

Territorial Sea Plan Part Three

Rocky Habitat Management Strategy

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Territorial Sea Plan Part Three

Rocky Habitat Management Strategy

A. The Rocky Habitat Management Strategy

1. Purpose

Strategy Goal: This strategy is a coordination and adaptive planning framework focused on the long term protection of ecological resources and coastal biodiversity within and among Oregon's 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 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 amongst local, state, and federal resource management agencies, and tribal governments, to ensure that marine resources and habitats are holistically managed.

3. Rocky Shores 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 shores have high value to Oregonians as places to enjoy, learn, and use.

Oregon's rocky intertidal habitats harbor a variety of lifeforms uniquely adapted to live on the margin between the land and sea. Rocky habitat natural resources include a productive mix of invertebrates, fish, and algae in the intertidal areas as well as seabirds and pinnipeds that use adjacent cliffs and offshore rocks for breeding and raising young.

Rocky habitats provide a window to the marine environment, making them attractive places to visit for educational institutions, marine scientists, curious members of the public, and those interested in harvesting organisms for food or souvenirs. Below the surface, rocky habitats offer stable footing for structure forming aquatic plants such as kelps and sea grasses. Structure forming plants and algae provide shelter and food for the diversity of unique and economically important organisms that call submerged rocky habitats home. Aquatic vegetation in these areas is critical to the success of the ecosystem, yet sensitive to pollution, trampling, marine heat waves, overgrazing, and ocean acidification. These sensitivities warrant an appropriate standard of protection for Oregon's submerged and submersible aquatic vegetation.

Oregon has long recognized the ecological value of rocky habitats, as well as the societal value associated with the variety of human uses occurring at the sites. Oregon's long history of managing rocky habitats to balance conservation and use reflects this recognition. Rocky habitat management needs to continue to account for human use pressure, which may increase as the number of coastal residents and visitors increases. Additionally, recent advances in the understanding of climate change has exposed new threats including warming temperatures, sea level rise, and changing ocean conditions, as well as potential cumulative impacts.

Oregon's rocky habitats belong to the public, with few exceptions. There are several state and federal agencies that are 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.

Oregon's Rocky Habitat Management Strategy provides policies and direction for strong, site based management and protection of these unique ecosystems along the entire Oregon coast. The creation and stewardship of this strategy embraces this model and 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 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 Territorial Sea Plan are available in [Part 1.F.2](#) and apply to management agencies recommending any modifications to the Territorial Sea Plan (including the Rocky Habitat Management Strategy). Proposed amendments 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. Community Based Proposals

The Rocky Habitat Management Strategy allows local community groups and the public at large to submit proposals for changes in rocky habitat management. Changes may include new recommended site designations, modifications of an existing recommended designation, or deletions of recommended 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 the Ocean Policy Advisory Council 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 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 the Parks and Recreation Department (OPRD), the 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 Refuges¹. 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 the states rocky habitats².

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 (OPAC) or any agency with respect to rocky habitat areas should:

¹ 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.

² The intent of these principles is not to replicate or expand Oregon Marine Reserves under ORS196.540 – 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 science, and outreach programs as integral parts of local site management, where attainable.

b. Education & Public Awareness

An informed and aware public is critical to protecting rocky habitat resources and carrying out the goal, objectives, and policies of the Rocky Habitat Management Strategy. It is essential for the continued ecological health and functioning of Oregon's rocky habitats that coastal visitors interact with rocky habitat resources in a manner that protects the ecological, cultural and economic resources of Oregon's rocky coast, and understands ways they can take action as individuals and in groups to positively affect these areas.

Successful implementation of the Rocky Habitat Management Strategy needs a strategic communication plan focused on both coast-wide 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 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 science programs are a recommended strategy for engaging visitors while increasing their awareness of and commitment to protecting rocky habitats.

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. Creation of a coast-wide network and communication strategy that links private, local, tribal, state, and federal education and interpretive programs.
2. Fostering of existing education programs, as needed, to ensure they meet management and stewardship goals, and contributes to the understanding and long-term support of Oregon's rocky habitat resources.
3. Support existing education and interpretation programs as well as creation and implementation of new education and interpretation programs to cover sites where none exist.
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 program 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 science network that engages local communities and visitors.

6. Policies

The policies for rocky habitat management have been crafted to ensure consistency with state goals and priorities. These policies are mandatory and all actions of local or state agencies in relation to managing rocky habitat areas and resources shall be consistent with them. A subset of these policies will be used for federal consistency review purposes and can be viewed in Appendix J. 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 coast wide 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 rocky habitats while allowing appropriate use.

b. Policies

- A. Consistent with Statewide 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 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 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 and practices 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' education and information efforts for visitors to rocky habitat areas shall be conducted 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 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 adverse effects or permanent³ impacts to the form and 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.
- 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 development action taking place in the rocky habitat areas.
- N. Impacts of management actions to cultural resources⁴ in rocky habitats shall be minimized, or mitigated, in consultation with affected Oregon federally recognized tribes and as determined by the State Historic Preservation Office
- O. Management measures in this plan will take no action to affect hunting and fishing consent decrees or other agreements between the State of Oregon and any Oregon federally recognized tribe.
- P. Managing agencies may propose site designations within rocky habitat areas as determined by the best available science.
- Q. Harvest of aquatic vegetation is prohibited except as regulated by state agencies for appropriate recreational, scientific, and educational use.

³ "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: ORS 141-085-0510 (88)

⁴ Resources vital to and/or the product of the perpetuation of traditional practices, ceremonies and lifeways.

R. Development activities occurring within or near an area with aquatic vegetation must have no adverse effects to the aquatic vegetation or its habitat.

B. Oregon's Rocky Habitat

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, tide pools, rocky beaches, and cliffs, as well as offshore rocks, islands, and reefs.

Rocky Substrate Definitions

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

- Bedrock, or
- Megaclasts (rock > 4 meters in size), or
- Rock fragments, boulders, or cobble which, individually, are greater than 64mm (2.5") in size, or
- any combination of the above

The rocks can comprise 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 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 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, a 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.

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

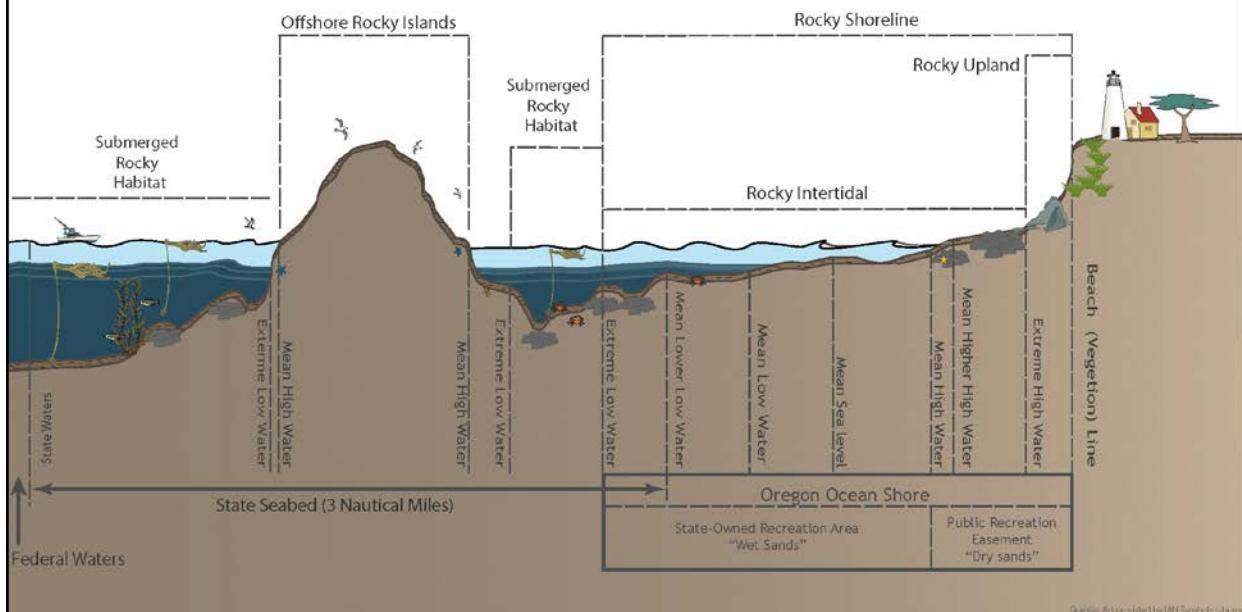
of this management strategy, Oregon's rocky habitats are grouped into three major classifications based on proximity to shore, jurisdictional boundaries, and ecological zone. Within these main classifications many other sub-classifications may be present including rocky intertidal and subtidal, cliffs, tidepools, etc. Additional descriptions of rocky habitat environments can be found in Appendix H.

