

Monitoring Study Group Meeting Minutes

July 22, 2009

CAL FIRE Shasta Trinity Unit Headquarters—Redding

The following people attended the MSG meeting: George Gentry (BOF—MSG chair), Peter Ribar (Campbell Timberland Management), Richard Gienger (HWC/SSRC), Clay Brandow (CAL FIRE), Shane Cunningham (CAL FIRE), Curt Babcock (DFG), Stuart Farber (Timber Products), Rich Klug (Roseburg Resources), Dr. Michael Wopat (CGS), Dr. Kate Sullivan (HRC), Dr. Sari Sommarstrom (Sari Sommarstrom and Associates), Drew Coe (CVRWQCB), Stacy Stanish (DFG), Dennis Hall (CAL FIRE), Duane Shintaku (CAL FIRE), Dr. Cajun James (SPI), and Pete Cafferata (CAL FIRE). **[Action items are shown in bold print]**.

The meeting began with general monitoring-related announcements:

- The 12th annual Coho Confab conference will be held on August 28-30, 2009 in Caspar (near Fort Bragg) at Jughandle Farm. Tours of fisheries-related projects located in several Mendocino Coast watersheds will occur. Detailed information is available on the web at: <http://www.calsalmon.org/> and <http://www.treesfoundation.org/cohoconfab/index.html>.
- The USFS and University of California, Cooperative Extension are sponsoring a conference titled “Pre- and Post-Wild Fire Forest Management for Ecological Restoration and Fire Resiliency” in Sacramento on February 9-11, 2010. Dr. Richard Harris can provide a draft agenda and additional information (contact Richard at: rrharris@nature.berkeley.edu).
- The California Forest Soils Council (CFSC) Fall Meeting will be held at Yosemite National Park [this is a joint meeting of the Professional Soil Scientist Assoc. of California and CFSC]. The meeting will occur on September 17-19, 2009, with an optional additional field day on the 20th. For more information, contact Lia Webb, CFSC Co-Chair, at liawebb@w-and-k.com.
- The Northern California (NorCal) Chapter of the Society of American Foresters (SAF) is holding its summer meeting in Yreka on August 7-8, 2009. The topic is “Restoring Watershed Health in the Klamath Basin.” Additional information is available from Jane LaBoa at 1-800-738-TREE or ncsaf@mcn.org.
- The American Institute of Hydrology (AIH) will hold its annual meeting on August 30-September 2 in Scottsdale, Arizona. The symposium topic is “Managing Hydrologic Extremes” and information is available on the web at: <http://www.eventinterface.com/hydrosymposium/>.
- The annual American Geophysical Union (AGU) Fall Meeting will take place on December 14-18, 2009 in San Francisco (see: <http://www.agu.org/meetings/fm09/>).
- A new Interagency working group to develop a strategy and criteria for in-channel water-quality monitoring for the national forests in California has been formed. Dr. Lee MacDonald, CSU is chairing the committee and Barry Hill, USFS Regional Hydrologist, is the project coordinator. The objective of the group is to determine the number and geographical distribution of reference (relatively pristine) watersheds needed to represent the variability in natural water quality on the national forests in California. Contact Barry for more information on this project at: bhill@fs.fed.us.
- Dr. Kevin Boston, Oregon State University (kevin.boston@oregonstate.edu), will be leading a meeting on August 13, 2009 at Humboldt State University to obtain a list of issues and researchable questions concern forest transportation. The long-term goal is to seek funding to

find solutions to these problems. OSU professors Boston, John Session, and Marv Pyles have received congressional funding to review the issues facing forest roads in the Pacific Northwest. Two meetings to discuss this topic were held in Washington and Oregon earlier this year.

