

Oregon Lower Columbia River Recovery Plan Annual Report Card: 2016

This annual report card is an abbreviated status report that reviews the most recent research, monitoring and evaluation data for Lower Columbia River Salmon and Steelhead. Viable salmonid population (VSP) metrics, where they exist, are used to compare against the populations status at the time the Plan was implemented to determine whether status has improved, remained the same or declined. The annual report card also documents formal adaptive management decisions, recommendations and actions in regards to achieving plan goals under the delisting scenarios in the plan. Detailed information regarding VSP metrics and yearly plan goals are found at <http://www.odfwrecoverytracker.org/>.

Coho: (ESU wide)

Wild adult coho abundance slightly increased across the ESU as compared to 2015 and was affected by a moderate marine survival rate. At the population level, abundance varied from 3%-77% of the yearly abundance goals. The Upper Gorge/Hood River population continues to exhibit extremely low abundance levels and a small fraction of the yearly abundance goals. Scale analysis of unmarked adult Hood River coho range from 83-94% unmarked hatchery fish from adult carcass sampling of Neal Creek, the primary spawning tributary in the Hood River population.

Generalized Random-Tessellation Stratified (GRTS) sampling of the direct Columbia River tributaries in the Columbia River gorge and Hood River is complicated by patchy distribution within a very limited number of spawning miles within the sampling frame. These issues are potentially reducing our confidence in VSP monitoring results and we are currently reviewing the monitoring methods and options for these areas.

The 2016 LCR coho harvest for ocean and Columbia River fisheries (9.4%) remained below the NOAA harvest guidelines of 18% for all populations that are subject to the interim evaluation criteria.

Under the interim measurable criteria for biological viability, the Sandy and Hood will not pass the abundance/productivity goals, the Clatskanie, Scappoose, Clackamas, Sandy and Hood will not pass the spatial structure goals and the Lower Gorge and Hood will not pass the diversity goals. Examination of average coho abundance (2002-2009 v. 2010-2016) shows all primary populations increasing, with the exception of the Hood River population.

Fall Chinook: (ESU wide)

Abundance based surveys began for Clatskanie, Scappoose, Sandy and Clackamas populations in 2012. Index counts go back further in the Clatskanie and Sandy populations. To date, there is not enough yearly abundance estimates to produce yearly abundance goals in which interim measurable criteria for biological viability can be assessed, but should be available in 2018. Current trends from 2013-2016 remain similar amongst the years and are at extremely low levels. The Clatskanie and Scappoose populations continue to have abundance levels near 0. The Clackamas population has varied from 130-

700 adults and spawning is limited by temperature and flow until October. Currently, Sandy River fish abundance estimates are problematic. Spring, fall and late-fall chinook spatially and temporally overlap when spawning. Staff have collected otoliths and genetic material from post spawners but funding has not been secured to process these samples. Therefore there are no current estimates of abundance at this time. There are no abundance estimates for Hood River natural origin fall chinook since the removal of Powerdale Dam.

Harvest data for LCR fall chinook is estimated at the ESU level for ocean and mainstem Columbia River (below Bonneville Dam). The ESU is subject to a yearly harvest rate under a harvest matrix referred to as “abundance based management”. The harvest rate, at the ESU level, was calculated for ocean and Columbia River fisheries (36%) and below the allowable 2016 harvest rate of 38% for all populations, with the possible exception of Hood River stocks. Any potential additional harvest upstream of Bonneville Dam is not currently calculated, and potentially exceeds the yearly harvest rate cap.

Late-Fall Chinook: (Sandy)

No data are reported for any of the recommended metrics, nor is harvest estimated. This population is listed as a low risk of extinction, but no methodology is finalized to assess risks (see explanation under Sandy Fall Chinook).

Spring Chinook: (Clackamas, Sandy and Hood)

2016 adult counts for the Clackamas and Sandy have been and continue to trend well above the yearly abundance goal for these two populations. For the Hood River population, 2016 marks the first year since the removal of Powerdale Dam (2010) that a natural origin abundance estimate was determined (300 spawners). Currently, there is not enough yearly abundance estimates to produce yearly abundance goals in which interim measurable criteria for biological viability can be assessed.

