ANNUAL PROGRESS REPORT FOR 2012
ROGUE RIVER SPRING CHINOOK SALMON CONSERVATION PLAN
ROGUE WATERSHED DISTRICT
OREGON DEPARTMENT OF FISH AND WILDLIFE

INTRODUCTION

In September of 2007, the Oregon Fish and Wildlife Commission formally adopted a conservation plan for spring Chinook salmon in the Rogue Species Management Unit (SMU). This plan calls for the Oregon Department of Fish and Wildlife (ODFW) to complete annual reports that will include, at least, the following elements: (1) SMU status in relation to the desired status and conservation status statements embedded in the conservation plan, (2) summaries of annual efforts to monitor SMU attributes, (3) implications of any research or evaluation projects completed during the reporting year, (4) any updated assessments of population attributes completed during the reporting year, and (5) presentation of the rationale associated with any changes in management actions made during the reporting year.

This document is the sixth annual report to be completed. A copy of the conservation plan, along with annual progress reports previously completed, is available on the ODFW website at: http://www.dfw.state.or.us/fish/CRP/rogue_spring_chinook_conservation_plan.asp

MONITORING RESULTS AND SMU STATUS

Monitoring of SMU attributes is designed to produce metrics that are to be used to characterize the current status of the SMU. All possible monitoring needed to update SMU status was completed by ODFW in 2012, with results presented in Table 1 and Table 2. Monitoring results that most differed in 2012, as compared to the previous ten years, included a lower percentage of hatchery fish among natural spawners.

The ability to monitor naturally produced spring Chinook salmon changed significantly with the removal of Gold Ray Dam in 2010 and the allied loss of the fish counting station. Beginning in 2011, all monitoring is now based on counts of spring Chinook salmon carcasses found (1) in the Rogue River between Cole M. Rivers Hatchery and the historical pool upstream of Gold Ray Dam and (2) in the lower mile of Big Butte Creek. These locations are the primary spawning areas of naturally produced spring Chinook salmon in the Rogue River Basin.

ODFW used results from the spawner surveys to hindcast the number of naturally produced spring Chinook salmon that would have passed Gold Ray Dam in 2012; had not the dam and fish counting station been removed. During the 2004-2010 surveys of fish that spawned in September, carcass counts of naturally produced fish averaged 15% (95% confidence interval = ±2%) of the number of live counterparts that passed Gold Ray Dam. This relationship will be used to estimate the number of live fish that passed the historical site of Gold Ray Dam, until some better estimation methods can be developed through future analyses or research. However, no analogous methods could be devised to hindcast the percentage of jacks in the run and adult migration timing at Gold Ray Dam. These two management criteria for naturally produced spring Chinook salmon in the Rogue SMU were thus abandoned; beginning in 2011.

An estimated 14,400 naturally produced spring Chinook salmon passed the historical site of Gold Ray Dam during 2012. This estimate was derived from the recovery of 2,065 carcasses of unmarked fish and 95 carcasses of unexamined fish (all assumed to be naturally produced).

Table 1. Comparisons of singular elements of current and desired status for naturally produced spring Chinook salmon in the Rogue Spring Chinook Salmon Species Management Unit. Desired status elements are described in the conservation plan, and the plan also called for the description of current status based on average values noted during the previous ten years (where available). Two conservation plan elements of desired status (migration timing and age structure) can no longer be estimated as a result of the removal of Gold Ray Dam in 2010.

Status Element	Desired Status	Current Status	2012 Estimate
Abundance (at Gold Ray Dam)	**≥15,000**	**8,966 (2003-2012)**	**14,400[a]**
Sept. Spawner Distribution[b] (% above Shady Cove)	**≥40%**	**61% (2004-2012)**	**64%**
Spawner Composition (% hatchery)	**≤15%**	**11% (2004-2011)**	**5%**

[a] *Metric estimated as described in the text.*
[b] *This element only covers September spawners because October spawners cannot be distinguished from fall Chinook salmon that spawn in overlapping areas.*

Table 2. Status of the Rogue Spring Chinook Salmon Species Management Unit as compared to adopted conservation criteria. Conservation criteria are based on a three year running average, except where noted. Two conservation plan elements of desired status (migration timing and age structure) can no longer be estimated as a result of the removal of Gold Ray Dam in 2010.

