COUNTY OF YOLO

Office of the County Administrator

Patrick S. Blacklock
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CACHE CREEK TECHNICAL ADVISORY COMMITTEE AGENDA

DATE: MONDAY, SEPTEMBER 9, 2013

TIME: 10:00am – 12:00 pm

LOCATION: County Administration Building, Board of Supervisors Chambers, 625 Court Street, 2nd Floor, Woodland, CA 95695.

Time set items are approximate. The Chair may adjust the time any item is heard in order to more efficiently manage the meeting. Items may be heard earlier than the time indicated at the discretion of the Chair.

1. CALL TO ORDER (10 AM):

2. APPROVAL OF AGENDA:

3. INTRODUCTIONS:

4. ADOPTION OF MINUTES OF THE February 11, 2013 MEETING:

5. PUBLIC COMMENTS:

Members of the public may address the Technical Advisory Committee on any subject relating to the Technical Advisory Committee, but not relative to items on the present agenda. The Committee reserves the right to impose a reasonable limit on time afforded to any individual speaker.

6. FOLLOW-UP ITEMS:

Parking Lot:

1. Vehicles left abandoned on flood plain – (Submitted to RWQCB)
2. Barn structure falling into Cache Creek (Reynolds Property) (Submitted to RWQCB)
3. Look for funding for signage regarding fishing due to mercury presence (Staff)
4. Monitor erosion and drainage concerns at Huff's Corner (Staff)

Action Items:

1. Biological baseline and Biological Update for 5-Year Survey: 2011 data has been resorted and is ready for analysis (In process, Martin)
2. Baseline DTM data: Produce TIN's from past survey data for analysis by Geomorphologist (Larsen/Staff)
3. Obtain copy of original Palisades construction study (Sabatini)
4. HEC-RAS Model (Larsen)
5. Investigate other means of conducting 2014 Creek Walk (boats, OHV's, etc) (Sabatini)
6. Transition to Liberty Meeting recording system for audio recording and minutes of future TAC meetings (Sabatini/Manprin)
7. Aerial Survey Scope of Work and Specifications (TAC/Staff)

7. STAFF UPDATES (10:10-10:45 AM):

7.1 Natural Resources Division
- 7.1.1 General Permit Update
  - Army Corps 404 (RGP 58)
  - RWQCB 401
  - USFWS Biological Opinion (VELB)
  - CDFW Streambed Alteration (1601/2/3)
  - CDOC SMARA Compliance for CCRMP (PRC Section 2715 – SB 133/Wolk)
- 7.1.2 Ambient Mercury Study / Off-Channel Pit Testing Protocol
- 7.1.3 Cache Creek Parkway Plan
- 7.1.4 SACOG Aerial Survey 2014

7.2 Cache Creek Conservancy (CCC)

7.3 Yolo County Resource Conservation District (RCD)

7.4 Yolo County Flood Control and Water Conservation District (YCFCWCD)
- 7.4.1 Update on WRID (Stevenson)

7.5 Mercury Report (Tuttle)

8. REGULAR AGENDA (10:45 AM-12:00 PM):

8.1 Memo from TAC: Estimating Aggradation (attachment) (Larsen)

8.2 Finalize Programmatic and Channel Improvement Priorities (attachment) (All)
- **8.2.1** 2011 & 12 Recommendations
- **8.2.2** Recommendations for in-channel USACOE
- **8.2.3** Historical Recommendations (1996 to present)
  - 8.2.3.1 Vegetation Survey vs. Andregg Transects

8.3 Annual Reporting Period (Staff)

8.3.1 Water Year vs. Calendar Year
8.3.2 Work Plan for 2013 Annual Report (attachment)

8.4 Large Scale Restoration Opportunities (Martin)

8.5 Receive TAC member updates (TAC)

9. NEXT MEETING: To Be Determined

9.1 Annual Report Presentation
9.2 Future Agenda Items

10. ADJOURNMENT:

Respectfully submitted by,

Elisa Sabatini
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CACHE CREEK TECHNICAL ADVISORY COMMITTEE (TAC)
DRAFT SUMMARY MEETING MINUTES

MONDAY, FEBRUARY 11, 2013, 10:00am – 12:00 pm

County Administration Building, Board of Supervisors Chambers
625 Court Street, 2nd Floor, Woodland, CA 95695.

1. CALL TO ORDER

The meeting was called to order by Dr. Eric Larsen at about 10:05 am.

Roll call:	Dr. Eric Larsen (TAC Fluvial Geomorphologist) Dr. Mark Tompkins (TAC Hydraulic Engineer) Jim Martin (TAC Biologist)
Staff:	Cindy Tuttle, Program Manager Elisa Sabatini, Program Coordinator Alyssa Manprin, Executive Assistant
Others:	See Sign-in sheet (attached)

2. APPROVAL OF AGENDA

Dr. Larsen provided a brief overview of the agenda and asked that Agenda Items 8.1 and 8.2 (from the Regular Agenda) be discussed first to allow Parks and IT staff to return to their duties in a timely manner. With that minor modification, the agenda was approved.

****8.1 - REGULAR AGENDA****

8.1 Off-Highway Vehicle Park Planning Grant (Jen Santos, Yolo County Parks)

Yolo County Parks is in the process of applying for a park planning grant from California State Parks that would provide funding to conduct a feasibility study for an Off-Highway Vehicle park. The grant would fund items such as site design and capacity, initial CEQA analysis, and cost estimates.

Presentation points included:

- County parks and Cache Creek are not designed for OHV use and the damage caused is expensive to repair.
- Proposed project site is located near CR 103 & CR 17 on undeveloped land that is owned by the Sacramento-San Joaquin Drainage District.

Ms. Santos requested OHV Park Planning grant letters of support be submitted no later than February 25, 2013. The deadline for grant submission is March 4, 2013.

******8.2 Aerial Survey Scope of Work Status Update******

8.2.1 2010/2011 aerial survey – leftover data availability

Marcus Neuvert (Yolo County IT) presented a map graphic showing the extent of the data the County currently possessed from the 2010/2011 aerial survey vendor. The TAC asked questions, discussed the purpose of the data, and determined the following:

i. Dr. Larsen will provide the GIS data files for the "Working Study Area Boundary" to Mr. Neuvert for use in data comparison.
ii. Based on Mr. Neuvert's presentation Dr. Larsen thinks the data the County is already in possession of is sufficient for his purposes.

8.2.2 Suitability of 2008 LIDAR data from DWR

Mr. Neuvert did not review the 2008 DWR data yet; he would prefer to use 2010 data for consistency with the rest of the data sets.

Mr. Martin stated the 2011 LIDAR data was not categorized correctly for vegetative mapping purposes. He also noted the 2010 data was not collected in the correct height intervals to be useful for mapping vegetative cover. Mr. Martin will work with Mr. Neuvert to re-categorize the 2011 data into vegetative cover classifications.

8.2.3 – 8.2.6 Scope of Work for aerial survey

Sample scopes of work were obtained from the City of Woodland and the City of Davis. They were distributed to the TAC.

Staff will continue to look for partnership opportunities for the next aerial survey.