- a. Rocky Shoreline – all rocky habitat (encompasses cliffs, tidepools, and rocky intertidal) between the upland vegetation line and extreme low water. These areas may be reached by foot from shore (regardless of hazard or convenience).
 - i. Rocky upland – rocky habitat area between the upland vegetation line and extreme high water line.
 - 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 water⁵.

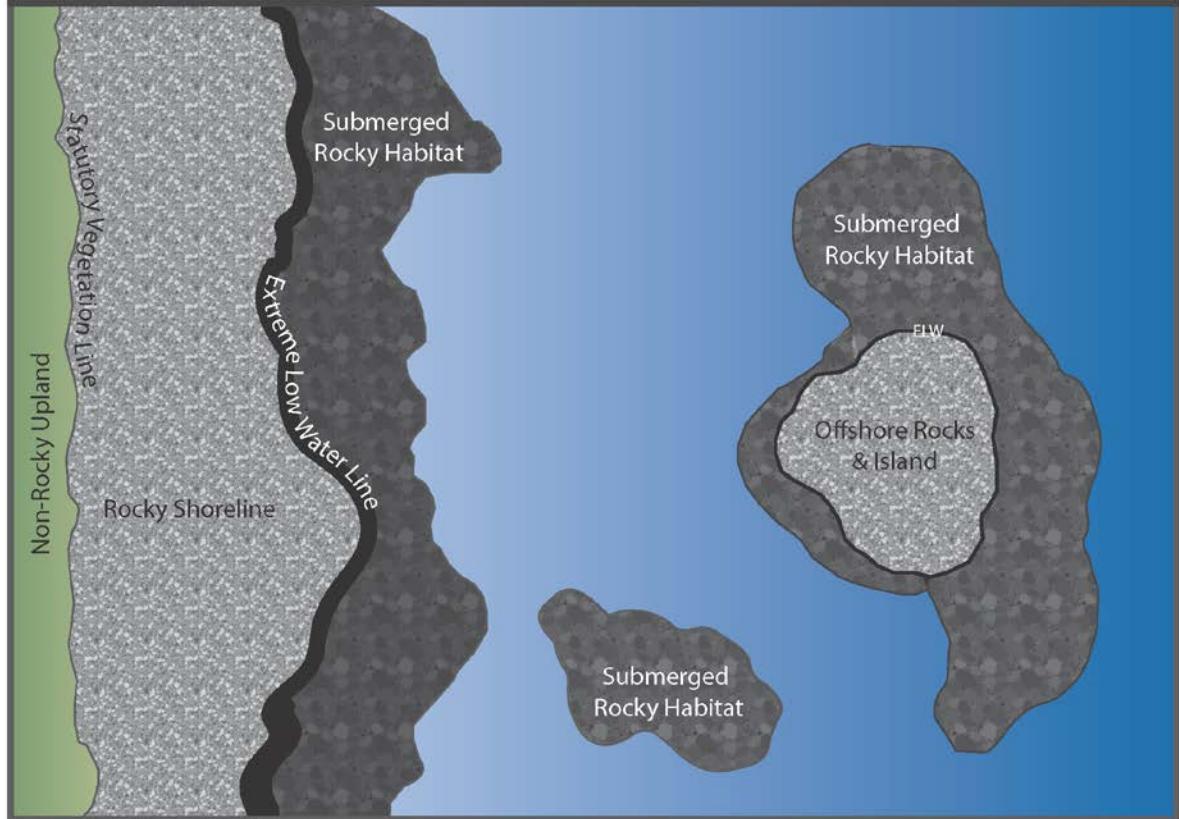
⁵ As defined by the U.S. Fish and Wildlife Service.

Oregon Territorial Sea Plan

Rocky Habitat and Ocean Shore Terminology



Oregon Territorial Sea Plan Rocky Habitat Definitions



2. Setting Context

This section provides a contextual overview of some key factors that influence and shape rocky habitat 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 both immensely productive, and 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 actively being investigated to build a better understanding of the system and potential impacts on 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 northward counter current is called the Davidson Current. In the most general sense, the California Current, along with seasonal northerly winds are responsible for spring/summer upwelling in the narrow ribbon of sea along the coast⁶. This upwelling water is tremendously productive due to deep nutrient rich water being exposed to light and oxygen near the surface and is responsible for feeding the regions fertile coastal ecosystems and fisheries. Although this upwelling brings great prosperity to 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 ongoing ocean deoxygenation associated with climate change and the naturally elevated carbon dioxide in the surfacing deep sea water. The addition of carbon dioxide being absorbed from the atmosphere results in decreased buffering capacity of the system to moderate the natural production and respiration in these surface waters⁷. The impacts of global changes effects on the CCLME and

⁶ A wide array of characteristics may impact local and regional upwelling including bathymetry, terrestrial inputs, etc. Oceanographic fluid dynamics is an evolving science and is still an open body of work.

⁷ Hypoxic conditions occur when oxygen levels in the water column become too low for marine life to survive, while ocean acidification is the shift of ocean chemistry to become less basic. This creates an environment where marine organisms have difficulty forming calcium carbonate structures (i.e. shell material).

Oregon's coastal waters are still being actively researched by scientists locally and worldwide in order to better predict impacts to Oregon's marine resources.⁸

b. Geology

Much like the ocean currents that support Oregon's coast, the regions rocky formations are also complex and have been evolving over a geologic timescale. The iconic headlands that protrude into the sea along the north 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.

Coastal geology changes along the coast. Cape Arago, south of Coos Bay on the south-central coast, is composed of uplifted and tilted sedimentary rock, while south of the Coquille River rocky headlands and



Oregon Department of
Geology & Mineral Industries
has characterized the geology
of the Oregon Coast

⁸ Acknowledgement – Ocean Current section reviewed for accuracy by Dr. George Waldbusser (Oregon State University).

offshore rocks are primarily composed of ancient metamorphic rock⁹.

Although the coast has seen millennia of oceanographic processes, more periodic 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 episodic earthquakes and tsunamis from the Cascadia subduction zone as well as distant faults.

c. Biology

Oregon's rocky habitats along the shoreline are 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 and water), 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, and urchins, but these zones can also be used to define less common organisms such as nudibranchs, limpets, sponges, and red, green, or brown algae. Highly mobile species must also be considered in rocky habitats, including pinnipeds (seals and sea lions), cetacean (whales), marine fishes, and sea birds, who utilize rocky habitats for food, protection, isolation, and more.

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

d. Stressors & Sustainability

The environment that sustains rocky habitat life 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.

As coastal populations increase and Oregon becomes a more popular tourist destination, concerns regarding degradation of coastal resources are becoming exacerbated. Although intertidal rocky habitat organisms are adapted to living in a

⁹ Metamorphic features on the south coast have been dated to have been in the region for over 200 million years.

harsh and dynamic environment, they are also susceptible to trampling. This can take place when visitors are not aware of the organisms beneath their feet. Additionally, vehicles, bikes, and pets can impact entire ecosystems in tidepools or on rocks. As these areas become more accessible to foot traffic, visitors must become more aware of the dangers their steps may have on the ecosystem.

Recreational and commercial harvest of organisms, as well as collection of organisms for scientific and educational purposes, often raises concerns about overuse. Current harvesting of intertidal in rocky habitat organisms is primarily recreational. Although there is actively little 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 and recreational harvest ventures. Developing fisheries and plant harvest should be well studied and understood prior to the implementation of broad-scale open harvest to avoid unnecessary stress on the ecosystem and species.

More recently, the impacts of unmanned aerial vehicles (i.e. drones) use have been recognized in rocky areas. Drones give visitors a glimpse into rocky habitat areas never seen from public view points and have begun to be used by managing agencies to better understand areas with limited access. Yet without an understanding of nearshore ecosystems, recreational drones may inadvertently disturb seabird colonies and pinnipeds and may impact 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 habitat areas. It is estimated that rocky habitats may be the first areas to see change due to these shifting regional and global trends. These shifts may also increase opportunities for non-native and invasive species to colonize rocky habitat areas. In addition, land based runoff and pollution, as well as marine debris can also increase the susceptibility of these organisms to broader stressors.

All of these stressors can cumulate to impact the overall health of Oregon's iconic rocky areas. With the implementation of appropriate educational resources, visitors can become knowledgeable stewards of the area and promote a sustainable future for Oregon's rocky habitats.

