review & Recommendation



Goal: Review complete proposal materials and consider rationale for recommended proposals. Determine which proposals to recommend to the LCDC.

1. The OPAC receives the Proposal Packet(s) ahead of their next meeting. The OPAC will allocate time during two consecutive meetings to review and then make a decision on the proposals. The first meeting will provide an opportunity for OPAC to become familiar with the proposals, review the evaluation materials, and ask questions of the proposing entity. The second meeting will be a decision-making meeting, where OPAC will consider whether to recommend the site designation changes being proposed.
2. OPAC Rocky Habitat site designation proposal exploratory meeting<sup>22</sup>.
  - a. OCMP staff present proposal packet at the OPAC meeting and provide details to Council members with an opportunity for questions and answers.
  - b. Proposing entities with recommended proposals have an opportunity to answer OPAC questions where necessary.
  - c. Public testimony is collected.
3. OPAC makes determination on whether to recommend the site designation proposals to Part Three as Plan amendments.
  - a. If a proposal is recommended, the site designation proposal packet, technical evaluation, and public comment summary will be sent to LCDC for their review and action (proposals will now be referred to as “OPAC Recommendations”).
  - b. If OPAC decides not to recommend the site proposal, a letter will be sent to the proposing entity informing them of such.

## **Phase 6 – Land Conservation & Development Commission Review & Potential Adoption**



Goal: Make final determination on which site proposals will be incorporated into the Rocky Habitat Management Strategy. Site proposal recommendations from OPAC will be reviewed by the Land Conservation and Development Commission for review and adoption.

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<sup>22</sup> OPAC review and determinations on proposals may require multiple meetings to complete.

1. LCDC receives OPAC recommendation for review prior to decision-making meeting in accordance with commission procedures and protocols.
2. OCMP staff present OPAC Recommendation to LCDC and provide details to Commissioners with an opportunity for questions and answers.
  - a. Public testimony is collected.
3. LCDC makes determination on OPAC Recommendation.
  - a. If adopted: The site designation and management measures are incorporated into the Rocky Habitat Management Strategy and sent to the appropriate agency governing bodies where applicable components of the designation and management measures will be considered for adoption.
  - b. If rejected: The recommendation will be returned to OPAC with recommended revisions based upon the Commission’s findings.

#### 4. Additional Considerations

##### Communication with Proposing Entity during Review

The proposing entity will be informed throughout the review process on the status of their proposal. OCMP staff will serve as the primary agency point of contact and will be responsible for maintaining a direct line of communication with the proposing entities. OCMP staff will also be responsible as the primary contact for communications with the agency staff involved in the proposal review process, and the TEG members.

##### Agency Proposals

Agencies are eligible to submit proposals into the site designation proposal process. These proposals must include all information normally included in the proposal submission process and will be held to the same standard as other proposals during OPAC review.

#### 5. Proposal Review Guidance

##### **Considering Submerged Rocky Habitat Management**

Submerged rocky habitat<sup>23</sup> is subject to a complex and diverse array of management and regulations. Although the Rocky Habitat Management Strategy allows for the public

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<sup>23</sup> Section B.1.b.b - *Submerged Rocky Habitat* – all rocky habitat below extreme low water, out to the deepest limits of the territorial sea. This area includes submerged rocky reefs, shallow rocky subtidal, and other submerged rocky habitats.

proposal of submerged rocky habitats for designation, it is critical to consider the existing system of Marine Reserves and Marine Protected Areas along the Oregon Coast prior to submission, review, and adoption of new or adapted designations.

The current system of Marine Reserves and Marine Protected Areas required years of planning and stakeholder engagement that culminated in legislation in 2012 (SB 1510). The Rocky Habitat Management Strategy is not intended to replicate this important public process. Additionally, the Marine Reserves Program, within the Oregon Department of Fish and Wildlife, is scheduled to undergo a legislative evaluation in 2023. The designation of subtidal areas prior to the completion of the 2023 evaluation may conflict with the science, monitoring, and public process of the program and evaluation process. Therefore, subtidal proposals must be written and reviewed with consideration for unintended consequences to the Marine Reserves Program Evaluation.

### Habitat Guidance

These guidelines are intended to inform submitted proposals and create a scale for how different habitats will be reviewed during the Initial Proposal Process. Proposed areas may include multiple habitat types (e.g., a proposal may include both rocky intertidal and shallow rocky subtidal habitats). Although these habitat classifications will act as general guidance for the review bodies, each proposal will be reviewed and judged based on merit on a case-by-case basis.

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### Rocky Intertidal Habitats

The rocky intertidal zone is the narrow strip of habitat along the shoreline. This habitat is relatively rare, ecologically unique and productive, and is the most accessible marine rocky habitat to human use and visitation. This makes these areas highly vulnerable to trampling and misuse. In addition, these areas have the most data in comparison to the other rocky habitats, helping to make proposed designations in these areas more informed.

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### Associated Shallow Rocky Subtidal Habitats

Some rocky intertidal areas blend with adjacent subtidal rocky habitat through a gradual transition zone consisting of a

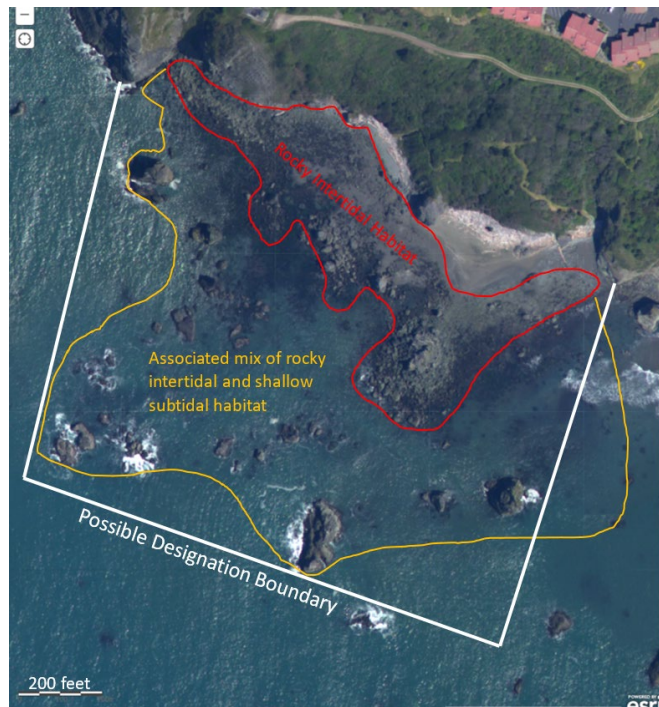


Figure 4. Example site designation including rocky intertidal (red) and mixed subtidal (yellow) habitat.

mosaic of shallow subtidal and intertidal features. These occur where the rocky habitat continues seaward along a gently sloping bottom. In these areas it may be justified to include the transitional area as part of the designation along with the intertidal habitat. The maximum depth of this transitional area should not exceed five meters<sup>24</sup> (see Figure 4).

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### **Deeper Rocky Subtidal Habitat**

Subtidal habitat deeper than five meters and any subtidal rocky habitat not associated with the shoreline differ in both environmental characteristics and human use pressures from rocky intertidal areas. The primary human use of these areas is fishing, and an extensive state and federal fishery management system controls and sustains fisheries here. The Territorial Sea Plan also protects rocky subtidal areas from development impacts through Part Three, Section A., Policy J, and by policies in Part Five.

### **General Proposal Review Criteria**

In addition to the geographic proposal priorities, the following process criteria should also be considered during proposal review. These criteria include, but are not limited to, the following:

### **General Proposal Review & Aligning with the Rocky Habitat Management Strategy**

- Only complete and officially submitted proposals are eligible for review. Review entities should not modify proposals to make them acceptable. A proposal may be characterized based on merit during review as 1) recommended, 2) rejected, or 3) has merit and requires additional work.
- Proposals also need to be reviewed in the broader coastwide regulatory and management context. Management goals and objectives will be achieved with a combination of coastwide management and site-by-site management. Groups and their proposals must demonstrate knowledge of, and take into consideration, current regulations, restrictions, enforcement, and protections.
- Proposals must state objectives, goals, criteria, and measurable results and outcomes from proposals. Proposing entities must also state how the proposed site will change protections from the status quo. A proposed site must include some change from status quo.
- Proposal review must consider how each proposed site, both individually and in context of all designated sites, addresses and furthers the goals, objectives, management principles, and policies within the Rocky Habitat Management Strategy.

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<sup>24</sup> The -5-meter depth contour is outlined by the Coastal and Marine Ecological Classification Standard (CMECS) which is a federal framework for classifying ecological units.



- All proposals must align with the goals, objectives, management principles, and policies outlined in the broader Rocky Habitat Management Strategy.

### **Consideration for the Marine Reserves Program Evaluation**

- The Rocky Habitat Management Strategy is not intended to create new Marine Reserves. Oregon’s Marine Reserves are statutorily defined and fall under the jurisdiction of ORS 196.540 – 196.555.
- Proposals overlapping Marine Reserves or Protected Areas shall not be approved or considered until the completion of the 2023 program evaluation.
- Subtidal proposals must be written and reviewed with consideration for unintended consequences to the Marine Reserves Program Evaluation. Proposals that may conflict with the 2023 evaluation may be held by the OCMP upon request for review after the evaluation is complete.