Ms. Sabatini identified areas of difficulty from prior aerial surveys that the County wants addressed in a revised scope of work:

i. Visibility – ensure there is a standard in the scope to ensure adequate visibility for aerial photos.
ii. Data Classification – ensure adequate ground controls are incorporated; specify LIDAR intervals for vegetative mapping.

Dr. Larsen stated he would prefer to do volumetric analysis in-house going forward and asked staff to remove that component from the revised scope of work.

3. INTRODUCTIONS

Individual introductions of the meeting attendees were made.

4. ADOPTION OF MINUTES OF THE JANUARY 14, 2013 MEETING

The draft summary minutes of the January 14, 2013 TAC meeting were adopted as submitted.

5. PUBLIC COMMENTS

Dr. Larsen opened the meeting to public comment at 10:55 am. There was no public comment provided.

6. FOLLOW-UP ITEMS:

Parking Lot:

1. Vehicles left abandoned on flood plain (Submitted to RWQCB)
2. Barn structure falling into Cache Creek (Reynolds Property) (Submitted to RWQCB)
3. Look for funding for signage regarding fishing due to mercury presence (Staff)
4. Monitor erosion and drainage concerns at Huff's Corner (Staff)

There was no status change to any of the items on the Parking Lot.

Action Items:

1. Invasive Species Mapping During Removal by Cache Creek Conservancy (To be discussed Spring 2013, Staff and Martin)
2. Biological baseline and Biological Update for 5-Year Survey: 2010/2011LiDAR data needs to be resorted into vegetation height categories for analysis (In process, Martin and Staff)
3. Baseline DTM data: Produce TIN's from past survey data for analysis by Geomorphologist (In process, Larsen and Staff)
4. Obtain new hydrology now available through Fran Borcalli (Tuttle/Tompkins/Larsen)

   Dr. Larsen stated he would be picking up the new hydrology later this week.

5. Obtain copy of original Palisades construction study (Sabatini)
6. HEC-RAS Model (Larsen)

   Dr. Larsen has a meeting scheduled this month with Wood Rogers to discuss the HEC-RAS model.

7. Investigate other means of conducting 2014 Creek Walk (boats, OHV's, horseback etc.) (Sabatini)
8. Transition to Liberty Meeting recording system for audio recording and minutes of future TAC meetings (Sabatini/Manprin)
9. Aerial Survey Scope of Work and Specifications (TAC/Staff)

   Discussed as Agenda Item 8.2.

7. STAFF UPDATES

7.1 Natural Resources Division

7.1.1 General Permit Update

Army Corps 404 (RGP 58)

The Corps is waiting on determinations from USFWS and the State Historic Preservation Office (SHPO) before proceeding with processing the General Permit. Staff is expecting a quote from the consultant who compiled the original Cultural Resources study very shortly.

RWQCB 401

The RWQCB is waiting on action from the Corps.

USFWS Biological Opinion (VELB)

Jim Martin reported that the USFWS would like to see all Elderberry shrubs in the CCRMP mapped and submitted for review. Martin is working with them to compromise on a condition of approval that would require proactive reporting and avoidance.

CDFW Streambed Alteration (1601/2/3)

CDOC SMARA Compliance for CCRMP (PRC Section 2715 – SB 133/Wolk)

7.1.2 Ambient Mercury Study

Staff expects to receive a draft of the ambient mercury study this month.

7.1.3 Cache Creek Parkway Plan

7.1.4 Summary of Board of Supervisors review of the Annual Report

Staff reported the Annual Report was received and approved by the Board of Supervisors Jan 15, 2013.

7.2 Cache Creek Conservancy (CCC)

Lynnel Pollack, Executive Director, reported UC Davis students would be at the Nature Preserve this spring to do field work. She also reported the CCC has booked nearly all of March for environmental education classes. Ms. Pollack went on to discuss how the

good weather we've been receiving has also spawned an increase in hunters and OHV's in the Creek.

Chris Gardner, Restoration Manager, discussed the plantings and restoration activities the CCC has carried out at Wild Wings in conjunction with the Conservancy's OHV grant from State Parks. He said there has been a good response from the locals; people are staying on the trails and not vandalizing equipment.

Mr. Gardner said the CCC was exploring the idea of using OHV funds to install bollards or a similar deterrent to keep OHV's out of Correll-Rodgers. The CCC is also expanding the hedgerow installed at the Nature Preserve to keep OHV's out of the Nature Preserve.

Mr. Gardner described recent conversations with a property owner adjacent to Correll-Rodgers. The property owner is concerned about vandalism at the overlook and weeds from the site that are migrating into his orchards. Mr. Gardner plans to meet with the complainant later this month to discuss his concerns.

Ms. Tuttle stated the CCC is in the process of putting together an estimate for weed control at the Millsap property.

7.3 Yolo County Resource Conservation District (RCD)

Jeanette Wrysinski, Executive Director, briefly described the RCD's search for grant funding and solicited suggestions from the meeting attendees. She briefly talked about an upcoming workshop the CCC and RCD are co-hosting.

7.4 Yolo County Flood Control and Water Conservation District (YCFCWCD)

Max Stevenson reported water conditions have been quite dry and the District does not have enough water in storage to meet summer irrigation needs. They are looking at 1.6-1.7 feet per acre for agricultural irrigation customers.

7.5 Mercury Report (Tuttle)

Ms. Tuttle reported staff was attempting to coordinate with the CVRWQCB to piggy back onto the mercury testing in fish tissues that will be required for the Mercury TDMLs in 2015.

Dr. Tompkins reported he attended DWR's Mercury Subcommittee meeting in January. He will be providing the Cache Creek water quality data to DWR and will be exploring whether DWR's hydraulic model for the Cache Creek Settling Basin would be a useful tool.

8. REGULAR AGENDA

******Items 8.1 and 8.2 discussed above******

8.3 Prioritize 2012 TAC recommendations and integrate with previous year's recommendations (TAC)

Staff was directed to update the 2011 list of recommendations based on verbal feedback provided by the TAC, and then merge the 2012 recommendations into a revised list. In addition, staff was directed to compile a separate list of potential in-channel projects based on the 2011/2012 recommendations. Finally, staff was asked to check on the status of prior year's recommendations (1998, 1999, 2006, and 2010).

The TAC will review these lists and compilations at the April TAC meeting.

8.4 Large Scale Restoration Opportunities (Martin)

The TAC requested this item be continued until the April TAC meeting.

8.5 Receive TAC member updates (TAC)

9. NEXT MEETING: APRIL 8, 2013

9.1 Future Agenda Items
Final Review of TAC Recommendations & Potential In-Channel Projects
Large Scale Restoration Opportunities

10. ADJOURNMENT:

Respectfully submitted by,

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Landscape Architecture Program
July 26, 2013

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TECHNICAL MEMORANDUM

To: Elisa Sabatini, Natural Resources Program Coordinator
From: Eric Larsen, Chair, Technical Advisory Committee
Subject: Yearly estimates of amount deposited within the channel
Date: July 26, 2013

BACKGROUND AND OVERVIEW

The Cache Creek Improvement Program (CCIP) encourages the use of "managed sand and gravel removal (bar skimming) to promote and maintain channel stability and flood capacity". (CCIP p. 28) The Technical Advisory Committee (TAC) is charged with providing annual recommendations of Creek maintenance needs and priority projects. (CCIP p. 6) In the past the TAC has relied on data obtained from an annual aerial survey to estimate the annual deposition (how much new sand/gravel material has been deposited in the Creek).