This strategy encompasses a broad view of the entire coast to provide a larger ecosystem context for meeting local management needs and setting priorities for action. A coastwide ecosystem context is important due to the inherent interconnection between sites on the Oregon 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. Cultural Significance

Oregon's rocky habitats are home to a unique cultural landscape with a history long predating European settlement. Archeological studies have found many ancestral tribal villages dating back 6,000 to 7,000 years, with experts estimating tribal settlement of the coast nearly 15,000 years ago. This legacy is connected to place and many rocky areas along the coast harbor a special meaning to past and present tribal nations. Much like mudflats in estuaries, some rocky habitats were also found to be easily accessible areas where resources could be gathered predictably. Additionally, Oregon's rocky coast has provided locations for ceremony, traditional cultural practices, and general sense of identity. The Rocky Habitat Management Strategy cannot begin to appropriately summarize the rich lineage of tribal nations use of the coast and traditional connection to rocky habitats. Tribal nations should be contacted to learn more about the individual cultural history surrounding these areas.

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 road, Oregon's rocky coastline is often visually accessible from Highway 101, which runs parallel to much of the Oregon coast allowing drivers to easily gain a sense of 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 unique coastal culture.

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

b. Recreation

Rocky habitat areas account for millions of visits to the Oregon coast annually. More commonly known by the public for their tidepools, Oregon's rocky habitats are a tremendous resource for recreation, exploration and hands-on, field-based learning. Like Oregon beaches, access to these coastal resources is critical to the identity of Oregonians. With ecotourism and experience-based vacations becoming more popular, the number of visitors to rocky coastal areas continues to increase as does the potential ecological impacts of recreation. This strategy recognizes recreation in rocky habitat

areas is critical to Oregonians and coastal economies; and, that those activities must be appropriately managed to balance the preservation and stewardship of these important resources. The strategy further recognizes that it is the diversity of flora, fauna, and challenging fishing 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.

c. Research & Monitoring

Sound 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 environment and illuminated some of the defining ecological principles of the marine ecosystem. 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 changes related to climate change.

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.

d. Education

Oregon's rocky coast provides a window into the marine environment that most people, other than SCUBA divers or fishermen, will never encounter. For many, this is the first and sometimes only place that 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 mission of schools, aquariums, universities, and life-long learners. Rocky habitats are living laboratories which host a suite of these institutions throughout the year. These educational programs directly aid in the appropriate management of the diverse and fragile rocky habitat system by instilling a sense of knowledge and stewardship in all who visit.

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 growing usage and impact issues in rocky-habitat areas, a robust, coast-wide 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.

e. 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 groudfish fishery targets a number of rockfish species, kelp greenling, cabezon as well as 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 commercial 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 - 1800 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

1. Statewide Land Use Planning Goal 19

Oregon's land use planning is founded on 19 Statewide 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 (Appendix F). 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.

- **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).
- **USDA 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, the 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

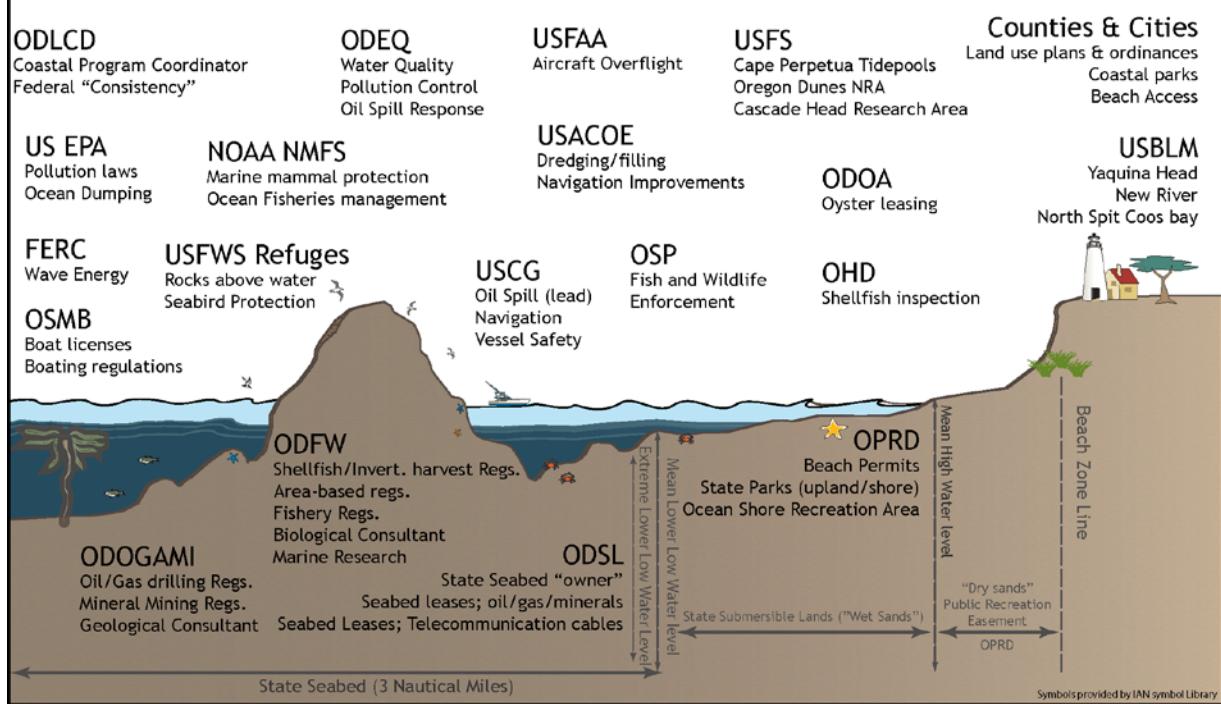
- **Oregon Parks and Recreation Department (OPRD)** has two main roles in managing areas within Oregon's coastal zone. The first is as a landowner. OPRD manages more than 70 parks, waysides, and other facilities along the coast that offer shoreline access. The second is the agency's statutory authority 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 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. OPRD 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. 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 manages seven intertidal marine gardens, six research reserves, one habitat refuge (OAR 635-011-0100), and five marine reserves with nine associated marine protected areas (ORS196.540 – 196.555)

- **Oregon Department of State Lands (DSL)**. 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 (SB11, 1999). Additionally, DSL has rules that designate marine reserves and MPA's. See the jurisdictional figure below for spatial context.
- **Oregon Department of Land Conservation and Development (DLCD)** houses the state's Ocean and 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 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.
- **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 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 claim ties to areas along the Oregon Coast, federally recognized tribal nations within the states coastal zone include the Confederated Tribes of Coos, Lower Umpqua & Siuslaw, 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 tribes 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.

AGENCY PROGRAMS AND AUTHORITIES in Oregon's Territorial Sea and Ocean Shore



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 rockyhabitats.

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 towards 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. Coastwide Rules and Regulations

i. Marine Fish and 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 2019. Refer to [Oregon Administrative Rules 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 some 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 of regulations set both regionally by the Pacific Fishery Management Council and by the West Coast states.

ii. Marine Plant Harvest

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 defines and restricts 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 274](#), and administered by the Division 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 also mandated to manage the Ocean Shore area for the preservation and protection of recreational uses and natural resources. To achieve the goal to preserve and protect the recreational uses and natural resources on the Ocean Shore, 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 736](#))

b. Site-Based Regulations

i. State Site Designations

Marine Gardens

ODFW has designated seven Marine Gardens in rocky intertidal areas along the coast. ODFW's regulations in these areas protect the rocky intertidal invertebrate community from harvest impacts ([OAR 635-005-0260](#)). Currently ODFW designated Marine Gardens include:

Site Name	Town/City, County
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
Harris Beach	Brookings, Curry County

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 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 Gardens overlap with Marine Reserves or Marine Protected Areas (Section E.2.b)

Research Reserves

ODFW has designated Research Reserves in both rocky intertidal areas and subtidal areas. ODFW's Research Reserve 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 Research Reserves include:

Site Name	Town/City, County
Boiler Bay (intertidal only)	Depoe Bay, Lincoln County
Pirate Cove (intertidal and subtidal)	Depoe Bay, Lincoln County
Neptune State Park (intertidal only)	Florence, Lane County
Gregory Point (subtidal only)	Charleston, Coos County
Cape Arago (intertidal only)	Charleston, Coos County
Brookings (intertidal only)	Brookings, Curry County

At most intertidal-only research reserves, sport harvest of most invertebrate species is closed. However, harvest of abalone¹⁰, 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 research reserve regulation described above, while Areas A and C prohibit take of all marine invertebrates. Pirate Cove and Gregory Point research reserves are close to the take of all marine invertebrates. Sport fishing is allowed in research reserves, 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

¹⁰ 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 re-open.

OPRD. These regulations may differ in areas where Research Reserves overlap with Marine Reserves or Marine Protected Areas (Section E.2.c).

