Draft Summary of the Environmental Work Group Meeting
Oroville Facilities Relicensing (FERC Project No. 2100)
June 25, 2003

The Department of Water Resources (DWR) hosted a meeting for the Environmental Work Group (EWG) on June 25, 2003 in Oroville.

A summary of the discussion, decisions made, and action items is provided below. This summary is not intended to be a transcript, analysis of the meeting, or to indicate agreement or disagreement with any of the items summarized, except where expressly stated. The intent is to present a summary for interested parties who could not attend the meeting. The following are attachments to this summary:

Attachment 1	Meeting Agenda
Attachment 2	Meeting Attendees
Attachment 3	FWS Functional Analysis Handout
Attachment 4	PM&E Development & Evaluation Flow Chart
Attachment 5	Draft Resource Actions Development Management Table (first 15 resource actions) revised by Fisheries Task Force
Attachment 6	Draft Resource Actions Development Management Table (next 15 resource actions)
Attachment 7	Resource Area Matrix
Attachment 8	Draft Level 1 Narrative reports for EWG-16A, Proposed Creation of Rearing Habitat for Juvenile Salmonid Fish Species and EWG-16B, Proposed Restoration/Improvement of Rearing Habitat for juvenile Salmonid Fish Species
Attachment 9	Proposed Changes to Study Plan SP-T2 and SP-T7 (study area)
Attachment 10	Interim Report, SP-T4 Biodiversity, Vegetation Communities and Wildlife Habitat Mapping
Attachment 11	SP-F9: Evaluation of Project Effects on natural Salmonid Populations, Phase 1 Interim Literature Review (Revised March 24, 2003)

I. Introduction

Attendees were welcomed to the EWG meeting. Attendees introduced themselves and their affiliations. The desired outcomes of the meeting were discussed as listed on the meeting agenda. The meeting agenda and list of meeting attendees are appended to this summary as Attachments 1 and 2, respectively.

II. Action Items – May 21, 2003 Environmental Work Group Meeting

A summary of the May 21, 2003 EWG meeting is posted on the relicensing web site. The Facilitator reviewed the status of action items from that meeting as follows:

Action Item #E88: Provide more detailed information on the priority potential resource actions as identified during the EWG meeting.
Status: Subject of later agenda item. See discussion below.

Action Item #E89: E-mail copy of fish passage presentation to EWG participants.
Status: Sent to EWG.

Action Item #E90: Consider fish passage and potential basin approach.
Status: Under consideration by DWR management.

Action Item #E91:	E-mail one page summary of changes and justification for methodology changes to SP-F10 and SP-F3.2.
Status:	Sent to EWG. Chuck Hanson representing State Water Contractors asked how such changes or adjustments to study plans would be tracked through the process and the group agreed that comments will be discussed by the EWG and the agreed upon revision will be amended to the study plan.
Action Item #E92:	Contact Butte Basin Groundwater Association to verify approach in SP-W5.
Status:	Jerry Boles with DWR reported that he had not contacted the association yet.
Action Item #E93:	Notice further meeting on cumulative impacts and ESA approach to Cumulative/ESA Task Force members.
Status:	This will be accomplished as appropriate. No meeting has been scheduled.

III. PM&E Discussion

US Fish and Wildlife Service (FWS) Water Temperature Presentation

Rich DeHaven representing the FWS introduced their recommendation to conduct a Functional Analysis Workshop to address the Thermalito Afterbay temperature issue (Attachment 3). He described the workshop as a structured, interdisciplinary, formal process focused on problem solving and cost efficiency and noted that the US Bureau of Reclamation has used the technique to address water temperature and flow-related issues on the lower American River.

The workshops are conducted by Corps of Engineers (COE) specialists, last approximately one week and cost about $35,000. Prior to the workshop, the organizers interview stakeholders and determine the appropriate participants. The participants would be drawn from the existing intelligence pool within the collaborative. The process itself involves team-building exercises, brainstorming, sorting and prioritizing solutions. After the workshop the COE specialists prepare a report with an identified solution which would become a PM&E or resource action. Rich suggested the potential benefits include delivering colder water from the Afterbay Outlet, providing additional juvenile steelhead habitat, providing more diversity for spawning in the low flow channel, and providing warmer water to the agricultural users. He added that creative thinking might lead to cooperative funding with other agencies contributing to the effort. The EWG discussed the appropriate timing for such a workshop and noted that modeling results and additional study plan results, which could assist in this analysis, will be available in the fall and early winter.