In 2012 the TAC recommended that the aerial survey be conducted once every five (5) years, or after a significant storm occurs that results in peak flows of 25,000 cubic feet per second or more. (2012 Cache Creek Annual Report, p. 32) This reduction was instituted as a cost saving measure and because the TAC indicated that there were other methods of obtaining the data needed to estimate the annual deposition in Cache Creek. This memo is intended to memorialize other methods of estimating annual deposition that are under consideration by the TAC.

This memo discusses the possibility of using other existing or easy to obtain data to estimate aggregate deposition over time, methods of estimating current deposition, and suggests the criteria by which the TAC will evaluate future gravel skimming recommendations.

POSSIBLE ALTERNATE METHODS OF ESTIMATING ANNUAL DEPOSITION

ESTIMATING CURRENT CONDITIONS

1. A long term average of the observed changes can yield an estimate of annual deposition. This would require at least two different time periods for which we had similar-method measurements of the amount of sediment deposited. For example, if we have a reliable measurement via aerial survey in 2011 and another in 2016, we could take the average amount of deposition per year in that time interval. This would be a rough estimate, and the longer the time period, the more appropriate the estimate. However, it should be noted that a single extremely large flow event in one year could account for the vast majority of sediment deposited over a period of several years.

2. Each year's sediment change can be estimated using sediment transport calculations. This method estimates the amount of sediment that would be deposited based on the observed flow record for the year. This method could be more accurately "calibrated" by looking at past volumetric data and checking our theoretical estimates with observed values.

The first method, the long-term average, is not ideal because it does not account for annual variability. The second method, using sediment transport estimates, relies on the data from actual observations, and assigns an amount per year based on the amount of flow documented in that year. Using the second method, the yearly deposition is likely to be more accurate for the previous year than the long term average method.

LONG TERM ESTIMATES

Based on the TAC's 2012 recommendation, aerial photos will be obtained at least every five (5) years but more frequently if there is a significant high flow event. This means that the TAC will be able to perform cut and fill measurements (to establish aggradation levels in the Creek) at least every five (5) years, if not more frequently. These measurements can be used in the following ways:

1. If gravel skimming is recommended by the TAC as a channel maintenance activity to improve bank stability or maintain flood capacity, we can quantify how much sediment has been deposited since the last in-channel extraction, and use this to inform the recommendation. For example, if there has been no extraction for five years, and a recommendation is made to remove 500,000 tons, we can base our recommendation on the knowledge of how many tons have been deposited since the last quantification.

2. Using the periodic cut and fill calculations, we can assume that the amount deposited will be related to the total flow of the creek through sediment transport algorithms. In this way, we can develop (and calibrate) our sediment transport algorithms so that they can be used to calculate the amount of sediment carried in a given single year.

This method assumes that the amounts to be extracted on an annual basis are modest (less than 1,000,000 tons/year) and that they do not occur frequently (i.e. not every year.) Under these conditions, the total extraction is expected to be less than the sum of the annual deposits, and any possible errors in our methodology would not lead to over-extraction. (See Chapter 3.3 of the "Technical Studies and Recommendations for the Lower Cache Creek Resource Management Plan" for further information.)

CURRENT CONDITIONS

There has been little or no bar skimming in association with channel maintenance since the CCRMP was established in 1996. In addition, modeling is underway to estimate the total deposition since the initiation of the CCRMP, based on a cut and fill analysis. We expect that this analysis will result in an estimate of the total deposition between roughly 1997 and 2011. Once this modeling is complete, the TAC can re-evaluate areas of the Creek where bar skimming has been recommended in the past as a countermeasure to bank erosion, or to preserve flood capacity, and prioritize those recommendations based on current conditions.

RECOMMENDATIONS

In summary, the TAC has access to enough data to perform reasonable analyses that will allow us to make educated recommendations without using annual aerial photos.

CURRENT CONDITIONS

When recommendations for channel maintenance activities are under consideration by the TAC, we will compare the amount of proposed extraction with the amount that has deposited since roughly 1997.

LONG TERM

The amount of sediment deposited in each year can be based on calibrated sediment transport calculations using the annual flow of the year in question. The calibration will be based on the measurements that are periodically verified using aerial photos, which will be obtained no less frequently than every five (5) years.

Eric Larsen, Ph.D.
Chair, Technical Advisory Committee
Phone: (530) 400-0561 (cell)
ewlarsen@ucdavis.edu

PROGRAMMATIC AND CHANNEL IMPROVEMENT PRIORITIES

The Cache Creek Annual Status Report includes recommendations based on physical, hydrologic, and biological assessments of Cache Creek, with guidance from the CCRMP. These recommendations form the analytical basis for TAC activities and the prioritization of channel improvement projects.

HIGH PRIORITY RECOMMENDATIONS

	Description	Discipline	Effort	Status	In-Channel List
2011.G.A1.1	**HEC RAS modeling** CCRMP reach completed and analyzed, and compared with 1996 conditions if possible.	GEO	MAJ	In Progress	
2012.G.A.1	Assessment of **bar skimming** in the following locations: RM 26.1, 25.5, 21.6, and 20.3 – 20.5. Need to establish footprint, linear distance, and estimate of material to be removed (for ACE In-Channel Project List).	GEO	MOD		X
2011.G.A2.2	Estimate the **annual rate of channel bed aggradation** over time.	GEO	MAJ	In Progress	
2012.G.A.2	Channel maintenance project on upper bank at **Huff's Corner** (RM 11.6) to prevent downstream unraveling of existing bank protection.	GEO	MIN		X
2011.G.A3.3	Amend **Aerial survey** contract and scope of work.	GEO	MIN	In Progress	
2012.G.A.3	Repair levee and bank erosion at **RM 19.5** (**Is this same as CEMEX Slope Protection Project?***).	GEO	MOD		X
2012.G,H,B.4	Create Creek Walk **protocol.**	GEO HYD BIO	MOD		
2011.G.A4.4	Continue to **monitor actively migrating bends**, and use a predictive model.	GEO	MOD	In Progress	
2012.H.A.1	**Increased mercury concentrations** detected in 2012 surface water quality samples need to be communicated to ongoing mercury studies in the watershed and evaluated in 2013.	HYD	MIN	In Progress	
2012.H.A.2	Update and maintain **geo-spatially referenced photo log** for use on future Creek Walks and to document on-going changes and conditions on the Creek.	HYD	MOD	On-Going	
2011.H.A4.8	Continue to **monitor contaminants** of concern in creek water based on water quality database review and prioritization described above.	HYD		On-Going	
2011.H.A5.9	Continue **groundwater monitoring** near Cache Creek. ~~incorporating data from mining sites~~	HYD		On-Going, Completed (WRID)	

