



ODFW HATCHBOX LEGISLATIVE REPORT 2013-2014

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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 in 2013-2014. The report is required by SB 130 and ORS 496.458(2)(d). The three primary requirements of the program are:

- ORS 496.458(2)(a) Identify sites in tributaries that are suitable for remote hatchboxes;
- ORS 496.458(2)(b) Adopt rules necessary to implement the remote hatchbox program;
- ORS 496.458(2)(c) Investigate the potential of producing remote hatchboxes through an inmate work program of the Department of Corrections.

Hatchboxes are small-scale fish egg incubation devices generally placed along streams. The newly hatched unfed fry are released as a means of attempting to augment fish populations. In the past, hatchboxes were a popular hatchery tool used by Department volunteers to try to recover 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 species released in every STEP district across the state. However in the last few years the benefit of unfed fry releases has come into question. Releases of unfed fry had decreased to 1.6 million by 2004 and currently only 438,000 unfed fry from three species are released from twenty hatchboxes in three districts.



A moratorium on all production programs was in place during the mid to late 2000's while ODFW policies and the Hatchery and Genetics Management Plans (described below) were finalized. In order to comply with the new policies between 2005 and 2007 most districts eliminated or reduced unfed fry releases. 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 results in fish that can be differentiated from wild fish and subsequently be harvested by anglers, monitored by staff, and removed from the system prior to spawning where trapping facilities exist. Hatchboxes are now primarily used to support ODFW STEP hatchery programs.

Hatchboxes are used in cases where egg to fry survival is a limiting factor, where a population has been extirpated and needs 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 greatly limits the number of locations that are appropriate for hatchbox use as other environmental factors such as habitat, fish passage, and water quality are usually the primary bottle neck. In cases where long standing barriers are planned to be removed, the use of hatchbox style programs can be used 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 run above the barrier. The decision to employ a hatchbox strategy undergoes significant agency review and approval, to ascertain if the strategy would be the most effective and efficient.

In terms of public education, hatchboxes do have a tangible and positive benefit. Hatchboxes improve community awareness, promote volunteer involvement, and increase education. Most recently one a hatchbox projects near Tillamook Bay was recognized nationally by Field and Stream magazine for their "Heroes of Conservation" award. The story can be found at <http://www.fieldandstream.com/heroes/conservation/finalists/gordon-and-terri-southwick>

Federal requirements under the Endangered Species Act (ESA) have influenced management of all hatchery and hatchbox related releases. Many populations of anadromous fish in Oregon, the primary subject of hatchbox projects, are federally listed under the ESA. Hatchery and Genetics Management Plans (HGMPs) have been developed to provide an assessment of the risk to wild fish populations from ODFW hatchery operations. Since HGMPs are in place, any expansion of hatchery or hatchbox, operations would need to be reviewed, approved and added to the current HGMP for that area.

Coastal Multi-Species Conservation and Management Plan

The Coastal Multi-Species Conservation and Management Plan (CMP) was adopted by ODFW in June 2014 to address conservation and management of anadromous salmonids (salmon, steelhead and trout) on the Oregon coast from Cape Blanco to Seaside. The CMP addresses both conservation and utilization of six distinct groups of fish species. 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 for their effectiveness at meeting program goals and could 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 Basins. 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, spawning gravel and egg to fry survival are not limiting factors for salmon and steelhead on the Rogue.

Under 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 at Evans Creek are scheduled to be removed in 2015 under a project led by Water Watch and the Geos Institute. Fall chinook will be able to fully utilize habitat in Evans Creek beginning with next year's spawning run, with naturally produced fish seeding the habitat. Hatchbox releases are no longer needed to jumpstart production in Evans Creek.

Current Hatchbox Unfed Fry Releases

District	Release Location (# programs)	Species	Number Released 2013-14	Program Start Date	Management Objective
North Coast	Miami River	Fall Chinook	48,473	1985	Fishery Enhancement
North Coast	Kilchis River	Fall Chinook	48,473	1985	Fishery Enhancement
North Coast	Wilson River (x2)	Fall Chinook	62,992	1989	Fishery Enhancement
North Coast	Trask River	Spring Chinook	16,417	1987	Fishery Enhancement
North Coast	Trask River (x2)	Fall Chinook	62,787	1987	Fishery Enhancement
North Coast	Tillamook River	Fall Chinook	24,300	1987	Fishery Enhancement & Education
North Coast	Nestucca Basin	Spring Chinook	34,280	2000	Fishery Enhancement
North Coast	Nestucca Basin	Fall Chinook	25,092	2000	Fishery Enhancement
Coos-Coquille	Catching Slough (x4)	Coho	26,317	2012	Research of egg injection
Coos-Coquille	NF Coquille	Fall Chinook	16,178	1981	Payback for broodstock collection
Coos-Coquille	SF Coquille	Fall Chinook	31,387	1981	Payback for broodstock collection
South Coast	Cedar Cr.	Fall Chinook	11878	1986	Education
Total Fall Chinook Fry Releases			331,560		
Total Coho Eyed Eggs Releases			26,317		
Total Spring Chinook Fry Releases			50,697		
Total Unfed Fry Releases			408,574		

Current Hatchboxes Where Fry Are Reared At Hatchery Prior To Release (converted in past 5-10 years)

District	Release Location	Species	Release goal	Program Start Date	Management Objective
Mid Coast	N. Depoe Bay Cr.	Coho	15,000 smolt (100% marked)	1981	Fishery Enhancement & Education
Mid Coast	Munsel Creek	Coho	10,000 fed fry (100% marked)	1994	Fishery Enhancement & Education
Umpqua	Calapooya	Fall Chinook	300,000 pre-smolt (>75% marked)	early 90's	Fishery enhancement.
Coos-Coquille	WF Millicoma	Fall Chinook	2,356,550 pre-smolt (100% marked)	1980's	Fishery enhancement.
Coos-Coquille	Coos Bay	Fall Chinook			
Coos-Coquille	Ferry Cr.	Fall Chinook			
Coos-Coquille	Millicoma IC	Fall Chinook			
Coos-Coquille	Noble Cr.	Fall Chinook	20,000 pre-smolt (100% marked)	1990's	Fishery Enhancement & Education
Coos-Coquille	Coquille HS	Fall Chinook			
Total Coho Reared			25,000		
Total Fall Chinook Reared			2,676,550		
Total Number Reared			2,701,550		