County of Yolo

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JOHN BENCOMO
DIRECTOR

Yolo County Cache Creek Technical Advisory Committee
Summary Minutes
February 7, 2005

Members in Attendance:	Kevin O'Dea, Jeff Hart, and Geoff Schladow
County Staff:	Linda Fiack, Dimitrios Georges, Petrea Marchand, Brett Williams
Others in Attendance:	Barry Cavanna, John Watson, Chad Roberts, Ben Adamo, John Perry, Dave Pratt, Max Stevenson, Lillie Noble, Dan Reiff, Bob Schneider, Grant Williams, Christian Brown, Robert MacArthur, Vince Bush, Marc Mammola, Bill Cruikshank, Janet Levers, Jan Lowrey, Jack White, Tyler Chatriand
Members Absent:	None

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1. CALL TO ORDER

The meeting commenced at 10:04 AM

2. PUBLIC COMMENTS

None

3. ADOPTION OF MINUTES

The minutes of the January 10, 2005 meeting were adopted as presented.

4. STAFF UPDATE

Lower Cache Creek Water Quality Testing*:* First flush was accomplished by Foothill in December 2004. Additional testing is anticipated by Foothill in late January or early February 2005.

Jensen Bank Stabilization: Completion report for the Jensen Bank Stabilization project on Cache Creek submitted to US Army Corps of Engineers by Brett Williams, Parks & Resources Coordinator.

Cache Creek Area Plan Presentation: Linda Fiack reported that a presentation will be made to the Board of Supervisors on February 15, 2005 by Parks and Resources Division staff, Kevin O'Dea, Chair of the TAC, and Jan Lowrey, Executive Director of the Cache Creek Conservancy regarding the past, present, and future projects and positive activities along Cache Creek.

Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) presentation to the TAC: Maria Wong, Project Manager: Yolo County Habitat Joint Powers Authority JPA will be making a presentation, as requested by Chair O'Dea at the TAC's March meeting regarding the NCCP/HCP.

California Indian Basketweavers Association (CIBA): Interested in establishing relationship and working with public agencies to promote the physical, social, cultural, spiritual, and economic environment that conserve traditional Native American resources. CIBA will be making a presentation to the TAC at a future date.

Cache Creek Walk Dates: Staff reminded TAC of annual walk dates, which are quickly approaching. Chair O'Dea suggested discussing at the next TAC meeting under the regular agenda.

Total Mercury Daily Load (TMDL) update by Yolo County Water Resources Coordinator: Petrea Marchand provided the TAC with an update on the proposed State Regional Water Quality Control Board (RWQCB) TMDL workshop in March, and the RWQCB hearings in July regarding TMDL.

Cache Creek Conservancy Project Updates: John Watson, Project Coordinator reiterated that a revegetation workshop is proposed at the Conservancy on April 7 or 8. County and Conservancy staff will organize the event.

5. COMMITTEE REPORTS

None

6. REGULAR AGENDA

Presentation by Dr. Robert MacArthur, Principal Engineer with Northwest Hydraulics Consultants, regarding the "Test 3 Conceptual Design":

Heidi Tschudin, Principal with Tschudin Consulting Group gave a brief introduction to the history of the technical studies, the science, and the process of the technical studies involved in preparation of the Cache Creek Resources Management Plan (CCRMP). She then introduced Dr. Robert MacArthur, who discussed the history and process utilized in the preparation of the technical studies (1994) that served as the basis for the CCRMP: *Technical Studies And Recommendations For The Lower Cache Creek Resource Management Plan.* Dr. MacArthur discussed factors that have historically affected Cache Creek, including:

Natural variable conditions that shaped the creek such as a complex regional geology, hydrology, and combinations of droughts, floods, and fires.

Human influences that shaped the creek, including agricultural activities, deforestation, water diversions, groundwater pumping, construction of levees, aggregate extraction, introduction of invasives and non native plant species, and habitat enhancement projects

The cumulative effects of natural and human activities has resulted in a change in the plan and profile of the creek, a narrower and deeper channel, bank erosion during flood events, and a loss of riparian habitat. The result has been a new creek morphology that is out of balance with the flow and sediment load.

After conducting specific hydrological studies, long term modeling and simulations were performed by the study team as a test to see how long it might take the creek the reestablish a more stable channel profile if left alone (50 & 100 year continuous flow simulations). The data was then utilized by the team in the development of conceptual channel improvement scenarios and river management plans. These tests identified hydraulic constraints and channel management opportunities. Single event and long-term modeling results showed that the creek confines flow energy for large events to a much narrower channel then had occurred historically: the 5 year channel width was not much different from the 50 or 100 year because the creek is confined. The resulting creek bank erosion causes the creek to be out of balance with the sediment load. These results led to 3 channel widening and smoothing scenarios.

Test 1 results:

- Limited bridge widening (30' to 240' wider) produced a measurable improvement at bridges and reduced dis-equilibrium results.
- Eases backwater effects at bridges.
- Improves sediment transport dynamics between sub-reaches that contain bridges

Test 2 results:

- Channel smoothing and bridge widening (300' to 900') markedly improves the hydraulic and sediment transport characteristics.
- Reduces the sediment load deficiencies of bridges from 50-60% down to 5-10%.
- The last two downstream reaches in the creek continued to trap sediment.

Test 3 results:

- Evaluated the effects of limited channel smoothing and smooth transitions into and out of bridges (including protection of channel bottoms at bridges from scour with no bridge widening).
- Similar to test 2 (except magnitude of dis-equilibrium is slightly higher).
- Results in 25-65% improvement over present conditions.

The Test 3 line appeared to be implementable, and minimized the costs and construction associated with Test 1 and 2. Test 3 line did not represent the 100-year flood event, but some areas of the test 3 do overlap with the 100-year flood event as determined by the US Army Corps of Engineers and FEMA. Test 3 is utilized in the CCRMP as a line to establish set back distances for off channel mining permits and creek management.

Plan and profile options were presented in the presentation (available in the CCRMP). Specific recommendations as a result of the test 3 line are included in the CCRMP, and were discussed by Dr. MacArthur in his presentation.

Staff advised the audience that copies of the *Technical Studies And Recommendations For The Lower Cache Creek Resource Management Plan* were available to the public in hard copies, and staff is working to transfer the technical studies to compact disk (CD) and make the studies available in electronic format.

7. ADJOURNMENT

The meeting was adjourned at 12:30 p.m.

Next meeting is scheduled for March 7, 2005. 10:00 AM to 12:00 PM.