	Description	Discipline	Effort	Status	In-Channel List
2011.B.A6.10	Complete **methylmercury** monitoring and analysis in the CCRMP study area. Consider additional partnerships to monitor and analyze methylmercury.	BIO		In Progress	
2011.B.A1.11	Continue to work with County staff and the aerial contractor to **further refine and classify vegetation.**	BIO		In Progress	
2011.B.A2.12	Determine whether **CCRMP boundary** should be updated.	BIO		In-Progress (Working Study Area)	
2011.B.A3.13	Coordinate with full TAC in 2012 to **identify areas and sites best suited for natural regeneration of riparian and upland habitat conditions.**	BIO			X
2011.B.A4.14	Continue to participate in the implementation of the **Cache Creek Watershed Wide Invasive Management Plan.**	BIO		On-going	
2011.G.A.15	**Channel shifting patterns** near RM 26.4 should be actively monitored.	GEO	MIN	On hold (need aerials)	
2011.G.A.16	**Bank erosion** at RM 26.9 on the south bank continued engagement with PG&E.	GEO	MIN-MOD	On-going	
2011.G.A.17	The bank retreat patterns near RM 25.4 -25.5, RM 22.0, and RM 20.6 for **regeneration of riparian habitat**. Site-specific small scale revegetation plantings explored.	GEO	MIN-MOD	In Progress	
2011.G.A.18	**Active bank retreat near RM 21.6** (near the old Madison Bridge) should be monitored.	GEO	MIN	On-hold (need aerials)	
2011.G.A.19	Significant erosion at the I-505 crossing should be assessed vegetation should be **removed in order to protect the bridge piers.**	GEO	MIN-MOD	On-going	X
2011.G.A.20	**Replace dead arundo and tamarisk in the Capay Reach with native plantings.** Coordinate with Cache Creek Conservancy.	GEO		In Progress	X

MEDIUM PRIORITY RECOMMENDATIONS

	Description	Discipline	Effort	Status	In-Channel List
2011.G.B1.1	Update **reach descriptions** using updated values for all channel characteristics. Standardize the reach endpoint descriptions.	GEO	MIN-MOD	In Progress (50% complete)	

	Description	Discipline	Effort	Status	In-Channel List
2012.H.B.1	Compile **Water Quality Impact Catalogue** and associated source and contaminant potential assessment.	HYD	MIN		
2011.H.B1.2	Continue to pursue **partnerships** to install **continuous turbidity monitoring.**	HYD		On-Going	
2011.B.B.3	Mapping protocols should be developed to define the procedure and schedule for **mapping vegetative cover** within the CCRMP study area.	BIO		In Progress	
2011.G.B.4	Complete **HEC-RAS** modeling of the Huff's corner area, and a comparison with the 1996 100-year flood capacity.	GEO	MIN-MOD	In Progress	
2012.G.B.3	Channel maintenance project on **lower bank at Huff's Corner** (RM 11.6) to prevent downstream unraveling of existing bank protection.	GEO	MIN		X
2012.G,H.B.2	Channel maintenance project at **south bank RM 12.35** to prevent the recruitment of foreign material into the Creek.	GEO HYD	MIN		X
2011.G,H.B.5	The flood conveyance at **the I-505 bridge**: Coordinate with CALTRANS and stakeholders, and complete hydraulic modeling to determine before- and after-skimming water surface elevations if the bar were skimmed.	GEO HYD	MIN-MOD		
2011.H.B.6	**Implement water temperature** monitoring by placing water temperature data loggers in each reach.	HYD	??		

LOW PRIORITY RECOMMENDATIONS

	Description	Discipline	Effort	Status	In Channel List
2011.B.C.3	Undertake more detailed ancillary **wildlife assessments** in conjunction with field work.	BIO	MOD		
2011.G.C.4	Channel **bank retreat** upstream from Moore's Siphon near RM 18.1 should be monitored.	GEO	MIN	On Hold	
2012.G.C.1	Establish a high-flow triggered bank stability monitoring plan for the **I-505 bridge.**	GEO		Monitoring Only	
2012.G.C.2	Establish a high-flow triggered bank stability monitoring plan for the south bank at the **Cemex Slope Protection Project**.	GEO	MIN	Monitoring Only	

	Description	Discipline	Effort	Status	In Channel List
2012.G.C.3	Remove berm/concrete barrier at **Correll Rodgers.**	GEO	MIN		
2012.H.C.1	Historical analysis on movement/migration of **the vehicle boneyard** (south bank RM 26.6).	HYD	MIN		

COMPLETED / OBSOLETE RECOMMENDATIONS

	Description	Discipline	Effort	Status
2011.H.A1.5	Complete review of hydrology and water quality objectives in CCRMP. Review completed, recommendations reviewed at October 2012 and November 2012 TAC meetings, recommendations included in 2012 Annual Report (accepted by BOS 1/15/13).	HYD		Complete
2011.H.A2.6	Review Cache Creek water quality data base and identify duplication of effort.	HYD		Complete
2011.H.A3.7	Prioritize and/or eliminate constituent testing based on 2011.H.A.1.5 and 2011.H.A3.7. Review completed, recommendations reviewed at October 2012 and November 2012 TAC meetings, recommendations included in 2012 Annual Report (accepted by BOS 1/15/13).	HYD		Complete
2011.G.C2.2	Develop a protocol and sampling schedule to measure **bed armoring.**	GEO	MIN	Deleted – See 2012 Annual Report (1.4.2)
2011.G.C1.1	**Sampling the bed surface material.**	GEO	MIN	Deleted – See 2012 Annual Report (1.4.2)