Harvest data for LCR spring chinook is estimated at the ESU level for ocean, mainstem Columbia River and tributaries. The ESU is subject to a yearly combined ocean and freshwater harvest rate of 25%. The harvest rate, at the ESU level, was calculated and below the allowable harvest rate for years 2010-2015. Clackamas spring chinook are part of the Upper Willamette ESU and harvest (7.4%) remains below the evaluation threshold of 15% for freshwater fisheries.

Winter Steelhead: (Clackamas, Sandy, Hood)

Adult abundance in the Clackamas population has continued to increase over the last 3 years. Adult abundance in the Sandy population has increased every year since plan adoption. The Hood River population followed most other statewide populations and decreased in abundance in 2016. Under the interim measurable criteria for biological viability, the Hood River population will not meet the diversity goal.

Summer Steelhead: (Hood)

2016 marks the first year since the removal of Powerdale Dam that natural origin abundance estimates were determined (174 spawners). Currently, there is not enough yearly abundance estimates to produce yearly abundance goals in which interim measurable criteria for biological viability can be assessed.

Habitat Restoration and Effectiveness Monitoring-

ESU wide restoration goals were developed in 2014 based on best available science and modeled in threat reduction scenarios to reduce tributary habitat mortality to a level that is consistent with recovery plan mortality rates for each population, under the delisting scenario. The habitat restoration targets are useful as a starting point to visualize the relative amount and types of restoration work needed in tributaries and when or if met, all implementers are encouraged to continue to implement additional projects until the biological listing factors for each population are fully met. Figure 1 lists habitat restoration accomplishments by population for 2016.

Figure 1. Habitat Restoration Projects Completed within the ESU During 2016

Population	Culverts Replaced (#)	Water Conserved(cfs)	Flood Plain Enhancement (acre)	LWD placed (mile)	Irrigation Improvement Projects (#)	Side Channel Creation (mile)	Alcove Creation (m2)	Riparian Planting (mile)
Young's Bay	1			.5				.13
Big Creek								.25
Clatskanie	2			1.81		.56		1.75
Scappoose								1.75
Clackamas	8			4.72			4856	8.6
Sandy				3.24		1.67	56	2.5
Lower Gorge								
Upper Gorge								
Hood				1.0	7			.56
Total	11			11.27	7	2.23	4912	15.54

According to the plan, the schedule for completing habitat restoration is listed as within 15 years. We are now 7 years since plan adoption. If practitioners were on track to meet restoration goals over a 15 year period, then 47% of the goals should be achieved in each population. The Young's Bay and Sandy populations are on track to meet most of the restoration goals. The remaining populations vary from 0%-32% of the goals.

Key accomplishments from local restoration practitioners are the East Fork Restoration Potential analysis and the Water Conservation Strategy from the Hood River Watershed Group, formalization of the Clackamas Partnership developing a strategic action plan under an OWEB FIP capacity grant and the inception of the Scappoose Bay Partnership coming together to develop a strategic action plan using the limiting factor analysis completed in 2014.

Adaptive management-

None at this time.

Research Monitoring and Evaluations Addendums:

While not adaptive management per se, monitoring of fish populations is critical to a yearly assessment of the effectiveness of plan actions and prioritization of limited monitoring funds. The following actions are recommended for implementation:

- ODFW Corvallis Research to investigate methodology for determining fall chinook from late-fall chinook and then collect the needed information during the entire run timing to obtain abundance estimates.
- ODFW East Oregon Research to continue working with the CTWS to genotype returning adult summer and winter steelhead to better define the spatial and temporal overlap of steelhead in the Hood River basin.
- ODFW Corvallis Research and the respective ODFW fish districts to review and recommend changes to monitoring of coho adult spawning populations in the Lower Gorge and Hood River populations.

Current and past reports as well as presentations and a host of LCR Recovery Plan information can be found at: http://www.dfw.state.or.us/fish/CRP/lower_columbia_plan.asp.

Recovery Plan Adopted: August 2010

Date Reviewed: December 2017