

SRCAF Technical Advisory Committee (TAC)
Meeting notes – February 7, 2012

In the absence of Chair Tom McCubbins and Rob Irwin, SRCAF Manager Jane Dolan opened the meeting with self introductions.

The following were in attendance: Peter Coombe, Sue Horkey, Aric Lester, Helen Swagerty, Jessie Cain, Mary Randall, Russ Bellmer, Roger Guinee, Bill Menke, Claudia Street, Michael Hellmair, Pat Kennedy, Alan Mitchell, Bobie Hughes and Scott Ferris.
Staff: Jane Dolan and Ellen Gentry.

Announcements and Public Comments

There were no announcements or public comments.

Activity Reports

Mary Randall, DWR, reported the Sacramento Watershed Coordinated Monitoring Program (SWCMP) will monitor and assess ambient water quality of the Sacramento River and its larger tributaries at incremental locations. The 41 monitoring stations begin upstream of Lake Shasta, south to Verona, and include the lower ends of the larger tributary streams to the Sacramento River. An additional three monitoring sites in the Upper Feather River watershed were added to this program in August 2011. SWCMP is designed to meet the monitoring needs of the Regional Board's Surface Water Ambient Monitoring Program (SWAMP) and the DWR Northern Region Water Quality Section's basic data programs. Coordination allows both agencies to maximize the use of their limited resources.

The TCCA/Red Bluff Diversion Dam construction is scheduled to cut the coffer dams in March and start delivering water in April.

DWR Central Valley Flood Management Planning Program released the Public Draft of the Central Valley Flood Protection Plan and other documents. All related documents can be found at: <http://www.water.ca.gov/cvfmp/documents.cfm>.

Integrated Regional Water Management's (IRWM) draft Local Groundwater Assistance Grant Guidelines and Proposal Solicitation Package are out for review. Comments are due by March 1. A workshop and webcast will be held February 23, at CalEPA, in Sacramento.

The final round of Prop 84 planning grant applications are due March 9. For more information, go to: http://www.water.ca.gov/irwm/integregio_planning.cfm.

Jane reported Central Valley Flood Protection Board celebrated its 100th Anniversary, in January, as the State agency responsible for protecting California's Central Valley from the devastating effects of flooding. The celebration included a short film history, guest speakers, highlights and the Board's plans for the future. To view the video, go to: <http://www.cvfpb.ca.gov/>.

NorthStar Environmental, a division of NorthStar Engineering, contacted SRCAF on behalf of Butte County. NorthStar has been hired to manage the permitting process for the seismic retrofit of Ord Ferry Bridge, located seven miles south of Hamilton City and ten miles west of the City of Chico. The Glenn Count Ord Bend Park and boat ramp are located near the bridge. The bridge connects unincorporated portions of Butte and Glenn Counties. Construction of the bridge, built in 1977, has been planned for 15 years. There will be construction activities over three years; the first phase will require the closure of the

boat ramp and river use from the west bank. Work involves underpinnings and abutments; the bridge alignment will not change. Butte County as the lead agency approved the environmental findings in 2005.

New Projects or Proposal Review

No new projects or proposals were presented or reviewed.

Projects/Updates

City of Colusa Boat Launch - Alan Mitchell, Ponticello Enterprises Consulting Engineers, gave an update of the City of Colusa boat launch facility. Built in 1960, the boat launch has required annual dredging, which has been deemed to be no longer feasible. In 2006 the City of Colusa submitted a grant application to CA Department of Boating and Waterways (DBAW) for funding for a new boat launch. Approval for a grant to study the feasibility of a new, and re-located boat ramp was received in 2008.

On April 11, 2011, Council affirmed the selection of Moffatt & Nichol (M&N) and awarded an Agreement for Consultant Services for design services associated with the project. The City Manager executed a separate contract with M&N for construction of a boat dock, separate from the grant-funded project.

M&N completed design alternatives for the boat launch, parking access and dock, which were reviewed by staff from the City, State Parks and State Boating. Preferred alternates were confirmed by the Colusa City Council: the boat launch will be an on-grade ramp, which is consistent with Boating and Waterways standards; the location of the ramp will be closest to the levee bank and most in-line with the alignment of the access driveway; parking will be increased and include widened stalls to accommodate larger vehicles; the 10th Street entrance is the preferable access and will remain; and the boat dock is to have a separate dock and controlled entrance point via a gangway from the south memorial grove/levee trail area.

