



# *the* OREGON NEARSHORE STRATEGY



## Chapter 3: Nearshore Strategy Development



2016



Oregon Department  
of Fish and Wildlife



[OregonConservationStrategy.org](http://OregonConservationStrategy.org)

# Table of Contents – Chapter 3: Nearshore Strategy Development

NEARSHORE STRATEGY DEVELOPMENT .....	1
PROCESS AND PARTICIPANTS .....	1
SUMMARY OF PUBLIC INPUT .....	3
SUMMARY OF CHANGES .....	8
NEARSHORE STRATEGY REVIEW .....	9

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## Contact ODFW

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## NEARSHORE STRATEGY DEVELOPMENT

While the preparation of the Oregon Nearshore Strategy is initiated and the primary responsibility of the ODFW, the content is based on a collaborative process which includes subject matter experts, our state's citizens, resource users, and resource managers from other state and federal agencies. The original Nearshore Strategy (ODFW 2006) outlines who was involved in development of the Nearshore Strategy, how they were involved, and a summary of the input provided by participants. Similarly, the 2015 Oregon Nearshore Strategy reflects input we have received during the decade since the original document was published and during the public process over the past year. A summary of public and technical working group input received to date and the process for reviewing and updating the Nearshore Strategy is presented below.

### PROCESS AND PARTICIPANTS

#### **Internal Process**

In 2012, ODFW conducted an update to the Nearshore Strategy to: 1) better integrate the Nearshore Strategy with the Oregon Conservation Strategy; 2) examine the effects of global climate change and ocean acidification on nearshore species and habitats; and 3) review the progress made in implementing the Nearshore Strategy and consider priorities for updating the Strategy during the 10 year review in 2015.

The 2015 revision included reviewing the Nearshore Strategy, integrating the work done in 2012 on climate change and ocean acidification, and collecting and analyzing new information on nearshore species, their habitats and factors affecting them. Published literature and electronic databases were examined, and input on current and future nearshore issues and needs were obtained from ODFW staff, other state agencies, tribes, external experts, and the public. The Oregon Conservation Strategy and Nearshore Strategy documents were better integrated.

#### **Public Participation**

A public process was undertaken to engage management partners, stakeholders, scientists, and other parties with an interest in Oregon's nearshore resources in updating the Nearshore Strategy. Avenues

for public participation included: a technical working group, notifications of the update on the ODFW website seeking input, public meetings, and additional verbal or written public comment. This work was done in parallel with an update of the Oregon Conservation Strategy. In all, six opportunities for input at public meetings were provided in 2015 (Table 3.1).

Participants represented a broad array of groups and interests, including:

- Commercial and sport fishing interests and other ocean related businesses
- Conservation organizations
- Scientists, economists, and other subject matter experts
- Federal, tribal, state, and local government representatives
- Other interested citizens

These opportunities provided ODFW with input on issues and concerns for nearshore species and habitats in need of management attention, potential conservation actions, research and monitoring, and priorities for management.

**Table 3.1. Public Meetings**

Nearshore Strategy Topic	Meeting Objectives
<p><b>January 2015</b> <b>April 2015</b></p> <p><b>Fish &amp; Wildlife Commission</b></p> <p>Nearshore Strategy review and update process progress reports</p>	<ul style="list-style-type: none"> <li>• Provide information on the Strategy, the review and update process and how members of the public can participate</li> <li>• Provide update on progress and present summary of proposed changes to species lists and definition of Nearshore</li> <li>• Identify priorities and opportunities for nearshore resource conservation and management</li> <li>• Opportunity for public input</li> </ul>
<p><b>July 2015</b> <b>Public Meetings</b></p> <p><b>North Bend and Newport</b></p> <p>Overview of updated Nearshore Strategy</p>	<ul style="list-style-type: none"> <li>• Provide overview of the updated Nearshore Strategy</li> <li>• Present proposed redefinition of Oregon’s Nearshore</li> <li>• Present list of proposed Strategy Species</li> <li>• Present summary of updated information in Strategy including research and monitoring needs and Recommendations</li> <li>• Opportunity for public input</li> </ul>
<p><b>August 2015</b> <b>Fish &amp; Wildlife Commission</b></p> <p>Integration of input into Nearshore Strategy public comment draft</p>	<ul style="list-style-type: none"> <li>• Present summary of changes to updated document</li> <li>• Present public input on public review draft</li> <li>• Present plans to finalize Strategy revision</li> <li>• Opportunity for public input</li> </ul>

## September 2015 Fish & Wildlife Commission

- Present updated Strategy for adoption by Commission
- Opportunity for public input

Adoption of updated Nearshore Strategy by Commission

## SUMMARY OF PUBLIC INPUT

A wealth of information on issues facing nearshore species and their habitats was received, during the initial development of the Nearshore Strategy as well as during the decade since it was first published. This section briefly captures major themes of this valuable information.