CACHE CREEK TECHNICAL ADVISORY COMMITTEE 1998-2012 RECOMMENDATIONS

No.	RECOMMENDATION	LOCATION / AREA	CATEGORY	DICIPLINE	STATUS						NOTE / COMMENTS
					1999	2006	2010	2011	2012	2013	
98-1	Develop a set of standardized conditions of approval for flood hazard permits within the CCRMP area.	CCRMP	Procedural	Admin	Completed						
98-2	Create and over-the-counter permit to construct low-flow, temporary stream crossings.	CCRMP	Procedural	Admin	Completed						Idea was to allow farmers better access in areas where bridges are far apart during spring plantings.
98-3	Create a standard hold harmless form for property owners on projects where the County is coordinating channel improvements. Liability issues have been a recurring issue on channel improvement projects that have resulted in lengthy delays.	CCRMP	Procedural	Admin	Completed						Listed as "resolved" in the 1999 AR
98-4	Obtain a general 401 Certification from the Regional Water Quality Control Board to reduce costs and streamline the permitting process.	CCRMP	Procedural	Admin	Completed			Renewal Process			
98-5	Petition the State Mines and Geology Board for an exemption from SMARA for the CCRMP.	CCRMP	Procedural	Admin	On-going	Completed					
98-6	Establish monitoring plots for vegetation in lieu of the 5-year biological survey.	CCRMP	Monitoring	Biology		Completed (2002)					The 1998 Annual Report (p. 7) states that "performing an area-wide biological survey every five years…would be expensive and would not provide the annual data necessary to evaluate incremental vegetative success. Representative plots would provide greater detail in a more timely manner." Veg transects were created and have been used most recently in Erik Ringelberg's work as Biologist. See also 99-7 and 2010.B.14
98-7	Change the water quality constituents to better reflect likely contaminants.	CCRMP	Monitoring	Hydrology	Completed						Recommends that Boron and total K nitrogen be added to monitoring program. Also recommends that ammonium be substituted for nitrites. Are we doing this? Ask Tompkins.
98-8	Allow TAC to develop feasible alternatives to using peizometers to monitor groundwater levels.	CCRMP	Monitoring	Hydrology	On-going						Peizometers were deemed too expensive and too easily damaged in flood events. Needed now that we have the WRID? Or can we substitute the Producer's well data?
98-9	Monitor previously approved projects within the CCRMP area to learn which methods of erosion control, stream stabilization, and revegetation are most successful.	CCRMP	Monitoring	TAC	On-going						
98-10	Install stream gauges at Capay and Madison with real-time telemetering capabilities.	CCRMP	Monitoring	Hydrology	On-going						Listed in 98, 99, and 2006. Need to ask Tompkins if needed, warranted and would provide useful information or are they just "nice".
98-11	Capay Bridge Erosion Control: Remove gravel bar and use material to construct spurs on the north bank upstream of Capay Bridge (CR 85). Revegetate areas between spurs.	Capay Reach	Channel Improvement	TAC	On-going						Listed as a top priority in 99 AR
98-12	Channel stabilization upstream of I-505 bridge: relocate the low-flow channel, construct gravel spurs and concrete rip-rap. Regrade slopes and revegetate slopes and areas between spurs.	Madison Reach	Channel Improvement	TAC	Completed						
98-13	Convert the Coors basin to seasonal wetlands. Expand existing shallow wetlands habitat, provide filtration and minor recharge of water from Gordon Slough.	Dunnigan Hills Reach	?	Biology, Hydrology	Completed						
98-14	Remove stream banks that separate isolated areas from the main creek channel to provide additional flood capacity, create new expansion areas for riparian vegetation, and reduce velocities.	CCRMP	Channel Improvement	TAC	Completed						99 AR cites Hayes projects and removal of the levee at Correll property. Listed as "complete"
98-15	Revegetate in appropriate areas.	CCRMP	Channel Improvement	Biology	Completed						Encourages coordination with CCC and willing land-owners.
98-16	Erosion control upstream of Moore's Crossing (approx. halfway between I-505 and CR 94B)	Dunnigan Hills Reach	Channel Improvement	TAC	Completed						Severe meander was noted on the south bank
98-17	Clear tamarisk and giant reed in selected areas.	CCRMP	Channel Improvement	TAC	On-going	On-going	On-going	On-going	On-going	On-going	Ties in with RCD's Watershed Wide Invasive Management Plan
98-18	Obtain critical lands and/or easements from willing sellers to preserve riparian habitat for public enjoyment and to form areas of continuous protection.	CCRMP	Restoration	All	Completed						Parkway Plan
99-1	Acquire a portable water quality sampling machine	CCRMP	Monitoring	Hydrology		Completed					YCFCWCD has this
99-2	Rezone the following properties to include an Open Space (OS) overlay zone: Millsap, CCNP, Correll, and Rodgers.	CCRMP	Procedural	Admin							Waiting to hear from Planning
99-3	Restrict incompatible materials from being used as riprap in the channel	CCRMP	Procedural	Admin							
99-4	Survey and paint elevation marks on the abutments of County bridges to provide more accurate readings during flood events.	CCRMP	Monitoring	Hydrology, Geomorphology							Is there value to implementing in 2013?
99-5	Create a Cache Creek website that provides info on monitoring, studies, and restoration activities	CCRMP	Monitoring	TAC		Completed					

CACHE CREEK TECHNICAL ADVISORY COMMITTEE 1998-2012 RECOMMENDATIONS

No.	RECOMMENDATION	LOCATION / AREA	CATEGORY	DICIPLINE	STATUS						NOTE / COMMENTS
					1999	2006	2010	2011	2012	2013	
99-6	Digitize historic contour maps (from 1980-97)	CCRMP	Monitoring	TAC							Is there any current value to this?
99-7	Establish stream transects to monitor plant colonization and success, instead of test plots. (See No. 98-6)	CCRMP	Monitoring	TAC		Completed (2002)					Also see No 98-6 and 2010.B.14
99-8	Develop and review HEC models for lower Cache Creek	CCRMP	Monitoring	Geomorphology					In Progress		Mentions that cessation of mining in Creek has led to aggradation and loss of flood capacity/freeboard. Listed in 99, 2006
99-9	Revegetate in appropriate areas: upstream of I-505 is a priority	CCRMP	Monitoring	Biology							
99-10	Obtain critical lands and/or easements from willing sellers to preserve riparian habitat for public enjoyment and to form areas of continuous protection.	CCRMP	Restoration	TAC							Duplicate of 98-18.
06-3.2-1	Implement a flood monitoring program, including monitoring and inspecting during flood events.	CCRMP	Monitoring	TAC				Complete			
06-3.4-1	Remove invasives in the Jesus Maria and Hoppin reaches to improve flood capacity.	Jesus Maria, Hoppin	Channel Improvement	Geomorphology, Biology			On-going	On-going	On-going	On-going	
06-3.5-1	Incorporate regulatory standards into Water Quality Monitoring as they become available.	CCRMP	Monitoring	Hydrology			On-going	On-going	On-going	On-going	Should be done periodically
06-3.5-2	Conduct further analysis of pH, ammonia nitrogen, nitrate nitrogen, total K nitrogen, total nitrogen, TPH (as diesel), and fecal coliform	CCRMP	Monitoring	Hydrology							Still needed?
06-3.5-3	Refine water quality constituents to better reflect likely constituents	CCRMP	Monitoring	Hydrology					Completed		Should be done periodically
06-3.5-4	Work with CVRWQCB to develop 20-year plan for reducing methyl mercury in fish tissue	CCRMP	Monitoring	Hydrology							Area of program responsibility?
06-3.6-1	Investigate best management practices to reduce methylation of mercury in wetlands	CCRMP	Monitoring	Hydrology, Biology							Area of program responsibility?
06-3.7-1	Mercury TDML: Add three turbidity monitoring sites to conform to new mercury TDML standards	CCRMP	Monitoring	Hydrology							Area of program responsibility?
06-3.7-2	Examine whether TSS monitoring can be replaced with turbidity monitoring. Turbidity monitoring is cheaper and easier but may/may not comply with CCAP standards	CCRMP	Monitoring	Hydrology							Check with Tompkins
06-4.1-1	Digital Terrain Model (DTM) - Use LiDAR data to create a 2006 DTM	CCRMP	Modeling	Geomorphology							Completed? Ask Larsen
06-4.2-1	Use DTM data to conduct a quantitative assessment of significant volumetric changes in channel capacity and areas of excessive erosion between 1997 and 2006	CCRMP	Modeling	Geomorphology							Completed? Ask Larsen
06-4.4-1	Channel morphology - survey transect locations to provide data necessary for calibration of a HEC-RAS model	CCRMP	Modeling	Geomorphology							Completed? Ask Larsen
06-5.2-1	Conduct digital aerial photography and utilize LiDAR imagery to improve accuracy and detail	CCRMP	Monitoring	Biology		Completed	Completed	Completed		On-going	Revised RFQ/P under development in 2013
06-5.2-2	Set mapping guidelines: specific guidelines for vegetation mapping and riparian surveys to ensure consistency in data collection	CCRMP	Monitoring	Biology							
06-5.3-1	Develop a standard method and process for monitoring human-assisted restoration projects that will allow for comparative analysis and provide guidance for future projects	CCRMP	Monitoring	TAC							
06-5-4.1	Use color aerial photography for tamarisk monitoring	CCRMP	Monitoring	Biology		Completed	Completed	Completed			On-going task
06-6.1-1	Resource agency coordination with landowners to promote and implement invasive species removal program	Capay Reach	Channel Improvement	Biology							Still needed? RCD has CCWWIMP adopted in 2013
06-6.1-2	Coordinate invasive species removal with riparian restoration projects	Capay Reach	Channel Improvement	Biology						On-going	
06-6.1-3	Use bioengineering methods for erosion control	Capay Reach	Channel Improvement	TAC							
06-6.1-4	PG&E Palisades: coordinate a solution to exposed pipeline and concrete blanker conditions	Capay Reach	Channel Improvement	TAC					Completed		FHDP issued in 2012
06-6.1-5	RM 26.6: Erosion on south bank - determine if it has the potential to endanger infrastructure. Coordinate erosional control project with landowner including mid-channel bar alterations	Capay Reach	Channel Improvement	TAC							Still an issue?
06-6.1-6	Capay Bridge: Monitor aggradation at the Capay Bridge and work with PPW on channel reorientation and/or sediment removal to address adverse orientation of the low-flow channel. Explore habitat restoration opportunities up or downstream in conjunction with any erosion control project	Capay Reach	Channel Improvement	TAC							Still an issue?

