

ALASKA SALMON HATCHERIES

CONTRIBUTING TO FISHERIES AND SUSTAINABILITY

Lorraine Vercesi

Alaska Department of Fish and Game — Division of Commercial Fisheries — P.O. Box 115526 Juneau, AK 99811-5526



ALASKA HATCHERY PROGRAM

The Alaska hatchery program was designed to increase salmon abundance and enhance fisheries, while protecting wild stocks. The program was built in response to depressed commercial fisheries, to meet the needs of the people of the state.

Fisheries enhancement projects are not permitted if they are anticipated to have a significant negative effect on natural production. Our fisheries enhancement program is designed to supplement natural production, not replace or displace it.

Alaska commercial salmon harvests have improved greatly since the inception of Alaska's hatchery program and natural stocks remain healthy (Figure 1).

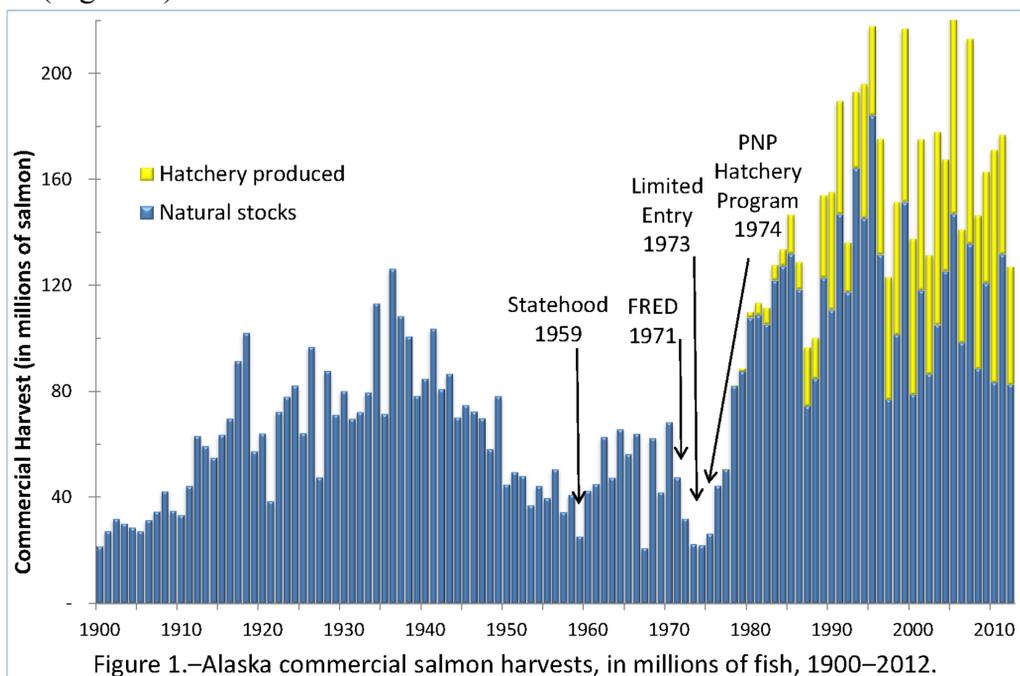


Figure 1.—Alaska commercial salmon harvests, in millions of fish, 1900–2012.

FISHERIES CONTRIBUTION

As Alaska's salmon return to their place of origin, they are available for harvest as common property in personal use, sport, subsistence, and commercial fisheries.

Hatcheries effectively contribute salmon to the commercial harvest and in turn can decrease fishing pressure on naturally-spawning salmon populations.

Hatchery contributions of adult salmon to commercial fisheries have been as much as 77 million fish, accounting for 48% of the total salmon harvested in common property commercial fisheries in 2010 (Figure 2).

In 2012, 37.2 million hatchery-produced salmon were harvested statewide in the commercial common property fisheries or 31% of the total commercial fisheries harvest (Figure 2).

Most hatchery production is pink salmon, with the majority harvested in Prince William Sound (PWS); and chum salmon that are harvested mainly in Southeast Alaska (SEAK).

In 2012, hatchery production accounted for 80% of the commercial fisheries harvest in PWS and 27% in SEAK.