### **Regarding Specific Designations**

- Marine Research Area
  - Proposals should be reviewed in the context of current knowledge of rocky habitats along the coast, with emphasis on addressing knowledge gaps in areas lacking adequate data and/or monitoring efforts.
  - Desired outcomes should be associated with each proposed site to help determine if the goals of the site are being reached.
- Marine Gardens (Marine Education Area)
  - Where feasible, Marine Gardens (Marine Education Areas) should aim to be equitably accessible, either visually or physically.
  - Priority should be given to Marine Gardens (Marine Education Areas) that have partnership opportunities with local organizations. Intentions of potential partner organizations (including goals, missions, and program areas) should also be considered in order to avoid negative impacts.
  - Desired outcomes should be associated with each proposed site to help determine if the goals of the site are being reached.
- Marine Conservation Area
  - Marine Conservation Areas with broad conservation goals may be proposed with regulations that limit adverse impacts to habitats and wildlife.
  - Entities proposing this type of designation must articulate the specific conservation goal(s) and management objectives relating to particular site concern(s), as well as how the proposed management measures would help reach these goals. A varied strategy of regulations may be proposed for Marine Conservation Areas based on site-specific goals and outcomes. Any proposed regulations must be supported by appropriate rationale.
  - Desired outcomes should be associated with each proposed site to help determine if the goals of the site are being reached.

# Appendix A: Glossary

The definitions herein only apply to the purposes of this strategy and are not intended to be used in regulatory or policy contexts unrelated to Oregon's territorial sea.

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**adverse effects:** degradation of ecosystem function and integrity, including but not limited to, direct habitat damage, burial of habitat, habitat erosion, a reduction of biological diversity, or a degradation of marine living organisms including, but not limited to, abundance, growth, density, species diversity, and species behavior.

**algae, marine:** this term is used loosely in this plan to include all the so-called "seaweeds", especially of the intertidal area. Marine algae range in size from microscopic blue-green algae and diatoms to the many species of larger brown and red algae that are commonly recognized as "seaweed" in tidepools.

**appropriate use:** a term used to imply a balance between human use or exploitation of a natural resource, including its environment, and the ability of the resource to tolerate the use. For any given site or resource, managers must consider nature, sensitivity, durability, and regenerative capacity of the resource against the amount, kind, duration, and intensity of the use as well as the goals, objectives, and policies of the administrative or management authority, including the Territorial Sea Plan.

**awareness:** knowledge that something exists, or understanding of a situation or subject at the present time, based on information or experience.

**biota:** all organisms found in a specified area.

**cell (rocky shore):** a major shore feature with a predominant set of similar shore types. On the Oregon Coast, there are two types of cells: littoral cells where nearshore circulation is enclosed between headlands, and rocky cells composed of headlands, capes and associated reefs or rocks.

**coast:** the area where land and sea meet and where the physiographic, hydrographic, oceanographic, atmospheric, and biological features and conditions of each strongly influence the other.

**coastal biodiversity:** at its simplest, a term meaning the diversity of lifeforms and biotic communities that occur in the coastal zone, including nearshore ocean waters. Diversity is a concept that means "variety or multiformity, a condition of being different in character and quality."<sup>25</sup> There is no single way to define, measure, or evaluate diversity of life; rather there are at least four interrelated ways:

- species diversity, which refers to the variety and abundance of species in an ecosystem;
- ecological diversity, which refers to the variety of types of biological communities found on Earth;

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<sup>25</sup> Patrick, R., ed. 1983. Diversity. Benchmark Papers in Ecology/13. Hutchinson Ross, Stroudsburg, Pa. 413 pp.

- genetic diversity, which refers to the genetic variation that occurs among members of the same species; and
- functional diversity, which refers to the variety of biological processes or functions characteristic of a particular ecosystem. This may be the most important way of referring to biodiversity in a coastal management sense.

Coastal biodiversity refers to the richness of variety and interactions of biological resources in the coastal zone, which is a transition zone or ecotone between the land and the sea. Coastal biodiversity therefore encompasses not only the range and multitude of sea creatures that live in the rocky intertidal zone, but also the varieties of seabirds and shorebirds, marine mammals, hundreds of species of fish, shellfish, invertebrates, marine algae or "seaweeds", plankton, and insects. This extends to the complexity of their interactions, evolved and adapted to fit the dynamics of this transition environment.

**coastal shorelands:** those areas immediately adjacent to the ocean, all estuaries and associated wetlands, and all coastal lakes. (Oregon Statewide Land Use Planning Goals)

**coastal zone:** the area lying between the Washington border on the north to the California border on the south, bounded on the west by the extent of the state's jurisdiction, and in the east by the crest of the Oregon Coast Range, with the exception of: (a) the Umpqua River basin, where the coastal zone shall extend to Scottsburg; (b) the Rogue River basin, where the coastal zone shall extend to Agness; (c) the Columbia River basin, where the coastal zone shall extend to the downstream end of Puget Island (Oregon Statewide Land Use Planning Goals).

**community:** the full complement of plant and animal species living and interacting in a specified habitat or, a "distinct and recurring assemblage of plants and animals naturally associated with each other and with a particular physical environment."<sup>26</sup> Like human communities, the exact composition of marine communities may vary for myriad reasons: seasonal changes in light, temperature, or nutrients; water depth, which affects food, light, temperature, and pressure; mixing of different water masses with different temperatures, salinity, or nutrient levels; etc.

**conservation:** to manage in a manner which avoids wasteful or destructive uses and provides for future availability. A principle of action guiding Oregon's ocean resources management, which seeks to protect the integrity of marine ecosystems while giving priority to the protection and wise use of living marine resources; as used in the Oregon Ocean Resources Management Plan, the act of conservation means "that the integrity, diversity, stability, complexity, and the productivity of marine biological communities and their habitats are maintained or, where necessary, restored" and "accommodate[ing] the needs for economic development while avoiding wasteful uses and maintaining future availability."

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<sup>26</sup> Dethier, M. N., & Kunze, L. M. (1997). *A marine and estuarine habitat classification system for Washington State*. [Washington State] Department of Natural Resources, Washington Natural Heritage Program.

**develop:** to bring about growth or availability, to construct or alter a structure, to conduct a mining operation, to make a physical change in the use or appearance of the land, to divide land into parcels, or to create or terminate rights to access. (Oregon Statewide Land Use Planning Goals)

**development activity:** a use involving the planning, construction, modification, or removal of facilities, or other structures. These activities may consist of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand; gravel, or minerals; bulkheads; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the overlying lands.

**disturbance:** to interfere or attempt to interfere with natural processes. Often referred to with respect to marine mammals and/or seabird colonies.

**ecosystem:** the living and non-living components of the environment which interact or function together, including plant and animal organisms, the physical environment, and the energy systems in which they exist. All the components of an ecosystem are understood to be interrelated. (Oregon Statewide Land Use Planning Goals)

**ecotone:** a transition area between different habitats or environments. The Oregon Coast is within an ecotone between the subarctic waters of the Gulf of Alaska and the subtropical waters of California and Mexico. Further, the waters of Oregon's territorial sea are coastal waters - an ecotone between marine habitats in waters over the continental margin and terrestrial habitats of Oregon's coastal watersheds and shoreline.

**educate:** to provide with knowledge or training in a particular area or for a particular purpose.

**enhancement:** improvement in condition. In natural resources management, this refers to objective tasks undertaken to improve the condition, numbers, or prospects for survival of populations, habitats, or ecosystems.

**environment:** the natural physical space in which all living things occur.

**extreme high water line:** the highest elevation reached by the sea as recorded by a tide gauge during a given period. The National Ocean Service routinely documents monthly and yearly extreme high waters for its control stations (NOS CO-OPS 1 2000).

**extreme low water line:** the lowest elevation reached by the sea as recorded by a tide gauge during a given period.

**habitat:** the particular portion of the environment in which an organism, species, or community lives. Just as humans live in houses, within neighborhoods, within a town or geographic area, within a certain region, etc., marine organisms live in habitats which may be referred to at different scales (see also "critical marine habitat", "important marine habitat").

**headlands:** bluffs, promontories or points of elevated shoreland jutting out into the ocean, typically sloping abruptly into the water. Oregon Coast headlands are generally identified in the report on Visual Resource Analysis of the Oregon Coastal Zone, OCCDC, 1974. (Oregon Statewide Land Use Planning Goals)

**holistic:** referring to an interconnected system as a whole rather than by its individual parts.

**important marine habitat:** marine habitats that must be specifically considered when an inventory-and-effects evaluation is conducted pursuant to Goal 19, including but not limited to: habitat necessary for the survival and conservation of Oregon renewable resources (e.g. areas for spawning, rearing, or feeding), kelp and other algae beds, seagrass beds, seafloor gravel beds, rocky reef areas and areas of important fish, shellfish and invertebrate concentration. (Oregon Statewide Land Use Planning Goal 19).