### Species

Many people noted that although birds were included in the Oregon Conservation Strategy, this important component of the nearshore ecosystem was missing from the original Nearshore Strategy.

### Limiting Factors

People shared their knowledge and concerns regarding limiting factors to sustainable nearshore resources, and identified a number of limiting factors. Limiting factors identified fall into eight general categories:

- **Lack of public awareness** about nearshore species, habitats, and issues facing nearshore resources. Education and outreach needs.
- **Inadequate data and analysis** for making appropriate management decisions. Insufficient data collection and analysis, limited life history information, the need for fishery independent surveys of abundance and the prolonged lag time for making use of data.
- **Loss or alteration of habitat** important to nearshore species and ecosystems. Both direct and indirect sources of nearshore habitat loss/alteration, including those related to global climate change and ocean acidification.
- **Water quality degradation** caused by anthropogenic factors that may negatively affect nearshore species and habitats. Point and nonpoint sources of pollution.
- **Wildlife disturbance** to nearshore species. Types of human activities that could cause wildlife disturbance.
- **Harvest issues** that could negatively impact nearshore species or habitats. Examples included general and localized overharvest, catch of non-targeted species, and lack of upper size limits for certain species to protect “mega-spawners” that can make substantial reproductive contributions to populations.
- **Management inadequacy.** Numerous regulations, conflicting regulations and authorities, and lack of coordination between management authorities.
- **Ecosystem imbalances**, such as imbalances in predator prey population dynamics and introduction of invasive species.

## **Conservation Actions, Research Needs, and Management Priorities**

Public input on conservation actions, research needs, and priorities for management that could contribute to sustainable nearshore resources are summarized here. Ideas expressed pertain to actions that could be carried out by ODFW staff, partners in collaboration with ODFW, or by other groups or natural resource agencies independently of ODFW.

Input from participants fell into three general categories consistent with the Nearshore Strategy recommendations and the three overall goals: 1) education and outreach, 2) research and monitoring, and 3) policy and management. Summaries of the input provided for each of these categories is provided below.

### **Suggested Education and Outreach Actions**

#### **Information dissemination to public**

Outreach and educational information is an essential component of successful conservation implementation. Building on existing programs and developing new methods to reach the public is needed to convey concepts for conservation.

- Use ODFW's Marine Resources Program website, local newspapers, social media and literature to share research and conservation actions.
- Display conservation and educational materials at public areas (including hotels, charter offices, angling shops, real estate offices, kiosks in malls, parks, marinas, boat ramps, and beach access points, other public areas).
- Continue to develop and implement fish release methods (aka "descender devices"). Make information widely available to anglers.
- Continue and increase ODFW representation at sportsmen shows, festivals, etc.
- Establish/strengthen outreach methods and opportunities for disseminating information to the public, stakeholders, industry, etc.

#### **Workshops/forums**

At times, education for stakeholders and the general public is needed on a more detailed and focused level than is possible with tools such as websites, printed material, or the media, in order to put conservation ideas and concepts into practice.

- Design and convene workshops tailored to educate the public or user groups on specific topics (e.g., fish, algae or invasive species identification workshops).

### **Suggested Research and Monitoring Actions**

#### **Species Information**

Accurate accounting of stock abundance and harvest impacts is an important component of sustainable resource management. There are many nearshore species for which we do not currently have abundance estimates or complete life history information. In many cases, most or all of the information

currently available on nearshore species is from catch landed in fisheries, which results in limited data. Information on abundance and other population characteristics from surveys independent of commercial or sport fishing is essential for managing nearshore species.

- Gather information for all key nearshore species, regardless of whether or not they are harvested.
- Develop stock assessment methods that accommodate the unique circumstances and habitats of nearshore species with the greatest management need.
- Collaborate with sport and commercial fishermen, university researchers, and others to gather information for exploited nearshore stocks.
- Inventory and monitor invasive species.
- Continue marine mammal population level monitoring.
- Encourage/assist in research on movement, behavior, and predator-prey relationships of adult and juvenile stages of nearshore species.
- Encourage/assist in research and monitoring of reef specific changes, dynamics, and species usage.

### **Estuaries**

Estuaries, and species predominantly estuarine, were not covered in the initial version of the Nearshore Strategy. Input from public and technical working groups strongly supported the inclusion of estuaries and estuary management in the 2015 Nearshore Strategy and close coordination on estuaries with the updated Oregon Conservation Strategy developed by ODFW's Wildlife Division. Suggested actions:

- Conduct a comprehensive assessment of human and predator effects on harvested and non-harvested estuary species.
- Evaluate potential impacts of issues such as invasive species and aquaculture on estuarine fish, wildlife, and habitats.
- Develop a sampling and monitoring program to assess harvest rates, distribution patterns, pollutant indicators and species biology that will allow for more comprehensive management planning.
- Recognize, and where plausible integrate, linkages between estuary and nearshore marine environments in resource management.

