ANNUAL PROGRESS REPORT FOR 2013
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 seventh 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 2013, with results presented in Table 1 and Table 2

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 2013; 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 12,147 naturally produced spring Chinook salmon passed the historical site of Gold Ray Dam during 2013. This estimate was derived from the recovery of 1,718 carcasses of unmarked fish and 104 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	2013 Estimate
Abundance (at Gold Ray Dam)	**≥15,000**	**8,253 (2004-2013)**	**12,147[a]**
Sept. Spawner Distribution[b] (% above Shady Cove)	**≥40%**	**61% (2004-2013)**	**61%**
Spawner Composition (% hatchery)	**≤15%**	**10% (2004-2013)**	**4%**

[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**	**12,147 (2013)[b]**
Abundance (at Gold Ray Dam)	**<5,000**	**12,162(2011-2013)**
Sept. Spawner Distribution[c] (% above Shady Cove)	**<30%**	**62% (2011-2013)**
Spawner Composition[d] (% hatchery)	**>25%**	**5% (2012-2013)**

[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 2013, 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. 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.

USACE completed successful operations for fish in 2013 despite the fact that this year was the driest calendar year on record in Medford. Two operations deserve note:

1) A side channel near McLeod that is used by numerous spring chinook for spawning is often dewatered during typical winter flow management and/or when the releases drop during the reservoir fill season. ODFW estimates that flows of about 1150 cfs at McLeod will keep redds in the side channel from being dewatered. During 2012-2013, flow was maintained in the side channel through egg incubation and fry emergence.

2) Pre-spawning mortality in upstream migrating adult spring Chinook was successfully minimized despite very low river flows and challenging conditions in 2013. Over time ODFW has learned the importance of not allowing disease to begin with spring Chinook because losses can be devastating. Releases from Lost Creek Reservoir help meet flow and temperature targets in the lower river to keep disease outbreaks from occurring in Chinook.

In 2013 reservoir releases were ramped up during heat waves May 4-12 and May 28-June 10. Cooler weather in-between allowed releases to be decreased in order to conserve reservoir storage. No loss in the spring chinook run was observed or reported. ODFW recruited John and Lyn McLaughlin, volunteer HOSTS for the BLM at the Rogue River Ranch near Mariel, to monitor the mouths of Mule and Stair Creek for evidence of stressed fish. No accumulations were observed.

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. Water Watch received grant funding to construct fish friendly improvements to the irrigation diversion. The primary benefit is for downstream migrating juvenile fish, although some upstream passage benefits are possible as well. Designs are being finalized, and construction is tentatively scheduled for 2014 (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 and water quality management plan.
- The Freshwater Trust is implementing riparian planting for the City of Medford to offset thermal impacts at the Waste Water Treatment Plan just downstream of Touvelle State Park. Some sites have been planted, and personnel continue to look for additional sites. ODFW has provided input on the planting program.
- Per statute, ODFW participated in a process reviewing certain municipal water rights on the Rogue River and Big Butte Creek. Conditions placed on use of these rights to ensure sustainability of native fish species are being written into Proposed Final Orders by the Oregon Water Resources Department.

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. In August 2013 an additional 100 yards of gravel was placed in Big Butte at the same location of the 2012 project. Spawning surveys found a peak count of 16 actively spawning fish at the gravel placement site on October 3, 2013. An evaluation of gravel transport in Big Butte will provide insight into the effectiveness of this project (see below).

Management Strategy 9.3

ODFW did not complete any work related to the specific action called for in the conservation plan in 2013. A full time watercraft inspection technician is stationed in the Rogue Watershed District office. Additional seasonal staff members were added in 2013 to conduct boat inspections as part of ODFW's Aquatic Invasive Species program.

Management Strategy 9.4

A couple of new angling regulations were adopted for the mainstem Rogue during the 2012 public review process. First, a zone boundary was changed from the Gold Ray dam site to Fishers Ferry Boat Ramp. The change was implemented so that a clearly identifiable site is used as a boundary, as well as to have uniform regulations through an entire angling drift (Touvelle Ramp to Fishers Ferry Ramp). Second, at the request of the Oregon State Police, the legal fishing hours upstream of Highway 62 were changed to ½ hour before sunrise (from one hour before sunrise) to 8:00pm (from 7:00pm). The objective was to increase the effectiveness of enforcement of snagging regulations in the early morning.

Management Strategy 9.5

ODFW did not complete any work related to the only action item that was relevant to this management strategy during 2013.

OTHER

1. One new evaluation project began in 2013. ODFW initiated a project to monitor gravel transport in Big Butte Creek to help evaluate the benefits of gravel augmentation in this unique subbasin. During spring and summer of 2013, ODFW inserted PIT tags into Chinook-sized spawning gravels. Approximately 275 rocks were tagged in all. These rocks were distributed at 6 different sites in Big Butte Creek, including the gravel placement site. Rocks were placed individually and in groups and a GPS waypoint was taken at each site.

All sites where tagged rocks were placed areas are either sites where Chinook are known to spawn or are areas that could be candidates for future gravel augmentation projects (pending access for equipment, etc). In spring/summer 2014, ODFW will recover as many tagged rocks as possible and compare the location of the rocks from 2013 to 2014. This process will be repeated over the next several years. This information will help determine whether future, larger scale gravel placement in Big Butte Creek will be cost effective.

ODFW also completed the fourth 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 dam site confirmed again this year that some spring Chinook salmon spawned in the former reservoir. Surveyors counted 10 redds in late September. Redd counts in the reservoir site peaked at 111 during early November but most of this activity was from fall Chinook.

3. Several actions were taken to verify early September spawning by spring Chinook on the Rogue. During a survey conducted on September 4th, over 50 redds were observed being constructed between Cole Rivers Hatchery and Shady Cove, and some redds were already completed. During a survey on September 10th, biologists from USACE documented a minimum of 35 spring Chinook redds between Shady Cove and Dodge Bridge. Finally, ODFW arranged for aerial photos to be taken of spring Chinook redds between Dodge Bridge and Rogue Elk on September 14, 2013.

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	X		
1.2	Y								
1.3	X	X	X	--	X	--	--		
1.4	Y								
1.5	X	X	X	X	X	X	X		
1.6	X	X	X	X	X	X	X		
1.7	X	X	X	X	X	X	X		
1.8	Y								
1.9	X	X	X	X	X	X	X		
1.10	Y								
1.11	Y								
1.12	X	X	X	X	X	X	X		
1.13*	X	X	X	Y					
1.14	X	X	X	X	X	X	X		
1.15	--	X	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	X		
				MANAGEMENT STRATEGY 9.3					
3.1	--	--	Z	Z	Z	Z	Z		
				MANAGEMENT STRATEGY 9.4					
4.1	--	Y							
4.2	n/a	n/a	n/a	X	n/a	n/a	n/a		
4.3	X	X	X	n/a	n/a	X	n/a		
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	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.