PACIFIC FISHERY MANAGEMENT COUNCIL

FACT SHEET:

SALMON MANAGEMENT

Chinook and coho salmon are the main salmon species managed by the Council. In odd-numbered years, the Council may manage special fisheries near the Canadian border for pink salmon. Sockeye, chum, and steelhead are rarely caught in the Council's ocean fisheries.

Salmon are affected by a wide variety of factors in the ocean and on land, including ocean and climatic conditions, dams, habitat loss, urbanization, agricultural and logging practices, water diversion, and predators (including humans). Salmon are an important source of spiritual and physical sustenance for Northwest Indian tribes, and they are symbolically important to many other residents of the Northwest.

Chinook salmon (*Oncorhynchus tshawytscha*) are also called king, spring, or tyee salmon, and are the largest of the Pacific salmon. Chinook salmon are highly prized by commercial, sport, and subsistence fishers. Like all Pacific salmon, Chinook are anadromous, which means they hatch in freshwater streams and rivers, migrate to the ocean for feeding and growth, and return to their natal waters to spawn. Within this life history, Chinook can be very diverse. Their spawning environments range from just above tidewater to over 3,200 kilometers from the ocean. The natural range of Chinook in North America ranges from the Ventura River in California to Kotzebue Sound in Alaska. They also appear in Asia, from northern Japan to the Andyr River in Russia (about 64 degrees north latitude). In the ocean, Chinook from Washington, Oregon, and California range widely throughout the Pacific Ocean and the Bering Sea, and as far south as the U.S. border with Mexico. Wild Chinook populations have disappeared from large areas where they used to flourish, and several evolutionarily significant units (ESUs) have been listed or proposed for listing as at risk for extinction under the Endangered Species Act.

Coho or "silver" salmon (*Oncorhynchus kisutch*) are found in streams and rivers throughout much of the Pacific Rim, from central California to Korea and northern Japan. Coho are also anadromous and have a life history similar to Chinook. However, the time they spend in fresh and salt water is relatively fixed, compared to the more variable life history of Chinook. North of central British Columbia, coho tend to spend two years in the ocean, while south of this point they spend only one year in the ocean. Unlike Chinook, where most production comes from mainstem spawning areas, coho tend to use smaller streams and tributaries. North American coho spawn in tributaries from the San Lorenzo River in Monterey Bay, California to Point Hope, Alaska, and throughout the Aleutian Islands. They are most abundant in coastal areas from central Oregon to southeast Alaska.

Because salmon migrate so far when in the ocean, managing the ocean salmon fisheries is an extremely complex task.

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The Fishery and Gear

Several different regions and groups are involved in the salmon fishery:

- Recreational (ocean, inland marine [Puget Sound, Strait of Juan de Fuca, coastal bays], freshwater (including Columbia River Buoy 10)
- Commercial (treat Indian and non-Indian ocean troll, Puget Sound seine and gillnet, Washington coastal bays gillnet, Lower Columbia non-Indian gillnet, Mid-Columbia treaty Indian gillnet)
- Tribal Ceremonial and Subsistence (gillnet, dip net and hook-and-line) (Puget Sound, Washington coastal rivers and bays, Columbia River and tributaries, Klamath and Trinity Rivers)

The Management Context

The Council's Salmon Fishery Management Plan describes the goals and methods for salmon management. Management tools such as season length, quotas, and bag limits vary depending on how many salmon are present. There are two central parts of the Plan: *Conservation objectives*, which are annual goals for the number of spawners of the major salmon stocks ("spawner escapement goals"), and *allocation provisions* of the harvest among different groups of fishers (commercial, recreational, tribal, various ports, ocean, and inland). The Council must also comply with laws such as the Endangered Species Act.

Every year the Council follows a preseason process to develop recommendations for management of the ocean fisheries. A schedule of this process is available from the Council after the November meeting. Public involvement begins in late February, when reports describing the previous season and estimating salmon abundance for the coming season are released. These reports are followed by a Council meeting early in March to propose season alternatives. Public hearings on these alternatives are held in late March or early April, and the final recommendations are adopted at a Council meeting in April. Recommendations are implemented by the National Marine Fisheries Service, and regulations are in effect from May 1 through April 30 of the following year.

The Salmon Technical Team (STT) helps the Council by summarizing data from the previous season, estimating the number of salmon in the coming season, and analyzing the effects of the Council's recommendations and amendments. The STT is made up of eight people drawn from state, Federal, and tribal fisheries management agencies, all of whom have technical expertise in salmon management. STT meetings are open to the public.

The Salmon Advisory Subpanel is made up of 17 members who represent commercial, recreational, and tribal interests, as well as a public representative and a conservation representative. These advisors play a large role in developing the Council's annual salmon management options in March and April. Each member serves a three-year term.

The Model Evaluation Workgroup (MEW) reviews and modifies models used to predict the effects of harvest on conservation objectives and allocation provisions. The MEW is made up of scientists from state, tribal, and Federal management agencies. MEW meetings are open to the public.

Challenges in Salmon Management

Correctly judging the size of salmon populations is a constant challenge. Salmon are affected by many natural and human-caused factors, so their numbers can vary widely. Estimating the effects of changes in ocean conditions and weather on salmon are difficult, but new research into the relationship between ocean environmental factors and salmon abundance show some promise. Other challenges include coordinating with international, regional, and local agencies and groups; judging the effects of these different regional fisheries on salmon stocks; recovering salmon under the Endangered Species Act; dividing the harvest fairly; and restoring freshwater habitat. Farmed salmon, bycatch, the use of hatcheries, the differences between wild and hatchery salmon, and the role salmon play as forage for predators such as killer whales are other hot topics relating to salmon. Genetic stock identification techniques are being investigated to see if differences in salmon stocks' ocean distribution can be used to improve management and reduce fishing impacts on stocks of concern.

Council Staff

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