**marine aquatic vegetation:** naturally occurring macroalgae (e.g. kelps and seaweeds), vascular plants (e.g. seagrasses such as surfgrass and eelgrass), and other marine vegetation. This does not include phytoplankton or non-planktonic single-celled algae. This definition does not apply to marine aquatic vegetation grown for aquaculture or mariculture.

**niche:** the range of environmental variables (such as temperature, salinity, nutrients, etc.) within which a species can exist and reproduce. The preferred niche is the one in which the species performs best in the absence of competition or interference from extraneous factors. The realized niche is the one in which it actually comes to live in a particular environment.

**organism:** an individual living entity or lifeform.

**outreach:** an effort to bring services or information to people where they live or spend time.

**pollution:** the violation or threatened violation of applicable state or federal environmental quality statutes, rules and standards. (Oregon Statewide Land Use Planning Goals)

**preserve:** to save from change or loss and reserve for a special purpose. (Oregon Statewide Land Use Planning Goals)

**program:** proposed or desired plan or course of proceedings or action. (Oregon Statewide Land Use Planning Goals)

**protect:** save or shield from loss, destruction, or injury or for future intended use. (Oregon Statewide Land Use Planning Goals)

**population:** a set of organisms belonging to the same species and occupying a clearly delimited space at the same time.

**preservation:** as used in the Oregon Ocean Resources Management Plan, means "that no adverse human-induced changes to a biological community or habitat should be allowed, and that human activities that could cause such changes need to be prohibited."

**recommended site designation:** ("site designation" or "designation") habitat designations are management categories that specify management objectives and actions for rocky habitat sites. Recommended site designations are the strategy's recommendation for assigning sites to their appropriate management category, thus

prescribing the types of management objectives and actions that agencies or other entities should implement at the sites.

**recreation:** any experience voluntarily engaged in largely during leisure (discretionary time) from which the individual derives satisfaction. (Oregon Statewide Land Use Planning Goals)

**rocky habitat:** consists of outcrops or deposits of the above-described material either along the shoreline or in submerged areas. The individual rock structures or fragments within a rocky habitat area are often interspersed with gravel or sediment and overlain with biogenic habitat features. This creates a complex mix of substrate characteristics that all contribute to the form and function of the rocky habitat. Thus, rocky habitat can have non-rock (sand, gravel, biological) components. These habitats are variously referred to as rocky reefs, rocky banks, rocky beaches, rocky intertidal areas, rocky subtidal areas, boulder fields, rocky debris fields, benches, rock pavement, sea stacks, wash rocks, pinnacles, and many other names.

To appropriately manage the resources within these rocky areas, the differences and similarities between the many rocky habitat types must be recognized. For the purpose of this management strategy, Oregon's rocky habitats are grouped into three major classifications based on proximity to shore, jurisdictional boundaries, and ecological zone. Within these main classifications many other sub-classifications may be present including rocky intertidal and subtidal, cliffs, tidepools, etc. Additional descriptions of rocky habitat environments can be found in Section B.

- c. Rocky Shoreline – all rocky habitat between the statutory vegetation line described in ORS 390.770 and extreme low water (encompasses cliffs, tidepools, and rocky intertidal). These areas may be reached by foot from shore (regardless of hazard or convenience).
  - i. Rocky upland – rocky habitat area between the statutory vegetation line and extreme high water line. In unvegetated areas, this is delineated at the 16-foot elevation contour.
  - ii. Rocky intertidal – rocky habitat area between extreme high water line and extreme low water line.
- c. Submerged Rocky Habitat – all rocky habitat below extreme low water, out to the deepest limits of the territorial sea. This area includes submerged rocky reefs, shallow rocky subtidal, and other submerged rocky habitats.
- d. Offshore Rocks and Islands - any rock or landform within the territorial sea separated from the mainland at mean high water which remains above the surface of the sea at mean high water.<sup>27</sup>

**rocky habitat sites:** specific geographic areas in which the immediate underlying geologic substrate primarily consists of rock.

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<sup>27</sup> As defined by the U.S. Fish and Wildlife Service.

**shoreline:** the boundary between a body of water and the land, measured on tidal waters at mean higher high water, and on non-tidal waterways at the ordinary high-water mark. (Oregon Statewide Land Use Planning Goals)

**significant:** involves the evaluation of context and intensity of an environmental effect. Context will vary with the physical setting of the proposed action, and may involve interests at the local, regional, state, or federal level. Intensity refers to the severity of the effect; that is, the magnitude and duration of the effect. The intensity of an effect should be weighed along with the likelihood of its occurrence. An effect may be significant even when its chance of occurrence is not great, but when the resulting effect would be severe if it occurred. Significance does not lend itself to a formula or quantifiable test when used to describe natural resources (unlike statistical analyses where "significance" does lend itself to mathematical expression). The agency with jurisdiction over the activity being reviewed has final authority over determining significance.

**species:** a population or collection of populations of closely related and similar organisms that are distinguished by typological, morphological, or hereditary characteristics, or the limitations of their reproductive compatibility.

**submersible lands:** lands lying between the line of ordinary (mean) high water and the line of ordinary (mean) low water. (ORS 274.005(8)).

**take:** to fish for, hunt, pursue, catch, capture or kill or attempt to fish for, hunt, pursue, catch, capture or kill. (OAR 635-012-0030).

**territorial sea:** the ocean and seafloor area from mean lower low water seaward three nautical miles. (Oregon Statewide Land Use Planning Goals).

**tidal submerged lands:** lands lying below the line of mean low tide in the beds of all tidal waters within the boundaries of this state are heretofore or hereafter established. (ORS 274.705(7)).

**vegetation line:** (statutory) a line of established upland shore vegetation and as described in ORS 390.770.

# Appendix B: Rocky Habitat Classification

## 1. ENVIRONMENTAL CONSIDERATIONS

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### a) Scale (Sizes)

The scale of the marine environment is vast, yet the scale of definable habitats and human use can be much smaller, often at a very precise location. The marine environment thus requires that management account for the tremendous differences in scales of reference. Management, monitoring, and research must accommodate for broad regional distinctions and characteristics, as well as fine-scale geographic and ecological resolution.

### b) Linkage (Connectivity)

Areas or locations in the ocean are linked by the continuously flowing masses of water and by migrating, roaming, or drifting marine plants and animals. Marine life in any given area is sustained by nutrients dissolved in the water column. Phytoplankton, which fix solar energy, are effectively part of the water mass, and eggs and larvae from organisms at one site are frequently borne long distances to the habitat sites in which they ultimately settle. There are virtually no points within the marine environment that are completely disconnected from the system. Similar habitat conditions at distantly separated sites in a given region may have the same or very similar biotic communities. Likewise, pollutants from one source can affect marine areas far away. This linkage is modified by time. While some species take full advantage of marine advection and reproduce widely, the reproductive mode of other species is quite localized, which means that settlement or colonization at distant sites may take many years until appropriate conditions prevail.

### c) Dynamics (Changes)

The dynamic conditions of the marine environment continuously change with a host of variables: tidal height, seasonal sunlight, storms, waves, water depth, upwelling, upland runoff, seafloor type or topography, etc. Oregon's marine environment is particularly influenced by the seasonal outflow of fresh water from the Columbia River and other coastal streams, and by upwelling created by summer winds. Large-scale events, such as El Niño, regularly punctuate these routine dynamics and increase complexity. These dynamic variables influence rocky habitat areas and their management.

## 2. ROCKY HABITAT TYPES

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### a) Rocky Upland

These habitats include rocky cliffs, sandstone bluffs, the upland extension of rocky intertidal benches or boulder fields, and other rocky substrates immediately inland from



intertidal areas. Some of these areas may receive saltwater spray or mist from the adjacent intertidal areas and may contain marine organisms. Rocky upland habitat provides isolated nesting and resting habitat for seabirds, as well as haulout sites for Pinnipeds.

Many rocky upland sites are in public ownership: State Parks and Recreation, U.S. Forest Service, Bureau of Land Management, or U.S. Fish and Wildlife Service. Others, such as the Sea Lion Caves area or the cliffs south of Cape Arago, are in private hands. Most are planned and zoned as part of the respective coastal county land use plan. Rocky uplands are included as coastal shorelands under Statewide Land Use Planning Goal 17.

#### **b) Rocky Intertidal**

Rocky habitat area between the extreme high water line and extreme low water line.

Rocky intertidal areas encompass a variety of hard, rocky sites, covered and uncovered daily by the tide and areas subject to splash and spray many feet above the water level. Most are wave-eroded bedrock platforms with associated remnant rocks and boulders. At some sites, boulder fields at the base of a rocky cliff predominate. Exposure to ocean waves varies from site to site: most are exposed or semi-exposed; a few are partially protected.

All rocky intertidal sites below mean high tide are held in trust by the State Land Board for the owners: the people of Oregon. Management is complex; the areas are administered jointly by the Department of State Lands exercising ownership responsibilities on behalf of the State Land Board and by the Oregon Parks and Recreation Department for public recreation under the Beach Bill (1967). The Department of Fish and Wildlife regulates harvesting, collecting, or taking of animals.