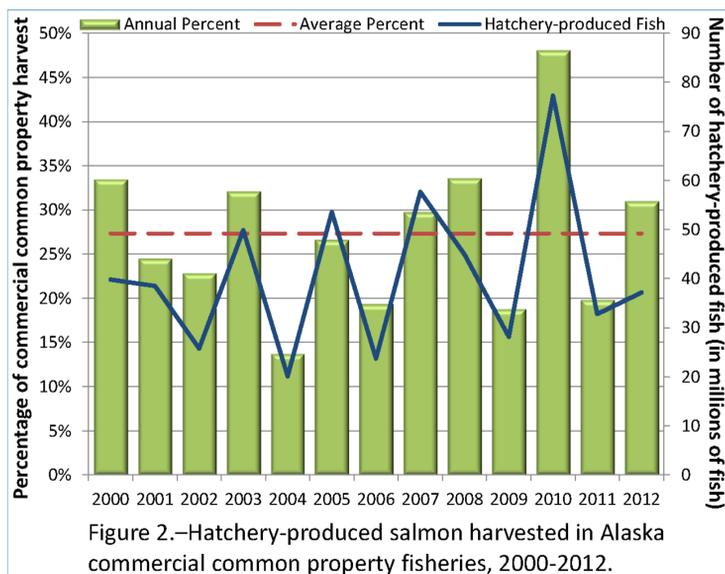


Figure 2.—Hatchery-produced salmon harvested in Alaska commercial common property fisheries, 2000–2012.

Salmon produced by Alaska's fisheries enhancement program remain wild. Our programs only protect the fish during the early juvenile life stage; if fish are not fit they will not return from the wild as adults.

By design, the hatchery program in Alaska has attempted to minimize interactions between natural and hatchery stocks by locating hatcheries away from significant naturally-occurring populations of salmon.

Only local stocks are permitted for use so that hatchery-produced fish are locally adapted and have local genetic profiles. Breeding or manipulation of stock characteristics is prohibited and large numbers of broodstock are used in order to maintain diversity, so that Alaska's fish remain wild.

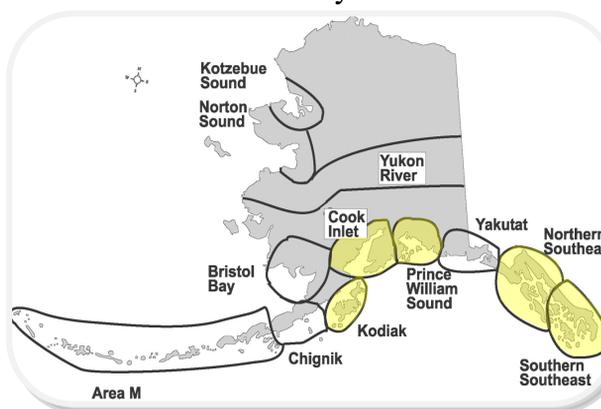


Alaska's salmon fisheries are managed with wild stock priority, to ensure adequate numbers of salmon reach natal freshwater spawning areas to maintain healthy, sustainable, naturally-spawning populations. ADF&G biologists estimate escapement goals for key wild stock systems and monitor returns to these systems annually.

Cooperative development of annual management plans guide hatchery operations, production, and harvest management of returns, lending to success in fisheries management and contribution while maintaining hatcheries' production goals.



In 2012, programs contributing primarily to commercial fisheries were conducted by hatcheries in five of the twelve designated aquaculture areas, along the coastline between Southeast Alaska and Kodiak. The number of active hatcheries by area were:



aquaculture areas, along the coastline between Southeast Alaska and Kodiak. The number of active hatcheries by area were:

- Southern Southeast - 8
- Northern Southeast - 9
- Prince William Sound - 6
- Cook Inlet - 4
- Kodiak - 2

Hatcheries, in general, operate at planned capacity, with the average number of eggs collected and annual releases consistent for the last decade (Figure 3).

Requests for increases in hatchery production are approached with consideration of potential risks to wild stocks. Wild-hatchery

salmon interactions studies are occurring, to better understand those relationships as they occur

in Alaska. As studies provide results, we will evaluate and decide if modifications to the program may be warranted.

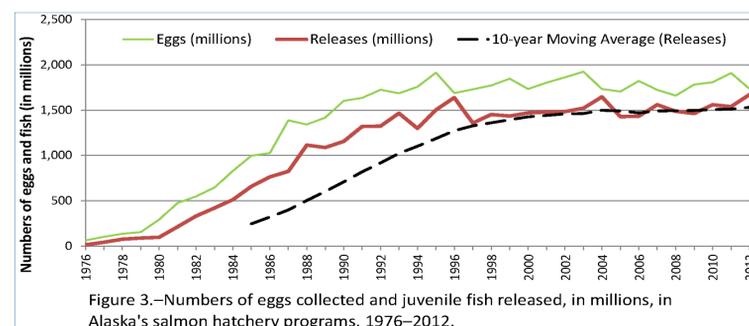


Figure 3.—Numbers of eggs collected and juvenile fish released, in millions, in Alaska's salmon hatchery programs, 1976–2012.