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2016 Status of the Salmon Stocks: Frequently Asked Questions

NOAA Fisheries has determined that one Pacific salmon stock is “subject to overfishing” and two stocks are “approaching overfished.” NOAA Fisheries sent notice of these determinations to the Pacific Fishery Management Council (Council) in August and will publish the notice in the Federal Register (October 31, 2016).

What do overfishing/overfished determinations mean?

Subject to Overfishing

When harvest of a particular stock exceeds the allowable exploitation rate prescribed in the fishery management plan (FMP) developed by the Pacific Fishery Management Council, the stock is determined to be “subject to overfishing.” This does not mean they are overfished, but rather is a cautionary determination that indicates further attention is warranted and the rate of harvest may need to be reduced to avoid overfishing.

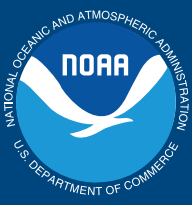
Approaching Overfished

Salmon stocks are managed to allow sufficient numbers of mature salmon to escape harvest (called “escapement”) and return to fresh water to spawn. Each salmon stock included in the FMP must meet a prescribed escapement level over each three-year period. When the forecast for escapement in the current year, combined with escapement in the two previous years, falls short of the prescribed level, the stock is determined to be “approaching overfished.” Managers then shape fisheries to increase escapement above the prescribed FMP levels if feasible.

Overfished

When a salmon stock’s actual spawning escapement averaged over a three-year period (specifically, the geometric mean of the most recent three years) falls below the level specified in the FMP, the stock is determined to be “overfished.” This term is used regardless of whether fishing was the cause of insufficient escapement. An overfished determination indicates that the stock is depressed and signals conservation concern. Under these conditions, a rebuilding plan must be developed to improve the escapement, generally leading to a rebuilt stock within 10 years.





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What salmon stocks are subject to overfishing?

The Pacific Fishery Management Council manages fisheries on 67 salmon stocks through the Pacific Salmon Fishery Management Plan. Of those, one has been identified as subject to overfishing:

- Hood Canal coho

What salmon stocks are overfished or approaching overfished?

No salmon stocks are overfished; however, two of the 67 managed stocks have been determined to be approaching overfished:

- Quillayute fall coho
- Snohomish coho

What's the difference between overfishing and overfished?

While they sound very similar, the two terms are unrelated from a management point of view. An overfishing determination has no connection to and does not indicate that a stock is overfished. The Council amended the Pacific Fishery Management Plan (FMP) in December 2011 to include new definitions for “overfishing” and “overfished.”

OVERFISHING is based on the annual rate of harvest, or the “exploitation rate.” When harvest in a particular year exceeds the allowable exploitation rate for a given stock in the FMP, that stock is determined to be subject to overfishing. The determination is a cautionary step that indicates the need for reducing the rate of harvest and reviewing the status of the stock.

APPROACHING OVERFISHED is similar to overfished in that it is based on escapement over a three-year period; however, this assessment considers the projected escapement of a stock in the current year if the previous year’s fishing scheme were applied to the current year abundance. An approaching overfished determination indicates that fisheries affecting that stock in the current year may need to be conservative to improve escapement and avoid a subsequent overfished determination.

OVERFISHED is based on the number of adult salmon of a given stock that return to fresh water (i.e., escapement). When too few salmon of a given stock return to fresh water over a three-year period, the stock is considered overfished. The term is used whether or not fishing was the cause of insufficient returns. An overfished determination indicates that the stock is depressed and is a stronger indicator of conservation concern. Managers must then develop a rebuilding plan that will restore the stock above the escapement goal.

How was the overfishing/overfished determination made? How long does it last?

Each year the Council reviews the status of salmon stocks relative to the overfishing and overfished criteria. This review is published each February and March in the annual Review of Ocean Salmon Fisheries and Preseason Report I: Stock Abundance Analysis, which are available on the Council’s website (www.pccouncil.org).

The reports published in 2016 indicated that harvest of the Hood Canal coho stock had exceeded the allowable exploitation rate specified in the FMP and thus it was subject to overfishing. The determination was based on the most recent data available, which for the Hood Canal coho stock was from 2014. The projected exploitation rate for 2014 was 66% compared to the allowable exploitation rate of 65%. The overfishing determination ends when the observed annual exploitation rate no longer exceeds specified limits in the Plan. The Council’s next review will be published in the March 2017 Preseason Report I, and will indicate whether the subject to overfishing determination should continue.

The escapement forecasts for Quillayute fall and Snohomish coho published in Preseason Report I for 2016 indicated that, under 2015 management measures, the 2016 escapement of these stocks combined with escapement



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in the previous two years would fall short of escapement goals set in the FMP. In response, the Council adopted management measures that greatly restricted ocean harvest impacts on these coho stocks in 2016. In February 2017, the Council will publish the Review of 2016 Ocean Fisheries. The document will provide the basis for determining if these stocks are overfished. If they are not overfished, the next Preseason Report I will subsequently determine if these stocks continue to be approaching overfished.

Does the overfishing determination mean these salmon are going to be listed under the Endangered Species Act (ESA)?

No, none of the affected stocks in the recent notice of overfishing are listed or under consideration for listing under the ESA. This determination is provided for under the Magnuson-Stevens Fishery Conservation and Management Act and has no ESA-related ramifications.

How did the overfishing occur?

In short, the harvest or exploitation rate for the Hood Canal coho stock exceeded what was anticipated in the management plan by 1 percent in 2014, the most recent year for which this can be assessed. However, escapement in 2014 was well above that required in the FMP. A total of 27,365 fish escaped compared with 10,750 required in the FMP. Ocean harvest off British Columbia and Washington, and inside fisheries (Salish Sea and in-river) contribute to impacts on Hood Canal coho. Fisheries managers work together under the Pacific Salmon Treaty and other agreements to keep fisheries impacts within limits, but sometimes unanticipated changes in abundance, migration patterns or fisheries occurring prior to those in the southern U.S cause them to exceed the limits. The overfishing determination signals that further scrutiny is warranted and harvests may need to be reduced if the situation continues.

How did the approaching overfished occur?

Both Quillayute fall and Snohomish coho stocks had several years of strong returns prior to 2015, but recent abundance for these stocks has dropped rather quickly. The cause of the reduced abundance of these stocks has not been determined.

Are Pacific salmon fisheries sustainable?

Federally managed fisheries in the United States, including Pacific salmon fisheries, are managed sustainably through a dynamic and public process that uses the best science available. Overfishing and overfished determinations are part of this science-based management process, ensuring continued monitoring and signaling caution when necessary. This approach has earned the U.S. a strong reputation as a global leader in sustainable fisheries management.

If these stocks are subject to overfishing and approaching overfished, why are we still harvesting them?

The overfishing determination was based on data from 2014 and more recent data on many coho salmon stocks in Washington shows a decline. The Council and NOAA Fisheries responded to weak coho salmon forecasts by prohibiting retention of coho salmon in ocean fisheries north of Leadbetter Point, Washington in 2016. Depending on the reason for lower escapements, reductions in harvest may be sufficient to increase escapement and resolve the overfishing and overfished events. Post season assessments will determine how effective these measures were in addressing these recent trends.

What happens next?

If the Hood Canal coho remain subject to overfishing, NOAA Fisheries will work with the Council to examine the contribution of different fisheries to overfishing and alert the managers of fisheries with significant impacts on the involved stocks, as recommended in the FMP. If the postseason assessment indicates the approaching overfished stocks meet the criteria for overfished, a rebuilding plan will be implemented.