- A draft paper titled “Frequency and Characteristics of Sediment Delivery Pathways from Forest Harvest Units to Streams” has been written by Sam Litschert and Dr. Lee MacDonald as part of Sam’s PhD dissertation work on cumulative effects modeling. This paper examines surface erosion sediment connectivity from harvest units on Forest Service lands in the Sierra Nevada. Almost no harvest-to-stream connectivity was found.
- Dr. Hugh Safford, David Schmidt, and Chris Carlson have authored a paper currently in press in Forest Ecology and Management titled “Effects of Fuel Treatments on Fire Severity in an Area of Wildland–Urban Interface, Angora Fire, Lake Tahoe Basin, California.” (see: http://www.wflcenter.org/news_pdf/336_pdf.pdf)

French Creek Watershed Advisory Group—Lessons Learned About Monitoring

Dr. Sari Sommarstrom provided a PowerPoint presentation titled “French Creek Watershed Monitoring Program, 1992-2004.” The purpose of this talk was to: (1) provide a case study of a successful effectiveness monitoring program in California, and (2) allow the lessons learned from this project to be applied to the Monitoring Study Group’s newly forming Effectiveness Monitoring Subcommittee. An earlier version of this PowerPoint is available at:

[http://www.bof.fire.ca.gov/board_committees/monitoring_study_group/msg_archived_documents/msg_archived_documents /frenchcreekwag_04saris.pdf](http://www.bof.fire.ca.gov/board_committees/monitoring_study_group/msg_archived_documents/msg_archived_documents/frenchcreekwag_04saris.pdf).

French Creek is a tributary of the Scott River, itself a tributary of the Klamath River. It has a drainage area of approximately 20,600 acres, with 63% of the watershed underlain by decomposed granitic (DG) soils. The USFS owns 54% of the basin, timber companies 34%, ranch ownerships 9%, and residential 3%. In 1990, the BOF selected the French Creek watershed as a case study for a cooperative watershed process to address high sediment levels in a mixed ownership watershed. Abundant sand filled pools and spawning gravels were identified as significant problems in the late 1980’s. There were major conflicts about timber harvesting among the timber companies, the USFS, residents, fish advocates, and environmentalists. UC Davis’s Dr. Dennis Pendleton acted as a neutral facilitator and coordinator for this collaborative process. The French Creek Watershed Advisory Group (WAG) was formed in the Fall of 1990 and met bi-monthly until 1992, and annually thereafter. Primary members included: USFS (Klamath National Forest), Fruit Growers Supply Co., Siskiyou County Road Department, SPI (now Timber Products), Roseburg Resources, the French Creek Drainage Property Owners Association, DFG, CAL FIRE, NCRWQCB, Siskiyou RCD, SCS (now NRCS), SWRCB, and the Marble Mountain Audubon Society.

Conflict management objectives of the French Creek WAG included: (1) building trust, (2) building understanding, (3) incorporating conflicting values, (4) providing opportunities for joint fact-finding, and (5) encouraging cooperation and collaboration through incentives. Sari provided two book references that are useful in these endeavors: “Making Collaboration Work” by J. Wondolleck and S. Yaffee (Island Press), and “Public Lands Conflict and Resolution: Managing National Forest Disputes” by J. Wondolleck (Basic Books). Additionally, Washington’s Timber, Fish, and Wildlife Program (TFW) was used as a model for the WAG. TFW uses a consensus approach for implementing changes in forest practice

regulations involving industrial timberland owners, state agencies, environmental groups, Indian tribes, and non-industrial forest landowners (for a detailed description, see: http://www.dnr.wa.gov/Publications/fp_tfw_agreement_intro.pdf).

Key components to the French Creek WAG process included having all the major stakeholders participate, using established “ground rules” (mostly from the TFW program), having a neutral coordinator/facilitator, scheduling regular meetings and field trips, encouraging “fact-finding” and mutual education, using subcommittees for major tasks, having good communication among stakeholders, and providing for adequate social time (e.g., lunches together for “ice-breakers”). The main French Creek WAG goal was “to reduce the sediment yield in the French Creek watershed and to reduce, as much as is feasible, the potential for negative cumulative watershed effects.”

A previously completed sediment study revealed that road cutslopes, fillslopes, and road surfaces produced the majority (62%) of the sediment in the basin. To address this sediment source, a Road Management Plan was adopted in 1992. Seventy-four miles of roads on DG soils were recommended to be rocked and outsloped to reduce surface erosion. Actual accomplishments to date include: 38 miles of road rocked and outsloped, 4 miles of road put-to-bed, 4 miles of private driveways rocked, timber roads gated, 20,000 trees planted on road cuts, and cut/fill slope erosion control. A monitoring plan was also adopted, with a joint annual monitoring effort performed by WAG members (~1 wk/yr). Ambitious goals were set with very little external funding. Fish monitoring took place at 6 sites in different reaches and tributaries. No coho were observed until 1993, with higher numbers observed in 3 year intervals (1999, 2002, and 2005). Drought years likely caused lost runs. Steelhead numbers have generally increased from 1992 to 2003. V-star monitoring, indexing the amount of fine sediment in pools, showed a dramatic reduction, starting at over 30% in 1992 and dropping to roughly 10% in most subsequent years. McNeil sediment sampling, measuring the amount of fine sediment in spawning gravels, took place at two reaches in 1989 and 2000. Results are not as definitive for the McNeil samples as for the V-star work.

