ANNUAL PROGRESS REPORT FOR 2010
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 is document is the fourth annual report to be completed. A copy of the conservation plan is available on the ODFW website at:
http://www.dfw.state.or.us/fish/CRP/rogue_spring_chinook_conservation_plan.asp

SUMMARY OF SMU STATUS

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).

Status Element	Desired Status	Current Status	2010 Estimate
Abundance (at Gold Ray Dam)	**≥15,000**	**8,164 (2001-2010)**	**9,556**
Migration Timing[a] (% passage by 15 June)	**≥60%**	**47% (2003-2010)**	**55%**
Age Structure (% jacks)	**≤10%**	**13% (2003-2010)**	**9%**
Sept. Spawner Distribution[b] (% above Shady Cove)	**≥40%**	**60% (2004-2010)**	**57%**
Spawner Composition (% hatchery)	**≤15%**	**13% (2004-2010)**	**8%**

[a] *For only those fish at least 24 inches in length ("adults").*
[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.

Status Element	Conservation Criterion	Conservation Status (years)
Abundance[a] (at Gold Ray Dam)	**<3,500**	**9,556 (2010)**
Abundance (at Gold Ray Dam)	**<5,000**	**6,253 (2008-2010)**
Migration Timing[b] (% passage by 15 June)	**<30%**	**50% (2007-2010)**
Age Structure (% jacks)	**>25%**	**20% (2007-2009)**
Sept. Spawner Distribution[c] (% above Shady Cove)	**<30%**	**59% (2008-2010)**
Spawner Composition[d] (% hatchery)	**>25%**	**9% (2009-2010)**

[a] *During any single year.*
[b] *For only those fish at least 24 inches in length ("adults").*
[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.*

MONITORING RESULTS AND FUTURE MONITORING

Monitoring of SMU attributes is designed to produce metrics that are to be used to characterize the current status of the SMU. All monitoring needed to update SMU status was completed by ODFW in 2010, and the results are presented in Table 1 and Table 2. Monitoring results that most differed in 2010, as compared to the previous ten years, included a lower percentage of hatchery fish among natural spawners.

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 will be based on counts of spawned spring Chinook salmon in (1) the Rogue River between Cole M. Rivers Hatchery and the historical pool upstream of Gold Ray Dam and (2) the lower mile of Big Butte Creek. Areas to be surveyed are the primary spawning areas of naturally produced spring Chinook salmon in the Rogue River Basin.

Results from the spawner surveys will be used to hindcast the number of naturally produced spring Chinook salmon that would have passed Gold Ray Dam; had not the dam and fish counting station been removed. During the 2004-2010 surveys of fish that spawned in September, counts of naturally produced fish averaged 15% (95% confidence interval = ±2%) of the number of counterparts that passed Gold Ray Dam. This relationship will be employed 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 and adult migration

timing at Gold Ray Dam. These two management criteria for naturally produced spring Chinook salmon in the Rogue SMU will have to be abandoned; beginning in 2011.

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 2010, 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 Lake 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.

2. ODFW participated on an interagency technical team and provided technical support to Jackson County in relation to fishery issues associated with the removal of Gold Ray Dam (Action 1.13 in the conservation plan). ODFW worked to ensure that the fish counting station remained operational during the 2010 spring Chinook salmon run. Removal of the dam now allows for unobstructed fish upstream passage and may result in the eventual restoration of spawning habitat for spring Chinook salmon. ODFW surveys confirmed that some spring Chinook salmon spawned in the former reservoir site as four redds were observed in early October. Redd counts in the reservoir site peaked at 37 during late October but it was not possible to determine whether these redds were constructed by fall Chinook salmon or spring Chinook salmon.

Management Strategy 9.2

ODFW completed a pilot project aimed at recruiting more spawning gravel for spring Chinook salmon in Big Butte Creek 2010. Large conifers with root wads were placed directly in the stream channel in an area upstream of Crowfoot Falls.

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 implement a project that should help decrease the chance that non-native predatory fish could be introduced in the Rogue River Basin. As part of project implementation in 2010, ODFW completed a grant application for the purchase and installation of project signs on boat ramps and stationed an Aquatic Invasive Species crew and portable boat cleaning unit in the Rogue River Valley. In addition, removal of Savage Rapids Dam and Gold Ray Dam (*see* Management Strategy 9.1) will decrease the amount of backwater habitat preferred by non-native predatory fishes such as Umpqua pikeminnow and largemouth bass.

Management Strategy 9.4

Initial passage counts at Gold Ray Dam indicated a large run of naturally produced spring Chinook salmon in the Rogue River during 2010. Based on passage estimates through May 9, ODFW forecasted that 24,000 (80% confidence interval = 18,000-36,000) would eventually pass the counting station in 2010. Based on this forecast and the production models reported in the 2007 conservation plan, ODFW adopted revised regulations to open the fishery downstream of Gold Ray Dam ten days early to allow for an additional angler harvest of mid-run and late-run wild fish. No analogous earlier opening was adopted for the area upstream of Gold Ray Dam when subsequent passage counts at Gold Ray Dam indicated that the return would not exceed 15,000 naturally produced fish in 2010. Removal of Gold Ray Dam, and the allied fish counting station, precludes any in-season changes to regulations during future years.

The in-season forecast was based on the percentage of the naturally produced fish that passed Gold Ray Dam by specific dates in previous years. Final passage estimates indicated that naturally produced fish (and hatchery fish) migrated past Gold Ray Dam earlier in 2010 as compared to previous years. Removal of Savage Rapids Dam in 2009 likely at least partially accounted for the early migration time of spring Chinook salmon at Gold Ray Dam in 2010.

Management Strategy 9.5

ODFW did not complete any work related to the only action item that was relevant to this management strategy during 2010.

OTHER

No new research or evaluation projects began in 2010. However, some work was completed during the year to lay the groundwork for ODFW to manage naturally produced spring Chinook salmon as outlined in the 2007 conservation plan. Loss of the fish counting station at Gold Ray Dam necessitated the need for new monitoring procedures to be implemented by ODFW. Discussion of completed work follows.

1. ODFW implemented and completed additional spawning surveys in the mainstem of the Rogue River between Cole M. Rivers Hatchery and the pool upstream of Gold Ray Dam. Data from these surveys, and a survey in the lower mile of Big Butte Creek, will be needed in future years in order to estimate returns of naturally produced spring Chinook salmon because of the 2010 removal of Gold Ray Dam, with a resultant loss of the fish counting station.

2. ODFW designed and implemented 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.

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.

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					
1.2	Y								
1.3	X	X	X	--					
1.4	Y								
1.5	X	X	X	X					
1.6	X	X	X	X					
1.7	X	X	X	X					
1.8	Y								
1.9	X	X	X	X					
1.10	Y								
1.11	Y								
1.12	X	X	X	X					
1.13	X	X	X	X					
1.14	X	X	X	X					
1.15	--	X	X	X					
				MANAGEMENT STRATEGY 9.2					
2.1	--	X	X	--					
2.2	--	X	X	--					
2.3	--	--	--	--					
2.4	n/a	n/a	n/a	n/a					
				MANAGEMENT STRATEGY 9.3					
3.1	--	--	Z	Z					
				MANAGEMENT STRATEGY 9.4					
4.1	--	Y							
4.2	n/a	n/a	n/a	X					
4.3	X	X	X	n/a					
4.4	--	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					
5.4	--	Y							