

Upper Sacramento River Salmonid Monitoring Work Team
Meeting Notes
May 1, 2003
USFWS Office, Red Bluff
10:00 – 3:00

Participants: See attached list.

Meeting Purpose:

- USRPWT – where we have been and where we are going
- Tracking Large Woody Debris (LWD) in the Sacramento River
- Agency Updates and Plans for 2003 Field Season
- Additional monitoring needs for juvenile salmon in the mainstem Sacramento River
- Central Valley recovery planning
- Additional research needs in the upper Sacramento River basin

Discussion:

- I. **USRPWT** - Jim Smith gave a brief description of the original focus of the USRPWT: to coordinate exchange of field study plans prior to the field season, to minimize duplication of effort in low budget times. A meeting was held once a year in February or March. The team consensus was to continue meeting on this time schedule, but not call the team a Project Work Team under IEP.
- II. **Tracking LWD in the Sacramento River** - Adam Henderson (DWR) gave a presentation on studies of tracking large woody debris in the Sacramento River. Over the last 2 years, bank types along the river have been mapped. LWD has been tracked using transmitters to determine movement and residence time.
- III. **Agency Updates –**
Matt Brown (USFWS – Red Bluff) -
Clear Creek – current studies include:
 - Rotary screw trapping yearround at bottom of spawning reach (weekly efficiency studies using Bismark brown and photonic tag or fin clip)
 - Yearround snorkel surveys for spring-run
 - Fall and late fall-run carcass surveys (assist DFG with fall-run) (CWT recoveries made, genetics tissue samples and otoliths are collected)
 - Steelhead redd surveys
 - Juvenile habitat use study (with Mark Gard's IFIM group)
 - Spawning gravel evaluation

- Stranding studies (Whiskeytown releases)
- Side channel benefits studies
- Barrier weir installation (September/October) to prevent fall-run from getting upstream (RM 8)
- Spawning ground mapping

Spring-run returns have been increasing; flows for spring-run were increased starting 3 years ago. In the August 2002 snorkel survey, 66 fish were counted. DFG requested that all steelhead mortalities be sent to DFG. Status of Fishery Management Plan for Clear Creek: Clear Creek Technical Team is functioning, plan will be developed after the Battle Creek plan)

Reports on all Central Valley surveys should be sent to Pete Adams at the NOAA Fisheries Santa Cruz Lab.

Battle Creek –

- 2 RSTs are operated yearround – efficiency tests with Bismark brown
- CNFH barrier weir operation – monitoring impact of delays due to closure of weir/fish passage over weir (flow and numbers of fish passing)
- Winter and spring-run snorkel surveys
- Steelhead redd surveys (kayak)
- Otolith/genetic samples (steelhead and Chinook)

Bob Null (USFWS – Red Bluff) –

Upper Sacramento River –

- Keswick trap for winter-run broodstock collection (LSNFH)
- Winter-run carcass survey (started this week)

Battle Creek –

- Heads/tissues collected at CNFH
- Late fall-run/steelhead tissues collected above barrier
- Studies of proportion of ad-clipped fish in lower Battle Creek
- Developing plans for video monitoring of fall-run escapement next year
- Water quality monitoring – DO, temperature problems
- Hatchery release coordination (FAX, email)

Phil Gaines (USFWS – Red Bluff) –

- RST at RBDD – Resumed 10/01 with CALFED contract, sample yearround, monitoring primarily winter-run Chinook. Actively seeking funding now for period after current 3-year contract
- Winter-run juvenile production monitored at RBDD – this year, about twice last year.

- Kevin/Bob are developing a proposal for steelhead work on the mainstem Sac at RBDD – genetics, otolith microchemistry to determine parental origin.

Kurt Brown (USFWS – Red Bluff) –

- Adult monitoring at RBDD – gate manipulations - no radio tagging/floy tagging – weekly fish count available electronically
- Contact Kurt with sturgeon observations (DFG, R1, Steve Baumgartner, needs live juvenile white sturgeon for disease studies)
- EIR/EIS at RBDD – preferred alternative is current operation – spring-run counting method has changed at RBDD, no way to go back and correct historic data. In Cottonwood Creek, spring-run returns have not increased/decreased significantly due to RBDD operations. Telemetry report on RBDD delays due out this year (USFWS).
- Pikeminnow predation reports were distributed.
- Report on drop-in escapement survey in Bear Creek was distributed (31 fall-run observed in 2002)

At lunch, Jim Smith shared the enlightening film “Fishheads” with the team.

Russ Smith (USBR – No. Calif. Area Office) –

- Limnology study at Shasta Reservoir, effects of TCD
- Studies of improvements in temperature/food supply associated with raising Shasta Dam

Sandy Borthwick (USBR – No. Calif. Area Office) –

- RBDD pumping plant – routine monitoring of incidental take of listed species continues. Research has been wrapped up – report series have been completed, and 2 papers published.
- Lake Red Bluff – biological studies beginning – fish sampling in lake, tributaries: beach seining to determine species composition/distribution/size, use of side margins for rearing, stranding of juveniles when RBDD gates are raised.