CACHE CREEK TECHNICAL ADVISORY COMMITTEE 1998-2012 RECOMMENDATIONS

No.	RECOMMENDATION	LOCATION / AREA	CATEGORY	DICIPLINE	STATUS						NOTE / COMMENTS
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06-6.2-1	Erosion control: protect infrastructure by installing "hard points" such as spur dikes or protected banks. Ensure that future erosion control projects adjacent to the low-flow channel require reinforcement of the toe as regular maintenance.	Hungry Hollow	Channel Improvement	TAC							
06-6.2-2	Human-Assisted Habitat Restoration: Assess soil conditions and water requirements for plant species specified in projects. Include soil amendments or topsoil when planting and ensure the presence of a water source	Hungry Hollow	Channel Improvement	Admin							
06-6.2-3	Capay Open Space Park (RM 26.3): Complete park plan implementation including additional trails and handicap access to Cache Creek	Hungry Hollow	Parkway	Admin				Completed			
06-6.2-4	Granite Construction Bank Stabilization Project (RM 25.7): Monitor reconstruction of the bank toe along the Granite property to protect the upper bank	Hungry Hollow	Channel Improvement	Geomorphology		Completed					
06-6.2-5	Jensen Site (RM 25.4): Evaluate the cause of the projects failure with project designers and landowner. Establish guidelines for repair or replacement.	Hungry Hollow	Channel Improvement	TAC							Still recommended? Outstanding issue?
06-3.2-6	Esparto Bridge (CR 87): Implement preventative erosion control measures to protect public infrastructure and evaluate habitat restoration opportunities	Hungry Hollow	Channel Improvement	TAC							Still recommended? Outstanding issue?
06-6.3-1	Lower Madison habitat restoration: Look for habitat restoration and enhancement opportunities to connect existing riparian vegetation in the lower reach	Madison Reach	Restoration	Biology							Still recommended? Outstanding issue?
06-6.3.2	Grube-Payne Site (RM 22.3-22.1): Work with landowner to develop a restoration project on 20 ac or bank terrace to promote a vegetated corridor for both habitat value and erosion control	Madison Reach	Channel Improvement	Geomorphology, Biology			Completed				
06-6.3-3	Grube-Payne Site (RM 22.1): Monitor reconstruction of agricultural tailwater pipe to ensure compliance with specifications detailed in the original design & prevent further erosion	Madison Reach	Channel Improvement	Geomorphology, Biology							Still recommended? Outstanding issue?
06-6.3-4	Grube-Payne Site (RM 21.8): Work with landowner to develop a restoration project on 24 ac or bank terrace to promote a vegetated corridor for both habitat value and erosion control	Madison Reach	Channel Improvement	Geomorphology, Biology							Still recommended? Outstanding issue?
06-6.3-5	Old Madison Bridge Site/Dunbar (RM 21.5): Erosion control project that deflects the energy of the channel meander located upstream of the Dunbar site and reform the existing spur dike at the Dunbar site to stabilize the north bank	Madison Reach	Channel Improvement	Geomorphology, Biology							Still recommended? Outstanding issue?
06-6.3-6	I-505 Bridge area (RM 21): Work with Syar and landowner to provide soil and plantings on upper portions of rip-rapped slopes. Improve habitat at spur dikes	Madison Reach	Channel Improvement	Geomorphology, Biology							Still recommended? Outstanding issue?
06-6.4-1	Bank stabilization in Guesisosi reach should include toe bank protection and vegetation. Lots of restoration opportunities with available groundwater.	Guesisosi Reach	Channel Improvement	TAC							Still recommended? Outstanding issue?
06-6.4-2	Guesisosi Reach-Upper South Bank: Assist property owner to develop a plan to address bank erosion and required mining setbacks.	Guesisosi Reach	Channel Improvement	TAC							Still recommended? Outstanding issue?
06-6.5-1	RM 18.6-18.1: Spur dikes have eroded significantly. Bank is vulnerable to erosion. Need to assess further stabilization of the bank to protect Moore's siphon.	Dunnigan Hills Reach	Channel Improvement	TAC							Still recommended? Outstanding issue?
06-6.5-2	Moore's Siphon (RM 18): Assist YCFCWCD is developing a long-term solution to the Moore's siphon crossing	Dunnigan Hills Reach	Channel Improvement	TAC							Still recommended? Outstanding issue?
06-6.6-1	Stephen's Bridge (CR 94B / RM 15.9): Look at preventative measure to reduce erosion potential at bridge. Look at habitat restoration opportunities	Hoppin Reach	Channel Improvement	TAC							Still recommended? Outstanding issue?
06-6.6-2	Correll Pond (RM 13.8): Address erosion of the embankment adjacent to the overflow structure	Hoppin Reach	Channel Improvement	TAC							Still recommended? Outstanding issue?
06-6.6-3	Correll -Rodgers Habitat Restoration (RM 13.9-13.7): Develop a site plan that includes habitat enhancement and public access	Hoppin Reach	Channel Improvement	TAC							Still recommended? Outstanding issue?
06-6.6-4	Harrison Site (RM 13.4): Revegetate lower bank areas. Use fencing or other barriers, instead of tubex tubes, for animal predation and protection from ATV's.	Hoppin Reach	Channel Improvement	TAC							Still recommended? Outstanding issue?
06-6.7-1	Flood Control/Invasive Removal: Coordinate with landowners, DWR, and the CCC to promote and implement an invasive species removal program within the floodplain	Jesus Maria Reach	Channel Improvement	TAC							Is this completed with RCD's Watershed-wide Invasives plan?
06-6.7-2	Huff's Corner (RM 11.6): Finalize design and present to TAC for comments any plans for improvements to CR 18 and/or levee protection at Huff's Corner	Jesus Maria Reach	Channel Improvement	TAC			Completed				
06-7.3.1	Project Prioritization: Establish a protocol and prioritization method for determining how all projects (County proposed & privately proposed) will be reviewed, approved, and prioritized by County staff and the TAC. Projects should be reviewed for consistency with any requirements and recommendations in the CCRMP/CCIP, design, construction methods, monitoring requirements as necessary, and maintenance.	CCRMP	Procedural	Admin			Completed				

