Monitoring Study Group Meeting Minutes

September 21, 2010
CAL FIRE Mendocino Unit Headquarters
Howard Forest Training Center
Willits, California

The following people attended the MSG meeting: George Gentry (BOF—MSG chair), Jim Ostrowski (BOF), Dr. Matthew Buffleben (NCRWQCB), Richard Gienger (public/ HWC/SSRC), Ed Struffenegger (CFA), Peter Ribar (CTM), Dennis Hall (CAL FIRE), Clay Brandow, (CAL FIRE), Dennis Bowker (Consultant to the SWRCB), Kevin Faucher (CTM), Matthew House (GDRCO), Dennis Slota (MCWA), Bill Stevens (NOAA), David Fowler (NCRWQCB), Kaete King (NCRWQCB), Jeremy Kobor (O'Connor Environmental), Brad Valentine (DFG), and Pete Cafferata (CAL FIRE). **[Action items are shown in bold print]**.

The meeting began with general monitoring-related announcements:

- The third coast redwood forest science symposium will be held on June 20-23, 2011 at the University of California, Santa Cruz. The conference web site can be viewed at: **http://ucanr.org/sites/redwood**. This conference is jointly sponsored by the University of California, Cal Poly San Luis Obispo, and Humboldt State University. The call for papers deadline for submission is November 19, 2010.

- The CLFA Fall Field Tour and Fall Workshop, both titled "Prescriptions for California's Forest Health" will be held on October 21st and 22nd, 2010, in the Redding/Burney area. For additional information, see: **http://www.clfa.org/**.

- The Sierra Nevada Adaptive Management Program (SNAMP) Annual Meeting will be held on October 21, 2010 in Sacramento at the US Fish & Wildlife Service office (register by October 15th at: **http://ucanr.org/snampannualmeetingregistration2010/**). Participation in the AM session is available on the web at: **http://ucanr.org/snampannualmeeting2010/** (for audio, call in to: 1-866-740-1260, code #7548509).

- There will be an El Dorado County Roads Workshop titled "Designing, Improving, and Maintaining Rural Roads" held on November 5, 2010 in Placerville. For information, contract Dr. Richard Harris, **rrharris2464@sbcglobal.net** or (707) 678-3504.

- A collection of more than 100 watershed-related published papers posted by Dr. Stephen Taylor, Associate Professor of Geology, Western Oregon University, is available at: **https://www.wou.edu/las/physci/taylor/andrews_forest/refs/**.

- An updated 100-year Memorandum of Understanding (MOU) for Caspar Creek watershed study has been signed by USFS-PSW Station Director Dr. Deanna Stouder and CAL FIRE Director Del Walters. First signed by Dr. Andrea Tuttle and Dr. Hal Salwasser in 1999, this document ensures that watershed research will continue to be conducted at Caspar Creek at least through 2099 (see: **http://www.fs.fed.us/psw/topics/water/caspar/100yearMOU.pdf**).

- The statewide Coho Recovery Team (CRT) will be meeting in Redding on November 2-3, 2010.

- Richard Gienger stated that the 13th annual Coho Confab held in the Russian River watershed on August 13-15, 2010 was a success, with more than 100 attendees. The Confab next year will be held in the Smith River watershed.

Introduction to the California Water Quality Monitoring Council

Mr. Dennis Bowker, Consensus Process Design, provided a PowerPoint presentation titled "California Water Quality Monitoring Council: Maximizing the Effectiveness of Water Quality Data Collection and Dissemination." This PPT gives an overview of the Monitoring Council and was developed by Monitoring Council Coordinator Dr. Jon Marshack, SWRCB. Mr. Bowker began by stating that an MOU was signed in November 2007 by the Secretaries of Cal/EPA and the California Natural Resources Agency to establish the Monitoring Council. The MOU was mandated by Senate Bill 1070 and requires the boards, departments and offices within Cal/EPA and the Natural Resources Agency to integrate and coordinate their water quality and related ecosystem monitoring, assessment, and reporting (see: http://www.swrcb.ca.gov/mywaterquality/monitoring_council/). The main premise is that all California citizens need to have easy access to water quality data, but in the past it has not been readily available. Key mandates of SB 1070 were to: (1) maximize efficiency and effectiveness of existing water quality data collection and dissemination, and (2) ensure collected data is available to decision makers and the public via the Internet. Members of the Monitoring Council are selected by the Secretaries of Cal/EPA and the Natural Resources Agency (each supplying a co-chair); members represent the CDPH, the regulated community (publically owned treatment works, stormwater), agriculture, citizen monitoring groups, the public, the scientific community, and water supply. Meetings are publically noticed and held every two months, alternating between northern and southern California.