Richard Corwin (USBR – No. Calif. Area Office) –

- Stoney Creek – 2nd year of 3-year study of salmon use of creek; beach seining, fyke netting, entrainment into North Canal. 100 cfs minimum below Black Butte Reservoir – 3 juvenile hatchery fish (potentially winter-run) found in Feb/March.
- Keswick releases – The need for better coordination of releases was discussed. DFG noted that releases went from 15,000 to 6,000 to 30,000 cfs recently, with no notification of DFG crews conducting studies in the upper river.
- Trinity River – Series of on-going studies of flow, spawning and rearing habitat, tracking gravel movement, etc. Next meeting, invite someone down to talk about studies.

Jason Kindopp (DWR) – Feather River studies

- Snorkel surveys (April-August) for steelhead
- Sturgeon/Spring-run telemetry study (January-September) – to identify barriers/spawning sites for sturgeon and identify holding pools/behavior of spring-run
- Sturgeon/larval fish study (February-June) – sampling larval sturgeon to identify sturgeon spawning grounds.
- Rotary screw trap survey (December '02 – June '03) – two RSTs operated for juvenile salmon and steelhead emigration data
- Steelhead water temperature/growth studies (June-August)
- Adult escapement surveys: fall-run escapement estimates, CWT recoveries, otoliths, scales collected
- Juvenile stranding/redd dewatering studies
- Miscellaneous FERC studies –
 - IFIM (Tom Payne)
 - Carcass survey nutrients
 - Water quality studies

Bruce Oppenheim (NOAA Fisheries)

- CVP/SWP operations consultation – draft BA out for review 5/15, will initiate consultation on operations, Biological Opinion will be prepared for project operations for the next 25 years; draft BO in November, final in December. Need recent trend data for the upper Sacramento River (winter, spring-run, and steelhead) since the interim 2-year BO was issued. Data should be provided to John Hannon (USBR, Sacramento).
- Need for consolidation of steelhead monitoring data; create a “grandtab” type summary for steelhead.

Colleen Harvey-Arrison (DFG – Red Bluff)

Plans for 2003 in tributaries:

- Fall-run escapement surveys in Battle, Clear Creeks planned. Not sure how much of the spawning reach can be surveyed in Battle Creek with anticipated large numbers returning. CWT recoveries, genetic tissue samples collected.
- Mill Creek – Conducted fall-run survey in 2002 for the first time since 1994. 2,600 fish were estimated; 46 CWTs recovered; 1,000 carcasses observed. CWT expansions indicate that all returns were probably of hatchery origin.
- This fall, will be spot checking for CWT rate in Cow and Cottonwood creeks.
- Deer Creek – fall-run surveys recovered 1 CWT per 30 fish.
- Battle Creek – 500 CWTs recovered in lower reach; USFWS recoveries indicated most fish were of CNFH origin, but all other CV hatcheries were also represented.

- Spring-run population estimates made in Deer, Mill, and Antelope creeks. Techniques used in Deer Creek were snorkel surveys, spawning distribution surveys (USFS), tissues/otoliths/scales collected. Mill Creek – snorkel surveys, spawning distribution surveys, redd survey for population estimates. Would like to do Antelope Creek this year. Juvenile life history studies conducted on Deer/Mill creek spring-run. Growth studies – will catch up on reporting before collecting more data. RSTs – Mill/Deer creeks – determine timing/size at emigration, predicting arrival time in the Delta.

Doug Killam (DFG – Red Bluff)

- RBDD counts – 4 months in operation – may go in late this year.
- Winter-run, fall-run, late fall-run carcass surveys
- Snorkel surveys for steelhead – Thomes, Beegum, Paynes, Deer, Cow, Antelope creeks
- Beegum Creek – Once a month snorkel surveys – spring-run, steelhead spawning/holding habitat
- Aerial redd surveys – upper Sac River – 8 months/year
- Mainstem genetic tissue sampling.
- USFWS/DFG – joint proposal being developed to estimate fall-run escapement with overhead video.
- Mill Creek – proposal being developed to use hydroacoustics to estimate escapement on lower creek.

George Edwards (DFG – Sacramento)

- Steelhead otolith study – collecting 45 adults/juveniles per population to determine origin of fish; genetics analysis of tissues; Sr/Ca ratios. Study will be conducted this year through 2005.
- Rob Titus’ otolith work was discussed. Concern was expressed by some members of the team that they are collecting more otoliths, when they’ve already collected some that may not yet have been analyzed.

- IV. Need for additional juvenile monitoring in the Sacramento River -** Alice Low discussed the need for brainstorming additional juvenile monitoring in the Sac River. Jim Smith suggested that this needs to be discussed in a smaller, more focused meeting, potentially at the new Juvenile Monitoring Project Work Team. Goals of the brainstorming should be made clear.
- V. NOAA Fisheries Central Valley recovery planning:** Shirley Witalis gave an update on the activities of the CV Technical Recovery Team. The team has met once; the initial meeting was an introduction to the recovery team process and a summary of CV salmon genetics work. Next meeting in June will focus on the identification of distinct populations of spring-run.

VI. Next meeting:

March 3, 2004

10:00 – 3:00

USFWS - Red Bluff Office

Sponsoring agency: NOAA Fisheries

Agenda idea:

- Invite someone down to talk about Trinity River studies

**Attendance List
May 1, 2003**

<u>Name</u>	<u>Agency</u>	<u>Phone or Email</u>
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