

APPENDIX D

Response to Comments on Draft License Application

On September 28, 2010, PCWA filed its Draft Application for New License with the Federal Energy Regulatory Commission (FERC or Commission) and requested comments from interested parties prior to the comment period closing date of December 27, 2010. The following comment letters were received:

	ENTITY	COMMENT LETTER DATE	DATE FILED WITH FERC	FERC ACCESSION NUMBER
1	Federal Energy Regulatory Commission	8-Nov-2010	8-Nov-2010	20101108-3030
2	Federal Energy Regulatory Commission	22-Dec-2010	22-Dec-2010	20101222-3037
3	Foothills Angler Coalition	26-Dec-2010	28-Dec-2010	20101228-5006
4	Foothills Water Network	19-Oct-2010	20-Oct-2010	20101020-5097
5	Foothills Water Network	20-Dec-2010	20-Dec-2010	20101220-5080
6	Foresthill Residents for respOnsible Growth	19-Dec-2010	23-Dec-2010	20101223-5037
7	Gibbs, Patricia	27-Oct-2010	3-Nov-2010	20101103-5003*
8	Gibbs, Patricia	6-Nov-2010	15-Nov-2010	20101116-0008
9	Gibbs, Patricia	27-Dec-2010	27-Dec-2010	20101227-5032
10	Horseshoe Bar Fish & Game Preserve	23-Dec-2010	28-Dec-2010	20101228-5004
11	Schweitzer, Hilde	15-Dec-2010	21-Dec-2010	20101221-5013
12	State Water Resources Control Board	23-Dec-2010	23-Dec-2010	20101223-5101**
13	US Dept of Agriculture - Forest Service, et. al. (resource agencies)	20-Dec-2010	22-Dec-2010	20101222-5008
14	US Dept of Commerce – NOAA (Biological Opinion)	17-Dec-2010	20-Dec-2010	20101220-5100
15	US Dept of Commerce - NOAA	21-Dec-2010	22-Dec-2010	20101222-5007
16	US Dept of Commerce - NOAA (Re-filing of Biological Opinion)	10-Jan-2011	13-Jan-2011	20110113-5012
17	Williams, Donna	4-Oct-2010	13-Oct-2010	20101013-0054

*20101116-0009 (Duplicate of Patricia Gibbs filed Nov 15, 2010_20101103-5003)

**20101228-0016 (Duplicate of SWRCB filed Dec 28, 2010_20101223-5101)

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Reference	Topic Area	Comment	Response
Federal Energy Regulatory Commission Comment Letter Dated November 8, 2010; Filed by FERC November 8, 2010 (20101108-3030)			
Comment Period for DLA			
FERC-1	Request for Extension of Comment Period on Draft License Application (DLA) by Foothills Water Network (FWN) (See comment FWN-1)	Response by FERC to FWN Since the deadline for filing comments on the DLA and the date by which PCWA must file their final license application are only two months apart, it does not appear to be necessary to extend the comment period on the DLA. We encourage you to comment on the material contained in the DLA by December 27, 2010, and then use the 60-day comment period on the final license application to provide comments on any new information that was not previously provided.	Comment noted.
Federal Energy Regulatory Commission Comment Letter Dated December 22, 2010; Filed by FERC December 22, 2010 (20101222-3037)			
Volume 1, Exhibit D			
FERC-2	Depreciation Calculation	On Page D-4 of your DLA, please add text or a footnote explaining how the depreciation expense was calculated, including the book value you used and rate of financing.	Volume 1, Exhibit D text has been revised to incorporate information explaining how depreciation expense was calculated, including the book value used and rate of financing.
FERC-3	Value of Project Power	On Page D-5 of your DLA, please include an estimate of the value of the project's power based on your existing power sales contract with Pacific Gas and Electric. Be sure to break out both the energy value and any capacity value.	In 1961, Placer County voters, with over 95% approval, authorized a \$140 million revenue bond to fund the construction of the Middle Fork Project (MFP). Prior to construction of the MFP, Placer County Water Agency (PCWA) entered into a long-term (50-year) contract with Pacific Gas & Electric Company (PG&E) for the purchase of power generated from the MFP. The contract specified that in return for the power generated from the MFP, PG&E would provide sufficient funding to PCWA to support ongoing operations and maintenance of the MFP and to retire the debt (bond) incurred for the construction of the Project. Per the current contract with PG&E, PCWA does not receive any revenue from PG&E for the sale of electrical energy beyond reimbursement of debt and operation and maintenance costs. Therefore, PCWA cannot estimate the value of the MFP power based on the existing power sales contract with PG&E. Volume 1, Exhibit D of the Final License Application (FLA) has been modified to include the methodology used to arrive at a reasonable estimate of the value of Project power. The current value of Project energy is based on the energy price Cal-ISO reported in its Annual Report on Market Issues and Performance for 2009 which is \$37.69/MWh (rounded to \$38.00/MWh). The 2010 Capacity Value of the Project energy is \$36/kW-year. This figure is based on verbal communication between PCWA and staff of the Northern California Power Agency.
FERC-4	Clarify Estimates of Project Power	Please clarify if your estimates of project power shown on page D-5 of your DLA include capacity value.	The estimates of Project power identified in the Draft License Application (DLA), Volume 1, Exhibit D did not include capacity value. An estimate of the MFP's capacity value was provided in Exhibit E, Section 11.0 of the DLA. The 2009 Energy Value is based on the energy price Cal-ISO reported in its Annual Report on Market Issues and Performance for 2009, which is \$37.69/MWh (rounded to \$38.00/MWh). The 2010 Capacity Value is \$36/kW-year. This figure is based on verbal communication between PCWA and staff of the Northern California Power Agency. The text of Exhibit D in the FLA has been modified to include the capacity value.