Habitat Refuge

ODFW has designated one Habitat Refuge 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](#)).

ii. Marine Reserves and Protected Areas

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:

Site Name	Town/City, County
Cape Falcon (subtidal and rocky intertidal habitat)	Tillamook and 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 its nine MPAs vary by site and can be found in [OAR 635.012](#). 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 and Research Reserves (Section E.2.c).

iii. Areas of Overlap between Designations

There are some rocky intertidal areas where Marine Reserves or Marine Protected Areas (MPA) overlap with Marine Gardens or Research Reserves. ODFW designated Marine Gardens and Research Reserves 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 Research Reserve 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 and Otter Rock Marine Reserve
- partial overlap of the Yachats Marine Garden and Cape Perpetua North MPA
- partial overlap between the Cape Perpetua Marine Garden and Cape Perpetua North MPA
- partial overlap between the Cape Perpetua Marine Garden and Cape Perpetua Marine Reserve (note, sandy beaches are not in the Marine Reserve)
- complete overlap of the Neptune State Park Research Reserve 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 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/>.

iv. Federal Laws and Regulations

Threatened and Endangered Species

Endangered Species Act ([16 USC 1531-1543](https://www.fws.gov/endangered/species/act))

A number of bird and mammals 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](https://www.fws.gov/online-system/) should be consulted for the most up to date list of listed species, and consult with USFWS and NMFS 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. 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 such designated areas.

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, which 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), or harassing wildlife, whether intentional or unintentional. In addition, the operation of unmanned aircraft (i.e. drones) is illegal on refuge islands. Most rocks under National Wildlife Refuge System jurisdiction are also in the Oregon Islands Wilderness designated by Congress.

Migratory Species

Migratory Bird Conservation Act of 1929 ([16 USC 715-715r](#))
and Migratory Bird Treaty Act of 1918 ([16 USC 703-712](#))

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

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 under federal law, 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.

v. 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.

c. Scientific and 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.

d. 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 this complex nature, this strategy recognizes that no single plan or method may be appropriate for responding to all events. Therefore, to best respond to sudden and unforeseen events, agencies and stakeholders shall coordinate individual response plans to imminent threats and impacts to rocky habitats in a timely manner once recognized¹¹.

¹¹ Agency action prior to rapid response planning may be required to assure immediate safety of life and resources.

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 the 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 unfamiliar to expeditious onsets of threats, all of which could have benefitted from greater coordination in rapid response. Beginning 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 substantial and persistent impacts to the rocky intertidal ecosystems along the west coast that are still being studied and actively monitored by a number of institutions. More commonly, rocky habitats must combat sudden onsets of marine debris washing ashore into intertidal areas. In these instances, a more general plan may be created to determine appropriate removal and jurisdiction.

i. Oil Spill Response Planning for Oregon's Rocky Coastal 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 oil 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 effected facilities when spills happen. View DEQ [web resources](#) for more information on DEQ's work to update the coastal oil spill response plans.

e. 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 1970's. This interdisciplinary framework considers ecosystem connections, coupled social ecological

influence, system uncertainty, adaptive and integrative management, stakeholder involvement, and sustainability, all using the integration of scientific knowledge and appropriate monitoring¹². More broadly, ecosystem-based management 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 system¹³. 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, and 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 update 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 organism populations 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 future generations.

¹² Long, R. D., Charles, A., & Stephenson, R. L. (2015). Key principles of marine ecosystem-based management. *Marine Policy*, 57, 53-60.

¹³ National Oceanic and Atmospheric Administration (NOAA), Ecosystem Based Management Core Characteristics; <https://ecosystems.noaa.gov/EBM101/WhatisEcosystem-BasedManagement.aspx>

D. ROCKY HABITAT DESIGNATIONS STANDARDS & PRACTICES

There are three types of site based designations associated with the strategy - 1) Marine Garden/Marine Education Area; 2) Marine Research Area; and 3) Marine Conservation Area. The goals for each designation are outlined below, followed by a table of associated management measures.

Marine Garden

Goal - Protect rocky habitat resources to support 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.

Marine Research Area

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 Conservation Area

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 magnitudes of management prescriptions based on site conservation needs*. Management prescriptions require appropriate rationale prior to implementation.

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 rationale¹⁴.

¹⁴ Broader coast wide regulations are not in the authority of the Rocky Habitat Management Strategy and cannot be added or removed as part of a Marine Conservation Area designation.

Federal Designations

Management of federally designated sites 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 National Wildlife Refuge, and Three Arch Rocks National Wildlife Refuges.

DRAFT

REGULATORY STANDARDS & MANAGEMENT PRACTICES

	Marine Garden (Marine Education Area)	Marine Research Area	Marine Conservation Area
Fish Harvest	<p><u>Commercial</u> – No additional site-based fish harvest regulations. Coast wide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Recreational</u> - No additional site-based fish harvest regulations. Coast wide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Scientific & Education</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><u>Commercial</u> - No additional site-based fish harvest regulations. Coast wide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Recreational</u> - No additional site-based fish harvest regulations. Coast wide Oregon Department of Fish and Wildlife regulations apply.</p> <p><u>Scientific & Education</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>A range of fish harvest regulations are applicable under a Marine Conservation Area. 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>
Invertebrate Harvest	<p><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take except for a single mussels for bait</p> <p><u>Scientific & Education</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><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take except at a subset of sites which allow variable species specific harvest of clams, Dungeness crab, red rock crab, mussels, piddocks, scallops, and shrimp.</p> <p><u>Scientific & Education</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>A range of invertebrate harvest regulations are applicable under a Marine Conservation Area. Individual site management must include a clear justification for all proposed regulations for <u>commercial</u>, <u>recreational</u>, <u>scientific</u> and <u>education</u> invertebrate harvest.</p>
Algae Harvest	<p><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take</p> <p><u>Scientific & Education</u> – No take except by scientific or education permit issued by the Oregon Parks and Recreation Department or the Department of State Lands.</p>	<p><u>Commercial</u> – No take</p> <p><u>Recreational</u> – No take</p> <p><u>Scientific & Education</u> – Requires scientific or education permit issued by 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>A range of algae harvest regulations are applicable under a Marine Conservation Area. Individual site management must include a clear justification for all proposed regulations for <u>commercial</u>, <u>recreational</u>, <u>scientific</u> and <u>education</u> algae harvest.</p>

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

NON-REGULATORY STANDARDS & MANAGEMENT PRACTICES

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

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

E. SITE BASED PROPOSAL OVERVIEW

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 *alterations* to rocky habitat site designations. Sites delineated in existing regulation (2019 Oregon Department of Fish and Wildlife Sport Fishing Regulations) are considered the starting point for any proposed changes. 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 of the scope of the Rocky Habitat Management Strategy.

Proposal Process Approach

Proposals will be accepted in a two part process as outlined below. Both processes will use the Rocky Habitat Web Mapping tool to inform and collect proposals.

Initial Proposal Process

(Estimated to begin January 2020)

The initial process period will accept proposals during a limited duration period beginning in the winter of 2019-2020 (exact dates TBD). This process will form the basis for the rocky habitat working group's recommended site designations for eventual OPAC and LCDC consideration during the current Rocky Habitat Strategy revision. It will also inform the following maintenance proposal process that will follow the adoption of the Rocky Habitat Management Strategy.

Maintenance Proposal Process

(Estimated Summer-2020)

This is intended to be a rolling process in which proposing entities can submit proposals at any time for review after the Rocky Habitat Management Strategy has been adopted. Proposal criteria and review procedures for this process will be informed by the outcomes of the initial proposal process.

Creating a Proposal & Eligability

Proposal content is generated using the online tool through interactive forms, and a generated report. The tool allows proposing entities to submit proposals directly to Oregon Coastal Management Program staff once complete. All applicable content must be addressed in submissions for the proposal to be deemed complete. View the necessary proposal information and questions in the supplementary section at the end of this document.

Nominating entities should review the purpose, objectives, strategy amendment, policies, and definitions sections of [Part 3 of the Territorial Sea Plan](#), as well as the entirety of this section prior to determining if a designation proposal is applicable. In addition, proposing entities should contact Oregon Coastal Management Program staff to determine if areas of interest have applicable pending proposals. Each proposal should include the information prompted by the Rocky Habitat Web Mapping Tool 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 the Oregon Coastal Management Program for information on any necessary accommodations, technical assistance, or general questions.

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. For this reason, not all regulatory change ideas 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 to assure they align with desired outcomes of a proposal. **Where they do not align, members of the public and interested entities should outline their concern or desired regulatory change in a formal letter to the Ocean Policy Advisory Council.** Interested parties should contact staff at the Oregon Coastal Management Program with any questions on the best method to propose desired change.

Initial Proposal Process

All proposals must be submitted via the online Rocky Habitat Mapping Tool, which offers information and data necessary¹⁵ to complete a proposal. Nominating entities are highly encouraged to work in communication with agency staff to complete proposals. Staff at the Oregon Coastal Management Program are available to answer questions throughout proposal development and 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 staff at the Oregon Coastal Management Program.