### **Habitat**

Habitat surveys of Oregon's nearshore environment are limited and much of the area has not been surveyed with advanced technologies capable of fine resolution. Substantial data gaps exist in regards to bathymetry, substrate, and habitat. Little is known about the shallow (<10 meters) habitat and bioassemblages and more information is needed to understand the complexity of the nearshore ecosystem and the effects of human interactions.

- Continue to develop habitat surveys using ODFW's remotely operated vehicle (ROV).
- Develop new cost effective survey techniques for nearshore habitats.
- Continue to collaborate with OSU on seafloor mapping projects
- Collaborate with interested stakeholders to supplement/increase current survey data and areas covered.

- Encourage/assist in research of reef-specific changes, dynamics, and species usage.
- Collaborate with DLCD in developing and updating estuary habitat maps.
- Encourage/assist in estuarine research to identify data/knowledge needed for management planning.

## **Monitoring**

Monitoring species and habitat changes will help evaluate resource status and trends, judge the success of conservation and management efforts, and guide future management actions. Although some monitoring is done at present, such as for catch and effort, more is needed to examine changes and trends within Oregon's nearshore ecosystem. Many of the recommendations under the species and habitat subcategories above are also monitoring actions specific to those subcategories. The recommendations below are more ecosystem wide monitoring that could be done by ODFW or other appropriate parties. These include:

- Encourage/assist in monitoring of reef specific changes, dynamics, and species usage.
- Continue to assess/gather information on levels of human use and wildlife disturbances to intertidal habitats, animals, and plants.
- Conduct new surveys to assess habitat changes and species distribution changes.
- Monitor coastal and offshore development to identify potential impacts to nearshore resources.
- Monitor point and nonpoint source pollution problem areas (e.g., wastewater treatment/raw sewage discharges, pulp/paper mill effluent, increased nutrient loading from agricultural runoff, etc.).

## **Suggested Policy and Management Actions**

### **Sport/Commercial Fisheries**

Fisheries management is an integral component of sustainable nearshore resource management. Many concerns about current fisheries management were articulated by participants during public and technical working group meetings. Some suggested actions for improving sport/commercial fisheries management were:

- Increase marine sport fishery monitoring.
- Examine sport fishing activity and the current monitoring framework to improve data collection.
- Analyze current data collection methods and estimates of catch to improve stock assessment support for species in greatest need of management attention and "overfished" stocks.
- Collaborate with other agencies to support and ground-truth data collection methods.
- Continue to reduce bycatch/discard using incentives as well as gear research and development.

### **Non-Extractive Management Actions**

Forage fish are an important component of the marine ecosystem off the U.S. West Coast, including Oregon's nearshore waters. There has been growing public interest in addressing the conservation needs of these species, which include round and thread herring, mesopelagic fishes, Pacific sand lance, Pacific saury, silversides, Osmerid smelts, and pelagic squids. In March, 2015, the Pacific Fishery Management Council prohibited the development of new directed commercial fisheries on these

unmanaged forage fish species. Federal regulations implementing this prohibition are under development as of June, 2015. ODFW will develop an Unmanaged Forage Fish Fishery Management Plan (FMP) based on the Marine Fishery Management Plan Framework approved by the Oregon Fish and Wildlife Commission in 2015 (recognizing that there will be significant differences from a typical fishery management plan, as directed fishing will not be occurring). Oregon's Unmanaged Forage Fish FMP will include information on resource status, management, and history that are specific to Oregon, but will overall align very closely with the federal approach.

### **Socioeconomics**

Coastal economies in Oregon are often directly or indirectly dependent on nearshore resources. The importance of improving the availability and use of socioeconomic information in nearshore resource management was emphasized by many. Suggested actions included:

- Work with coastal ports and stakeholders to characterize sport and commercial fishery contributions to coastal economies.
- Examine, at local and regional scales, economic impacts due to regulations.
- Look for ways to include incentives in fisheries and other nearshore resource management.

### **Communication and Coordination**

One of the primary goals of the Nearshore Strategy is to improve communication and coordination between ODFW and the public, other resource management agencies, tribes, the fishing industry, universities, ports, local units of government, and non-governmental organizations. Suggested actions:

- Continue to facilitate the exchange and discussion of information about terrestrial activities that may negatively impact nearshore resources or the nearshore environment.
- Increase/develop coordination between state and federal management agencies, local units of government, ports, and non-governmental organizations.
- Encourage development of local groups to facilitate information and knowledge exchange between ODFW and local constituents. Look for ways in which local input can be folded into the management process.

