

**Battle Creek Watershed: January 2011 Update**  
U.S. Fish & Wildlife Service Activities

**COLEMAN NATIONAL FISH HATCHERY COMPLEX**

**SCOTT HAMELBERG, PROJECT LDR**

**Outreach:**

Volunteers and Friends Group—Friends and Volunteers contributed over 1,200 hours of service last fall. These individuals helped guide over 5,000 school children on tours around the hatchery and on the new Battle Creek Salmon Trail.

**Fish Releases:**

Over 1 million Late-fall Chinook salmon were released in December 2010.

Approximately 700,000 steelhead juveniles were released in early January 2011.

Over 120,000 winter Chinook salmon will be released from Livingston Stone NFH on February 3, 2011.

**Spawning:**

Spawning of fall Chinook salmon was completed prior to Thanksgiving 2010. Adequate numbers of adults returned to achieve egg collection target.

Spawning of late-fall Chinook salmon and steelhead was initiated in late December 2010.

**RED BLUFF FISH & WILDLIFE OFFICE**

**JIM SMITH, PROJECT LEADER**

**Hatchery Evaluation Program:**

**Kevin Niemela**

**Fish Marking and Tagging**

- Late-fall Chinook: Marking and tagging all (approx. 1.1 M) juvenile late-fall Chinook at the Coleman NFH was completed in June. This work was conducted through contract with the Pacific States Marine Fisheries Commission (PSMFC) using the automated marking and tagging trailers.
- Steelhead: Marking (adipose fin-clip) of all (approx. 0.6 M) juvenile steelhead at the Coleman NFH was completed in June. This work was conducted through contract with the PSMFC using the automated marking and tagging trailers.
- Marking and tagging all (approx. 122,000) juvenile winter Chinook at the Livingston Stone NFH **was completed in December**. This work was conducted through contract with the PSMFC.

**Sacramento River Winter Chinook Carcass Survey**

DFG and FWS **completed** the 2010 Sacramento River Winter Chinook Carcass Survey in August. This information is used to estimate the abundance of winter Chinook spawners.

**Battle Creek Fall Chinook Counting Weir**

The Department of Fish and Game and U.S. Fish and Wildlife Service have completed operation of the seasonally installed fish counting weir in lower Battle Creek. The fish counting weir was operated from mid-August through mid-November 2010, for the purpose of estimating the abundance of fall Chinook in Battle Creek. Final run size estimates will be derived by the California Department of Fish and Game after the data has been checked for accuracy.

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## Battle Creek Monitoring

Jess Newton/Matt Brown

### Adult Salmonid Monitoring

Upstream passage: **We completed our review of video monitoring footage of 2010** adult salmonid passage through the upstream fish ladder at the Coleman Barrier Weir. In 2010, an unusually high number of clipped (hatchery) Chinook entered Battle Creek during the spring Chinook immigration period.

Table 1: Adult salmonid escapement upstream of the CNFH barrier weir for the period March 1-Aug 1.

<b>Adult fish: upstream passage</b>	unclipped				clipped			
	<b>'10</b>	'09	'08	'07	<b>'10*</b>	'09	'08	'07
Chinook (potential spring-run)	<b>123</b>	194	105	291	<b>50</b>	9	5	5
steelhead/rainbow trout	<b>142</b>	134	120	217	<b>12</b>	20	2	3

Snorkel Surveys for Spring Chinook Redds and Carcasses: During the period 9/20/2010-11/4/2010, we completed six snorkel surveys to count spring Chinook salmon redds and sample Chinook carcasses. This year our sampling effort increased from three to six surveys in order to recover as many carcasses as possible. Our objective with increasing sampling effort was to attempt to collect as many coded wire tags as possible to determine which hatchery the tagged fish had originated from (high numbers of tagged fish had been seen on video footage). During the snorkel surveys, we counted a total of 94 redds and recovered seven coded-wire tags from carcasses. Information on the coded-wire tags indicated all seven fish were from the Feather River Hatchery (in Oroville). Six fish were spring Chinook and one was a fall Chinook.

### Juvenile Salmonid Monitoring

We completed the 2009-2010 juvenile salmonid production monitoring season on July 16, 2010. We captured approximately 7,628 Chinook salmon and 408 rainbow trout/steelhead in our rotary screw trap. Relative to previous years, catch totals for rainbow trout are very high and totals for Chinook are well above average, possibly indicating that environmental conditions were good for successful spawning and egg incubation this year.

Recently completed annual reports include the **2009 adult salmonid monitoring report**, the 2008-2009 juvenile salmonid monitoring report, and the Battle Creek fish community study report. Annual monitoring reports can be downloaded at <http://www.fws.gov/redbluff/cvpia.html>

## Anadromous Fish Restoration Program:

Tricia Parker

### Headgate on Irrigation Diversion:

Funds have been provided to the DFG screenshop to complete this project on the Orwick Diversion. Construction and installation of the new headgate occurred in June 2008. Monitoring of flows and diversion rates at the site was not performed by DFG's screenshop.