Agency staff will receive and review each proposal in a timely manner to assure it is complete and incorporates all the information necessary for review. 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. OPAC will be notified of all proposals submitted for agency review and will be given justification for those rejected in this step. The merit of proposals are evaluated independently from one another unless otherwise indicated by the proposing entity. Review bodies will evaluate proposals spatially in relation to one another in order to reach the goals of the Rocky Habitat Management Strategy and be consistent with its management practices.

Due to the depth of agency review, staff cannot guarantee when a proposal will be reviewed by OPAC or LCDC. Please note that a high volume of submissions may increase review timelines.

Communication with Proposing Entity During Review

The proposing entity will be informed throughout the review process on the status of their proposal. If a proposal is rejected during review, the proposing entity will be given the rationale. A revised proposal may be submitted, which will be treated as a new proposal during the Maintenance Proposal Process. Although proposals may be sorted

¹⁵ The Rocky Habitat Mapping Tool was created to guide proposal synthesis and may not include all data and information necessary for proposal creation and review. Based on proposal contents, additional information may need to be incorporated by the proposing entity. Staff at the Oregon Coastal Management program should be consulted to help determine accessibility of external data sets.

as “not recommended” during some stages of review, proposal rejection only occurs during the Agency Feasibility and Completeness Analysis (step 2) or OPAC Review (step 4).

Working Group Proposal Packet

As part of the initial proposal process, the Rocky Habitat Working Group will synthesize a suite of site proposals using the Rocky Habitat Web Mapping Tool. This working group recommendation will be informed by the best available science, submitted public proposals, and areas suggested for designation as part of the 1994 Rocky Shores Management Strategy. All public proposals reviewed and recommended by the Working Group will be incorporated into the Working Group Proposal Packet.

Natural resource agency staff are members of the working group and will work collectively to incorporate agency expertise into the working group recommendation. Once complete, the recommendation will be published for public comment and follow the review process outlined in the section “Initial Proposal & Review Process” below.

Initial Proposal & Review Process

OVERVIEW



Step 1 - Building a Proposal

1. Individual or entity identifies a necessary change in site management that aligns with the designations outlined in the Rocky Habitat Management Strategy.
2. Proposing entity builds a proposal using the Rocky Habitat Web Mapping Tool.
 - a) Draw a polygon around the area of interest – a report is generated.
 - b) Answer remaining proposal questions using data report, local knowledge, and communications with natural resource agencies.
 - c) Conduct community engagement to gauge proposal support and concerns (to occur throughout proposal synthesis)
 - d) Modify proposal as needed and submit through the Rocky Habitat Web Mapping Tool.

Step 2 – Agency Feasibility & Completeness Analysis

Goal – Determine completeness and feasibility of each proposal and obtain tribal input.

1. Oregon Coastal Management Program staff are automatically notified of all submitted public proposals.
2. Natural resource agencies evaluate proposals and create a report determining proposal completeness and feasibility (based on cost, implementation plausibility, agencies ability to regulate, etc.). Agencies include ODFW, OPRD, DSL, and DLCD, and may include others based on the details of individual proposals.
Incomplete proposals or proposals determined not to be feasible will be rejected and not move forward in the review process. Rejected proposals will be returned to the proposing entity with rationale for rejection. Rejected proposals may be revised and resubmitted as a new proposal.
3. Oregon Coastal Management Program staff will gain tribal input on proposals from the four federally recognized coastal Oregon tribes to avoid impacts to cultural resources and tribal interests.
4. Agencies will make a recommendation each proposal that is determined to be complete and feasible using the agency report and tribal input.
5. Proposal packet is submitted to the Rocky Habitat Working Group.
 - a) Proposal packet contents - public proposals, agency feasibility report and recommendations¹⁶.

Step 3 – Rocky Habitat Working Group Review & Recommendation

Goal – Review public proposals on merit. Create a Working Group Recommendation that considers all recommended public proposals, and additional sites as capacity allows.

1. Working Group receives and reviews the proposal packet based on the merit of each proposal. Each proposal will be sorted as “recommended” or “not recommended”¹⁷.
2. Building a Working Group Recommendation
 - a) *Review Public Proposals* - Public proposals sorted as “recommended” will be incorporated into the working group recommendation packet, while public proposals sorted as “not recommended” will not be included in the working group recommendation but will remain in the process record¹⁸. During this

¹⁶ Tribal input will remain confidential to avoid possible impacts to sensitive cultural resources.

¹⁷ This sorting process doesn’t constitute a formal adoption or rejection but instead indicates which proposals the review body supports the rejection or adoption of. The working group may implement certain parts of non-recommended proposals with minor modification as part of the working group proposal.

¹⁸ This sorting process doesn’t constitute a formal adoption or rejection but instead indicates which proposals the review body supports the rejection or adoption of. The working group may implement certain parts of non-recommended proposals with minor modification as part of the working group proposal.

- review, the working group may use public proposals to help inform additional site considerations.
- b) *Additional Site Considerations* – The working group will prioritize review of public proposals and if time and capacity is available, the group will move onto reviewing additional sites of concern using Working Group expertise, including agency knowledge. The group may also consider analyzing unimplemented recommended designations from the 1994 Rocky Habitat Management Strategy.
3. Conduct a 30 day public comment period on Rocky Habitat Working Group Recommendation.
 - a) Agency staff will send recommended proposals to appropriate agency commissions as informational briefings.
 4. Working Group will modify the recommendation as needed based on public comment and submit the full proposal packet to OPAC for review.
 - a) Proposal packet contents organized into two sections – 1) all non-recommended public proposals, agency feasibility report and recommendations; 2) Working Group Recommendation and public comment summary.

Step 4 – Ocean Policy Advisory Council Review & Recommendation

Goal – Review complete proposal packet and consider rationale for recommended proposals. Determine which proposals to recommend to the Land Conservation and Development Commission (LCDC).

1. The Ocean Policy Advisory Council (OPAC) receives the proposal packet a minimum of 2 weeks prior to the decision making meeting.
2. OPAC meeting discussion and determination¹⁹
 - a. OCMP staff present proposal packet at the OPAC meeting and provide details to Council members with an opportunity for question and answer.
 - b. Proposing entities have an opportunity to answer OPAC questions where necessary.
 - c. Public testimony is collected.
3. OPAC makes determination on Working Group Recommendation-
 - a. If recommended, the Working Group Recommendation, and public comment summary will be sent to LCDC for review (now referred to as the “OPAC Recommendation” and moves onto Step 5).

¹⁹ OPAC review and determinations on proposals may require multiple meetings to complete.

- b. If rejected, or if OPAC determines edits are required, the Working Group Recommendation will be returned to the Rocky Habitat Working Group to address OPAC tasks (return to Step 3).

Step 5 – Land Conservation & Development Commission Review & Potential Adoption

Goal – Make final determination on which site proposals will be incorporated into the Rocky Habitat Management Strategy. Suggest recommended site proposals to appropriate regulatory commissions for review and adoption.

1. The Land Conservation and Development Commission (LCDC) receives OPAC recommendation for review prior to decision making meeting in accordance with commission procedures and protocols.
2. OCMP staff presents OPAC recommendation to LCDC and provides details to Commissioners with an opportunity for question and answer. Public testimony is collected.
3. LCDC makes determination on OPAC recommendation
 - a. If adopted – Recommendation is incorporated into the Rocky Habitat Management Strategy and accepted proposals are forwarded to the appropriate agency commission(s) for incorporation into regulation.
 - b. If rejected – The recommendation will be returned to OPAC with recommended revisions.

Maintenance Proposal Process

The Maintenance Proposal Process²⁰ aims to maintain an up-to-date and adaptive management strategy into the future without requiring an intensive update process. Much like the initial proposal process, the Maintenance Proposal Process intends to incorporate local knowledge and the best available scientific information through public proposals submitted using the Rocky Habitat Web Mapping Tool.

The Maintenance Proposal Process collects and reviews proposals on a rolling basis using a multi-step review process. Agency staff will receive and review each proposal in a timely manner to assure it is complete and incorporates all information necessary for review. 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. OPAC will be notified of all proposals submitted for agency review and will be given justification for those rejected in this step. The merit of proposals are evaluated independently from one another unless otherwise indicated by the proposing entity. Review bodies reserve the right to also evaluate proposals spatially in relation to one another in order to reach the goals of the Rocky Habitat Management Strategy and be consistent with its management principles.

