

**Battle Creek Watershed: March 2008 Update**  
U.S. Fish & Wildlife Service Activities

**RED BLUFF FISH & WILDLIFE OFFICE**

**JIM SMITH, PROJECT LEADER, 527-3043**

**Hatchery Evaluation**

**Kevin Niemela**

**Fish Marking and Tagging**

**The California Department of Fish and Game, U.S. Fish and Wildlife Service, and the Pacific States Marine Fisheries Commission have begun the second 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. Marking and tagging of 25% fall Chinook production was completed at the Feather River Hatchery Annex (a satellite facility of the Feather River Hatchery) in late-February, and has been initiated at the Coleman National Fish Hatchery. Marking and tagging at the Coleman NFH will continue through April, 2008, with two automated marking and tagging trailers operating concurrently during the peak of the tagging project.**

*Late-fall Chinook* – Marking and tagging of all juvenile late-fall Chinook at the Coleman NFH was completed on November 14. This is substantially earlier than previous years, because the automated marking and tagging trailers were used to tag a large portion of the fish. Not all late-fall Chinook were tagged with the automated tagging trailers because a portion of the late-fall Chinook exceed the maximum size that can be processed through the machines

*Winter Chinook* – Marking and tagging of all 72,137 brood year 2007 juvenile winter Chinook at the Livingston Stone National Fish Hatchery was conducted between December 27 and January 9.

**Battle Creek Video Monitoring**

Monitoring of fall Chinook in lower Battle Creek at the video weir fish counting station (stream mile 2) occurred from late August until early December. This project is a cooperative effort of the California Department of Fish and Game and the U.S. Fish and Wildlife Service. Data generated from this project are used to estimate escapement to Battle Creek and to guide hatchery broodstock collection activities. Through November 10, approximately 22,000 fish had migrated up Battle Creek past the video station. During recent years, over 95% of the run had been counted by this date. The number of fall Chinook returning to Battle Creek during recent years has been 77,863 (2006), 150,583 (2005), 70,011 (2004), and 144,392 (2003).

**Winter Chinook Carcass Survey**

The 2007 Sacramento River winter Chinook salmon carcass survey was conducted seven days a week between May 1 and August 24. Daily fish counts were markedly lower than recent years, and preliminary evidence suggests a substantially reduced run size compared to 2005 and 2006. An estimate of spawner abundance, based on a carcass mark-and-recapture technique, is forthcoming from the California Department of Fish and Game.

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**Anadromous Fish Restoration Projects**

**Tricia Parker**

**Exclusion Fencing:** Lower Battle Creek will be protected from an increase in fine sediment by a new fence that will exclude cattle from the riparian. The fence is targeted for completion in May 2008. **Feb 2008 status: The Environmental Assessment (EA) ) is close to completion. The EA covers fencing and grazing lease issues for much of the BLM acreage east of Jellys Ferry Rd. BLM is also looking at other actions that could improve the Spring Branch County Road, decrease the off-road activities and decrease the sediment into Battle Creek and the river.**

**Headgate on Irrigation Diversion:** Funds have been provided to the DFG screenshop to complete this project on the Orwick Diversion. **Construction of the new headgate is targeted to occur in summer 2008.**

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**Battle Creek Monitoring**

**Jess Newton \* / Matt Brown**

[update 3/19/08]

[\* Jess will be departing the RBFWO soon. ]

**Operation of the Coleman NFH barrier weir fish trap began March 1. Barrier weir monitoring data are used to estimate passage of naturally produced adult Chinook and steelhead into upper Battle Creek. Operation of the fish trap will continue no later than May 31 because the location will be dewatered as part of the Barrier Weir Improvement Project. Monitoring of fish passage will continue through August 1 using a temporary video monitoring system in the vicinity of the barrier weir.**

**The 2007-2008 juvenile salmonid monitoring season is ongoing. We are operating the screw trap 7 days per week. We are conducting a special study this year comparing trap capture efficiencies between hatchery and natural fall Chinook juveniles. As of 3/6/2008, more than 14 paired efficiency trials have been conducted with hatchery and naturally produced fall Chinook. Results of this study will be presented by Kellie Whitton at the 2008 Western Division AFS annual meeting in Portland Oregon. To download annual fish monitoring reports, please visit our web site at <http://www.fws.gov/redbluff/cvpia.html>**

In November 2007, we began the Battle Creek Fish Community Study. The purpose of Phase I of the study is to collect pre-project data to investigate the effect of dam removal and increased flows on the spatial distribution of fish within Battle Creek. Additional aspects of the study include investigating the abundance of lamprey and predator species. Phase I includes four surveys between November 2007 and November 2008. Preliminary results from the first of the four surveys documented the presence of lamprey as far up as immediately above Coleman Diversion Dam on the South Fork and immediately above Wildcat Dam on the North Fork.