There are numerous lessons that have been learned from the French Creek WAG process. One of the most important is to use joint fact-finding in a monitoring program, since this develops mutual trust, improves understanding of data for all stakeholders, and makes data collection more enjoyable. Additional lessons learned include: (1) meeting at least annually to share data, (2) completing data analysis and report writing (i.e., no data storage in “shoe boxes”), (3) continuing to schedule field trips with all stakeholders, (4) maintaining consistency with data collection sites, but allowing flexibility as conditions and methods change, and (5) recognizing that as personnel change over time (through retirements, etc.), it is necessary to maintain education so that the lessons learned are carried forward.

Dr. Sommarstrom stressed that keys to success include keeping the watershed and group size small (a maximum of 12 people), motivating affected parties to participate, being practical and applied (i.e., solution-oriented), setting clear goals and developing strategies together, focusing on problems that can be solved economically and locally, using members to implement solutions, and developing pride to sustain results. The French Creek WAG was clearly a successful program, as evidenced by the group receiving the 1996 National Watershed Award for voluntary efforts. Additionally, the NCRWQCB has cited the WAG efforts as an example of success in sediment reduction. This project has produced the best long-term data set for sediment and fish numbers in the Scott and most of the Klamath River

basin. All participants have expressed abundant pride in the successes that have occurred in the basin over time. Sari stated that the lessons learned in French Creek can be extrapolated to other monitoring programs throughout the state.

Lessons Learned from Other Monitoring Projects

Drew Coe, CVRWQCB, and Dr. Kate Sullivan, HRC, briefly summarized lessons they have learned regarding their monitoring programs. Drew stated that the Central Valley Regional Water Quality Control Board's Waiver monitoring program produces informal benefits, since reproducible metrics are not currently in use. The protocols are primarily qualitative and require the landowner to determine if the Forest Practice Rules (FPRs) and THP recommendations have been implemented correctly and are effective. Generally, visual inspections are required four times a year and the main objective is to have landowners on the ground to take corrective actions when and where necessary to protect water quality. Photo-point monitoring is often required and Drew provided the group with photo-point monitoring guidelines for Waiver monitoring. He informed the group that detailed monitoring data that can influence policy maker decisions regarding FPR adequacy is not produced with this program.

Kate Sullivan stated that her HRC compliance (implementation) audit is able to qualitatively determine what percent of field sites are treated according to specified standards. Compliance audits are completed on all sites; wet weather inspections are conducted on 50% of the sites (randomly selected). Wet weather inspections using more detailed field forms determine if the implemented prescriptions are effective at controlling storm runoff and sediment delivery, but take very little additional time to complete in the field when compared to Water Board procedures. Kate stated that this type of effectiveness monitoring provides a rapid feedback loop, allowing practices to be adjusted to reduce sediment delivery.

Following Drew and Kate's comments, a lengthy discussion took place regarding possible avenues for collaborative monitoring that can build public trust in this era of reduced budgets and limited agency staff time. There were suggestions that rigorous landowner compliance and effectiveness monitoring with agency oversight-QA/QC teams should be able to provide the public with data that they can trust. There were several comments that unlike Washington, California does not have a mechanism to transfer monitoring data to policy decision makers so that it can be used in the decision making process. George Gentry pointed out, however, that we have a good example of policy makers using monitoring data in Santa Cruz County. He cited the recent CCRWQCB decision to use their staff's recommendation to require reduced levels of Waiver monitoring based on monitoring information gathered over the past several years by private landowners. Monitoring had a positive effect on regulations in Santa Cruz County (see the recommended modifications at: http://www.swrcb.ca.gov/rwqcb3/water_issues/programs/timber_harvest/docs/2009_05_18_proposed_modifications_timber_activities.pdf).