The EWG discussed the current process where the EWG would provide goals and through an iterative process possibly using joint task force meetings, the modeling group would develop scenarios and perform model runs to evaluate how operations could change to meet our goals. Ken Kules representing Metropolitan Water District suggested that the Recreation and Socioeconomics Work Group would likely be interested in participating in some focused discussions related to actions affecting their interests and stressed the need to have the appropriate people at the table. Dave Olson with the consulting team told the EWG that he had participated in the Functional Analysis Workshop related to flow fluctuations on the lower American River and agreed that it is critical to have all perspectives represented to get the full value of the workshop. Curtis Creel noted that the Engineering and Operations Work Group had been considering a workshop in August that would begin with the presentation of benchmark model results followed by the participants breaking up into smaller sessions to focus on specific issues and solutions and ending with the groups coming back together to share results.

Terry Mills agreed to consider the FWS recommendation to hold a Functional Analysis Workshop and discuss the subject with DWR management.

Fisheries Task Force Update
Terry Mills noted that the Fisheries Task Force continues to flush out the technical details associated with each PM&E and the EWG will continue to receive the Task Force recommendations for review as the resource actions are developed over the next several months. He suggested the EWG review the information developed since the last EWG meeting including additional detail on the resource actions that were identified as priorities, revisions to the tracking matrix, the more detailed or 'functional' matrix, and narrative reports.

Priority Resource Actions
Terry distributed a document titled PM&E Development & Evaluation Flow Chart (Attachment 4) and the EWG discussed the PM&E classifications. Category 1 actions have enough information to determine if the action would likely produce results. A narrative report would be prepared for each Category 1 resource action and after EWG review and approval then it would be forwarded to the Plenary Group with broad support from the EWG. Category 2 actions are waiting for study results before the EWG can fully assess them. Category 3 actions either require basic science development or new analysis not included in approved study plans. These actions may be considered under an adaptive management approach. No further analysis is recommended for Category 4 actions, which may include studies, monitoring programs, untested concepts without supporting science, and redundant PM&Es. Terry Mills clarified that the Category 3 'basic science development' requirement includes applied research. Wayne Dyok representing the consulting team added that the difference between Category 2 and Category 3 is timing. Category 2 will likely have data in time to develop the resource action fully while Category 3 actions will not have data prior to license application. Eric Theiss representing NOAA Fisheries indicated he was not totally comfortable with the categories, particularly the difference between categories 2 and 3 and asked that the descriptions be expanded. DWR will further develop the category definitions.

Terry distributed a revised matrix that includes the top 15 prioritized resource actions from the last EWG meeting (Attachment 5) and a second matrix that contains the next set of 15 (Attachment 6). The matrices identify the actions to be taken immediately, the sponsor of the resource action from the EWG, and identify a team leader or advisors with broad expertise that could be of assistance to the Preliminary Draft Environmental Assessment (PDEA) team. A revised version of the Resource Area Matrix was also distributed and discussed (Attachment 7).

Dave Olson with the consulting team reviewed a detailed or 'functional' matrix that was developed and tested by populating it with information on the top 15 prioritized resource actions. The functional matrix provides a structure with sufficient specificity to evaluate resource actions in greater detail, including cross-resource effects. He described the hierarchical structure for the goals section to allow for resource goal-based sorting and reviewed the other columns and the expected information needed to populate the matrix. The EWG discussed the need to measure success and Sharon Stohrer representing the State Water Resources Control Board (SWRCB) reminded participants that under CEQA mitigation must have an accompanying monitoring plan to determine if the mitigation measure is successful. Dave suggested that the 'basis for measuring success' column of the matrix should include the identification of a level of certainty that the particular action will result in the desired response by the resource and some description of the ability to measure success.

Dave explained that the task force would discuss the information contained in the functional matrix and make recommendations to the EWG. The EWG would then make recommendations to the Plenary Group. The EWG discussed resource action EWG-15A as an example. EWG-15A is an incremental increase in flows to minimize superimposition of salmonid redds. EWG-15B is a one-time increase in flows for the same purpose. Dave explained that EWG-15A is Category 2 because it is awaiting results of the PHABSIM analysis. If the PHABSIM tool were not developed yet, EWG-15A would be a Category 3 action without adequate science to further evaluate it.

Chuck Hanson representing the State Water Contractors suggested that when new analysis is necessary, it should be documented and communicated it to those conducting the studies.

Phil Unger with the consulting team distributed and reviewed examples of another tool under development, the Level 1 Narrative Report. Draft Level 1 Narrative reports for EWG-16A, Proposed Creation of Rearing Habitat for Juvenile Salmonid Fish Species and EWG-16B, Proposed Restoration/Improvement of Rearing Habitat for juvenile Salmonid Fish Species were distributed to the EWG (Attachment 8). The Level 1 report is designed to provide information directly to the environmental documentation and includes information on specific design considerations.