All proposals must be submitted via the online Rocky Habitat Mapping Tool which offers much of the information and data necessary to complete a proposal²¹. Although proposing entities may use external data to support proposals. Nominating entities are highly encouraged to work in communication with agency staff to complete proposals. Staff at the Oregon Coastal Management Program are available to answer questions throughout proposal development and may communicate with other natural resource

²⁰ The maintenance proposal process will be informed by the initial proposal process scheduled to begin January 2020. Some information currently outlined in the maintenance process maybe be adapted following the initial proposal process.

²¹ The Rocky Habitat Mapping Tool was created to guide proposal synthesis and may not include all data and information necessary for proposal creation and review. Based on proposal contents, additional information may need to be incorporated by the proposing entity. Staff at the Oregon Coastal Management program should be consulted to help determine accessibility of external data sets.

agencies as needed (e.g. Department of Fish and Wildlife, Parks and Recreation Department, Department of State Lands) to best support proposing entities. Entities in need of special accommodation should contact staff at the Oregon Coastal Management Program. Due to the depth of agency review, staff cannot guarantee when a proposal will be reviewed by OPAC or LCDC. Please note that a high volume of submissions may increase review timelines.

Working Group Creation

The Ocean Policy Advisory Council may convene a working group to aid with proposal review at any point during the Maintenance Proposal Process based on the volume and complexity of submissions. The working group tasked with reviewing proposals should incorporate diverse interests and perspectives relating to rocky habitat management. Working group review products are intended to act as an initial synthesis and recommendation of proposals, and will require OPAC recommendation and LCDC adoption.

Agency Review

Agencies are also eligible to submit proposals through the maintenance proposal process. These proposals must include the information regularly added during the agency review process (feasibility and completeness report) and will be held to the same standard as other proposals during OPAC review.

Maintenance Proposal & Review Process

OVERVIEW

Build a Public Proposal in Rocky Habitat Web Mapping Tool

Agency Feasibility & Completeness Analysis

Ocean Policy Advisory Council Review & Recommendation*

Land Conservation & Development Commission Review & possible adoption.

*The Ocean Policy Advisory Council may convene a working group to review and recommend public proposals based on the volume and complexity of submissions.

Step 1 - Building a Proposal

1. Individual or entity recognizes a necessary change in site management that aligns with the designations outlined in the Rocky Habitat Management Strategy.
2. Proposing entity builds a proposal using the Rocky Habitat Web Mapping Tool.
 - a) Draw a polygon around the area of interest - a report is generated.
 - b) Answer remaining proposal questions using data report, local knowledge, and communications with natural resource agencies.
 - c) Conduct community engagement to gauge support and concerns.

- d) Modify proposal as needed and submit on the Rocky Habitat Web Mapping Tool.

Step 2 – Agency Feasibility & Completeness Analysis

Goal – Determine completeness and feasibility of each proposal and gain tribal input.

1. Oregon Coastal Management Program staff are automatically notified of all submitted public proposals.
2. Natural resource agencies evaluate proposals and create a report determining proposal completeness and feasibility. Agencies include ODFW, OPRD, DSL, and DLCD, and may include others based on the details of individual proposals. Incomplete proposals will not move forward in the review process and will be returned to the proposing entity with rationale for rejection.
3. Oregon Coastal Management program staff will obtain tribal input on proposals from the four federally recognized coastal Oregon tribes to avoid impacts on cultural resources and tribal interests.
4. Agencies will make a recommendation on the feasibility of each proposal using the agency report and tribal input.
 - a) Agency staff will send recommended proposals to appropriate agency commissions as informational briefings.
5. Proposal packet is submitted to the Ocean Policy Advisory Council.
 - a) Proposal packet contents - public proposals, agency report, and agency feasibility recommendations.

Step 4 – Ocean Policy Advisory Council Review & Recommendation

1. After the completion of agency feasibility & completeness analysis, the Ocean Policy Advisory Council (OPAC) receives the proposal packet a minimum of 2 weeks prior to the decision making meeting.
 - a. If the volume or complexity of proposal packet contents is too large for review during an OPAC meeting, the council may convene a working group to carry out initial review and recommendation of proposals. This may take place at any point in the review process.
2. OPAC meeting discussion and determination²²
 - a. OCMP staff present proposal packet at the OPAC meeting and provide details to Council members and answer questions.
 - b. Proposing entities have an opportunity to answer OPAC questions where necessary.

²² OPAC review and determinations on proposals may require multiple meetings to complete.

- c. Public testimony is collected.
- 3. OPAC makes determination on Proposal Packet-
 - a. If recommended, the Proposal Packet, and public comment summary will be sent to LCDC for review (now referred to as the “OPAC Recommendation” and moves onto Step 5).
 - b. If rejected, proposals will be returned with rejection rationale to the proposing entity.

Step 5 – Land Conservation & Development Commission Review & Potential Adoption

- 1. The Land Conservation and Development Commission (LCDC) receives OPAC recommendation for review prior to decision making meeting in accordance with commission procedures and protocols.
- 2. OCMP staff presents OPAC recommendation to LCDC and provides details to Commissioners with an opportunity for question and answer.
 - a. Public testimony is collected.
- 3. LCDC makes determination on OPAC recommendation
 - a. If adopted – Recommendation is incorporated into the Rocky Habitat Management Strategy and moves onto the appropriate agency commission(s) for incorporation into regulation.
 - b. If rejected – The recommendation will be returned to OPAC with recommended revisions.

Proposal Review Guidance

Considering Submerged Habitat Management

Submerged rocky habitat is subject to a complex and diverse array of management and regulations. Although the Rocky Habitat Management Strategy allows for the public 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 cumulated in legislation 2012. 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. Proposals that may conflict with the 2023 evaluation may be held by the OCMP upon request for review after the evaluation is complete.

Habitat Guidance

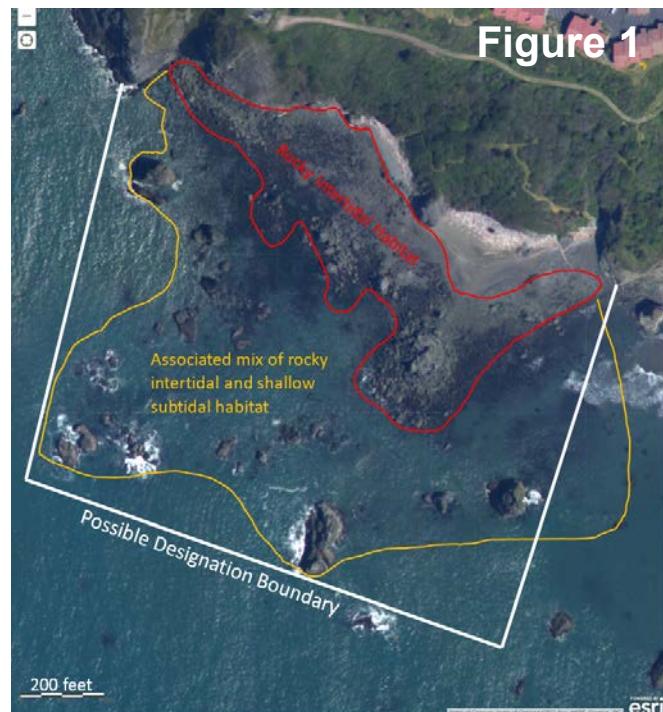
These guidelines are intended to inform submitted proposals and create a scale for how different habitats will be reviewed during the initial proposal process. Proposed areas may include multiple habitat types (i.e. a proposal may include both rocky intertidal and shallow rocky subtidal habitats). Although 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.

Rocky Intertidal Habitats

Rocky intertidal 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.

Associated Shallow Rocky Subtidal Habitats

Some rocky intertidal areas blend with adjacent subtidal rocky habitat through a gradual transition zone consisting of a 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 5 meters²³. See Figure 1 for example.



Deeper Rocky Subtidal Habitat

Subtidal habitat deeper than 5 meters and any subtidal rocky habitat not associated with shore 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. Sites in deeper subtidal areas must demonstrate no impact to the existing network of Marine Reserves and Protected areas, or Marine Reserves Program evaluation. Additionally, the Territorial Sea Plan already protects rocky subtidal areas from development impacts through Part 3, Section A, Policy J and by policies in Part 5.

²³ 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.

General Proposal Review Criteria

In addition to the geographic proposal priorities, the following process criteria should also be considered during proposal review.

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 show knowledge of and take into consideration current regulations, restrictions, enforcement and protections.
- Proposals must state objectives, goals, criteria and state measurable results and outcomes from proposals. Proposing entities must also state how the proposed site will change protections from status quo. Area of proposal must include some change from status quo.
- Proposal review must consider how each proposed site, both individually and in a context of all designated sites, addresses and furthers the goals, objectives, management principles, and policies within the Rocky Habitat Management Strategy.
- 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

- 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.
- Subtidal proposals must be written and reviewed with consideration for unintended consequences to the Marine Reserves Program Evaluation.