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Reference	Topic Area	Comment	Response
Volume 1, Exhibit H			
FERC-5	Sale of Project Output	On Page H-16 of your DLA, please clarify whether Placer County Water Agency (PCWA) serves any end-use customers and say how PCWA plans to sell the output of the project.	<p>PCWA has not served end-use customers in the past, nor does it anticipate doing so in the future. Under the terms of the new power purchase contract, PCWA would remain a wholesaler of MFP electrical output to the northern California marketplace. The text in Exhibit H of the FLA has been modified accordingly.</p> <p>As described in Volume 1, Exhibit H, Page H-8 of the DLA, "The electrical output of the Project is currently contractually obligated to Pacific Gas and Electric Company (PG&E) pursuant to the Middle Fork Project Power Purchase Contract, dated April 30, 1963. The contract expires on April 30, 2013."</p> <p>"PCWA is currently negotiating a new power purchase contract, which will be in place prior to the expiration of the current PG&E contract. It is anticipated that the new contract will be from three to ten years in length, with provisions for renewal with the mutual agreement of both parties. This power purchase contract would be consistent with the FERC license conditions, water rights, and existing operating agreements/contracts and would not result in additional limitations or constraints in Project operations."</p>
Volume 5, Exhibit E, SD E: Historic Properties Management Plan			
FERC-6	APE Map	In sections 2.2 and 5.6 of your Historic Properties Management Plan (HPMP), you cite an area of potential effects (APE) map and a map 6; respectively. However, these maps do not appear in the HPMP. Please provide these and all other maps and figures cited in the HPMP.	In the DLA (Volume 5, Exhibit E, SD E), the referenced maps were attached in a separate Map Section of the Draft HPMP (hardcopy) and provided electronically in a folder labeled PRIV_LargeFormat_HPMP_Maps. These maps will be included in the FLA.
Foothills Angler Coalition Comment Letter Dated December 26, 2010; Filed with FERC December 28, 2010 (20101228-5006)			
MFP Relicensing Process			
FAC-1	Process	The DLA is not a "consensus" document. The DLA is not a "consensus" document because insufficient time was allotted for discussions and negotiations regarding the peaking reach, consensus was not reached on the content of the DLA.	As clearly stated in the DLA, Volume 3, Exhibit E, Introduction and Section 4.0, the Proposed Action represents only PCWA's recommended protection, mitigation, and enhancement (PM&E) measures. The DLA was never represented as a "consensus" document.
FAC-2	Process	Angling interest input minimized. Throughout the process, the angling interest was treated in a manner significantly different than other interests. At the outset of the proceedings, an "angler focus group" meeting was held, from which erroneous, superficial information was drawn. Requests were made repeatedly for additional meetings, but until late in the process those requests were summarily denied. A second meeting was held in March of 2010, near the time when the negotiations were to begin. The angling interest was well represented at that meeting. The information that was generated from that meeting unfortunately did not find its way into the DLA. As " Attachment A " we have attached the summary of that meeting as prepared by Entrix, so that it is clear that it is part of the record, together with letters associated with requests for additional focus group meetings.	<p>It is not PCWA's intent to minimize angling interests. The angling-related studies were conducted as specified in the REC 4 – Stream-based Opportunities Technical Study Plan (TSP), which was developed in consultation with the Recreation Technical Working Group (TWG). The REC 4 - TSP was approved by the relicensing participants and included in the Pre-Application Document (PAD), which was filed with the FERC on December 13, 2007. The FERC issued a study plan determination on July 18, 2008 approving all of the TSPs, including the REC 4 - TSP.</p> <p>As part of the REC 4 – TSP, PCWA conducted two focus group sessions with local anglers to develop information about angling opportunities in the bypass and peaking reaches. The first focus group session was conducted on May 20, 2008. At the request of angler relicensing participants, a second focus group session was conducted on March 4, 2010. The purpose of the second focus group session was to clarify and expand upon the information collected at the first focus group session. All materials related to the Angler Focus Group Sessions were included in Appendix J, of the REC 4 – Technical Study Report (TSR). A draft version of the REC 4 – TSR was distributed to the relicensing participants for review and comment on July 24, 2009, and finalized on June 23, 2010, after addressing comments provided by the relicensing participants. The final REC 4 – TSR was included in Supporting Document B of the DLA. The March 4, 2010 Angler Focus Group notes and associated letters were inadvertently omitted from the DLA. However, they are (and have been) available on PCWA's website and are included in the FLA.</p> <p>In addition, a representative of one or more angling-focused relicensing participant groups has been in attendance at nearly every MFP relicensing participant meeting since 2006 (see PCWA's relicensing website: http://relicensing.pcwa.net/). PCWA believes that the interests of anglers have been clearly articulated by the relicensing participants in attendance, and have been given consideration in the development of pertinent license conditions.</p>