Estimated project cost is \$2.4M, although the City will strive to have the construction come in under \$2M. The boat launch is the priority, with the understanding that parking may be done in a later phase. The City is still looking for other funding sources to construct the improvements sooner.

The City Planner will commence with CEQA analysis, based on the preferred alternatives, with the intent of filing a Mitigated Negative Declaration.

M&N will complete the preliminary design package mid-February, which will be the basis for staff to prepare and submit a Construction Funding Grant Application to DBAW by April 1. This is the deadline for 13/14 funding. With DBAW's approval, M&N will proceed with Design Development and Construction documents, within the approved funding allocation. M&N estimates design and permitting will take at least a year to complete, after funding is secured.

For more information on this project contact: alan.mitchell@ponticelloinc.com.

Climate and Climate Change - Pete Coombe, DWR Staff Environmental Scientist, gave a second in a series of presentations, providing an overview of climate and climate change implications for hydrology and water resources in CA. DWR forecasts future water needs, evaluates and inventories existing water supplies, and explores conservation and storage options. Climate is long term average conditions. Weather is day to day conditions.

Annual, average and year to year precipitation were reviewed. CA precipitation is uniquely variable compared to the rest of the country. In parts of the state, there have been up to ten, three-day episodes with more than 16 inches of precipitation since 1950. Just a few storms each year can make up the core of CA's water supply. The North State can receive half of its precipitation in ten days; Southern CA is getting less

precipitation because the water is too salty for evaporation. In looking at precipitation trends, the driest 30 years were from 1908-1937 with 21.28 inches; the wettest 30 years were from 1977-2006 with 24.88 inches. In reviewing the chart for “American and Feather River Peak 2-Day Flows Without the Influence of Reservoirs,” there was an upward trend in 1998; more peaks occurred after dams were built.

The top five “worst” storms of the 20th century in CA included: 1) January-February, 1969; 2) October 11-13, 1962; 3) February 11-18, 1986; 4) February 10, 1978; and 5) December 19-24, 1964.

Atmospheric rivers occur when water vapor comes up from the tropics; the jet stream brings the vapor into CA. The Intergovernmental Panel on Climate Change (IPCC) 2100 Projections sees an increase in global temperature, resulting in thermal expansion of ocean water; sea level rise, with an additional rise if Greenland ice melt increases beyond previous rate(s); uncertain precipitation, but likely an increase at higher latitudes and near the equator (less in subtropics); and the likelihood of extreme events (floods). New reports will be provided in 2013.

Mapping Fall-run Redds – Aric Lester, DWR, reported on mapping fall-run redds to provide data to identify and map areas susceptible to dewatering. The pilot effort is done in partnership with DFG, Pacific Marine Fisheries Commission, USFWS and DWR. The study question was: What percentage of fall-run redds is being dewatered while eggs and fry are still in the gravel? The study area covers roughly 70 miles of the Sacramento River, from Redding to Los Molinos.

The fall-run spawning life history begins in October and ends in March, with eggs and (yolk sac) fry in gravel for 60-90 days. If the eggs or fry become dewatered during this period, they perish.

Competing demands on Shasta Lake water and Shasta dam affects dewatering for both winter-run and fall-run. Keswick reservoir is released to make room for winter water, however if water levels drop to 4,500cfs, redds start to become exposed. In 2006-2007 water levels did not drop below 4,500cfs. There were far fewer fish in 2009-10 because levels dropped by mid November. In 2011-2012, levels didn't drop until early January. Fall-run salmon is not a listed species.

The survey was ground/boat based, to determine when redds were created, and to mark and record accurate location of redds. During low-flow periods, the survey recorded dewatered redds and the state of dewatering. Maps indicated dewatered spawning areas.

CDFG Input to the CVPIA (b)(2) Decision Process – Russell Bellmer, CDFG Fisheries Branch, noted salmon runs are important ecologically, serving as enormous pumps that push vast amounts of marine nutrients upstream to the headwaters of otherwise low productivity rivers. Their carcasses are the primary food for aquatic invertebrates and fish, as well as terrestrial fauna (eagles, ducks and songbirds), ranging from marine mammals to terrestrial mammals (including bears and humans). Pacific salmonids support commercial and recreational fishing industries that produced over \$1B in income and more than 60,000 jobs. Alaskan salmon exports generate over \$700M each year.