EWG-16A and B are related to spawning habitat in the low-flow channel. Phil reviewed the available habitat, gravel bars, potential restoration areas and other results from field investigations. He described opportunities and constraints for side channel development or modifications at Aleck, Robinson, Steep, Eye and Gateway riffles. The EWG discussed potential changes to predator habitat, existing high-value habitat and temperatures with proposed changes to river morphology and flow and the need to have engineering designs to ensure adequate flow and gradient are available. Phil noted that Steep Riffle provides considerable gradient that would allow for a sinuous channel and more habitat potential and also has existing vegetation that could be incorporated into the design.

The EWG discussed the Hatchery Ditch and the need for an alternative water source to keep the channel watered during maintenance to the hatchery water supply line. Dewatering the channel would require consultation. The EWG discussed potential options to replace the water supply and Anna Kastner representing Department of Fish and Game noted that Hatchery Ditch is the most productive juvenile young-of-year rearing habitat as reported in the snorkel surveys.

Chuck Hanson asked if the PM&E was a collection of side channels or if it would require a selection of a specific location for restoration or side-channel creation. He also asked what criteria would be used to determine the biological performance of an action. Terry Mills responded that an adaptive management approach would likely involve the development of a conceptual hypothesis regarding side channel habitat and testing to see if it results in population of the side channel by juveniles. If successful, a program could be developed that would likely include periodic channel assessment and potential maintenance activities.

Michael Pierce representing Butte County asked when cross-resource issues would be addressed because the County has three of interest: replacing the flash dam near Great Western Riffle, restoration of Ruddy Creek, and development of a whitewater park. Terry Mills responded that the current level of detail under development in the EWG should provide adequate information to schedule cross-resource task force discussions and he would confirm the process with other RAMs.

Terry asked the EWG if the narrative reports are helpful and if DWR and the consulting team are on the right track. Sharon Stohrer called the reports valuable and the type of documentation needed for FERC and agencies with mandatory conditioning authority. Eric Theiss and Rich DeHaven both added kudos. Chuck Hanson indicated that the narratives should include more analysis. All acknowledged the work involved in preparing the narrative reports and agreed to rely on the technical task forces to screen the potential resource actions prior to the development of Level 1 reports. Wayne Dyok added that Level 1 reports are currently being prepared for the first 15 prioritized resource actions and target dates for completion have been identified. DWR and the consulting team are reviewing the target dates to incorporate and coordinate study result schedules. Eric Theiss requested a copy of the functional matrix and the consulting team agreed to forward it to him.

The EWG agreed to set the following technical task force meetings:
July 8 Fisheries Task Force 9am – 12:00pm
Tentative location: Joint Operations Center (JOC) and Oroville Field Division (OFD) via teleconference
July 22 Fisheries Task Force 9am – 12:00pm
Tentative location: JOC and OFD via teleconference
July 9 Terrestrial Task Force 1pm – 4pm
Tentative location: OFD

Eric Theiss asked for time on the July agenda to show slides from a recent trip to the Pacific Northwest where he toured fish passage facilities. He suggested he could show them during the lunch break.

IV. Study Deliverables and Implementation Updates

Study Methodology

The EWG discussed proposed modifications to study plan methodology for the following studies as noted.

SP-T2 and SP-T7

Gail Kuenster distributed a document denoting proposed changes to the study area language for SP-T2 and SP-T7 (Attachment 9). She explained that some of the areas being removed from the study area are too steep and unstable to survey safely. Gail will provide the revised language to Linnea Hansen with USFS for review and the EWG confirmed that the changes were approved pending USFS confirmation. Woody Elliott representing Department of Parks and Recreation (DPR) asked for clarification of the term 'highly rated' as it relates to noxious weed species. The EWG agreed that the language should identify CAL EPC and CDFA listed plants as 'highly rated'.

Chuck Hanson asked for clarification on the protocol for revising study plans. The Facilitator reminded the EWG that they had agreed in general to review small changes in redline/strikeout format and more extensive changes with both the redline/strikeout and a summary cover sheet however, they reserve the right to respond to suggested revisions on a case-by-case basis. Chuck noted that he would review the fisheries plans modifications and provide comments.

Draft / Interim Reports

SP-F3.1, Task 1C; SP-F3.2, Task 4A

Dave Olson distributed an oversized, bound document titled "GIS Fish Habitat Components SP-F3.1 Task 1C; SP-F3.2 Task 4A". The EWG reviewed the maps comprising the document and DWR agreed to e-mail out the draft maps to the EWG. Additional hard copies are also available from DWR on request. Chuck Hanson suggested that some of the white space on the maps could be used to provide additional information such as percent pool habitat in the reach, linear miles of pools, areal extent of pools, etc. Dave agreed to provide a box for statistics and include data sources and the date and flow range for the Feather River at the time measurements were taken. Rich DeHaven reported that FWS will make available a GIS rip-rap database for the Feather River reach from Sunset Pumps to Verona that includes bank slope, bank type, type of rip-rap, and aquatic near-shore depth, cover, and woody debris. Dave added they have integrated types of data needed to characterize fish habitat and compare to fish distribution information.