To begin the project, the Monitoring Council chose "theme-based" web portals that directly address users' questions as an overall strategy for streamlined data access. Theme-specific workgroups were or will be established for developing web portals in five specific areas. These areas are: "Is our water safe to drink?", "Is it safe to swim in our waters?", "Is it safe to eat fish and shellfish from our waters?", "Are our aquatic ecosystems healthy?", and "What stressors and processes affect our water quality?" (see: http://www.CaWaterQuality.net). Currently, there are portals available for the "safe to swim", "safe to eat", and "wetland ecosystem health." These portals provide decision makers and the public with a central place to get theme-specific information for a given location in California (e.g., beach closure information for Monterey Co.), as well as a location to store data in one place. Eventually, the Monitoring Council would like to have the website designed so that it is possible to search for data using a specific theme/topic or a specific location (e.g., the Mattole River watershed). The only "aquatic ecosystem health" portal currently available is for wetlands; portals for estuaries, lakes, streams and rivers, and the ocean are to be supplied in the near future. The goal is to make all the web portals fully functional within the next few years. The initial portal development has been produced with scant resources and a largely volunteer effort. Benefits for this type of approach include: (1) automated agency annual reporting, (2) improved efficiency of monitoring and assessment programs through agency collaboration, (3) easy access to information for decision makers to guide future expenditures, and (4) documentation of big picture water quality status and trends.

Mr. Bowker then presented a specific example demonstrating how databases currently have the ability to connect to the California Environmental Data Exchange Network (CEDEN) and obtain the most current data available using a network "mule" (see: http://www.ceden.org/). The Imperial Valley Spatial Data Infrastructure site (http://www.institute.redlands.edu/ivsdi/) is a partnership between federal, state, and local entities, and the Redlands Institute. Database design objectives included incorporating data from various agencies, complying with SWRCB SWAMP standards, and supporting analysis and reporting requirements. The Imperial Valley Spatial Data Infrastructure interactive website allows users to easily display web-based GIS

maps with water quality monitoring point locations, as well as to generate water quality data reports and graphs for those locations (data can be obtained by location or by topic). As an example, total suspended solids (TSS) data were displayed, illustrating farming impacts near the Salton Sea. Mr. Bowker stated that this type of technology could be applied more broadly in California, potentially allowing reports to be generated for any water quality monitoring station in the state. Future possibilities for the Monitoring Council, therefore, include developing a web based link among CEDEN and other sources of monitoring data. This would allow both a spatial and topical display of information and provide custom graphing and reporting capabilities to users. It would also provide a central point to access water quality data without requiring a central repository (using a web-based data server).