CACHE CREEK TECHNICAL ADVISORY COMMITTEE 1998-2012 RECOMMENDATIONS

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06-7.3-2	Project Development Guidelines: Develop a project checklist for parties interested in developing projects in the CCRMP. Educate the public in permit requirements to improve public understanding of the CCRMP area project evaluation and implementation process.	CCRMP	Procedural	Admin			???				Research - may be complete
10-G-1	HEC-RAS modeling of the entire CCRMP should be completed and analyzed in 2011 to allow an analysis of the 100-year flood capacity.	CCRMP	Modeling	Geomorphology					On-going		
10-G-2	~~Adopt a protocol for bed material sampling and a description of how the data will be used.~~	CCRMP	Modeling	Geomorphology					Deleted		Deleted with adoption of 2012 Annual Report (See 1.4.2)
10-G-3	Estimate the annual rate of channel bed aggradation over time using DTM data. DTM data from prior to 2006 should be added to the study. A frequency analysis of flows should be done to consider the relative influence of the 2006 data on the results.	CCRMP	Modeling	Geomorphology					On-going		
10-G-4	Continue to study the relationship between rates of aggradation and channel characteristics in various reaches of the creek. A frequency analysis of flows should be done to consider the relative influence of the 2006 data on the results.	CCRMP	Modeling	Geomorphology							Check with Larsen
10-G-5	Review the benefits of monitoring bed armoring and formulate a recommendation regarding future monitoring.	CCRMP	Modeling	Geomorphology					Completed		Deleted with adoption of 2012 Annual Report (See 1.4.2)
10-G-6	Update reach descriptions using more accurate georeferenced length measurements for each of the reaches.	CCRMP	Modeling	Geomorphology					On-going		Check with Larsen
10-G-7	Report on the flood potential directly upstream from Huff's Corner (Rio Jesus Maria) including location and magnitude of flow potential at this site.	Jesus Maria Reach	Modeling	Geomorphology							Is this completed by HEC-RAS model from 94B to Yolo?
10-H-8	Work with County disaster relief personnel to maximize the technical expertise of the TAC during flood events.	CCRMP	Monitoring	Hydrology				Complete			
10-H-9	Upgrade turbidity monitoring methods to include continuous turbidity monitoring. This newer technology will allow better tracking of sediment and contaminant loads.	CCRMP	Monitoring	Hydrology							
10-H-10	Address high summer water temperatures by restoring native shrubs and trees in the riparian zone for shade.	CCRMP	Monitoring	Hydrology							
10-H-11	Monitor levels of orthophosphates, diesel fuel, fecal coliform, and total coliform in creek water.	CCRMP	Monitoring	Hydrology							
10-H-12	Undertake required methylmercury monitoring and analysis. Consider additional partnerships to monitor and analyze methylmercury.	CCRMP	Monitoring	Hydrology						Completed	Dr. Slotton's Ambient Mercury Study
10-H-13	Use existing shallow wells near Cache Creek to identify groundwater patterns. Many of these wells (piezometers) were drilled on gravel company property to satisfy CCAP requirements.	CCRMP	Monitoring	Hydrology						Completed	WRID
10-B-14	Conduct surveys of the Andregg vegetation transects to develop baseline data to support vegetation monitoring	CCRMP	Monitoring	Biology							Discussion point: transects vs. 5-year survey
10-B-15	Conduct a study of vegetation classes in the riparian zone based on the color aerial photos	CCRMP	Monitoring	Biology							
10-B-16	Assess and possibly update the CCRMP boundary to compensate for channel migration	CCRMP	Monitoring	Biology					On-going		Adopted a Working Study Area Boundary in 2012.
10-B-17	Review and modify the Andregg vegetation transects for changes caused by channel migration	CCRMP	Monitoring	Biology							Discussion point: transects vs. 5-year survey
10-18	Monitor OHV impacts and work with YCSD to reduce illegal OHV activity in the creek. Work with CCC to respond to erosion and vegetation damage caused by OHV activity	CCRMP	Monitoring	Biology			On-Going				
10-CIP-1	Coordinate with YCFCWCD on reconstruction of the Moore's siphon (RM 18.1)	CCRMP	Channel Improvement	TAC							
10-CIP-2	Consider bank repair at RM 20.8 where the toe of the levee is eroded	CCRMP	Channel Improvement	TAC							CEMEX Slope Protection Project?
10-CIP-3	Repair minor erosion at the emergency bank stabilization sites (RM 20.8 - 19.8)	CCRMP	Channel Improvement	TAC							CEMEX Slope Protection Project?
2011.G.A1.1	HEC RAS modeling CCRMP reach completed and analyzed, and compared with 1996 conditions if possible.	CCRMP	Monitoring	Geomorphology				In progress			
2011.G.A2.2	Estimate the annual rate of channel bed aggradation over time.	CCRMP	Monitoring	Geomorphology						In progress	
2011.G.A3.3	Annual aerial survey contract and scope of work should be amended	CCRMP	Monitoring	Admin			Complete	Complete		On-going	
2011.G.A4.4	Continue to monitor actively migrating bends, and use a predictive model	CCRMP	Monitoring	Geomorphology							
2011.H.A1.5	Complete review of hydrology and water quality objectives in CCRMP	CCRMP	Monitoring	Hydrology					Complete		