Status Element	Conservation Criterion	Conservation Status (years)
Abundance[a] (at Gold Ray Dam)	**<3,500**	**14,400 (2012)[b]**
Abundance (at Gold Ray Dam)	**<5,000**	**11,299(2010-2012)**
Sept. Spawner Distribution[c] (% above Shady Cove)	**<30%**	**61% (2010-2012)**
Spawner Composition[d] (% hatchery)	**>25%**	**5% (2011-2012)**

[a] *During any single year.*
[b] *Metric estimated as described in the text.*
[c] *This element only covers September spawners because October spawners cannot be distinguished from fall Chinook salmon that spawn in overlapping areas.*
[d] *Average during two consecutive years.*

COMPLETED MANAGEMENT ACTIONS

The Oregon Fish and Wildlife Commission adopted Alternative 9, outlined in the conservation plan, as the preferred suite of management strategies to be employed by ODFW. Some of the relevant actions, completed by ODFW during 2012, are briefly discussed below. A tabulated progress summary related to management actions described in the conservation plan can be found at the end of this document in Appendix Table 1.

Management Strategy 9.1

1. Most of the action items within this management strategy relate to seasonal operations of Lost Creek Reservoir by the United States Army Corps of Engineers (USACE). ODFW worked cooperatively with the USACE to identify and implement reservoir release strategies designed to enhance naturally produced spring Chinook salmon. With the retirement of long time research biologist Tom Satterthwaite, ODFW participation in the management of reservoir releases was conducted by Rogue District staff for much of the year. A weekly conference call was implemented to facilitate communication. ODFW provided an orientation session on fish needs to dam operations staff and participated in the Corps' annual winter management coordination meeting.

2. A partial spanning dam on the mainstem Rogue supplies water for the Gold Hill Irrigation District just upstream of Nugget Falls near Gold Hill. ODFW assisted Water Watch in developing and implementing a grant application for technical assistance to improve the dam, canal, and fish return facility. The primary benefit is for downstream migrating juvenile fish, although some upstream passage benefits are possible as well. Alternatives are being developed by the contracting engineer (Action 1.13 in the conservation plan).

3. ODFW continued to participate in a wide variety of habitat protection activities (Action 1.14 in the conservation plan), including the following:

- ODFW assisted the City of Shady Cove with ongoing work to develop a riparian ordinance.
- The City of Medford received approval from DEQ for riparian planting to offset thermal impacts at the Waste Water Treatment Plan just downstream of Touvelle State Park. ODFW has provided input to Freshwater Trust personnel serving as the contractor for the planting program.
- Per statute, ODFW participated in a process reviewing certain municipal water rights on the Rogue River and Big Butte Creek. Conditions are placed on use of these rights to ensure sustainability of native fish species.

4. ODFW continued to implement projects to encourage good stewardship by streamside landowners, primarily through activities in the Salmon Trout Enhancement Program (Action 1.15 in the conservation plan).

Management Strategy 9.2

Work continued on the pilot project aimed at recruiting more spawning gravel for spring Chinook salmon in Big Butte Creek. Large conifers with root wads were placed directly in the stream channel in an area upstream of Crowfoot Falls in 2010. A site visit during the summer of

2011 failed to find improved spawning habitat but the trees provided excellent habitat for juvenile salmonids. In 2012 ODFW received funding from the Fish Restoration and Enhancement Program (R&E) to place spawning gravel in the creek. A total of approximately 150 cubic yards was placed in August 2012 just upstream of the large wood project. Boulder clusters were also placed with the spawning gravel.

