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U.S. DEPARTMENT OF COMMERCE**

**ON
THE STATE OF ALASKA SALMON
BEFORE THE**

**COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION
SUBCOMMITTEE ON OCEANS, ATMOSPHERE,
FISHERIES, AND COAST GUARD
U.S. SENATE**

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Good afternoon, Chairman Sullivan. My name is Chris Oliver and I am the Assistant Administrator for the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS). Thank you for inviting me to testify today on the state of Alaska salmon. As you know, NMFS is responsible for the stewardship of the nation's ocean resources and their habitat. We provide vital services for the nation: productive and sustainable fisheries, safe sources of seafood, the recovery and conservation of protected resources, and healthy ecosystems—all backed by sound science and an ecosystem-based approach to management.

Alaska Salmon Science and Stock Status

Salmon have a complex life cycle that involves a freshwater rearing period, followed by a period of ocean feeding prior to their spawning migration back to freshwater. Salmon migrate and feed over great distances during their marine life stage. While there is great diversity in the range and migratory habits among different species of salmon, there also is a remarkable consistency in the migratory habit within stock groups, which greatly facilitates stock-specific fishery planning. Most salmon stocks are vulnerable to harvest by numerous commercial and sport fisheries in marine areas. Salmon are also taken in rivers and streams during their spawning migration by subsistence, sport, commercial, and personal use fishermen.

The Alaska Fisheries Science Center collaborates with the Alaska Department of Fish and Game (ADF&G) on several integrated ecosystem surveys used to forecast adult salmon returns. One example is our collaborative research efforts with ADF&G on the Southeast Coastal Monitoring survey, which has been conducted for the past 21 years. The results are used to produce an annual forecast of pink salmon returns to Southeast Alaska. We also conduct a survey in the Northern Bering Sea (the Bering Arctic/Subarctic Integrated Survey). One of the products of this survey, produced annually, is a pre-season forecast of Yukon River Chinook salmon returns. In the Southern Bering Sea extension of this survey, we are also able to monitor juvenile Pacific salmon and provide data to resource managers biennially.

So what we are seeing during such surveys? In the Gulf of Alaska, pink salmon returns were unexpectedly low during 2015, 2016, and 2017, and sockeye salmon returns were unexpectedly low during 2018. Chinook salmon returns from the Southeast reached record lows in 2018. In the Eastern Bering Sea, sockeye salmon returns to Bristol Bay during 2018 set a new record high and Chinook salmon returns to Western Alaska appear at or below average.

During the surveys, we also collect a variety of ecosystem information on sea surface temperature, phytoplankton, zooplankton, forage fishes and juvenile fish. The condition of juvenile fish is a good indication of how many fish are going to survive to contribute to the future spawning population. If young fish have been able to find food and are in a good condition, they are more likely to make it through their first winter and become adults.

Because we have long term data sets from these surveys, we are able to better understand the ecosystem impacts from events such as the “blob.” The blob was a large mass of unusually warm water that formed in the eastern Pacific Ocean in 2013 and persisted for several years. It formed as the result of a highly unusual atmospheric condition that produced a very strong high-pressure ridge in the Gulf of Alaska during winter, reducing the intensity and frequency of storms. This lack of storm events allowed the surface waters of the Gulf to remain warm. The anomalously warm sea temperatures were not only found at the surface, but as deep as 200m in some places. Surveys during spring and late summer found big changes to the ecosystem as a result the blob, including less food available for fishes than in previous years.

Consequently, salmon returns to the Gulf of Alaska 1 to 3 years after the “blob” event were much lower than predicted. In the Eastern Bering Sea, surface temperatures remain warmer than average and the ecosystem productivity is similar to previous warm water years (e.g., producing less nutritious zooplankton). Our long-term data sets from ecosystem surveys in this region enable us to anticipate how salmon will respond to current warm conditions. For example, juvenile Bristol Bay sockeye salmon are likely to do relatively well because they have sufficient food resources, while the outlook for juvenile western Alaska Chinook salmon is not as good because some of their preferred prey is less abundant in warm conditions.

Overview of Federal Salmon Management

Salmon fisheries in the exclusive economic zone (EEZ) off Alaska are managed under the Fishery Management Plan (FMP) for the salmon fisheries in the EEZ off Alaska. In 2012, the North Pacific Fishery Management Council (Council) comprehensively revised the FMP with Amendment 12 to comply with Magnuson-Stevens Act requirements, such as annual catch limits and accountability measures, and to more clearly reflect the Council’s policy with regard to State of Alaska management authority for commercial and sport salmon fisheries in the EEZ. Part of that action was to defer management of three traditional net fishing areas – Cook Inlet, the Alaska Peninsula, and Prince William Sound – to State management. As a result, the State of Alaska manages the fisheries in those three areas in federal waters.

