NOAA FISHERIES

WEST COAST REGION

Rockfish Recovery in Puget Sound

Threatened yelloweye rockfish and endangered bocaccio

OVERVIEW

Decline

Total rockfish abundance in Puget Sound has declined approximately 70 percent in the last 40 years. Yelloweye rockfish *(Sebastes ruberrimus)* and bocaccio *(Sebastes paucispinus)* have declined to an even greater extent.

Because of these declines, the Puget Sound/Georgia Basin yelloweye Distinct Population Segment (DPS) was listed as threatened and the bocaccio DPS was listed as endangered under the Endangered Species Act on April 28, 2010 by NOAA Fisheries. The DPSs include all yelloweye rockfish and bocaccio (listed rockfish) found in waters of Puget Sound, the Strait of Georgia into the northern Johnstone Strait and Queen Charlotte Channel in Canada, and the Strait of Juan de Fuca east of Victoria Sill (approximately east of Port Angeles).

Fisheries conservation

Regulatory measures have been taken by the State of Washington to protect rockfish over the last several decades. These include a commercial fishing ban on rockfish in the late 1980s and early 1990s and more recent closures of some fisheries with rockfish bycatch. In 2010 the Washington Department of Fish and Wildlife (WDFW) banned recreational anglers from targeting or retaining all rockfish (13 species of rockfish in Puget Sound are listed as State Species of Concern and many species of rockfish look very similar and live in similar habitats), and instituted a 120-foot (36.6-m) depth limit while bottom fishing. Despite these measures, rockfish remain at risk from bycatch and other remaining threats.

Current rockfish threats

Historical overfishing has been recognized as the primary cause of the decline of rockfish in Puget Sound, but there is some uncertainty about the relative impact of primary contemporary threats, which include degraded water quality and habitat, derelict fishing gear, fisheries bycatch, and other threats. A primary objective of the recovery plan is to further assess and address these threats.

1970s yelloweye and bocaccio catch in the Neah Bay area. Photo: Frank Haw

ROCKFISH CONSERVATION
Bottom-up Recovery of Puget Sound

Rockfish abundance has declined by approximately 70% in Puget Sound over the last 40 years.

Introduction to the Rockfish Recovery Plan

Recovery Planning

Since 2010, NOAA Fisheries has been conducting research and working with partners to inform the development of the rockfish recovery plan. The plan outlines actions and research for listed rockfish conservation and survival using the best available science.

Adaptive management is used throughout the plan to ensure that ongoing, essential research findings are used in management and further research decisions.

Collaboration

NOAA Fisheries worked with a team of experts from the University of Washington, Washington Department of Fish and Wildlife, Northwest Indian Fisheries Commission, and NOAA Fisheries Northwest Fisheries Science Center who provided expertise and guidance to develop the plan. Other individuals also provided peer reviews, comments, and ideas and have contributed to rockfish recovery through various research or actions – we value all of these collaborators and their work.

Bocaccio. Photo: Chad King, NOAA Fisheries

Learn about rockfish

http://www.westcoast.fisheries.noaa.gov/protected_species/rockfish/rockfish_in_puget_sound.html

Contact us

NOAA Fisheries, West Coast Region, Rockfish Recovery Coordinator Dan Tonnes, Dan.Tonnes@noaa.gov

Action

Recovery Plan *Strategy and Actions:*

The recovery program includes approximately 45 actions to address the following needs:

- **Improving understanding of listed rockfish population abundance and demographics, and habitat associations.**

  Example action: listed rockfish population and spatial surveys (such as remotely operated vehicle surveys) in the nearshore and deepwater environments.

- **Fisheries management consistent with recovery goals.**

  Example action: assess the need for and potentially establish marine reserves or rockfish conservation areas where prioritized.

- **Protection and restoration of listed rockfish habitats and the Puget Sound/Georgia Basin ecosystem.**

  Example action: nearshore protection/restoration, with an emphasis on native kelp.

- **Development of an education, outreach, and public involvement plan.**

  Example action: improve rockfish species identification by fishermen and bycatch documentation.

- **Securing public support for listed rockfish recovery.**

  Example action: work with partners to seek a variety of types of funds to support recovery over a long time frame.

A juvenile yelloweye rockfish in Puget Sound. Photo: Janna Nichols

Questions & Answers
Rockfish Recovery in Puget Sound

Threatened yelloweye rockfish and endangered bocaccio

What does the recovery plan do?