CACHE CREEK TECHNICAL ADVISORY COMMITTEE 1998-2012 RECOMMENDATIONS

No.	RECOMMENDATION	LOCATION / AREA	CATEGORY	DICIPLINE	STATUS						NOTE / COMMENTS
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2011.H.A2.6	Review Cache Creek water quality data base and identify duplication of effort.	CCRMP	Monitoring	Hydrology					Complete		
2011.H.A3.7	Prioritize and/or eliminate constituent testing based on HA1 and HA2 above	CCRMP	Monitoring	Hydrology					Complete		
2011.H.A4.8	Continue to monitor contaminants of concern in creek water based on water quality database review and prioritization described above.	CCRMP	Monitoring	Hydrology					On-going	On-going	
2011.H.A5.9	Continue groundwater monitoring near Cache Creek, incorporating data from mining sites	CCRMP	Monitoring	Hydrology					On-going	On-going	
2011.B.A6.10	Complete methylmercury monitoring and analysis in the CCRMP study area. Consider additional partnerships to monitor and analyze methylmercury	CCRMP	Monitoring	Hydrology						On-going	
2011.B.A1.11	Continue to work with County staff and the aerial contractor to further refine and classify vegetation	CCRMP	Monitoring	Biology						In progress	
2011.B.A2.12	The CCRMP boundary should be updated	CCRMP	Monitoring	TAC					On-going	On-going	Adopted a "Working Study Area" boundary in 2012.
2011.B.A3.13	Coordinate with full TAC in 2012 to identify areas and sites best suited for natural regeneration of riparian and upland habitat conditions	CCRMP	Monitoring	Biology							
2011.B.A4.14	Continue to participate in the Cache Creek Watershed Wide Invasive Management Plan	CCRMP	Monitoring	Biology						On-going	
2011.G.A.15	Channel shifting patterns near RM 26.4 should be actively monitored	CCRMP	Monitoring	Geomorphology						On-going	
2011.G.A.16	Bank erosion at RM 26.9 on the south bank … continued engagement with PGE	Capay Reach	Channel Improvement	Geomorphology					On-going	On-going	
2011.G.A.17	The bank retreat patterns near RM 25.4 -25.5, RM 22.0, and RM 20.6 for regeneration of riparian habitat. Site-specific small scale revegetation plantings explored.	CCRMP	Channel Improvement	Geomorphology					In progress	In progress	
2011.G.A.18	Active bank retreat near RM 21.6 (near the old Madison Bridge) should be monitored in 2012.	Madison Reach	Monitoring	Geomorphology					On-going	On-going	
2011.G.A.19	Significant erosion at the I-505 crossing should be assessed. Vegetation should be removed in order to protect the bridge piers.	Guesisosi Reach	Monitoring	Geomorphology							
2011.G.A.20	Replace dead arundo and tamarisk in the Capay Reach with native plantings.	Capay Reach	Monitoring	Geomorphology							
2011.G.B1.1	Update reach descriptions using updated values for all channel characteristics. Standardize the reach endpoint descriptions.	CCRMP	Monitoring	Geomorphology							
2011.H.B1.2	Continue to pursue partnerships to install continuous turbidity monitoring	CCRMP	Monitoring	Hydrology							
2011.B.B.3	Mapping protocols should be developed to define the procedure and schedule for mapping vegetative cover within the CCRMP study area	CCRMP	Monitoring	Biology							
2011.G.B.4	Complete HEC-RAS modeling of the Huff's corner area, and a comparison with the 1996 100-year flood capacity.	Jesus Maria Reach	Monitoring	Geomorphology							
2011.G.H.B.5	The flood conveyance at the I-505 bridge. Coordinate with CALTRANS and stakeholders, and complete hydraulic modeling to determine before- and after-skimming water surface elevations if the bar were skimmed.	Guesisosi Reach	Monitoring	Geomorphology							
2011.H.B.6	Implement water temperature monitoring by placing water temperature data loggers in each reach.	CCRMP	Monitoring	Hydrology							
~~2011.G.C1.1~~	~~Sampling the bed surface material~~	~~CCRMP~~	~~Monitoring~~	~~Geomorphology~~					Deleted		Deleted with adoption of 2012 Annual Report (See 1.4.2)
~~2011.G.C2.2~~	~~Develop a protocol and sampling schedule to measure bed armoring~~	~~CCRMP~~	~~Monitoring~~	~~Geomorphology~~					Deleted		Deleted with adoption of 2012 Annual Report (See 1.4.2)
2011.B.C.3	Undertake more detailed ancillary wildlife assessments in conjunction with field work.	CCRMP	Monitoring	Biology							
2011.G.C.4	Channel bank retreat upstream from Moore's Siphon near RM 18.1 should be monitored.	Dunnigan Hills Reach	Monitoring	Geomorphology							
2012.G.A.1	Assessment of bar skimming in the following locations: RM 26.1, 25.5, 21.6, and 20.3 - 20.5.	CCRMP	Channel Improvement	Geomorphology							Need to establish footprint, linear distance, and estimate of material to be removed for ACE In-channel project list
2012.G.A.2	Channel maintenance project on upper bank at Huff's Corner (RM 11.6) to prevent downstream unraveling of existing bank protection	Jesus Maria Reach	Channel Improvement	Geomorphology							
2012.G.A.3	Repair levee and bank erosion at RM 19.5	Guesisosi Reach	Channel Improvement	Geomorphology							
2012.G, H, B.4	Create Creek Walk protocols	CCRMP	Monitoring	All							
2012.H.A.1	Increased mercury concentrations detected in 2012 surface water samples need to be communicated to on-going mercury studies in the watershed and evaluated in 2013	CCRMP	Monitoring	Hydrology							
2012.H.A.2	Update and maintain geo-spatially referenced photo log for use on Creek Walks and to document on-going changes and conditions on the Creek.	CCRMP	Monitoring	Hydrology					Complete	Complete	Have log for 2012, 2013
2012.H.B.1	Compile water Quality Impact Catalogue and associated source and contaminant potential assessment	CCRMP	Monitoring	Hydrology							

CACHE CREEK TECHNICAL ADVISORY COMMITTEE 1998-2012 RECOMMENDATIONS

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2012.G.B.3	Channel maintenance project on lower bank at Huff's Corner (RM 11.6) to prevent downstream unraveling of existing bank protection	Jesus Maria Reach	Channel Improvement	Geomorphology							
2012.G, H.B.2	Channel maintenance project at south bank RM 12.35 to prevent the recruitment of foreign material into the Creek	Jesus Maria Reach	Channel Improvement	Geomorphology Hydrology							
2012.G.C.1	Establish a high-flow triggered bank stability monitoring plan for the I-505 bridge	Guesisosi Reach	Monitoring	Geomorphology							
2012.G.C.2	Establish a high-flow triggered bank stability monitoring plan for the south bank at the Cemex Slope Protection project site (RM 20.6)	Guesisosi Reach	Monitoring	Geomorphology							
2012.G.C.3	Remove berm/concrete barrier at Correll Rodgers (RM 13.8)	Hoppin Reach		Geomorphology							
2012.H.C.1	Historical analysis on movement/migration of the vehicle boneyard (south bank RM 26.6)	Capay Reach	Monitoring	Hydrology							

2013 ANNUAL MONITORING REPORT WORK PLAN

October 1, 2013	**First Draft from all TAC members**
October 11, 2013	**Staff mark up due back to TAC for review, discussion, and incorporation**
October 25, 2013	**Final Draft due from TAC**
November 4, 2013	**TAC Meeting – Annual Report Presentations**
December 2, 2013	**Final Annual Report due from TAC members**
January 14, 2014	**Consideration by Board of Supervisors**