

Battle Creek Watershed: January 2010 Update
U.S. Fish & Wildlife Service Activities

RED BLUFF FISH & WILDLIFE OFFICE

JIM SMITH, PROJECT LEADER

Hatchery Evaluation Program:

Kevin Niemela

Barrier Weir Video Monitoring

Video monitoring at the Coleman NFH Barrier Weir is being conducted to investigate unintended fish passage over the weir during the period of broodstock collection at Coleman NFH. Several cameras are positioned to monitor “around-the-clock” across the sill of the weir and the adjustable “overshot” gate, which is located adjacent to the fish ladder. Video recordings will be reviewed to determine if fish are escaping past the weir and, if so to estimate the number of fish escaping past the weir.

Fish Marking and Tagging

- **Winter Chinook: Marking and tagging all juvenile winter Chinook at the Livingston Stone NFH was recently completed.**
- **Fall Chinook: The California Department of Fish and Game (DFG), U.S. Fish and Wildlife Service (FWS), and the Pacific States Marine Fisheries Commission completed the third year of the Constant Fractional Marking program, whereby 25% of the production releases of fall-run Chinook salmon from Central Valley hatcheries will be marked with an adipose fin clip and coded-wire tagged.**
- **Late-fall Chinook: Marking and tagging all juvenile late-fall Chinook at the Coleman NFH was completed in July. This work was conducted using the automated marking and tagging trailers.**
- **Steelhead: Marking (adipose fin-clip) of all juvenile steelhead at the Coleman NFH was completed in July. This work was conducted using the automated marking and tagging trailers.**

Battle Creek Video Monitoring

Monitoring of fall Chinook in lower Battle Creek at the video weir fish counting station (stream mile 2) began on August 19, 2009. This project is a cooperative effort of DFG and the FWS. Data generated from this project are used to estimate escapement to Battle Creek and to guide hatchery broodstock collection activities.

Sacramento River Winter Chinook Carcass Survey

DFG and FWS have completed the 2009 winter Chinook carcass survey. The survey was conducted daily from May 4 to August 28. The cooperating agencies are currently using information gathered on this project to estimate the abundance of winter Chinook spawners.

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 is being performed by DFG.**

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Battle Creek Monitoring

Jess Newton/Matt Brown

We began the 2009-2010 juvenile salmonid production monitoring season on November 23, 2009. As of January 18, 2010 we have captured 4,432 spring Chinook salmon in our rotary screw trap. This is a high number of juveniles relative to previous years, possibly indicating that environmental conditions were good for successful spawning and egg incubation this year.

We have nearly completed our review of video monitoring footage of 2009 adult salmonid passage through the Coleman National Fish Hatchery barrier weir fish ladder. Final estimates of spring Chinook and steelhead escapement for 2009 should be available in a month or two. Preliminary escapement estimates, as reported in the previous November 2009 greensheet, are as follows:

Preliminary data

Adult fish: upstream passage	unclipped			clipped		
	'09	'08	'07	'09	'08	'07
Chinook (potential spring-run)	195	105	291	8	5	
steelhead/rainbow trout	133	120	217	20	2	

Annual monitoring reports can be downloaded at <http://www.fws.gov/redbluff/cvpia.html>

COLEMAN NAT'L FISH HATCHERY COMPLEX SCOTT HAMELBERG, PROJECT LDR

Livingston Stone NFH (winter Chinook)

John Rueth, Assistant Hatchery Manager

- For the 2009 season, adult fish were trapped at Keswick Dam between March and June. A total of 120 adults were retained for the production program. Prespawn mortality was very low at 3.33 % (i.e. 4 fish). A total of 324,000 eggs were taken with an eye-up of 93.29%. The fry were put into tanks in early August. **Approximately 200,000 fish will be released in the second week of February.**
- During the 2008 season, 101 adult winter run were retained which produced approx 150,000 juveniles. The juveniles were tagged in mid December, then released as pre-smolts into the mainstem Sacramento River in late January.

CNFH Intake Improvements

Co-lead: Hank Harrington, USBR

Phase I: Construction to screen intake #3, expand intake #1 and install new pipeline between intake #1 and #3 is completed. Phase II, the screening/modification of Intake #2, is not funded at this time.