



## ODFW HATCHBOX LEGISLATIVE REPORT 2008-2012

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This report describes the activities and progress of the Oregon Department of Fish and Wildlife (ODFW) in regards to the remote hatchbox program from 2008-12. 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 bolster depressed 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 565,000 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. Now in many cases the use of hatchboxes has been redirected to support STEP hatchery programs. These 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.

Success in using hatchboxes techniques, and the resulting unfed fry release to rebuild anadromous fish populations in the Pacific NW has generally been poor and some recent research suggest their offspring may negatively impact wild spawning adults. In general, and due to policy direction, hatchboxes and the resulting unfed fry, are primarily 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, in many cases naturally returning wild fish will reestablish a run and thus passing of wild fish above the barrier is a more appropriate method. The addition of unfed fry from a hatchbox in locations that are not appropriate may increase competition with wild stocks or could lead to a decrease in the fitness of the wild run which is why each project undergoes significant agency review and approval.

Hatchboxes can have a positive benefit in terms of public education. Hatchboxes improve community awareness, volunteer involvement, and increased education. Most recently one of the hatchbox projects was recently recognized nationally as "Conservation Heroes" by Field and Stream Magazine. 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.

## 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. There was no evidence from that research that spawning gravel or egg to fry survival is a primary factor limiting the numbers of our salmon and steelhead.

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 only proposal that has received interest is the Evans Creek project where ODFW proposed jump-starting fall Chinook production when the barriers are removed and full passage is restored. ODFW has assisted Senator Atkinson's office and the Coastal Conservation Association (CCA) in making contacts with landowners adjacent to the dams on Evans Creek. No project has begun as of this report deadline.

### Current Hatchbox Unfed Fry Releases

District	Release Location (# programs)	Species	Release goal	Program Start Date	Management Objective
North Coast	Miami River	Fall Chinook	50,000	1985	Fishery Enhancement
North Coast	Kilchis River	Fall Chinook	50,000	1985	Fishery Enhancement
North Coast	Wilson River (x2)	Fall Chinook	30,000	1989	Fishery Enhancement
North Coast	Trask River (x2)	Spring Chinook	40,000	1987	Fishery Enhancement
North Coast	Trask River (x3)	Fall Chinook	75,000	1987	Fishery Enhancement
North Coast	Tillamook River(x3)	Fall Chinook	50,000	1987	Fishery Enhancement & Education
North Coast	Nestucca Basin (x2)	Spring Chinook	60,000	2000	Fishery Enhancement
North Coast	Nestucca Basin (x2)	Fall Chinook	50,000	2000	Fishery Enhancement
Coos-Coquille	Fourth Creek	Coho	50,000	2010	Establish Coho above dam
Coos-Coquille	NF Coquille	Fall Chinook	50,000	1981	Payback for broodstock collection
Coos-Coquille	SF Coquille	Fall Chinook	50,000	1981	Payback for broodstock collection
South Coast	Cedar Cr.	Fall Chinook	10,000	1986	Education and maintain run in Euchre Creek.
Total Fall Chinook Fry Releases			415,000		
Total Coho Fry Releases			50,000		
Total Spring Chinook Fry Releases			100,000		
<b>Total Unfed Fry Releases</b>			<b>565,000</b>		

### Recently Discontinued Hatchbox Unfed Fry Releases

District	Release Location	Species	Release goal	Program Date	Management Objective
South Coast	Indian Cr.	Fall Chinook	75,000	1986-2012	Fishery Enhancement

### 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
MidCoast	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	1,800,000 pre-smolt (>30% 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			2,120,000		
<b>Total Number Reared</b>			<b>2,145,000</b>		