#### **c) Rocky Shallow Subtidal**

At some sites, submerged bedrock or boulders form reefs in direct association with rocky intertidal areas. This subtidal region, between extreme low water and the -5 meter depth contour, are generally geologic extensions of rocky intertidal or cliff areas along the shore.

These features within the territorial sea are held in trust by the State Land Board for the owners: the people of Oregon. The Department of Fish and Wildlife regulates harvest of fish and shellfish through general and site-specific regulations.

### **3. OFFSHORE ROCKY HABITAT TYPES**

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Areas detached from the main coastline including submerged reefs and exposed rocky islands within state jurisdiction (0-3 nautical miles) that are located seaward of the extreme low water line.

These sites are generally accessible only by boat. These reefs and rocks have valuable habitat that may be similar to those nearer to shore, but physical isolation at sea generates a unique set of management requirements and opportunities.

### **a) Offshore Reefs**

The reefs in Oregon's territorial sea are submerged rock formations (but may also include individual rocks that project above the surface) with a variety of compositions: bedrock with pinnacles reaching toward the surface, boulders, cobbles, and, in some cases, intermixed gravel or sandy patches. All are exposed to high-energy ocean currents, waves, and mixing. Rocky reef depths can range from extreme low water out to the deepest limits of the territorial sea. If the reef is contiguous with an adjacent rocky intertidal area, then the portion from extreme low water out to -5 m depth is considered to be part of the rocky shoreline and is classified as rocky shallow subtidal (see above). These reefs provide diverse, valuable habitat for marine life.

Offshore reefs within three miles of shore are under the jurisdiction of the Department of State Lands (DSL) as submerged lands. DSL has general authority to lease submerged lands and specific authority to lease for marine plant harvest, which grows only on a rocky substrate. Sport and commercial harvest of fish and shellfish is regulated by the Department of Fish and Wildlife.

### **b) Offshore Rocks or Islands**

Offshore rocks and islands occur singly (e.g., Tillamook Rock), in small clusters (e.g., Redfish Rocks), or in association with many other rocks and submerged reefs (e.g., Orford Reef). An offshore rock or island is defined as any rock that extends in elevation above mean high water and is disconnected with the mainland at mean high tide.<sup>28</sup>

Birds and mammals use these rocks for breeding and rearing of young, shelter, and feeding. The degree of use and habitat value to a species or mix of species varies depending on differences in geologic composition, soil cover, vegetation, slope angle or orientation, relationship to other habitat areas, distance from shore, proximity to human use, etc. These rocks are center points for a wider range of feeding, foraging, and reproductive activities, which may take animals hundreds, if not thousands, of miles from the site. In some cases, these rocks are nesting sites for birds, which migrate from South America or New Zealand and are thus of international importance in species protection.

Above mean high water, almost all offshore rocks are designated as wilderness and managed as part of the National Wildlife Refuge system administered by the U.S. Fish and Wildlife Service. Below mean high water, the Oregon Department of State Lands

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<sup>28</sup> As defined by the U.S. Fish and Wildlife Service.

has jurisdiction over the seabed. The Oregon Department of Fish and Wildlife regulates all fish and shellfish harvest throughout both tidal elevations.

# Appendix C: Example Proposal Contents & Questions

The example Rocky Habitat Web Mapping Form includes the following questions below. Additional questions may be included in the site management designation Request For Proposals that need to be answered in addition to the questions below. All proposals must be completed and submitted using the Rocky Habitat Web Mapping Tool (<http://Oregon.SeaSketch.org>). Special accommodations are available upon request by contacting the Oregon Coastal Management Program.

**Questions with (\*) indicate information that will be generated in part or in full by the Rocky Habitat Web Mapping Tool. The proposer will likely need additional information not found within the web mapping tool to support the proposal.**

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## Primary Contact Information & Proposal Rationale

1. Name of proposed site.
2. Name of principal contact.
3. Affiliation/agency/organization (if applicable).
4. Phone, email, and mailing address.

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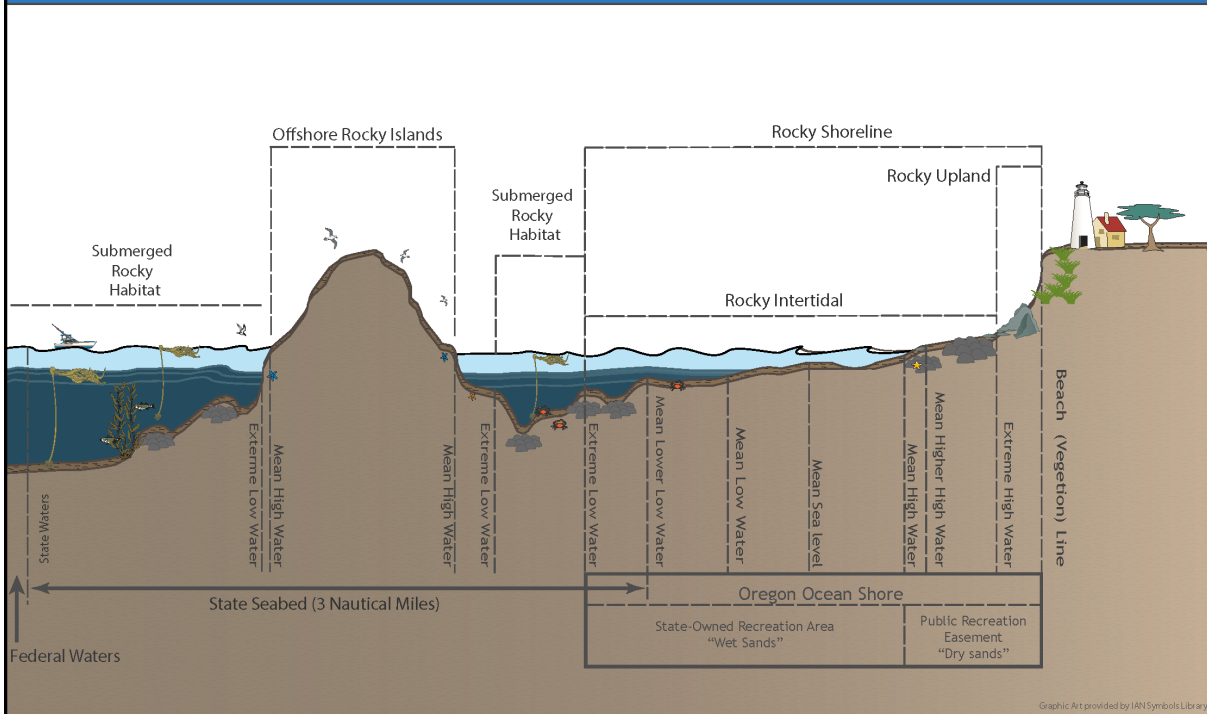
## General Proposed Site Information

To the best of your knowledge, please provide the following information:

1. Current site name (if different from proposed name). \*
2. Site Location - Please use common place names, latitude/longitude, and geographic references to identify the site. \*
3. Proposed Site Boundaries
  - a. Please describe in writing and identify (draw) on the graphic below the upper and lower elevation bounds of your proposed site designation. For example, does it only include rocky intertidal habitats?
  - b. Please attach a GIS shapefile of the proposed site boundaries. The Rocky Habitat Web Mapping Tool provides the functionality to export a site once a boundary is drawn. For more information see the [Rocky Habitat Web Mapping Tool User Guide](#).

# Oregon Territorial Sea Plan

## Rocky Habitat and Ocean Shore Terminology



4. Which of the following actions does this proposal present? 1) site designation addition, 2) site designation deletion, 3) site designation modification.
5. If proposing an addition or modification to a site designation, what type of rocky habitat designation are you proposing?
  - 1) Marine Research Area
  - 2) Marine Garden (Marine Education Area)
  - 3) Marine Conservation Area

### Proposal Goals and Rationale (Maximum 6-page limit)

1. Please describe the context for why this proposal is being brought forward.
2. Please describe the site-specific goals of this proposal and how they relate to the goals of the Rocky Habitat Management Strategy.
3. How does this proposal fit with the priorities established in the Request for Proposals (RFP)?

## **Proposal Consistency with RHMS Objectives and Management Principles**

1. How do the proposed site designation and management recommendations contribute to or address the objectives of the Strategy and improve upon or fill a gap in addressing objectives or principles that are not currently addressed by other designated sites or management measures? Please address this question in relation to the listed topics below:
  - a) Maintenance, protection, and restoration of habitats and natural communities.
  - b) Allowing for the enjoyment and use of the area while protecting from degradation and loss.
  - c) Improve knowledge and understanding of rocky habitat ecosystems by fostering research and monitoring efforts.
  - d) Facilitate cooperation and coordination among local, state, and federal resource management agencies, and tribal governments, to ensure that marine resources and habitats are holistically managed.
  - e) Fostering stewardship and education of the area or coastwide.
2. Please include any additional information that you would like reviewers to consider (optional).