Mr. Bowker closed his presentation by stating that the Monitoring Council work will assist with the "Healthy Streams Initiative", a joint effort initiated by the Water Boards, the SWRCB SWAMP program, and DFG's Aquatic Bioassessment Laboratory to protect high quality California streams, protect threatened streams from degradation, and restore impaired streams. During the discussion period following the PowerPoint presentation, the group discussed whether the Monitoring Council web portal approach would be a useful method for providing forestry-related water quality monitoring data under an ""aquatic ecosystem health" web portal. Earlier at the August 11th Monitoring Council Meeting, Pete Cafferata and Clay Brandow provided the group with an introduction to forestry monitoring data and the Monitoring Study Group (the PowerPoint presentation is posted at: http://www.waterboards.ca.gov/mywaterquality/monitoring_council/meetings/2010aug/cafferata_msg.pdf, and the one page handout prepared for the meeting is posted at: http://www.waterboards.ca.gov/mywaterquality/monitoring_council/meetings/2010aug/mon_study_grp.pdf). Clearly, posting forestry-related water quality monitoring data would require an extensive partnership among agencies, as well as the timber industry, and Clay Brandow raised the concern about potential misuse of the datasets. Peter Ribar stated that some timber companies would likely be more open than others in terms of sharing their data over the web, and that aggregated, consolidated datasets produced by an industry group would likely be more acceptable to most companies. Matthew Buffleben stated that additional monitoring data for individual stream reaches from the timber companies would be highly beneficial to the NCRWQCB in terms of delineating problem and non-problem areas. Additionally, there was limited discussion regarding how the BOF's newly formed Research and Science Committee (RSC) could assist in this process.

Green Diamond Resource Company's Aquatic HCP Effectiveness Monitoring Program

Mr. Matthew House, provided a PowerPoint presentation titled "Green Diamond Resource Company's Aquatic Habitat Conservation Plan: An Overview of the Effectiveness Monitoring Program." Mr. House stated that in June 2007, Green Diamond Resource Company (GDRCo) signed, along with the National Marine Fisheries Service (NMFS) and the United States Fish & Wildlife Service, an Aquatic Habitat Conservation Plan (AHCP), with the objective to enhance habitat for six fish and amphibians. These species are: coho salmon, Chinook salmon, resident rainbow trout/steelhead, cutthroat trout, tailed frog, and torrent salamander. The main purposes of the AHCP are to: (1) provide coverage for incidental take of listed species, (2) provide coverage for unlisted species that could be listed, (3) provide flexibility in application of forest practices and certainty in long-term planning (50 years), and (4) allow it to be used as a foundation for other planning and permitting processes. Potential operational impacts from timber operations to the six covered species include altered hydrology, increased sediment delivery, altered large wood recruitment rates, altered water temperature and nutrient inputs, creation of fish barriers, and direct harm of the

species. The biological goals and objectives of the AHCP are to maintain cool water temperatures, minimize and mitigate sediment inputs, provide for adequate large wood recruitment, maintain or increase amphibian populations, and monitor/use adaptive management.

GDRCo's ownership in the California Coast Ranges covers approximately 450,000 acres, with 406,962 acres covered by the AHCP, broken up into 11 hydrographic planning areas (areas subject to significant rain-on-snow events were excluded). Conservation measures were tailored for individual hydrographic areas. Primary conservation strategies relate to stream protection for Class I, II, and III watercourses, slope stability measures, road management plan practices, and harvest-related ground disturbance. The monitoring program for the AHCP includes both implementation and effectiveness components. Effectiveness refers to determining whether the conservation measures are meeting stated biological objectives.

Mr. House stated that there are four categories of effectiveness monitoring and adaptive management: (1) rapid response monitoring (up to 2 yrs), (2) response monitoring (minimum of 3 yrs), (3) trend monitoring (long term), and (4) an experimental watersheds program. Rapid response monitoring includes water temperature, spawning substrate permeability, road-related surface erosion and turbidity (with 12 stations outfitted with recording turbidimeters), and headwater amphibian monitoring. Response monitoring includes Class I watercourse channel monitoring (i.e., changes in channel morphology as evidenced by long profiles and pebble counts) and Class III sediment monitoring (BACI design). Trend monitoring includes juvenile salmonid population estimates, stream habitat assessment and LWD surveys, and monitoring and assessment of slope stability (with steep streamside slopes and mass wasting assessments to be completed in 15 to 20 years). There are four experimental watersheds (SF Winchuck River, Ah Pah Cr., Little River, and Ryan Cr.), all with BACI experiments and special monitoring/research objectives (e.g., testing new monitoring approaches). Mr. House stated that the GDRCo is receptive to collaborative monitoring efforts in these watersheds with the BOF's MSG, resource agencies, universities, etc.