Chinook spawners were observed using the placed gravel in September and October. Painted rocks were set out at the project this fall after the end of the chinook spawning period, and almost all are still present despite a sizable high flow peaking at 3000 cfs near the mouth of Big Butte Creek in early December. An additional 75 yards of gravel has been stockpiled at the project site to be added to the creek in future years (Action 2.2.4 in the conservation plan).

Management Strategy 9.3

ODFW did not complete any work related to the specific action called for in the conservation plan. However, the agency continued to develop an Aquatic Invasive Species program that should help decrease the chance that non-native predatory fish could be introduced in the Rogue River Basin. A full time technician is stationed in the Rogue Watershed District office as of 2012.

Management Strategy 9.4

The process for public review of angling regulations took place in 2012. The only regulation change affecting spring chinook is the change of one zone boundary from the Gold Ray dam site to Fishers Ferry Boat Ramp. The change was implemented solely to have a clearly identifiable site as a boundary, as well as to have uniform regulations through an entire drift (Touvelle Ramp to Fishers Ferry Ramp).

Management Strategy 9.5

ODFW did not complete any work related to the only action item that was relevant to this management strategy during 2012.

OTHER

1. No new research or evaluation projects began in 2012. However, ODFW completed the third year of sampling needed to eventually generate pre-season forecasts for returns of naturally produced spring Chinook salmon. This sampling requires that lengths and scale samples be collected in order to estimate the age of naturally produced fish that spawn in each year. At least six years of sampling will be needed in order to develop the sibling relationships that are needed to generate pre-season forecasts.

2. ODFW surveys near the former Gold Ray site confirmed that some spring Chinook salmon spawned in the former reservoir as 24 redds were observed in late September. Redd counts in the reservoir site peaked at 84 during late October but it was not possible to determine whether these redds were constructed by fall Chinook salmon or spring Chinook salmon.

Appendix Table 1. Summary of progress related to management actions described in the Rogue Spring Chinook Salmon Conservation Plan, which was adopted by the Oregon Fish and Wildlife Commission in September 2007. The "X" symbol means that ODFW completed work on an action that requires annual attention. The "Y" symbol means that ODFW completed the action and that no further work is needed. The "Z" symbol means that ODFW completed work on an allied topic that complemented the action item included in the conservation plan. The "--" symbol means that no ODFW work was completed on the action item during the year. The "n/a" symbol means that the action was not applicable or relevant to the specific year.

Action	Year of completion for action item								
Item	2007	2008	2009	2010	2011	2012	2013	2014	2015
				MANAGEMENT STRATEGY 9.1					
1.1	X	X	X	X	X	X			
1.2	Y								
1.3	X	X	X	--	X	--			
1.4	Y								
1.5	X	X	X	X	X	X			
1.6	X	X	X	X	X	X			
1.7	X	X	X	X	X	X			
1.8	Y								
1.9	X	X	X	X	X	X			
1.10	Y								
1.11	Y								
1.12	X	X	X	X	X	X			
1.13*	X	X	X	Y					
1.14	X	X	X	X	X	X			
1.15	--	X	X	X	X	X			
				MANAGEMENT STRATEGY 9.2					
2.1	--	X	X	--	--				
2.2	--	X	X	--	--				
2.3	--	--	--	--	Y				
2.4	n/a	n/a	n/a	n/a	n/a	X			
				MANAGEMENT STRATEGY 9.3					
3.1	--	--	Z	Z	Z	Z			
				MANAGEMENT STRATEGY 9.4					
4.1	--	Y							
4.2	n/a	n/a	n/a	X	n/a	n/a			
4.3	X	X	X	n/a	n/a	X			
4.4	--	X	--	--	X	--			
4.5	--	--	--	--	--	--			
4.6	Y								
4.7	--	--	--	--	--	--			
				MANAGEMENT STRATEGY 9.5					
5.1	--	X	X	--	--	--			
5.2	Y								
5.3	n/a	n/a	n/a	n/a	n/a	n/a			
5.4	--	Y							

*The primary mainstem fish passage projects were completed by 2010. Work will continue as opportunities arise, such as described above.