## **Management Concerns and Measurable Outcomes**

1. What are the site-specific management concerns that are addressed by this designation and associated changes in management?
  - a. Examples include tidepool trampling, wildlife harassment, conflicts among user groups, invasive species, biological degradation.
  - b. Please note if any threatened or endangered species are affected by these concerns.
2. What are the outcomes, metrics that could be measured to determine progress toward or achievement of the site designation goals?
  - a. Metrics should be described for each management recommendation to demonstrate the outcome or effectiveness will be evaluated.

Current site management and authorities<sup>29</sup>.

- a. What is your understanding of current management at this site?
- b. Include current site ownership, management authorities, and other key stakeholders.\*

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<sup>29</sup> A framework of coastal management is available for reference in Section C.

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**Site Uses and Equity of Access (Maximum 4-page limit)**

To the best of your knowledge, please provide the following information **based on the current site management**.

1. Current site uses and infrastructure.
  - a. Please describe the current users and uses present at the site.\* Uses may encompass recreational, commercial, cultural, and scientific.
  - b. Please summarize existing site infrastructure. For example: large parking lot, public restrooms, paved trail access, etc.
2. Potential future uses based on the current site management.
  - a. Please describe potential future uses of the proposed site if there was no change to current management. Much like current uses, future uses may encompass recreational, commercial, cultural, and scientific, as well as others not listed.
3. How will altering this site's management designation impact existing and potential future uses?
  - a. Please outline the potential positive and negative impacts to current and future users as well as the degree of impact.
  - b. How does the proposed site management balance the conservation of rocky habitat resources with human use?

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**Key Natural Resources**

1. Rocky habitat type present throughout the site.
  - a. Please include as much information as possible on the specific types and composition of rocky habitat present at the site (e.g. rocky intertidal with extensive tidepools, adjacent rocky cliffs, and rocky subtidal).\*
2. Key resources present at the site.
  - a. Describe current rocky habitat resources present at the site. These may include, but are not limited to:
    - i. kelp beds; Pinniped haulout or pupping areas; seabird colonies; presence of threatened/endangered/protected species;\*
    - ii. intertidal diversity (invertebrates, marine plants, etc.).\*
3. Does this site include any unique or special features in relation to the Oregon Coast? This may include high quality examples of rocky habitats, etc.
4. Please discuss site values and resources and how a change in designation will impact them.

### **Climate Change (Maximum 2-page limit)**

1. How will this designation address climate change concerns at this site or coastwide?
2. Please discuss the site's vulnerabilities and/or resilience to climate change, ocean acidification, hypoxia.
3. How does this designation align with State climate change policy (OAH Action Plan, Climate Change Adaptation Framework)?

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### **Regulations & Enforcement (Maximum 4-page limit)**

Proposing entities should fill out this section to the best of their knowledge. Agencies will attempt to address gaps where information is available.

1. How was enforcement/compliance of management considered in the design of this site proposal?
  - a. If possible, please estimate the cost to implement this change in site management.
2. What regulations and enforcement would be necessary to implement this change in management?
  - a. Individual site management must include a clear justification for all proposed regulations for commercial, recreational, scientific research and educational harvest. If a Marine Conservation Area is being proposed, a change from the management status quo must be included along with clearly describing how these management changes help achieve the site-specific goal(s). If the proposed regulations deviate from the management prescriptions outlined in Table 1 for Marine Research Areas or Marine Gardens, please explain why this is necessary to achieve your site goals.
  - b. Which state/federal agencies would be impacted by this change in site management?

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### **Non-Regulatory Management**

1. What non-regulatory management mechanisms are recommended at this site in order to meet the goals of the proposed designation? These may include, but are not limited to, public access management, on-site enhancement, stewardship programs, and educational intercepts.
2. How do you propose to support these mechanisms?
  - a. Some designations incorporate larger financial or programmatic support. Please identify any entities or funding sources that may be available to continually support this proposal. This information is not required for a



proposal to be accepted, but review bodies would like to be informed of any support that is already in place or expected for the site.

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### **Stakeholder Engagement**

1. Describe the steps taken to develop this proposal in coordination with stakeholders. Please list and describe engagement opportunities where the public has had the opportunity to learn about and/or comment on this proposal (e.g., conferences, meetings, tabling events).
2. Please list the communities, organizations, and groups that have worked to develop and support this proposal, as well as those in opposition of the proposal.
3. List and explain both positive and negative opinions received regarding this proposal.
4. **Before submitting your proposal**, please attach any materials, or letters of support gathered as part of the development of this proposal. You may include meeting resources, campaign materials, etc. The attached materials do not apply to the 4-page limit.

### **Additional Information (Maximum 4-page limit)**

1. What land or watershed activities/conditions exist adjacent to this site?
2. Include other characteristics of the site or adjacent area you wish to describe. \*
3. Please describe any other reasons you think this site warrants a change in designation.
4. Should this proposal be evaluated in conjunction with other proposals your entity has submitted?

*Note:* The merit of all proposals is evaluated independently unless otherwise indicated by the proposing entity.

# Appendix D: Designation Standards for Federal Consistency

The following information is for application during Federal Consistency Review as outlined by the Coastal Zone Management Act of 1972. None of the information within this section varies from the intent of the Rocky Habitat Management Strategy.

## Enforceable policies

The following subset of policies will be submitted to the National Oceanic and Atmospheric Administration for approval to use during Federal Consistency review under the Coastal Zone Management Act (see Federal Consistency Regulations 15 CFR Part 930).

### **General Policies (from Section A.6.b.)**

- A. Consistent with Statewide Land Use Planning Goal 19, actions that are likely to affect rocky habitats shall be developed and conducted to conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social values benefits.
- B. Protection of rocky habitat resources (i.e. living marine organisms and their habitat) shall be prioritized over development of non-renewable ocean resource uses.
- D. Public access shall be preserved to the maximum extent practicable and minimize user conflict.
- F. Standards for designations described in Section D. of this plan shall apply to activities occurring in rocky habitats. Managing agencies shall incorporate management recommendations outlined in Section D. into administrative rule or site management practices.
- I. Harvesting, gathering, or scientific collection of marine plants and animals in rocky habitat areas, where allowed, shall be conducted in a manner that minimizes impacts and disturbance to habitats or other organisms.
- J. Marine development activities, not currently managed by a specific part of the Territorial Sea Plan, that cause significant adverse effects or permanent<sup>30</sup> impacts to the form or function of submerged rocky habitats, or the fisheries dependent upon them, are prohibited.

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<sup>30</sup> "Temporary impacts" are adverse impacts to waters of this state that are rectified within 24 months from the date of the initiation of the impact. As defined by: OAR 141-085-0510(88).

- N. Impacts to cultural resources or historic properties in rocky habitats shall be avoided, minimized, or mitigated, in consultation with affected Oregon federally recognized tribes and as determined by the State Historic Preservation Office or Tribal Historic Preservation Office, as appropriate.
- Q. Harvest of marine aquatic vegetation is prohibited except as regulated by state agencies for appropriate recreational, scientific, restoration, and educational use.
- R. Development activities occurring within or near an area with marine aquatic vegetation must have no significant adverse effects to the marine aquatic vegetation or its habitat.

## Designation Standards (from Section D.)

**TABLE 2 REGULATORY STANDARDS & MANAGEMENT PRACTICES**

	Marine Research Area	Marine Garden (Marine Education Area)	Marine Conservation Area
<b>Fish Harvest</b>	<p><u>Commercial</u> – No additional site-based fish harvest regulations. Coastwide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Recreational</u> – No additional site-based fish harvest regulations. Coastwide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Scientific &amp; Educational</u> – Requires a permit from Oregon Department of Fish and Wildlife or Oregon Parks and Recreation Department, which may be issued if the research does not impede the management goals of the Marine Research Area.</p>	<p><u>Commercial</u> – No additional site-based fish harvest regulations. Coastwide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Recreational</u> – No additional site-based fish harvest regulations. Coastwide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Scientific &amp; Educational</u> – Requires a permit from Oregon Department of Fish and Wildlife or Oregon Parks and Recreation Department, which may be issued if the research aligns to further the management goals of the Marine Garden.</p>	<p>Marine Conservation Areas with broad conservation goals may be proposed with regulations closing harvest in all categories.</p> <p>Specific fish harvest regulations will be established based on the proposed management goals of the site.</p> <p>Individual site management must include a clear justification for all proposed regulations for <u>commercial</u>, <u>recreational</u>, <u>scientific</u> and <u>educational</u> fish harvest.</p>
<b>Invertebrate Harvest</b>	<p><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take except at a subset of sites which allow species-specific harvest of clams, Dungeness crab, red rock crab, mussels, piddocks, scallops, and shrimp.</p> <p><u>Scientific &amp; Educational</u> – Requires a permit from Oregon Department of Fish and Wildlife or Oregon Parks and Recreation Department, which may be issued if the research does not impede the management goals of the Marine Research Area.</p>	<p><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take except for single mussels for bait.</p> <p><u>Scientific &amp; Educational</u> – Requires a permit from Oregon Department of Fish and Wildlife or Oregon Parks and Recreation Department, which may be issued if the research aligns to further the management goals of the Marine Garden.</p>	<p>Marine Conservation Areas with broad conservation goals may be proposed with regulations closing harvest in all categories.</p> <p>Specific invertebrate harvest regulations will be established based on the proposed management goals of the site.</p> <p>Individual site management must include a clear justification for all proposed regulations for <u>commercial</u>, <u>recreational</u>, <u>scientific</u> and <u>educational</u> invertebrate harvest.</p>
<b>Marine Aquatic Vegetation Harvest</b>	<p><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take</p> <p><u>Scientific &amp; Educational</u> – Requires authorization from Oregon Parks and Recreation Department or the Department of State Lands, which may be issued if the research does not impede the management goals of the Marine Research Area.</p>	<p><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take</p> <p><u>Scientific &amp; Educational</u> – Requires authorization from Oregon Parks and Recreation Department or the Department of State Lands, which may be issued if the research aligns to further the management goals of the Marine Garden.</p>	<p>Marine Conservation Areas with broad conservation goals may be proposed with regulations closing harvest in all categories.</p> <p>Specific marine aquatic vegetation harvest regulations will be established based on the proposed management goals of the site.</p> <p>Individual site management must include a clear justification for all proposed regulations for</p>

