



ODFW HATCHBOX LEGISLATIVE REPORT 2018-2019

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This report describes the activities and progress of the Oregon Department of Fish and Wildlife (ODFW) related to the remote hatchbox program from October 2018 through September 2019. ORS 496.458 details the remote hatchbox program rules.

Hatchboxes are small-scale fish egg incubation devices generally placed along streams. Hatchboxes are used in cases where egg to fry survival is a limiting factor, where fish populations have been extirpated and need to be reintroduced due to limited ability for natural reestablishment (e.g. above a passage barrier, isolated basin), or as a tool to involve and educate the public on salmon and trout conservation. This limits the number of locations that are appropriate for hatchbox use as other environmental factors such as rearing habitat, fish passage, and water quality are usually the primary bottleneck. In cases where passage barriers are planned to be or have been removed, the use of hatchbox programs can help to “jump start” natural production and subsequent returns to the waterway. However, the preferred strategy in most cases allows for naturally returning wild fish to reestablish a population above the barrier. The decision to employ a hatchbox strategy undergoes significant agency review and approval, to ascertain if a hatchbox program would be the most effective and efficient strategy.



In the past, hatchboxes were a popular hatchery tool used by ODFW and STEP volunteers to try to recover or augment populations of coastal Coho and Chinook salmon, as well as steelhead trout. The production from hatchboxes peaked in late 1980's with more than 10,000,000 unfed fry from at least nine different species released in every STEP district across the state. Research and monitoring efforts in the early 2000's brought into question the benefits of these hatchbox releases. As a result, releases of unfed fry decreased to 1.6 million by 2004 and currently only 64,000 unfed fry from Fall Chinook are released from three hatchboxes in the Coos-Coquille and South Coast fish districts (Table 1). In 2016, due to storm damage and compliance with Hatchery and Genetic Management Plans (HGMPs) several hatchbox programs were discontinued. Currently, hatchbox programs support ODFW STEP hatchery programs. In terms of public education, hatchboxes can have a tangible and positive benefit. Hatchboxes can improve community awareness, promote volunteer involvement, and increase education.

Federal requirements under the Endangered Species Act (ESA) have influenced management of hatchery and hatchbox related releases. Many populations of anadromous fish in Oregon, the primary species of hatchbox projects, are listed under the ESA. During the mid to late 2000's a moratorium on all production programs was in place while ODFW finalized policies and HGMPs. HGMPs provide an assessment of the risk to wild fish populations from ODFW hatchery operations. With HGMPs in place, any expansion of hatchery or hatchbox production or operations undergoes a review and approval process, before incorporation in to the HGMP for that area.

In order to comply with these policies, between 2005 and 2007 most districts eliminated or reduced unfed fry releases, or transferred the production to a hatchery facility (Table 2). The majority of ODFW hatcheries rear fish for several months until they reach the smolt or pre-smolt stage. This additional rearing decreases hatchery-wild fish interactions among juveniles and improves survival rates of released fish. This approach also allows the larger fish to be fin clipped or otherwise marked. Marking hatchery fish, allows them to be differentiated from wild fish when they are harvested by anglers in selective fisheries, monitored by staff, and removed from the system prior to spawning where trapping facilities exist.



Coastal Multi-Species Conservation and Management Plan

The Coastal Multi-Species Conservation and Management Plan (CMP) was adopted by Oregon Fish and Wildlife Commission in June 2014 to address conservation and management of anadromous salmonids on the Oregon coast from Cape Blanco to Seaside. The CMP addresses both conservation and utilization of spring and fall Chinook salmon, summer and winter steelhead, Chum salmon and cutthroat trout. Under this plan, the majority of the current unfed fry releases in this area are identified for phase out because of their limited benefits to the fisheries and the risk to wild populations. The remaining releases will be reviewed to determine if they are meeting program goals and may be phased out in the future if found ineffective. More information on the CMP can be found on-line at http://www.dfw.state.or.us/fish/CRP/coastal_multispecies.asp.

Rogue District and Senate Bill 472

In 2009, Senate Bill 472 was enacted and directed ODFW to evaluate the use of a hatchbox program in the Rogue River Basin. As required in ORS 496.458, hatchbox programs must be scientifically sound and consistent with the Oregon Plan for Salmon and Watersheds. On the Rogue, ODFW benefits from 30 years of research conducted during construction of the Army Corps of Engineers dams in the watershed. Based on that research, egg to fry survival is not limiting factors for salmon and steelhead on the Rogue.

In response to Senate Bill 472, ODFW proposed three locations on the Rogue where hatchboxes could serve as an effective tool in fish management: Evans Creek (fall Chinook hatchbox program); Jackson Creek (summer steelhead program); and the upper Applegate watershed above Applegate Dam (winter steelhead program). These are sites where production is either limited or not happening currently because of barriers to fish migration.

The barriers in Evans Creek were removed in 2015 under a project led by Water Watch and the Geos Institute. Fall Chinook are now able to fully utilize habitat in Evans Creek. With naturally produced fish seeding the habitat, hatchbox releases are no longer needed to jumpstart production in Evans Creek. No hatchboxes are currently being operated in Jackson Creek and improvement to fish passage remains a priority. In 2019, spawning and outmigrant steelhead fry were documented in Jackson Creek above a major fish barrier for the first time in over 40 years. No stakeholder group has shown interest in operating hatchboxes above Applegate Dam. ODFW has been releasing winter steelhead presmolts above Applegate Dam. Presmolts were released in October 2017 and 2018 by STEP and volunteers.

Table 1. Current Hatchbox Unfed Fry Releases

District	Release Location (# programs)	Species	Number Released 2018-19	Program Start Date	Management Objective
Coos-Coquille	NF Coquille	Fall Chinook	0	1981	Payback for broodstock collection
Coos-Coquille	SF Coquille	Fall Chinook	0	1981	Payback for broodstock collection
South Coast	Cedar Cr.	Fall Chinook	0	1986	Education
Total Fall Chinook Fry Releases					
Total Coho Eyed Eggs Releases			0		
Total Spring Chinook Fry Releases			0		
Total Unfed Fry Releases			0*		

*Due to various reasons production goals were not met and anticipated hatchbox releases did not occur during this period.

Table 2. Hatchboxes Releases Converted to Hatchery Releases (converted in past 15 years)

District	Release Location	Species	Number Released 2018-19	Program Start Date	Management Objective
Mid Coast	N. Depoe Bay Cr.	Coho	16,300 pre-smolt (100% marked)	1981	Fishery Enhancement & Education
Mid Coast	Munsel Creek	Coho	0 fed fry (100% marked)	1994	Fishery Enhancement & Education
Coos-Coquille	WF Millicoma	Fall Chinook	Programs ended 1,119,054 pre-smolt (100% marked)	1980's	Fishery enhancement.
Coos-Coquille	Coos Bay	Fall Chinook			
Coos-Coquille	Morgan Cr.	Fall Chinook			
Coos-Coquille	Millicoma IC	Fall Chinook			
Coos-Coquille	Noble Cr.	Fall Chinook			
Coos-Coquille	Coquille HS	Fall Chinook	3,889 pre-smolt (100% marked)	1990's	Fishery Enhancement & Education
Total Coho Reared			16,300		
Total Fall Chinook Reared			1,122,943		
Total Number Reared			1,139,243		