In 2013, Cook Inlet commercial salmon fishermen and seafood processors filed a lawsuit in Federal district court challenging Amendment 12 and its implementing regulations. The lawsuit focused on Amendment 12’s deferral to State management of the Cook Inlet Area. The Ninth Circuit determined that Magnuson-Stevens Act section 302(h)(1) requires a Council to prepare

and submit FMPs for each fishery under its authority that requires conservation and management and that no other provision in the Magnuson-Stevens Act creates an exception to this statutory requirement. Because the Council and NMFS concluded that the Cook Inlet salmon fishery requires conservation and management by some entity, the Ninth Circuit found that the Cook Inlet portion of the salmon fishery must be included in the FMP given the statutory language of the Magnuson-Stevens Act.

In response to the Ninth Circuit ruling, the Council is considering how to revise the FMP to manage the salmon fishery that occurs in the federal waters of Cook Inlet. The Council is considering new management measures that comply with Magnuson-Stevens Act requirements for the salmon fisheries that occur within these three areas, such as status determination criteria, annual catch limits, and accountability measures and is considering an option that would defer to state management. In addition, the Council formed a stakeholder committee, called the Cook Inlet Salmon Committee, to assist in developing the measures to manage the commercial fishery in Cook Inlet. Finally, the Council is scheduled to review a discussion paper and the committee's recommendations at their December 2018 Council meeting.

Salmon are also incidentally caught as bycatch in the federally-managed groundfish fisheries off Alaska, primarily by the pollock fisheries. The Council and NMFS have taken a number of actions to both monitor and reduce salmon bycatch in the Bering Sea and Gulf of Alaska in recent years. Chinook salmon bycatch in the Bering Sea pollock fishery is limited by regulation and pollock fishermen participate in contracts that provide incentives for each vessel to avoid Chinook and chum salmon bycatch at all times. The goal is to allow the pollock fisheries to catch the full total allowable catch while staying within specified salmon bycatch limits. For 2019, Chinook salmon abundance, measured by a State of Alaska index, is below a threshold by the Council, requiring NMFS to further reduce the Chinook salmon bycatch limits for each pollock fishing sector.

Pacific Salmon Treaty

There is an international component of salmon management as well. Signed by Canada and the U.S. in 1985, the Pacific Salmon Treaty provides a framework for the two countries to cooperate on the management of Pacific salmon. A high degree of cooperation is required to prevent overfishing, provide optimum production, and ensure that each country receives benefits that are equivalent to the production of salmon in its waters.

The treaty resolved long-standing salmon interception disputes between the U.S. and Canada as well as between Alaska and Northwest states and treaty Indian tribes. The treaty implementing legislation stipulates that decision-making within the U.S. Section is established by consensus of the U.S. Commissioners from affected states and treaty Indian tribes. Fishing regimes under the treaty (contained in Annex IV) are generally re-negotiated every ten years. Most chapters expire at the end of 2018 and were the subject of re-negotiation recently completed by the Canadian and U.S. Sections to the Commission.

With the current harvest sharing agreement set to expire on December 31, 2018, Canadian and U.S. representatives on the Pacific Salmon Commission met regularly over the course of two years to negotiate proposed amendments to five fishing regimes contained in Annex IV of the

treaty. The chapter addressing Chinook salmon was the primary, but not sole, focus of the re-negotiation. While coho, chum, sockeye and pink salmon regimes are largely negotiated by regional representatives, Chinook salmon is of coast-wide significance and negotiated directly by U.S. and Canadian Commissioners. The agreement is currently undergoing formal review by the two governments in an effort to bring the amendments into force by January 2019, and to provisionally apply the proposed amendments, in the event that the final exchange of diplomatic notes is delayed. In addition, NMFS will complete an Endangered Species Act consultation on any new discretionary domestic actions taken as a result of the amendments.

2016 Pink Salmon Failure

In 2016, Alaska experienced abnormally low returns of pink salmon throughout the Gulf of Alaska. In response to a request from Alaska's Governor in the fall of that year, the Secretary of Commerce made the determination, in January 2017, of a commercial fishery failure for pink salmon in seven management areas in State waters. In reaction to multiple fisheries disasters declared on the west coast and Alaska, as well as those related to Hurricanes Maria, Irma, and Harvey, Congress appropriated Federal funds to address these commercial fishery failures in the Bipartisan Budget Act of 2018. Of the \$200M of dedicated funds, \$56.3M was subsequently directed for disaster relief to address the 2016 Gulf of Alaska pink salmon failure. Eligible recipients must submit spending plans to NOAA for approval. These funds will support individuals, businesses, and fishery dependent communities through a range of actions that will improve the long term sustainability of the fishery.

This concludes my testimony. Thank you again for the opportunity to testify before you today. I would be happy to answer any questions you may have.