SP-F10, Task 3B
Brad Cavallo with DWR reported that the literature review for SP-F10 is in preparation and last season's enclosure study was shortened to one month due to vandalism and equipment problems. Brad said they trapped approximately 400 steelhead and the recapture rate was low. Researchers reported that the fish in the lower portion of the low flow channel were larger than fish in the upper portion. The enclosure is operational and currently in place in the river.

SP-F10, Task 3C
Brad reported 14 redds were dewatered in the high-flow channel: the low-flow channel is not surveyed because there are no flow fluctuations. With 30,000 – 40,000 fish spawning in the high-flow channel, the loss of 14 redds is a small proportion of the total population. Brad estimated that during the February flow fluctuation approximately 50,000 salmon were lost out of the 8 million juvenile salmon in the river at that time. He explained the difficulties in determining what effects are contributed by the Yuba River operations and added that DWR will be looking at the area between the Yuba River and Honcut Creek this year.

Michael Pierce asked where studies would be done to evaluate effects of resource actions proposed by other work groups. He described the flash dam concept and the desire to restore the aesthetic and socioeconomics pre-project values of Ruddy Creek. Wayne Dyok suggested that these resource actions should first be developed in the appropriate work group, such as Recreation and Socioeconomics and if it gets past that work group, then it gets discussed in a cross-resource task force. Terry Mills agreed that these discussions should occur at a cross-resource task force level and will confirm that with DWR RAMs.

SP-T4
Gail Kuenster distributed and described the Interim Report, SP-T4 Biodiversity, Vegetation Communities and Wildlife Habitat Mapping (Attachment 10). Three locations were chosen for examples in the report: Foreman Creek, Afterbay, and Feather River. Other groups and study authors will be using the vegetation mapping produced through this study.

Updates
SP-F15
Dave Olson provided a quarterly update on SP-F15 and reported that they have collected some but not all of the GIS coverage for the components that will be used for this analysis.

VI. Next Steps
The next EWG meeting is scheduled for July 30. Terry Mills suggested the EWG continue their PM&E discussions and DWR and the consulting team will send out as many Level 1 narrative reports as completed, update the tracking matrix, and continue to populate the functional matrix. The next EWG meeting will include a modeling update and an update on the cross-resource task force process. The focus for the next task force meetings will be the functional matrix.

Ted Alvarez distributed revisions to the SP-F9: Evaluation of Project Effects on natural Salmonid Populations, Phase 1 Interim Literature Review (Attachment 11). Curtis Creel reminded participants that the Engineering and Operations Work Group plan an August modeling workshop to present benchmark studies. He noted that they will not have the entire 75-year record modeled but would like to choose one or two scenarios and run a series of years to see the comparison between the benchmark scenarios.

Chuck Hanson requested and the Facilitator agreed to extend the collaborative meeting calendar into 2004 and distribute a new revised version.

The participants agreed that the July Environmental Work Group meeting would be:
Date: July 30, 2003
Time: 9:00 a.m. – 3:30 p.m.
Location: Oroville Field Division

Action Items
The following action items identified by the Environmental Work Group includes a description of the action, the participant responsible for the action, and due date.

Action Item #E94: Consider the FWS recommendation to hold a Functional Analysis Workshop and discuss the subject with DWR management.
Responsible: DWR
Due Date: July 2003

Action Item #E95: Confirm cross-resource task force process.
Responsible: DWR
Due Date: July 2003

Action Item #E96: Send functional matrix to Eric Theiss.
Responsible: DWR
Due Date: July 2003

Action Item #E97: Further develop the PM&E category definitions.
Responsible: DWR
Due Date: July 2003

Action Item #E98: E-mail maps included in GIS Fish Habitat Components document.
Responsible: DWR
Due Date: July 2003

Action Item #E99: Make available the FWS' GIS rip-rap database for the Feather River reach from Sunset Pumps to Verona that includes bank slope, bank type, type of rip-rap, and aquatic near-shore depth, cover, and woody debris.
Responsible: Rich DeHaven, FWS
Due Date: July 2003

Action Item #E100: Prepare and distribute Level 1 reports for prioritized resource actions.
Responsible: DWR/Consulting Team
Due Date: July 2003

Action Item #E101: Extend collaborative meeting calendar and distribute to collaborative.
Responsible: Facilitator
Due Date: July 2003

Carry over
Action Item #E90: Consider fish passage and potential basin approach.
Responsible: DWR Management
Due Date: July 2003
Action Item #E92: Contact butte Basin Groundwater Association to clarify their issues related to conjunctive use of groundwater during drought conditions.
Responsible: Jerry Boles, DWR
Due Date: July 2003