The draft recovery plan provides a roadmap for recovery by using the best available science to outline actions and research for conservation and survival of yelloweye rockfish and bocaccio that are listed under the Endangered Species Act (ESA).

Is the plan a law?

Recovery plans are not regulatory, but they enable coordination and resources for recovery. Plan development and implementation are required by the ESA, which is a law. That law prohibits harassment or harm of ESA-listed species, requires federal agencies to carry out programs to conserve listed species, and requires federal agencies to ensure their actions do not adversely impact listed species or their critical habitat.[1]

[1]Critical habitat: ww.westcoast.fisheries.noaa.gov/protected_species/rockfish/critical_habitat_info.html

How will the plan affect fishing practices?

Washington Department of Fish and Wildlife (WDFW) regulations that have been in place since or before 2010 to protect rockfish are unlikely to change.

WDFW does not allow commercial rockfish fishing of any kind in Puget Sound and has closed many fisheries with rockfish bycatch. In Puget Sound, WDFW prohibits recreational anglers from targeting or retaining any rockfish because many rockfish species live in the same places, look similar, and 11 other rockfish have been listed as Species of Concern. Also, bottom fishing below 120 feet is prohibited to limit barotrauma injuries and mortality to rockfish.

Does rockfish recovery benefit the ecosystem?

Larval rockfish are an important food for juvenile salmon. Adult female yelloweye rockfish give birth to up to two million larvae, typically in the spring. The birth of larvae can coincide with the outmigration of salmon smolts into Puget Sound.

Many of the actions in the recovery plan are not only good for rockfish but are also good for other species that share their ecosystem, such as nearshore protection and restoration and the prevention and removal of derelict fishing gear.

COOL ROCKFISH FACTS

Most rockfish do not start to have young until they are about 5-20 years old, depending on the species.

The older and bigger the rockfish, the more and healthier young she can have.

Yelloweye rockfish and other rockfish species can live to be more than 100 years old.

What about canary rockfish?

The Puget Sound/Georgia Basin canary rockfish Distinct Population Segment (DPS) was also listed as threatened under the ESA in 2010. However, based on new genetics data, NOAA Fisheries removed this canary rockfish DPS from the List of Threatened and Endangered Species in early 2017. The plan, therefore, does not address canary rockfish, but many of the plan's actions will support healthy populations of other rockfish species because they often share habitats with listed species.

https://www.federalregister.gov/documents/2016/07/06/2016-15923/endangered-and-threatened-species-removal-of-the-puget-soundgeorgia-basin-distinct-population

Is NOAA Fisheries designating rockfish conservation areas/marine protected areas?

No. However, the plan sets forth a process to assess yelloweye rockfish and bocaccio abundance and demographics, the efficacy of existing fishing regulations, and bycatch.

What can I do to help recover rockfish?

Bycatch - If you accidentally catch a rockfish, handle them quickly and carefully and release them using a descending device to avoid barotrauma (where the gas in a rockfish's swim bladder expands and causes the fish harm or death). Further barotrauma prevention information can be found here:

www.westcoast.fisheries.noaa.gov/publications/fishery_management/recreational_fishing/rec_fish_wcr/bring_that_rockfish_down.pdf

If you keep catching rockfish, move to a different area.

Gear Loss - Fishermen of all kinds can take steps to prevent the loss of their fishing gear, which can persist in the water and kill rockfish and many other marine species for many years after gear is lost. For example, the Northwest Straits Foundation estimates that approximately 12,000 crab pots and 600 shrimp pots are lost each year in Puget Sound. Steps to prevent loss:

http://nwstraitsfoundation.org/project/recreational-crabbing-resources/

At Home & Around Town - In your home and around your yard, avoid using harmful chemicals that may end up in Puget Sound; take public transportation when possible; and reduce your waste by recycling and reusing resources.

Finally, learn about rockfish or get involved with their recovery! They are remarkable creatures.

www.westcoast.fisheries.noaa.gov/protected_species/rockfish/rockfish_in_puget_sound.html

Preparing to lower a yelloweye rockfish with a descending device. Photo: NOAA Fisheries

Larval rockfish, 21 days old. Photo: Mark Tagal, NOAA Fisheries

Larval rockfish, 63 days old. Photo: Mark Tagal, NOAA Fisheries

This comprehensive recovery plan is anticipated not only to recover rockfish, but many of the plan's actions may also be beneficial to other species like salmon.

It's a win-win for the Puget Sound ecosystem and for future generations.

NOAA FISHERIES
West Coast Region