In addition to water levels, dewatering occurs if flow velocity drops below .32ft/s for fall and late-fall runs, or .87ft/s for winter-run. Flow dynamics and behavior in this zone is important for surface water/groundwater interactions, as well as fish spawning and other processes. If the gravel in a dewatered redd actually dehydrates and moisture is lost, little oxygen transfer would take place and oxygen would subsequently be depleted from the egg by metabolism. This year it is anticipated that approximately 10-20% of redds may have been dewatered.

Chinook salmon are monitored by video, passing the Red Bluff Diversion Dam. Adult Chinook are also monitored throughout Cow, Bear, Battle, Antelope, Mill and Deer Creeks for presence and absence year round by video and carcass surveys, and weir and snorkel counts. Adult Steelhead are monitored

intermittently throughout Beegum, Thomes, Paynes, Antelope, Mill and Deer Creeks as funding, personnel and weather allow. Aerial flight monitoring is also used, from fixed wing aircraft and helicopter, from October to December.

For more information contact Russ at rbellmer@dfg.ca.gov, go to www.dfg.ca.gov/fish/, or <http://www.calfish.org/programs/CalFishPrograms/tabid/60/Default.aspx>.

CVPIA (b)(2) water in the Sacramento River – Roger Guinee, USFWS, Bay-Delta Field Office, gave an overview entitled Water Operations on Central Valley Streams. The purposes of the Central Valley Improvement Act., 1992, is to protect restore and enhance fish, wildlife and associated habitats in the Central Valley; address impacts of the CVP on fish, wildlife and associated habitats; and improve operational flexibility of the CVP. CVPIA Section 3406 (b)(2) is a program that dedicates and manages 800,000AF annually of CVP water. This water is managed pursuant to conditions specified by the FWS after consultation with USBR, CDWR and CDFG. The FWS and USBR agencies coordinate with CDFG, CDWR and NOAA fisheries.

The Anadromous Fish Restoration Program (AFRP) aims to develop and implement doubling natural production of anadromous fish, compared to the 1967-1991 average levels. The AFRP Working Paper (1995) identified flows to achieve doubling the goal in Central Valley rivers and streams, and the AFRP Plan (2001) recommended “reasonable” flow objectives for CVP streams that contribute toward the doubling goal. Limiting factors include inadequate timing and/or magnitude of flow to provide suitable conditions for one or more life stage, and water temperatures that exceed tolerances of one or more life stage.

Action includes implementing a river flow regulation plan that balances carryover storage needs with instream flow needs, a schedule for flow changes that avoids dewatering redds and isolating or stranding juvenile anadromous salmonids, and continues to maintain water temperatures at or below 56F from Keswick Dam to Bend Bridge. The upper mainstem of the Sacramento River is high priority. Implementation is based on the May 2003 Department of the Interior (DOI) (b)(2) Decision, the Ninth Circuit’s January 2004 decision and Judge Wanger’s September 2008 decision, and continued use of (b)(1) re-operation.

Charts for Shasta Reservoir Storage and inflow, Keswick Reservoir releases, and water used to augment releases, were reviewed. 5,000cfs were able to be maintained late in the season (Oct. 1, 2011-Jan. 31, 2012) with (b)(2) water. Agencies continue to work together to balance these complex decisions as are studies for documentation. Continuing to share information, inflow and precipitation is always needed.

All presentations given today will be available on the SRCAF website at: www.sacramentoriver.org.

Scott Ferris, NorCal Fishing Guides, commented that he would have liked to have heard more about potential solutions, i.e., cutting flows earlier in the year, the peripheral canal, and wild or natural spawning. Maintaining fisheries with needs could help, as well as getting more people involved.

Roger Guinee stated that he can talk more about solutions next time, but flow decisions and solutions are complex and include habitat restoration, introduction of gravel and off-stream improvements such as opening up above Battle Creek by removing dams. Some solutions have also been implemented under the restoration plan, developing more restoration and habitat because flows are dependent on them. Guinee added that steelhead is now a listed species.

Next Meeting Date and Location

The next regularly scheduled meeting date will is 9:30-Noon, Tuesday, March 6, at Willows City Hall.