**Users should refer to individual site designation for a complete understanding of site regulations**

## NON-REGULATORY STANDARDS & MANAGEMENT PRACTICES

Marine Research Area	Marine Garden (Marine Education Area)	Marine Conservation Area
<ul style="list-style-type: none"> <li>• In regards to physical public access to areas:                             <ul style="list-style-type: none"> <li>○ Avoid enhancement of <u>future</u> physical public access on public lands to rocky habitats except in instances of safety concerns.</li> <li>○ Maintain but avoid enhancing capacity of <u>current</u> physical access.</li> <li>○ Enhance visual access to these sites.</li> <li>○ Prioritize access to these sites for low impact research.</li> </ul> </li> <li>• When possible, researchers in these areas should report project outcomes and metadata to the permitting agency for incorporation into a publically accessible repository.</li> <li>• Other actions and practices that aid in reaching site goals.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase, enhance, and maintain visual and physical access on public lands to rocky habitats to be inclusive of diverse uses while prioritizing the protection of ecological and cultural resources<sup>31</sup>.</li> <li>• Encourage educational and interpretive programming that increases informed visitation to the site and minimizes impacts to site resources.                             <ul style="list-style-type: none"> <li>○ Educational programs should aim to reduce the impacts of trampling and wildlife disturbance, as well as monitor impacts of visitor use.</li> </ul> </li> <li>• Increase and enhance messaging around rules and regulations, and highlight general rocky habitat etiquette and stewardship.</li> <li>• Other actions and practices that aid in reaching site goals.</li> </ul>	<ul style="list-style-type: none"> <li>• Variable non-regulatory management practices are applicable in Marine Conservation Areas.</li> <li>• Individual site management must outline clear non-regulatory management mechanisms that aid in reaching the site goals.</li> </ul>

<sup>31</sup> Resources vital to or the product of the perpetuation of traditional practices, ceremonies and lifeways.

# Appendix E: Rocky Habitat Designations & Map

## Rocky Habitat Designations (as of April 2022)

### **Marine Gardens (Marine Education Areas)**

The OPAC and LCDC have approved the designation of eight Marine Gardens in rocky intertidal areas along the Oregon Coast (Table 3). ODFW’s regulations in these areas protect the rocky intertidal invertebrate community from harvest impacts (OAR 635-005-0260). Currently, ODFW designated Marine Gardens are summarized in the table at right.

Marine Gardens are closed to the take of marine invertebrates with two exceptions: single mussels may be taken for bait, and razor clams (a sandy beach species) may be taken at Cape Perpetua. The

Cape Perpetua Marine Garden has some small stretches of sandy beach among the rocky areas where razor clams can be harvested without affecting rocky habitat areas. Sport fishing is allowed in and from Marine Gardens, while commercial harvest of invertebrates is prohibited. No collection of marine aquatic vegetation is allowed within the ocean shore in these areas, except by scientific research permit from OPRD. These regulations may differ in areas where Marine Gardens overlap with Marine Reserves or Marine Protected Areas (Section E.2.b).

<b>Table 3 Marine Gardens (Marine Education Areas)</b>	
<b>Site Name</b>	<b>Community, County</b>
Haystack Rock	Cannon Beach, Clatsop County
Cape Kiwanda	Pacific City, Tillamook County
Otter Rock	Otter Rock, Lincoln County
Yaquina Head	Agate Beach, Lincoln County
Yachats	Yachats, Lincoln County
Cape Perpetua	Lincoln County
Coquille Point	Bandon, Coos County
Harris Beach	Brookings, Curry County

### **Marine Research Areas**

The OPAC and LCDC have approved the designation of seven Marine Research Areas (total) in both rocky intertidal areas and subtidal areas (Table 4). ODFW’s Marine Research Area regulations vary by site and are designed to limit sport harvest of most invertebrate species and manage scientific/educational take through a permit program (OAR 635-005-0260; Section E.3.). The designated Marine Research Areas are listed in Table 4.

At most intertidal-only Marine Research Areas, sport harvest of most invertebrate species is closed. However, harvest of abalone,<sup>32</sup> clams, Dungeness crab, red rock crab, mussels, piddocks, scallops, and shrimp is allowed. The regulations divide Cape Arago into three zones (Areas A, B, and C – north to south). Area B employs the Marine Research Area regulation described above, while Areas A and C prohibit take of all marine invertebrates. Pirate Cove and Gregory Point Marine Research Areas are closed to the take of all marine invertebrates. Sport fishing is allowed in Marine Research Areas, while commercial harvest of invertebrates is prohibited. No collection of marine plants is allowed within the ocean shore in these areas, except by scientific research permit from OPRD. These regulations may differ in areas where Marine Research Areas overlap with Marine Reserves or Marine Protected Areas (Section E.2.c.).

<b>Table 4 Marine Research Areas</b>	
<b>Site Name</b>	<b>Community, County</b>
Boiler Bay (intertidal only)	Depoe Bay, Lincoln County
Pirate Cove (intertidal and subtidal)	Depoe Bay, Lincoln County
Neptune State Scenic Viewpoint (intertidal only)	Florence, Lane County
Gregory Point (subtidal only)	Charleston, Coos County
Cape Arago (intertidal only)	Charleston, Coos County
Cape Blanco	Curry County
Brookings (intertidal only)	Brookings, Curry County

**Marine Conservation Areas**

ODFW has designated one Marine Conservation Area on the coast, the intertidal and subtidal areas of Whale Cove in Lincoln County. ODFW’s regulations at Whale Cove prohibit harvest of both marine invertebrates and fish (OAR 635-005-0260). No collection of marine plants is allowed within the ocean shore in these areas, except by scientific research permit from OPRD (OAR 736-020-0003).

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<sup>32</sup> All abalone harvest was closed coastwide for at least a 3-year period beginning in 2018 due to population concerns. As of the date of this document, it is not known if and when harvest will reopen.

# Territorial Sea Plan Part Three - Appendix E Map

## Rocky Habitat Management Designations (as of April, 2022)





## Marine Reserves & Protected Areas

Currently, there are five Marine Reserves designated in Oregon, four of which have one or more associated Marine Protected Areas (MPAs). All of the Marine Reserves contain subtidal habitat and four of the Marine Reserves contain rocky intertidal habitat (OAR 635-012).

The Marine Reserves include:

<b>Table 5 Marine Reserves</b>	
<b>Site Name</b>	<b>Community, County</b>
Cape Falcon (subtidal and rocky intertidal habitat)	Tillamook & Clatsop Counties
Cascade Head (subtidal and rocky intertidal habitat)	Tillamook County
Otter Rock (subtidal and rocky intertidal habitat)	Otter Rock, Lincoln County
Cape Perpetua (subtidal and rocky intertidal habitat)	Lincoln County
Redfish Rocks (subtidal habitat only)	Port Orford, Curry County

ODFW's regulations for Marine Reserves prohibit the take of fish and invertebrates. ODFW's regulations for the nine MPAs vary by site and can be found in OAR chapter 635, division 12. Only two MPAs have regulations that materially affect rocky intertidal areas: Cascade Head North MPA and Cape Perpetua North MPA. Regulations pertaining to rocky intertidal areas of Cascade Head North MPA and Cape Perpetua North MPA prohibit take of fish from shore and prohibit take of invertebrates except crab. The regulations may differ where the MPAs overlap with Marine Gardens (Marine Education Areas) and Marine Research Areas (Section E.2.c.).

## Areas of Overlap between Designations

There are some rocky intertidal areas where Marine Reserves or Marine Protected Areas (MPA) overlap with Marine Gardens (Marine Education Areas) or Marine Research Areas. ODFW designated Marine Gardens (Marine Education Areas) and Research Reserves (Marine Research Areas) in years prior to designating Marine Reserves, and their designations were for different purposes. Even though many of the

regulations are redundant in areas of overlap, ODFW chose not to change the status or rescind the underlying Marine Gardens and Research Reserves in favor of the newer Marine Reserve regulations because the longevity of the Marine Reserve designations is not known. The Oregon Legislature will evaluate Marine Reserves in 2023, with an option of maintaining, changing, or removing designations. Maintaining the Marine Garden and Marine Research Area designations in areas of overlap ensures that these long standing rocky intertidal area protections will remain should the overlying Marine Reserve or MPA designations be removed.