Adaptive management was then discussed. Monitoring was stated as driving adaptive management for this 50 year AHCP, but Mr. House explained that the monitoring program itself needs to be adaptive in nature. Expected monitoring changes include: (1) revising protocols, using new technology to measure the same parameters, (2) abandoning methods that prove ineffective, (3) incorporating new monitoring approaches, and (4) using data analysis approaches that can lead to re-evaluation of adaptive management "triggers." Channel monitoring was provided as an example of revised protocols, where a laborious "tape-set" approach with auto-level and compass bearings has been replaced with a total station method for long profiles. Spawning substrate permeability monitoring is an example of an abandoned monitoring method that was found to be ineffective. Highly variable results were obtained within individual riffles, as well as between adjacent riffles, and measurements taken within a riffle were influencing each other. For reevaluating management triggers, Mr. House described property-wide water temperature thresholds. When thresholds were exceeded, most happened where no recent timber management operations had occurred. Possible factors include climatic variations, aspect and location relative to the coast, and site specific conditions (i.e., sites appear to be consistently warmer regardless of management). Proposed changes include reevaluating the watershed area-temperature relationship previously used and creating a new threshold that requires some relation to management activities to be triggered.

During the discussion period following the PowerPoint presentation, Mr. House stated that biennial reports are submitted to NOAA and the USF&WS, with information available through these agencies. Additionally, sufficient data has now been collected to allow data analysis, with the expectation that the data will be published in the near future.

Update on Section V Pilot Projects Technical Advisory Committee (VTAC) Formation

Pete Cafferata rapidly summarized the status of the Anadromous Salmonid Protection Rule 916.9 Section V Pilot Projects Technical Advisory Committee formation. The VTAC will act as a technical advisory committee for the development of at least two pilot projects that use site-specific information and measures to protect and restore the beneficial functions of the riparian zone in watersheds with listed anadromous salmonids. The primary tasks for the group, as described in the VTAC Charter, are to: (1) provide recommendations for the development and completion of at least one coast and one inland pilot project, (2) process facilitation development, (3) development of a workable context assessment process, including planning watershed assessment and cumulative watershed effects assessment as appropriate, and (4) development of a general guideline document that will allow broad application of the site-specific approach for riparian zone management.

Nominations for the VTAC were to be received by CAL FIRE by July 31, 2010. Approximately 15 well qualified resource professionals submitted applications, but no final selection has yet occurred. Additionally, 10 to 15 landowners have stated their interest in developing Section V projects. The lack of a state budget for the current fiscal year has delayed CAL FIRE from finalizing the committee and holding an initial meeting of the group (i.e., no ability to authorize funds for travel expenditures). **It is likely that CAL FIRE will announce VTAC membership at the October BOF meeting in Sacramento.** Richard Gienger stated that Assembly Bill 2575, which mandates pilot projects that result in the development of guidelines for conducting cumulative effects evaluation on a planning watershed scale, was approved by the Legislature (see: ftp://www.leginfo.ca.gov/pub/09-10/bill/asm/ab_2551-2600/ab_2575_bill_20100805_amended_sen_v95.pdf) and would complement the VTAC's goals and objectives well. Governor Schwarzenegger, however, vetoed this bill (see press release dated 9/30/10 at: http://gov.ca.gov/press-release/16095).