### **Public Input on Review Draft**

Unlike the wide reaching scope of extensive input received when the concept of the Nearshore Strategy was brand new a decade ago, the amount of public input received on the public review draft was more limited in 2015. Although public comment still encompassed a broad range of topics, it largely focused on fine tuning the updated version of the Nearshore Strategy. Comments expressed support for the redefined Nearshore area and inclusion of portions of estuaries. A variety of opinions were expressed on changes that could be made to the species lists and the information presented on species-habitat associations. The role of marine reserves in nearshore research and monitoring efforts was noted. The importance of explicitly incorporating climate change and ocean acidification effects in all aspects of the document was stressed. Staff analyzed public input received and modified the Nearshore Strategy as deemed appropriate.

## SUMMARY OF CHANGES

The review, extensive input, new information and better integration resulted in a number of changes to both the Oregon Conservation Strategy and the Nearshore Strategy. A brief summary of changes relevant to the Nearshore Strategy follows:

- The term “Nearshore” was expanded to [include all of Oregon’s Territorial Sea, shoreline areas in the supratidal zone, and portions of Oregon’s estuaries.](#)
- Information on [coastal communities](#) was updated.
- The Nearshore Strategy was reorganized to make it easier to find information on [species](#), [habitats](#), [factors and stressors affecting species and habitats](#), and [research and monitoring needs](#), with new and updated information incorporated.
- [Species](#) lists were modified based on new information, better integration with the Oregon Conservation Strategy and inclusion of [estuaries](#) as part of the nearshore.
- The new federally-adopted Coastal and Marine Ecological Classification Standard was integrated to describe [habitats](#).
- Extensive information on the effects of global climate change and ocean acidification on Oregon’s nearshore and coastal waters was incorporated (see [Factors Affecting Nearshore Habitats and Species](#) and [Appendices A – D](#)).
- Better integration resulted in more links between the Oregon Nearshore Strategy and the Oregon Conservation Strategy, including an integrated [Strategy Species list](#) and a [Nearshore Ecoregion](#) in the Oregon Conservation Strategy.
- Updates to the [recommended actions](#) for 1) Education and Outreach; 2) Research and Monitoring; 3) Management and Policy.

**Table 3.2. Summary of modifications to the Strategy Species List in the Oregon Nearshore Strategy component.**

Change	Species
Strategy Species identified in Oregon Conservation Strategy now included in Oregon Nearshore Strategy	<p><b>Anadromous Fishes:</b> Chinook salmon (all listed SMUs<sup>[1]</sup>), Coho salmon (all listed SMUs), Chum salmon (All SMUs), Coastal Cutthroat Trout (Columbia River SMU), Pacific lamprey, Western river lamprey</p> <p><b>Birds:</b> Black brant goose, Black oystercatcher, California brown pelican, Caspian tern, Fork-tailed storm petrel, Leach’s storm petrel, Marbled murrelet, Rock sandpiper, Tufted puffin, Western snowy plover</p>
Strategy Species moved to the Watch or Commonly Associated Species List	<p><b>Fishes:</b> Black and yellow rockfish, Bocaccio, Gopher rockfish</p> <p><b>Marine Mammals:</b> California sea lion</p>

**Strategy Species added based on Oregon Nearshore Strategy criteria**

**Fishes:** Pacific sandlance, Longfin smelt, Deacon rockfish (a cryptic species formally recognized as a new species in 2015, formerly considered to be Blue rockfish)

**Invertebrates:** Blue mud shrimp, Native littleneck clam, Olympia oyster, Sunflower star

**Marine Mammals:** Southern resident killer whale

**Plants:** Native eel grass

[1] SMUs are Oregon's Species Management Units for native fish species. More information about SMUs and how they relate to ESA listings for salmonids can be found in the Oregon Conservation Strategy.

## NEARSHORE STRATEGY REVIEW

The 2015 Nearshore Strategy was reviewed by multiple parties prior to completion to ensure that the eight [required elements for a State Wildlife Action Plan](#) are included and clearly presented, and that the document accurately captures the public and technical input received during development. One of the USFWS eight required elements is to develop procedures to review the Plan at least every ten years and update it if necessary. To remain consistent with the Oregon Conservation Strategy, the Nearshore Strategy will undergo a complete review on this timeframe. ODFW staff will report to the Oregon Fish and Wildlife Commission on the status of the Nearshore Strategy, its relevance to current nearshore resource issues and priorities, and implementation of its recommendations. This will be done in conjunction with reports on the Oregon Conservation Strategy annually to help evaluate if changes to Oregon's State Wildlife Action Plan are warranted more frequently.