Areas of overlap include:

- partial overlap between the Otter Rock Marine Garden (Marine Education Area) and Otter Rock Marine Reserve
- partial overlap of the Yachats Marine Garden (Marine Education Area) and Cape Perpetua North MPA
- partial overlap between the Cape Perpetua Marine Garden (Marine Education Area) and Cape Perpetua North MPA
- partial overlap between the Cape Perpetua Marine Garden (Marine Education Area) and Cape Perpetua Marine Reserve (note, sandy beaches are not in the Marine Reserve)
- complete overlap of the Neptune State Scenic Viewpoint Marine Research Area and the Cape Perpetua Marine Reserve (note, sandy beaches are not in the Marine Reserve)

The general interpretation of rules in areas of overlap is that the more stringent regulation (by species) applies. For example, the Otter Rock Marine Garden (Marine Education Area) allows fishing and taking single mussels for bait. The Otter Rock Marine Reserve does not allow any take; therefore, the more stringent Marine Reserve regulations (i.e. no take) apply for those species where the two areas overlap. For a full detailed description of Marine Reserves and Marine Protected Areas rules and regulations visit <http://OregonMarineReserves.com/>.

# Appendix F: History & Status of Rocky Habitat Site Management Designations

The following appendix outlines historical snapshots of rocky habitat site designations through time as of the 2021 Rocky Habitat Management Strategy Amendment process. The intent of these sections is to:

1. Section 1 – Provides an outline of the recommended designations from the original 1994 Rocky Shores Management Strategy (refer to Section 2. to see if and how sites were implemented). As is evident from the table in Section 2., implementation of 1994 recommendations varied in the following ways:
  - a. Most sites were implemented with respect to the 1994 recommended designations and regulations.
  - b. Some 1994 sites proposed regulations that match current regulations, so no change was needed and no further implementation action was taken.
  - c. Some 1994 sites did not propose regulatory recommendations, so no change was proposed and no implementation action was taken.
  - d. Some additional sites beyond what were included in the 1994 recommendation were designated with protective regulations.
  - e. Some 1994 recommended sites were not implemented.
2. Section 2 – Provides a comparison between the 2021 implemented designations and the 1994 recommended designation, and specifies the status of rocky habitat designations as of 2021.
  - a. Compare 2021 designations and regulations with recommended regulations and regulations from the 1994 Rocky Shores Management Strategy.
  - b. Outline how site designations are carried forward into the 2021 designation system without the need for a public proposal.
  - c. Provide a guide as to which sites require a public proposal to be considered in the revised 2021 strategy, and where proposals are not eligible due to overlap with Marine Reserves and Marine Protected Areas.
3. Section 3 – Provides a history of designation implementation, removal, and adaptation from the first designated sites in 1962 through just prior to adoption of this strategy in 2021.

## Section 1 – 1994 Recommended Rocky Shore Designations

The following designations were part of the original Rocky Shores Management Strategy adopted in 1994. See Section 2. for a crosswalk of site management implementation.

### Marine Garden

- Haystack Rock (Cannon Beach)
- Otter Crest
- Yaquina Head
- part of Yachats State Park
- Cape Perpetua
- Sunset Bay\*
- South Cove, Cape Arago\*
- part of Harris Beach

### Habitat Refuge

- Tillamook Head
- Three Arch Rocks NWR
- Cape Lookout (south side)
- Cascade Head/Cliff Cr. Cove
- Whale Cove
- Simpson Reef/Shell Island\*
- Coquille Point & Rocks
- Crook Point/Mack Reef
- Hooskanaden Creek
- Cape Ferrelo

### Research Reserve

- Boiler Bay
- Pirate Cove
- Strawberry Hill
- Gregory Point/Baldija\* and Qochyax Island
- Middle Cove, Cape Arago\*
- Cape Blanco
- Humbug Mountain/Lookout Rock

### Priority Offshore Rocks/Reefs

- Sea Lion Rock at Ecola Point
- Gull Rock near Otter Crest
- Shell Island/Simpson Reef
- Orford Reef
- Redfish Rocks/Island Rock
- Rogue Reef
- Twin Rocks/Goat Island

### Marine Shore

- parts of Tillamook Head not in other categories
- Silver Point to Cape Falcon

- Cape Mears/Maxwell Point
- Cape Lookout (north side)
- Cape Kiwanda
- parts of Cascade Head not in other categories
- Headland at Roads End
- Lincoln City to Fogarty Creek
- Depoe Bay
- parts of C. Foulweather not in other categories
- Yachats oceanfront (excl. Marine Garden area)
- Bob Creek to Heceta Head
- Yoakam Point
- Shore Acres\*
- tip of Cape Arago not in other categories\*
- base of cliff south of Cape Arago South Cove\*
- Five Mile Point
- The Heads (Port Orford)
- Nellies Cove/Tichenor Cove (Port Orford)
- Rocky and Coal Points
- Arizona Beach to Sisters Rock
- Cape Sebastian
- Deer Point/Natural Bridges
- Thomas Creek/Indian Sands/Whaleshead
- Lone Ranch (south end)
- parts of Harris Beach not in other categories
- Chetco Point
- Harbor oceanfront
- any other rocky shoreline area not listed on this page is Marine Shore.

### Not Yet Designated

- Ecola Point
- part of the tip of Cape Falcon
- Seal Rock
- Neptune State Scenic Viewpoint
- part of Heceta Head
- Blacklock Point
- Sisters Rock to Devil's Backbone
- Nesika Head to Otter Point
- south Samuel H. Boardman State Park

\*Rocky Shore designations for the Cape Arago headland were amended May, 2001.

## Section 2 – 1994-2021 Management Status of Designated Sites

The following table lists rocky habitat site management as of 2021, and includes the following sites:

- A. Sites recommended for designation in the 1994 Rocky Shores Management Strategy (see Section 2.), including:
  - i. Marine Gardens
  - ii. Habitat Refuges
  - iii. Research Reserves
  - iv. Priority Rocks and Reefs
  - v. Not Yet Designated
- B. Additional sites that are now managed with protective management measures that were not included in the 1994 designation recommendations.
- C. Contemporary site designations may not reflect 1994 recommended designations in all cases because many were not officially implemented through Oregon Administrative Rules.

Designations listed under the “2021 Revised Designation” header indicate how site designations existing in 2021 have been implemented using the revised designation system. Sites are listed from north to south.

<b>Table 2 Management Status of Designated Sites</b>					
<b>Site Name</b>	<b>1994 Recommended Designation</b>	<b>1994 Recommended Regulation</b>	<b>2019 Designation</b>	<b>2021 Regulation</b>	<b>2021 Revised Designation</b>
<b>Tillamook Head</b>	Habitat Refuge	No invertebrate/algae harvest	None	General coastwide harvest regulations	None
<b>Ecola Point</b>	Not Yet Designated	None	None	General coastwide harvest regulations	None
<b>Sea Lion Rock at Ecola Point</b>	Priority Rock/Reef	None	None	General coastwide harvest regulations	None
<b>Haystack Rock</b>	Marine Garden	No invertebrate/algae harvest except single mussels	Marine Garden	No invertebrate/marine aquatic vegetation harvest except single mussels	Marine Garden (Marine Education Area)
<b>Cape Falcon</b>	Not Yet Designated	None	Marine Reserve	No harvest	Marine Reserve (proposals not considered)

<b>Three Arch Rocks</b>	Habitat Refuge	Prohibit vessel activity seasonally within specified buffer area	None	Prohibits vessel activity seasonally within specified buffer area	None
<b>Cape Lookout</b>	Habitat Refuge	Invertebrate/algae harvest by scientific permit only; no commercial kelp harvest	None	General coastwide harvest regulations, including no commercial kelp harvest	None
<b>Cape Kiwanda</b>	Marine Shore	None	Marine Garden	No invertebrate/marine aquatic vegetation harvest except single mussels	Marine Garden (Marine Education Area)
<b>Cascade Head</b>	Habitat Refuge	None	Marine Protected Area	No invertebrate/marine aquatic vegetation harvest	Marine Protected Area (proposals not considered)
<b>Headland at Roads End</b>	Marine Shore	None	Marine Reserve	No harvest	Marine Reserve (proposals not considered)
<b>Boiler Bay</b>	Research Reserve	Invertebrate/algae harvest by scientific permit only	Research Reserve	Invertebrate/marine aquatic vegetation harvest by scientific permit only (except short list of invertebrates)	Marine Research Area
<b>Pirate Cove</b>	Research Reserve	Invertebrate/algae harvest by scientific permit only	Research Reserve	Invertebrate/marine aquatic vegetation harvest by scientific permit only	Marine Research Area
<b>Whale Cove</b>	Habitat Refuge	No harvest	Habitat Refuge	No harvest	Marine Conservation Area
<b>Gull Rock</b>	Priority Rock/Reef	None	Partially within Otter Rock Marine Reserve	No harvest	Marine Reserve (proposals not considered)
<b>Otter Rock</b>	Marine Garden	No invertebrate/algae harvest except single mussels	Marine Garden (partially in Otter Rock Marine Reserve)	No invertebrate/marine aquatic vegetation harvest except single mussels (no harvest in Marine Reserve)	Marine Garden (Marine Education Area); within Marine Reserve (proposals not considered)
<b>Yaquina Head</b>	Marine Garden	No invertebrate/algae harvest except single mussels	Marine Garden	No invertebrate/marine aquatic vegetation harvest except single mussels	Marine Garden (Marine Education Area)