Introduction to the BOF's Research and Science Committee

George Gentry provided introductory material on the Board of Forestry and Fire Protection's newly formed Research and Science Committee (RSC) (for detailed information, see: http://www.bof.fire.ca.gov/board_committees/research_and_science_committee/). Mr. Gentry stated that the RSC was primarily established to: (1) review ongoing research programs; (2) advise the Board on research needs, priorities, policy, and other matters; and (3) provide science-based recommendations and technical information to assist the Board in making its determinations on forest practice rules and fire regulations. Additionally, the RSC is to provide oversight and coordinate the efforts of the Board's technical committees, such as the Monitoring Study Group (MSG). The 2008 Charter of the RSC was provided as a handout to the MSG. This document includes an organizational chart displaying the oversight role of the RSC over the Board's various committees, including external committees. Dr. Richard Standiford, UC Berkeley, is the chair of the RSC. Dr. Standiford selected the following scientists for the RSC: Drs. Martha Conklin (UC Merced), Norm Pillsbury (Cal Poly SLO), Lowell Diller (GDRCo), Jon Rosenfield (The Bay Institute), Chris Edgar (HSU), David Gantz (The Nature Conservancy), and Hao Tran (USFS-PSW liaison). The committee held its initial meeting on August 6, 2010 at UC Davis and Mr. Gentry summarized the meeting.

Topics covered included: (1) a presentation by Dr. Standiford on ongoing UC research gaps, with considerable discussion on the purposes of forestry-related research in California; (2) the Washington Cooperative Monitoring, Evaluation, and Research Committee (CMER) and the TFW approach used in that state; and (3) a presentation by Dr. John Helms, UC Berkeley Professor Emeritus, on the Jackson Demonstration State Forest Management Plan and Jackson Advisory Group (JAG) work. **The next meeting is tentatively scheduled for the end of October or early November, with issues for priority for the RSC to be discussed. Meetings are planned to be held at a minimum of quarterly and are open to the public.**

Update on FORPRIEM Monitoring Work by CAL FIRE

Clay Brandow, CAL FIRE, provided an update on FORPRIEM (Forest Practice Implementation and Effectiveness Monitoring) work. CAL FIRE's goal is to obtain a complete 10% random sample of all THPs that have undergone a Work Completion Report from July 1, 2008 to the present. Mr. Brandow is tracking monitoring progress with the CAL FIRE Forest Practice System (FPS) database and the FORPRIEM random number pick-lists. To date, there are 60 THPs in the FORPRIEM database. There are 36 THPs that been completed since July 1, 2008 that have not yet undergone FORPRIEM monitoring (12 in the Coast District, 24 in the Northern District, and 0 in the Southern District; all but 10 have overwintered at least one year). **CAL FIRE will continue to work with CAL FIRE Audit Foresters, Unit Foresters, and Forest Practice Inspectors to close the backlog.** An interim report will be generated when 100 THPs have been completed. A FORPRIEM QA/QC program has been developed, utilizing a 10% sample of monitored plans. **Five THPs have been selected for QA/QC work, but to date no progress has been made due to travel restrictions pending a state budget.** Peter Ribar suggested that there may be a problem with some THPs in the FORPRIEM data base becoming too old to be effectively re-monitored for QA/QC purposes (e.g., too much time has elapsed between the original effectiveness evaluation and the re-monitoring of effectiveness). Mr. Brandow acknowledged that in some cases this may be a problem, and that in such cases re-sampling of the THPs in the FORPRIEM database will be required.

Public Comment

Mr. Ed Struffenegger, CFA, asked how the MSG can better educate the public regarding the results of its monitoring work conducted for nearly two decades. He stated that the MSG needs to better promote and disseminate what has been learned, so that it is not construed as necessary to duplicate past monitoring efforts. Pete Cafferata referred to the PowerPoint presentation he developed with Clay Brandow for the August 11, 2010 California Water Quality Monitoring Council meeting as one approach for better educating the public and resource professionals about MSG monitoring results [this PowerPoint presentation was added to the BOF's Monitoring Study Group website following the MSG meeting (see: http://www.bof.fire.ca.gov/board_committees/monitoring_study_group/mission_and_goals/introduction/msg_for_water_quality_monitoring_council_meeting__2b_.pdf)]. Other ideas expressed included: producing annual reports, targeting universities, participating in job fairs, and utilizing social networking sites.

Next Monitoring Study Group Meeting Date

The next MSG meeting date was tentatively set for **December 15th** in either Redding or Willows. When a definite date, venue, and agenda are available, this information will be emailed to the MSG contact list.