Initial Concepts for Formation of a New MSG Effectiveness Monitoring Subcommittee

Following lunch, George Gentry summarized the brief discussion held at the last MSG meeting held in April regarding the concept of forming a new MSG Effectiveness Monitoring Subcommittee. This effort is a follow-up to the MSG Monitoring and Tracking Subcommittee work, which had a goal of locating redundancy in monitoring projects conducted in California.

George provided a handout showing the preliminary goal for the Effectiveness Subcommittee discussed in April: “The Subcommittee would advise the Board on how to build a monitoring program that could provide an active feedback loop to policy makers for adaptive management.” He reiterated that Board members have repeatedly asked that a new monitoring program be developed that can provide answers regarding the effectiveness of rules developed for listed anadromous fish species. George’s handout provided a list of preliminary steps related to the new subcommittee’s formation to act as a “strawman” to stimulate discussion from the group.

There was considerable dialogue regarding exactly which policy makers are to be targeted, the need for all stakeholders (including the public) to participate, and the need for a framework to allow science information to be effectively transferred to policy makers. Kate Sullivan and others described how the TFW program works in Washington. Landowners collect the data, but all the stakeholders are allowed to participate in the process. She stated that the key is to for all participants to have a sense of ownership in the monitoring project and data. A published paper describing this process by Dr. Robert Bilby titled “Water Quality Monitoring in Washington’s Timber/Fish/Wildlife Program (Bilby 1993) is available at: <http://www.springerlink.com/content/n68j2321p5n0j552/fulltext.pdf>.

Sari Sommarstrom developed an initial framework for the new MSG Effectiveness Monitoring Subcommittee, which she wrote on the “white board” in the conference room. The group suggested numerous changes and additions. The final version (with slight additional modifications following the meeting) is as follows:

Purpose / Mission of Subcommittee: *To advise the Board of Forestry and Fire Protection on how to build a monitoring program that could provide an active feedback loop to policy makers, managers, agencies, and the public. Board members have repeatedly asked for a new monitoring program that can provide answers.*

Goal: *To ensure a collaborative science-based monitoring effort to credibly evaluate the effectiveness of the FPRs and Review Team process (i.e., plan review process) for:*

- (a) Adaptive management.*
- (b) Meeting stakeholders’ goals.*
- (c) Helping fish (i.e., improving listed anadromous fish species numbers).*
- (d) Ownership of product.*

Objectives:

- A. Identify critical research questions to address the goals (include input from all stakeholders) (i.e., “What do you fret about?”).*
- B. Spread awareness of results to partners, decision-makers and the public through:
 - 1. Field tours.*
 - 2. Internet availability.*
 - 3. Workshops and conferences.*
 - 4. User-friendly format.**
- C. Select priority projects to jointly monitor.*
- D. Promote joint fact-finding at local, regional, and state levels.*
- E. Develop effective partnerships to share the costs of evaluation.*
- F. Provide “free lunch” for social time to develop partnership relationships.*
- G. Involve credible representatives of key stakeholders that are publicly trusted.*

Kate Sullivan and Peter Ribar stressed that many large industrial timberland companies are already doing a significant amount of water quality-related monitoring and that funding for new projects would likely not be available. For this new effort to be successful, they stated that priorities would have to be merged so that there is a commonality in monitoring goals between companies.

Next Steps

The group agreed that the next step is to further refine the mission/goals/objective statement. After this task is completed, all stakeholders (companies, agencies, public, universities, consultants, etc.) will be asked to list their most critical research questions so that they can be prioritized. In other words, all the stakeholders need to frame the questions to be studied. George Gentry suggested that we utilize the email list used in the MSG Monitoring and Tracking Subcommittee work (i.e., the list used for the monitoring questionnaire). After all the researchable questions are received, they are to be prioritized by the new MSG Effectiveness Monitoring Subcommittee. It was agreed that the general framework used for the Washington TFW program would be attempted to be duplicated for this new effort in California—at least as an initial working concept.

Next MSG Meeting/Conference Call

Dennis Hall suggested that rather than waiting 2-3 months for the next MSG meeting to move forward on this new MSG Subcommittee, we should circulate documents by email and schedule a conference call within the next month to rapidly move forward. The group agreed that this was a good idea. No date was set for the next MSG meeting, but when a date is selected, it will be emailed to the full MSG email list (currently 233 participants).