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**COLEMAN NATIONAL FISH HATCHERY COMPLEX**

**SCOTT HAMELBERG, PROJECT LEADER 365-8622**

**Livingston Stone NFH (winter Chinook)**

**John Rueth, Assistant Hatchery Manager**

**Released 71,800 fish on January 31, 2008. Started collecting adults for BY 08 on Feb 19, 2008.**

CWT tagging was completed on 1/9/08. This year, only 24 winter Chinook females were spawned. This number represents only about half of the broodstock that were needed. The resulting production will be reduced to under 100,000 pre-smolts this year.

**Barrier Weir & Upstream Ladder Improvements at Coleman NFH**

**Co-lead: Janice Pinero, Reclamation Project Manager, Sacramento**

**Project Management. Project manager, Sandy Osborn's, last day with Reclamation was February 14, 2008.**

**Upstream Fish Ladder.** In August '07, the primary and auxiliary upstream river ladder floors (slabs) and walls were placed. In September, the Coleman National Fish Hatchery Project Leader expressed concern about the difference in elevation between the slab (invert) of the upstream ends of the primary and auxiliary river ladders and the existing stream bed. The stream bed is higher and may allow rocks, silt, and/or debris to enter the ladder. Also, the future bar rack on the upstream end of the existing fish ladder may catch debris that may be difficult to remove by hand. In December and **January '08, Reclamation's Technical Service Center (TSC) provided a few proposed remedies that are still being researched. These remedies are within the existing project design and specifications.**

**Section 7, Endangered Species Act Compliance.** The construction contractor has scheduled some in-stream activities in May 2008, outside of the in-stream work period (June 1 through September 30). In their November 13, 2007 letter, the action agency, Coleman NFH, requested re-initiation of section 7 formal consultation with the goal of receiving an amended biological opinion from the National Marine Fisheries Service to allow in-stream activity in May 2008, ahead of the June to September work period.

**Water Quality Compliance.** Based on water quality monitoring by Reclamation and the contractor, there have been no violations of turbidity limits to date.

**Construction Information Line.** The toll-free construction information line is 800-742-9474

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### **Barrier Weir Improvement Schedule**

November 15, 2007 (estimated): USFWS requests initiation of section 7 ESA formal consultation.

**March 3, 2008 Demolition of existing hatchery ladder began.**

April 15, 2008 (estimated): NMFS issues amended biological opinion.

June 1 to September 30 of any year: In-stream actions allowable.

**June 2, 2008: Open ends of diversion channel and divert Battle Creek flows**

**June 13, 2008 (estimated): USFWS fish rescue**

February 2009: Construction will be complete.

### **CNFH Intake Improvements**

**Co-lead: Hank Harrington, USBR**

**Overall Project: All permits were obtained and vegetation clearing occurred in January 2008 (prior to the neotropical bird breeding season). Phase I of actual intake rehabilitation construction is expected to begin in June to screen intake #3, expanding intake #1, and installing the new pipeline between intake #1 and #3. Phase II, screening/modification of intake #2, is not funded at this time.**

**Project Design: Hope to have specs completed and ready for bid in next few months.**

**Received detailed comments from the NMFS regarding proposed Intake #3 screen designs.**

### **Environmental Compliance/permitting:**

EA/IS FONSI and Mitigated Negative Declaration signed in late December 2007 by Reclamation, Fish and Wildlife Service, the Bureau of Land Management and the California Regional Water Quality Control Board. (For copies, contact Jim DeStaso at [jdestaso@mp.usbr.gov](mailto:jdestaso@mp.usbr.gov).)

Section 404: Letter of Permission application submitted about October 24. [**3/08: outstanding**]

Section 401: Water Quality Certification obtained in late December 2007.

Section 402 (for vegetation clearing only): Obtained in late December 2007.

FWS Consultation: Completed about October 18.

**NMFS Consultation: ~~Ongoing, expect biological opinion to be completed no later than April 2008.~~ March 18 update: Biological Opinion received.**

SHPO (State Historic Preservation Office) Consultation: Completed December 2007.