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.
- Marine Gardens (Marine Education Area)
 - Where feasible, Marine Gardens (Marine Education Areas) should aim to be equitably accessible, 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.
- Marine Conservation Area
 - Measureable outcomes must be associated with each proposed site to help determine if the goal of the site is being reached.

Appendix A: Glossary

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 the simple microscopic blue-green algae and diatoms that float in the water to the many species of large brown and red algae that are so recognizable as "seaweed" in tide pools. Marine algae include several species of kelp but in Oregon the bull kelp, *Nereocystis luetkeana*, grows subtidally and has special legal status because of its value as a commercial raw material.

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 particular administrative or management authority including the Territorial Sea Plan.

aquatic vegetation: native marine plants, including macroalgae (e.g. kelps and seaweeds), vascular plants (e.g. seagrass, surfgrass, and eelgrass), and other vegetation in marine environments.

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 (sandy shore) cells where nearshore circulation is enclosed between headlands; 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, and biological features and conditions of each strongly influence the other.

coastal biodiversity: at its simplest, a term meaning the diversity of life forms and 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" (Patrick, 1983, in Ray, 1988). 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;
- 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. More than that is the complexity of their interactions, evolved and adapted over the millenia 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 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 coastal mountain 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 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" (Dethier). Like human communities, the exact composition of marine communities may vary for complex reasons: seasonal changes in light, temperature, or nutrients; water depth, which affects food, light, temperature, and pressure; meeting or mixing of different water masses with different temperatures, salinity, or nutrient levels; etc.

conserve: to manage in a manner which avoids wasteful or destructive uses and provides for future availability. (Oregon Statewide Planning Goals)

conservation: the act of conserving the environment. (Oregon Statewide Planning Goals)

conservation: 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 renewable resources over nonrenewable; 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 "...accommodat(ing) the needs for economic development while avoiding wasteful uses and maintaining future availability.

critical marine habitat: means one or more of the following land and water areas:

- a) areas designated as "critical habitat" in accordance with federal laws governing threatened and endangered species; OR
- b) areas designated in the Territorial Sea Plan as either:
 - 1) as needed for the survival of animal or plant species listed by state or federal laws as "threatened", "endangered", or "sensitive". Such areas might include special areas used for feeding, mating, breeding/spawning, nurseries, parental foraging, overwintering, or haul out or resting. This is not intended to limit the application of federal law regarding threatened and endangered species; OR
 - 2) "unique" (i.e. one of a kind in Oregon) habitat for scientific research or education within the Oregon territorial sea. (Territorial Sea Plan, Part Two)

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 Planning Goals)

disturbance: to interfere or attempt to interfere with natural processes. Often referred to in regards 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 interrelated. (Oregon Statewide 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 the oceanic habitat 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 referring to objective tasks undertaken to improve the condition, numbers, or prospects for survival of populations, habitats, or ecosystems.

environment: where we, and all living things, live.

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

habitat: 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, and so on, 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 high shoreland jutting out into the ocean, generally sloping abruptly into the water. Oregon headlands are generally identified in the report on Visual Resource analysis of the Oregon Coastal Zone, OCCDC, 1974. (Oregon Statewide 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, rock reef areas and areas of important fish, shellfish and invertebrate concentration. (Oregon Statewide Planning Goal 19).

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.

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 life form.

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 Planning Goals)

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

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

protect: save or shield from loss, destruction, or injury or for future intended use. (Oregon Statewide 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") rocky shore designations are management categories that specify management objectives and actions for rocky shore 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 the agencies should implement at the sites.

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

rocky shore sites: a specific coastal geographic feature or area located between the upland vegetation line and the shoreward extent of the Territorial Sea (3 nautical miles from shore). They may be a rock or cluster of rocks, a particular cove or cliff, or other specific feature. These sites may also have a mix of rocky shore types and even have sandy or cobbled beaches when mapped at this scale.

rocky shores: To appropriately manage the resources within these rocky areas, the differences and similarities between the many shoreline types must be recognized. For the purpose of this management strategy, Oregon's rocky shores are grouped into three major classifications based on proximity to shore, jurisdictional boundaries, and ecological zone²⁴. Within these main classifications many other sub-classifications may be present including rocky intertidal and subtidal, cliffs, tidepools, etc.

- b. Rocky Shoreline – all rocky habitat (encompasses cliffs, tidepools, and rocky intertidal) between the upland vegetation line and extreme low water. These areas may be reached by foot from shore (regardless of hazard or convenience).
 - i. Rocky upland – rocky habitat area between the upland vegetation line and extreme high water line.

²⁴ Only rocky shoreline areas are applicable for the community proposal amendment process. See Section __ for additional details.

- ii. Rocky intertidal – rocky habitat area between extreme high water line and extreme low water line.
- d. Associated rocky shallow subtidal – for the purpose of this strategy, the associated rocky subtidal zone encompasses rocky habitat below extreme low water out to the -5 meter depth contour²⁵ that are contiguous with an exposed rocky feature (rocky shoreline or offshore feature above ELW). In areas without exposed rocky features, this area is classified as a submerged rocky reef (see below definition).
- e. Offshore Islands and Submerged Rocky Reefs - areas detached from the main coastline at mean high water including submerged reefs and exposed rocky islands within state jurisdiction (0-3 nautical miles) that are located seaward of the extreme low water line.
 - i. Offshore Islands – Any landform separated from the mainland at mean high water which remain above the surface of the sea at mean high tide²⁶.
 - ii. Submerged Rocky Reefs – Rocky reefs are composed of submerged rocky habitat with depths ranging from Extreme Low Water out to the deepest limits of the Territorial Sea. If the submerged rocky habitat is contiguous with an adjacent rocky intertidal area, then the portion from Extreme Low Water out to -5 m depth is classified as associated rocky shallow subtidal (see above).

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 Planning Goals)

significance: for purposes of the required resource inventory and effects evaluation, involves context and intensity. 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).

²⁵ As defined by NOAA CMECS Benthic depth shallow infralittoral zone.

²⁶ As defined by the U.S. Fish and Wildlife Service

Site: a specific coastal geographic feature or area located between the upland vegetation line and the shoreward extent of the Territorial Sea (3 nautical miles from shore). They may be a rock or cluster of rocks, a particular cove or cliff, or other specific feature. These sites may also have a mix of rocky shore types and even have sandy or cobbled beaches when mapped at this scale.

species: a population or collection of populations of closely related and similar organisms capable of interbreeding freely with one another but not with members of other species under natural conditions.

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. ([ORS 635-012-0030](#))

territorial sea: the ocean and seafloor area from mean low water seaward three nautical miles. (Oregon Statewide 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: line of established upland shore vegetation and as described in [ORS 390.770](#)

Appendix B: References

Appendix C: Acronyms & Abbreviations

Appendix D: Notes on Tidal Related Shorelines

Appendix E: Oregon Ocean Law

Appendix F: Goal 19, Ocean Resources

Appendix G: Policies of the Oregon Ocean Plan

Appendix H: Rocky Shore Classification System

1. ENVIRONMENTAL CONSIDERATIONS IN THE ROCKY SHORE

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 suspended in the flowing water column; the phytoplankton, which fix the sun's energy, are effectively part of the water mass, and eggs and larvae from animals at one site are borne to habitat sites some distance away. There are virtually no points within the marine environment that are isolated. Similar habitat conditions at distantly separated sites in a given region will have the same or very similar biotic communities. Likewise, pollutants from one source can effect marine areas far away. This linkage is modified by time. While some species take full advantage of the water flow and reproduce widely, the reproductive mode of other species is quite localized, which means that colonization to distant sites may take many, many years until the right conditions prevail.

c) Dynamics (Changes)

The dynamic conditions of the marine environment continuously changes 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 an El Nino, punctuate these routine dynamics and increase complexity. These dynamic variables influence rocky shore areas and their management.

2. ROCKY SHORELINE TYPES

a) Rocky Upland

[Describe rocky upland - includes some areas that you wouldn't call cliffs.]

b) Cliffs

As used here, cliffs are the steep seaward facing slopes of rocky headlands composed primarily of basalt (north coast) and metamorphic or highly resistant sedimentary rock (south coast) where wave action and other weathering agents have eroded a vertical or nearly vertical rocky slope with little or sparse vegetation. The exposed slope is either inaccessible or very dangerous to human trespass. Cliffs provide isolated nesting and resting habitat for seabirds, but can also enclose and thereby protect marine mammal or intertidal habitat along the toe of the cliff.

Many cliff 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 cliffs south of Cape Arago are in private hands. Most are planned and zoned as part of the respective coastal county land use plan. Cliffs are included as coastal shorelands under Statewide Planning Goal 17.

c) Rocky Intertidal

Rocky habitat area between 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 the ocean varies from site to site: most are exposed or semi-exposed; a few are partially protected.