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Volume 3, Exhibit E, Section 8.1 Analytical Approach			
FAC-3	Environmental Analysis	<p>Metric for Measuring Claimed Enhancements. FAC requests that PCWA provide a discussion of its rationale for using the existing license condition as opposed to the existing operating condition, or at least do a comparative analysis using both metrics.</p>	<p>Volume 3, Exhibit E, Section 8.1 Analytical Approach of the DLA provided a detailed description of the modeling approach used to analyze potential effects of the Proposed Action on environmental resources. In almost all the effects analysis, the hydrology used to represent the No-Action Alternative was the historical impaired hydrology in the bypass and peaking reaches (1975-2007). This was referred to as the No-Action Alternative or No-Action Alternative-Impaired Hydrology in the DLA. Therefore, in most cases, impact determinations were developed based on a comparison of the historical impaired hydrology and modeled hydrology under the Proposed Action.</p> <p>At a few locations, the historical impaired hydrology did not accurately represent current operations of the MFP under the existing license conditions due to changes in operations over time (1975-2007). For example: (1) historical reservoir elevations were the result of much lower water demands than exist currently; and (2) historical diversions in the small diversions were reduced to debris build-up at the intakes or to prevent turbine damage from rocks during high-flow events. Planned screen/intake modifications will alleviate the small diversion issues in the future under the No-Action Alternative allowing unimpeded (full) diversion up to the existing water rights and FERC license conditions.</p> <p>An additional model run was developed to more accurately reflect current and future operations of the MFP under the No-Action Alternative in Hell Hole and French Meadows reservoirs (water surface elevations) and in the bypass reaches downstream of the small diversion (high-flow events). This model run is referred to as the No-Action Alternative-Existing License Conditions (ELC). The DLA clearly indicated which No-Action Alternative was used in the analysis. In the cases, when the Proposed Action is compared to the No-Action Alternative ELC model run, the analysis also provides the No-Action Alternative-Impaired Hydrology data.</p> <p>In addition, as part of the impact analysis in the DLA, PCWA compared the minimum flow requirements in the Proposed Action to the minimum flow requirements in the No-Action Alternative. PCWA has reviewed the impact sections and where this occurred, PCWA has also included in the FLA a corresponding analysis of the hydrology (Proposed Action and the No-Action Alternative), to ensure that the analysis reflects the resulting hydrology (operational reality), not just the minimum flow requirements.</p>