<b>Seal Rock</b>	Not Yet Designated	None	None	General coastwide harvest regulations	None
<b>Yachats State Park</b>	Marine Garden	No invertebrate/algae harvest except single mussels	Marine Garden	No invertebrate/marine aquatic vegetation harvest except single mussels	Marine Garden (Marine Education Area)
<b>Yachats Oceanfront</b>	Marine Shore	None	Marine Protected Area	Various harvest restrictions	Marine Protected Area (proposals not considered)
<b>Cape Perpetua</b>	Marine Garden	No invertebrate/algae harvest except single mussels	Marine Garden (in Cape Perpetua Marine Reserve)	No harvest	Marine Garden (Marine Education Area); within Marine Reserve and Marine Protected Area (proposals not considered)
<b>Neptune State Scenic Viewpoint</b>	Not Yet Designated	None	Research Reserve	Invertebrate/marine aquatic vegetation harvest by scientific permit only (except short list of invertebrates)	Marine Research Area
<b>Strawberry Hill</b>	Research Reserve	Invertebrate/algae harvest by scientific permit only	Research Reserve and in Cape Perpetua Marine Reserve	No harvest	Marine Research Area; part of Marine Reserve (proposals not considered)
<b>Bob Creek to Heceta Head</b>	Marine Shore	None	Partially within Cape Perpetua Marine Reserve and SE Marine Protected Area	No harvest	Marine Reserve and Marine Protected Area (proposals not considered)
<b>Heceta Head</b>	Not Yet Designated	None	None	General coastwide harvest regulations	None
<b>Gregory Point</b>	Research Reserve	Invertebrate/algae harvest by scientific permit only; no commercial kelp harvest	Research Reserve	Invertebrate/marine aquatic vegetation harvest by scientific permit only; no commercial kelp harvest	Marine Research Area
<b>Shell Island/Simpson Reef</b>	Priority Rock/Reef (subtidal portion)	No commercial kelp harvest	None for subtidal portion	No commercial kelp harvest	None

(Intertidal within Cape Arago Research Reserve)					
<b>Cape Arago (2001 amendment)</b> Sunset Bay, Simpson Reef, North Cove, Middle Cove, South Cove, Shore Acres	Designation and management prescriptions set by area management plan and 2001 TSP amendment.		Research Reserve	Invertebrate/marine aquatic vegetation harvest by scientific permit only with species exceptions in some areas	Marine Research Area
<b>Rocks off Coquille Point</b>	Habitat Refuge	None	None	General coastwide harvest regulations	None
<b>Blacklock Point</b>	Not Yet Designated	None	None	General coastwide harvest regulations	None
<b>Cape Blanco</b>	Research Reserve	Invertebrate/algae harvest by scientific permit only	None	General coastwide harvest regulations	None
<b>Heceta Head</b>	Not Yet Designated	None	None	General coastwide harvest regulations	None
<b>Orford Reef</b>	Priority Rock/Reef	Seasonal sea urchin fishery closure within a buffer around some rocks	None	General coastwide harvest regulations; seasonal sea urchin fishery closure on entire reef	None
<b>Redfish Rocks</b>	Priority Rock/Reef	None	Marine Reserve	No Harvest	Marine Reserve (proposals not considered)
<b>Humbug Mt./ Lookout Rock</b>	Research Reserve	Invertebrate/algae harvest by scientific permit only	None	General coastwide harvest regulations	None
<b>Sisters Rock to Devil's Backbone</b>	Not Yet Designated	None	None	General coastwide harvest regulations	None



<b>Nesika Head to Otter Point</b>	Not Yet Designated	None	None	General coastwide harvest regulations	None
<b>Rogue Reef</b>	Priority Rock/Reef	Seasonal fishery closure around Pyramid Rock	None	General coastwide harvest regulations; seasonal commercial fishery closure around Pyramid Rock	None
<b>Crook Point/Mack Reef</b>	Habitat Refuge	No commercial kelp harvest	None	General coastwide harvest regulations, including no commercial kelp harvest	None
<b>Hooskanaden Creek</b>	Habitat Refuge	Invertebrate/algae harvest by scientific permit only	None	General coastwide harvest regulations	None
<b>South Samuel H. Boardman State Park</b>	Not Yet Designated	None	None	General coastwide harvest regulations	None
<b>Twin Rocks/ Goat Island</b>	Priority Rock /Reef	None	None	General coastwide harvest regulations	None
<b>Cape Ferrelo</b>	Habitat Refuge	Invertebrate/algae harvest by scientific permit only	None	General coastwide harvest regulations	None
<b>Harris Beach</b>	Marine Garden	No invertebrate/algae harvest except single mussels	Marine Garden	No invertebrate/marine aquatic vegetation harvest except single mussels	Marine Garden (Marine Education Area)
<b>Brookings (other than Harris Beach)</b>	Marine Shore	None	Research Reserve	Invertebrate/marine aquatic vegetation harvest by scientific permit only	Marine Research Area

## Section 3 – History of Rocky Habitat Site Designations

The following table outlines the timeline of rocky habitat designation implementation, removal, and adaptation from the first designated sites in 1962 through just prior to adoption of this strategy in 2021. Sites are organized from north to south.

<b>Table 3 History of Rocky Habitat Site Designations</b>	
<b>Site Name</b>	<b>Designation History</b>
<b>Haystack Rock</b>	<u>1977</u> – designated Research Reserve <u>1990</u> – designation changed to Marine Garden
<b>Cape Falcon</b>	<u>2016</u> – designated Marine Reserve and Marine Protected Areas
<b>Three Arch Rocks</b>	<u>1997</u> – seasonal vessel closure implemented by Oregon State Marine Board
<b>Cape Kiwanda</b>	<u>1997</u> – designated Marine Garden
<b>Cascade Head</b>	<u>2014</u> – designated Marine Reserve and Marine Protected Areas
<b>Boiler Bay</b>	<u>1962</u> – designated Research Reserve (previously known as “permit only area”) <u>2021</u> – designation changed to Marine Research Area
<b>Depoe Bay/Shell Cove</b>	<u>1962</u> – designated Research Reserve (previously known as “permit only area”); site named Depoe Bay State Park <u>1981</u> – site named Shell Cove (Depoe Bay) <u>1996/1997</u> – Shell Cove designation removed
<b>Pirate Cove</b>	<u>1996</u> – designated Research Reserve <u>2021</u> – designation changed to Marine Research Area
<b>Whale Cove</b>	<u>1967</u> – area closed to shellfish harvest <u>1988</u> – area closed to fish harvest <u>1995</u> – designated Habitat Refuge <u>2021</u> – designation changed to Marine Conservation Area
<b>Otter Rock</b>	<u>1962</u> – designated Marine Garden <u>1976</u> – first use of Marine Garden exception of taking single mussel for bait <u>2012</u> – designated Marine Reserve
<b>Yaquina Head</b>	<u>1962</u> – designated Research Reserve (previously known as “permit only area”) <u>1988</u> – designation changed to Marine Garden
<b>Yachats</b>	<u>1998</u> – designated Marine Garden <u>2014</u> – coincident designation with Cape Perpetua North Marine Protected Area
<b>Cape Perpetua</b>	<u>1981</u> – designated Marine Garden

	<u>2014</u> – coincident designation with Marine Reserve and Protected Areas
<b>Neptune State Scenic Viewpoint</b>	<u>1962</u> – designated Research Reserve (previously known as “permit only area”) <u>2014</u> – coincident designation with Cape Perpetua Marine Reserve <u>2021</u> – designation changed to Marine Research Area
<b>Gregory Point</b>	<u>1996</u> – designated Research Reserve <u>2021</u> – designation changed to Marine Research Area
<b>Sunset Bay/Arago State Park</b>	<u>1962</u> – designated Research Reserve (previously known as “permit only area”) <u>2002</u> – designation split into three areas with site-specific management plans <u>2021</u> – designation changed to Marine Research Area
<b>Redfish Rocks</b>	<u>2012</u> – designated Marine Reserve and Protected Area
<b>Harris Beach</b>	<u>1997</u> – designated Marine Garden; section of Harris Beach Research Reserve changed to Marine Garden; remaining area renamed Brookings Research Reserve
<b>Harris Beach State Park/Brookings</b>	<u>1962</u> – designated Research Reserve (previously known as “permit only area”) <u>1997</u> – site renamed Brookings Research Reserve <u>2021</u> – designation changed to Marine Research Area