All rocky intertidal sites 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 Department of Parks and Recreation for public recreation under the Beach Bill. The Department of Fish and Wildlife regulates harvesting, collecting, or taking of animals.

Because use of associated reefs and rocks is often directly related to attractiveness and activities of a rocky intertidal site, rocky intertidal areas are the central element of coordinated management efforts along the entire rocky shoreline.

d) Rocky Shallow Subtidal

At some rocky-shore 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 people of Oregon. The Department of Fish and Wildlife controls harvest of fish and shellfish through general and site-specific regulations. The Department of Parks and Recreation has no management authority or responsibility for subtidal areas.

Oregon has not historically had substantial commercial marine plant harvest, and extensive study will be necessary before moving toward a commercial program.

3. OFFSHORE ROCKY TYPES

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 or aircraft. These reefs and rocks have valuable habitat that may be similar to those nearer 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 and wave mixing. Rocky reefs 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 the 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 (Tillamook Rock), in small clusters (Redfish Rocks), or in association with many other rocks and submerged reefs (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 Tide²⁷.

Birds and mammals use these rocks for breeding and rearing of young, resting, and feeding. The degree of use and habitat value to a species or mix of species varies from rock to rock 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 (a few are under jurisdiction of the Bureau of Land Management; one is privately owned). Below Mean High Water, the Oregon Department of State Lands has jurisdiction over the seabed. The Department of Fish and Wildlife regulates all fish and shellfish harvest throughout both tidal elevations.

²⁷ As defined by the U.S. Fish and Wildlife Service.

Appendix I - Proposal Contents & Questions

The Rocky habitat Web Mapping tool includes all of the following questions below. All proposals must be completed and submitted using the tool. Special accommodations are available upon request by contacting the Oregon Coastal Management Program.

Questions with (*) indicates 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 within the web mapping tool to support the proposal.

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
5. Please describe the context for why this proposal is being brought forward.
 - a. What are the goals of this proposal?
 - b. Why is this change in site management necessary?
6. How does the proposed site improve upon or fill a gap in addressing objectives/policies that isn't 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) Preservation of public access
 - d) Consideration for the adaptation and resilience to climate change, ocean acidification, and hypoxia.
 - e) Fostering stewardship and education of the area or coast-wide
7. Please include any additional information that you would like reviewers to consider (optional)

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. General site description
3. Site Location - Please use common place names, latitude/longitude, and geographic references to identify the site*
4. Site Boundaries - Provide a written description of the intended boundaries and scope of the proposed area. (i.e. intertidal area, subtidal area, depth contour, etc.)
 - a. All proposals must include a map of proposed site boundaries*
5. Site access information
 - a. How is this site commonly accessed?*
6. Which of the following does this proposal nominating? - 1) site designation addition, 2) site designation deletion, 3) site designation amendment.
 - a. Must be a management/designation alteration, addition, or removal listed by the Rocky Shores Management Strategy.
7. If proposing an addition or alteration to a site designation, what type of rocky habitat designation are you proposing? 1) Marine Research Area, 2) Marine Garden (Education Area), 3) Marine Conservation Area.
8. Current site management and authorities²⁸
 - a. What is your understanding of current management at this site?
 - b. Include current site ownership, management authorities, and other key stakeholders*

Site Uses

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 include 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 rest rooms, paved trail access, etc.
2. Potential future uses based on the current site management.

²⁸ A framework of coastal management is available for reference in Section C.

- a. Please include 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?

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 (ex. Rocky intertidal with extensive tidepools, adjacent rocky cliffs, and rocky subtidal, etc.)*
2. Key resources are present at the site
 - a. Describe current rocky shore resources present at the site in as much detail as possible. These may include, but are not limited to-
 - i. kelp beds; pinniped haul out or pupping areas; seabird colonies; presence of threatened/endangered/protected species*;
 - ii. Intertidal diversity and score/metric (invertebrates, marine plants, etc.)*
3. List the animal and plant species you know exist at this site along with relative abundance.*
4. Does this site include any unique or special features in relation to the Oregon coast?
 - a. This may include high quality examples of rocky shore habitats, etc.
5. Please discuss site values and resources and how a change in designation will impact them.

Regulations & Enforcement

Proposing entities should fill out this section to the best of their knowledge. Due to the complexity of site regulation and enforcement, this section will not be used to evaluate proposal completeness, but will be considered for the merit of this proposal.

1. How does the proposed site improve upon or fill a gap in addressing objectives/policies that isn't currently addressed by coastwide regulations or management?
2. What regulations and enforcement would be necessary to implement this change in management?
 - a. What regulatory changes at the proposed site would be needed at this site?
 - b. Which state/federal agencies would be impacted by this change in site management?
3. In comparison to current site management, what changes would be necessary to enforce the proposed management measures.
 - a. This may include the addition or removal of infrastructure, personnel, etc.
 - b. Include the estimated financial impact of the proposal.
 - c. 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.
4. 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.

Non-Regulatory Management

1. What non-regulatory mechanisms are required at this site in order to meet the goal of the proposed designation? These may include, but are not limited to - public access management, on-site enhancement, 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.

Stakeholder Engagement

1. Describe the steps taken to develop this proposal in collaboration with stakeholders.

- a. Please describe the community support and opposition for this proposal?
 - b. 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.
2. List and explain both positive and negative opinions received regarding this proposal.
 - a. While preparing this proposal and performing stakeholder outreach, what were the main comments of support and issues of concern voiced regarding this proposed change in site management/designation?
3. List and describe engagement opportunities where the public has had the opportunity to learn about and/or comment on this proposal. (i.e. Conferences, meetings, tabling events, etc.)
4. **Before submitting your proposal**, please attach any materials, or letters of support gathered as part of the development of this proposal. (May include meeting resources, campaign materials, etc.)

Additional Information

1. How does this proposal incorporate local knowledge?
2. How does this proposal incorporate scientific knowledge?
3. Which goals and policies does the Rocky Habitat Management Strategy does this proposal address, and how?
4. What existing or proposed infrastructure/development are located within and adjacent to the site?
 - a. These may include submarine cables, residential developments, ocean outfalls, etc.*
5. What land or watershed activities/conditions exist adjacent to this site?
6. Are there any other overlapping protected areas within the site?*
7. Additional Information-
 - a. Include other characteristics of the site or adjacent area you wish to describe.*
 - b. Please describe any other reasons you think this site warrants a change in designation.
 - c. Should this proposal be evaluated with respect to other proposals your entity has submitted?

- i. The merit of all proposals are evaluated independently unless otherwise indicated by the proposing entity. Review bodies reserve the right to also evaluate proposals spatially in relation to one another.
8. What other information would you like to include about this site or your proposal.

Appendix J - 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 have been reviewed and accepted by the National Oceanic and Atmospheric Administration for use during Federal Consistency Review.

General Policies

- A. Consistent with Statewide 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 and practices 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 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 adverse effects or permanent²⁹ impacts to the form and function of submerged rocky habitats, or the fisheries dependent upon them, are prohibited.

²⁹ "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: ORS 141-085-0510 (88)

- Q. Harvest of aquatic vegetation is prohibited except as regulated by state agencies for appropriate recreational, scientific, and educational use.
- R. Activities occurring within or near an area with aquatic vegetation must have no adverse effects to the aquatic vegetation or its habitat.
 - a. This standard of protection may be overcome by submitting scientific evidence that clearly indicates that no adverse effects will occur from the activity.

Designation Standards

MARINE GARDEN (MARINE EDUCATION AREA)

In Marine Gardens the following prohibitions apply-

- There shall be no commercial take of invertebrates within Marine Gardens. Recreational take of invertebrates within Marine Garden's is limited to 1 mussel to be used for bait.
- No commercial or recreational take of aquatic vegetation is permitted within Marine Garden's, including macroalgae (e.g. kelps and seaweeds), vascular plants (e.g. seagrass, surfgrass, and eelgrass), and other vegetation in marine environments.

MARINE RESEARCH AREA

The following standards apply to all Marine Research Areas (MRA) –

- All research taking place within a Marine Research Areas must align with, or further the goal to "*maintain the natural system to support scientific research and monitoring while maintaining ecological integrity.*"
- No commercial take of invertebrates is permitted within Marine Research Areas.
- No commercial or recreational take of aquatic vegetation is permitted within Marine Research Areas, including macroalgae (e.g. kelps and seaweeds), vascular plants (e.g. seagrass, surfgrass, and eelgrass), and other vegetation in marine environments.

MARINE CONSERVATION AREA

Due to the variable nature of Marine Conservation Areas necessary to meet site goals, consistent standards are not available for all areas under this designation. Enforceable standards will need to be identified on a site-by-site basis.