OREGON DEPARTMENT OF FISH AND WILDLIFE

Inland Fisheries – Hatchery Salmon Carcass Program
April 2021

Background.

Each year, hatchery produced salmon and steelhead return from the ocean to freshwater. The overwhelming majority of adults that are not captured in bay and river fisheries return to the hatchery where the juveniles were released. These returning fish, or a portion of them, are critical to continuing the hatchery program (termed broodstock) and therefore providing future returning fish. In many years however, the returns are sufficiently robust that there are more adults than are needed for broodstock. Given there are a number of potential beneficial uses for these surplus fish, including providing meals to Oregon Food banks, ODFW prioritizes[1] their use based on Oregon Statute and several ODFW Commission adopted policies.

During this annual prioritization, ODFW considers several key considerations to provide for the various beneficial uses of surplus hatchery adults without compromising the department's ability to meet egg collection goals, provide for Tribal ceremonial needs, prevent disease transmission, and meet Oregon water quality standards. These considerations are outlined below.

- *Ensuring that the hatchery run can be perpetuated for future generations.* To ensure long term sustainability and benefits, hatchery managers prioritize meeting egg collection goals for production, particularly during low adult return years.
- *Meeting tribal obligations*. Oregon code 496.201 directs ODFW to furnish salmon for Indian ceremonies to Confederate Coos, Lower Umpqua, Siuslaw Indian tribes, Cow Creek Band of the Umpqua Indians, Coquille Tribe, and the Burns Paiute Tribe for various cultural and ceremonial uses.
- *Flesh quality*: the quality of carcasses varies considerably based on multiple factors. Only high quality, food grade carcasses are considered for distribution to food banks.
- *Preventing disease transmission to wild populations* ODFW Fish Health policy directs the agency to review the disease history of a particular stock, current fish health testing results, geographic location and presence of disease agents in the receiving stream and watershed before placement of carcasses to minimize the risk of transmitting disease to wild stocks.
- *Nutrient needs of river systems*: Department staff and volunteers place thousands of pounds of salmon carcasses in Oregon waterways each year. This is a vital nutrient injection that mimics the historic ecology in these systems. However, in most Oregon watersheds, lack of marine derived nutrients is not thought to limit juvenile salmon production.
- *Ensuring compliance with permits*. Placement of fish carcasses from hatcheries into streams is regulated under a National Pollution Discharge Elimination System (NPDES) permit issued pursuant to ORS 468B.050 and the federal Clean Water Act. ODEQ has stipulated compliance can be achieved by:
    - Placing a maximum of 2500 pounds (~250 adults) per mile in the streams,
    - Placing carcasses generally between August and May in an agreed to list of streams and sections
    - Including a distinguishable mark applied when placed in areas that overlap with natural spawning areas, and
    - Adhering to disease control procedures, placement within basins they are collected, and other best management practices for reducing the risk of a disease outbreak in native fish populations.

[1] See page 4 and 5 for Priority list https://www.dfw.state.or.us/fish/hatchery/docs/hatchery_mgmt.pdf

During years of high adult returns, ODFW is required to reduce the percentage of carcasses overall that are placed to maintain adherence to the pounds/mile on spawning grounds to avoid violating the MOA. While the percentage placed may go up or down based on the number of returning fish, the effort to place the max volume allowed is consistent each year as fish are available within each specific basin.

Carcass sales:

Hatchery produced adults may be sold if significant surpluses are expected to return to Oregon facilities. The process to sell surplus includes development of multiple bid packages for an individual hatchery or a package for multiple hatcheries, a closed bid solicitation, and contract awards to highest bidder(s). Buyers bid packages for resell as whole fish to local restaurants, extraction of eggs, or as processed for fillets. Several buyers have developed agreements with the Oregon Food Bank that the flesh is processed, frozen and provided back to Oregon food bank for distribution and consumption. In exchange, buyers are able to retain the eggs to sell for compensation for processing and to increase profit interest. Bonneville Hatchery generates the most surplus adults. The location of Bonneville Hatchery and species it produces limits acceptable locations of carcass placement areas.

The department maintains a competitive bid process, and buyers must be registered as businesses. Prioritizing to Oregon businesses provides a benefit to in-state businesses to the detriment of out-of-state businesses; therefore, there is some risk that the law may violate the dormant commerce clause as opposed to falling within the 'market participant' exception.

During the past ten years, implementation of the priorities outlined in the Fish Hatchery Policy resulted in an annual average of 250,000 meals for needy Oregonians, 80,251 (51.3%) adults for nutrient enrichment, $300,000 of revenue for hatchery maintenance through sales to commercial fish processors (e.g., American Beauty, AmericanCandian, Fishhawk, among others), for the purpose of hatchery operations and capital maintenance, and 2,000 adult fish for educational outreach (Table 1).

Table 1. 10-year summary of beneficial use of surplus hatchery return adult salmon and steelhead (2010-2019).

Year	Release Enrichment	Sold	Food Banks	Education Other	Bury or Render	Total	% Release Enrichment
2019	56,395	14,445	5,542	828	15,006	92,216	61.2%
2018	54,765	9,974	8,682	316	16,193	89,930	60.9%
2017	62,426	6,526	15,379	1,533	19,726	105,590	59.1%
2016	71,520	14,794	24,852	1,161	23,467	135,794	52.7%
2015	93,982	50,525	29,455	2,026	24,298	200,286	46.9%
2014	101,954	65,010	55,881	3,149	23,983	249,977	40.8%
2013	82,085	41,748	22,918	3,372	22,300	172,423	47.6%
2012	94,212	36,659	24,667	2,379	22,918	180,835	52.1%
2011	78,458	43,820	23,858	2,677	22,807	171,620	45.7%
2010	106,712	51,272	41,924	2,700	28,039	230,647	46.3%
AVG	**80,251**	**33,477**	**25,316**	**2,014**	**21,874**	**162,932**	**51.3%**