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects			
FAC-4	Flow Evaluation in Peaking Reach	<p>PCWA failed to follow and implement the science that Entrix produced for the peaking reach, relating to the effects of peaking on available habitat for trout spawning, young-of-the-year rearing, and benthic macroinvertebrate refugia... PCWA's studies demonstrate two very significant scientific facts: (i) peaking drastically affects trout spawning habitat, young of the year rearing habitat, and BMI production and refugia habitat; (ii) there is virtually no spawning within the main channel of the Middle Fork below Oxbow dam because of the peaking of the system. These two facts are related, but bear specific separate mention...The trout spawning habitat studies showed that 94% of the effective trout spawning habitat is destroyed by peaking flows at the RM 4.8 study site under current license conditions, and that at the RM 14.1 study site peaking flows destroy 81% of the spawning habitat. The DLA proposal would continue to destroy 88% of the spawning habitat at RM 4.8 and 75% of the spawning habitat at RM 14.1. To suggest that by virtue of this small reduction in adverse impact the DLA would provide "enhancement" to spawning habitat is equivalent to saying that it is ok to destroy 88% of the spawning habitat because previously only 94% was destroyed by PCWA...This, of course, is the reason that there is no spawning in the main stem of the river. Such spawning as does occur happens in the few tributaries that exist below Oxbow Dam...PCWA's sole mitigation for this impact is to propose that gravels be introduced to re-establish spawning habitat. There are a number of problems with this: (i) PCWA proposes to introduce gravels above the tunnel chute...FAC requests that PCWA conduct a study to determine feasible areas for gravel introduction below the tunnel chute and lake...FAC requests that in its geomorphology analyses, PCWA consider this question and produce the necessary science to support a conclusion that gravel introduction will in fact mitigate for loss of spawning habitat caused by peaking. Finally, if spawning gravels are introduced into suitable locations as a mitigation measure, then that should be done regularly to encourage spawning in the site channel at Grey Eagle Bar and other areas...The studies show that there are virtually no small fish in the mainstem river, and virtually no young of the year...FAC requests that PCWA produce the necessary science to determine reasonable and feasible mitigation measures designed to provide suitable habitat for small fish...The studies for the RM 4.8 study site show that BMI habitat is reduced to 20% at 75 cfs. A similar loss of habitat occurred at the RM 14.1 study site. The DLA proposes a minimum flow of 125 cfs which will reduce the habitat to 34%. Under the current operating policy PCWA minimum flows have been approximately 200 cfs which results in a reduction of habitat to approximately 50%. As a consequence, the DLA is actually asking to reduce the BMI habitat by 16% from its current operating policy. Therefore, the DLA request to increase the destruction of habitat is in fact not an enhancement and should be disallowed. BMI numbers clearly affect the number (few, as shown by the fish population studies) and size (all larger—larger fish eat small fish) of fish in the system. There are too few BMIs to support good populations of small fish. FAC members provided clear anecdotal information to PCWA during the study process that demonstrated that BMIs that did hatch were stranded and preyed upon so that their numbers were reduced nearly to zero. PCWA did not take this evidence into account. Letters expressing the issue to PCWA are attached to these comments as "Attachment C," so that it is clear that they are part of the record...FAC requests that PCWA produce the necessary science to determine reasonable and feasible mitigation measures designed to provide suitable habitat for BMIs.</p>	<p>PCWA's Proposed Action is intended to balance competing interests in the peaking reach which include, recreation, aquatic species habitat, power generation, and water supply. The best available science was used in the analyses and in development of the Proposed Action.</p> <p>The Proposed Action also includes increased minimum flows and a maximum release at Oxbow Powerhouse to reduce the flow fluctuations in the peaking reach for the express purpose of enhancing aquatic species habitat. The Proposed Action also reduces the ramping rate in the Peaking Reach to enhance aquatic species habitat. As a result, the Proposed Action enhances the aquatic habitat in the Peaking Reach compared to the existing conditions (No-Action Alternative).</p> <p>The potential effects of the Proposed Action, including the effects of peaking on trout spawning habitat, young-of-the-year (YOY) habitat and BMI production are provided in the DLA and FLA (Volume 3, Exhibit E, Section 8.5) and AQ 1 Instream Flow report. The Proposed Action enhances conditions for these resources compared to the No-Action Alternative. The effects analysis (Volume 3, Exhibit E, Section 8.5) is based on the hydrology that would occur in the Proposed Action compared to the hydrology in the No-Action Alternative (historical impaired hydrology). See response to FWN-7 for a detailed discussion.</p> <p>The Proposed Action includes a Sediment Management Plan that would introduce gravels that are currently being captured in the medium sized reservoirs/diversion pools back into the river downstream of the reservoirs. This is considered an enhancement to aquatic habitat/aquatic species (e.g., fish and macroinvertebrates). In the peaking reach, the gravels will be mobilized and transported during high flow periods, consistent with natural processes. Naturally high flows exist throughout the peaking reach as a result of the many miles of watershed/tributaries that provide flow. Both the Sediment Management Plan and Geomorphology/Riparian Monitoring Plan will be used to monitor sediment augmentation. Results from this monitoring will be provided to the Agencies after each monitoring season and PCWA will consult with the Agencies regarding the monitoring results.</p> <p>PCWA conducted three years of fish population studies in the bypass and peaking reaches, as well as comparison river reaches for the AQ 2 - Fish Population Technical Study Report (Volume 3, Exhibit E, SD-B in the DLA and FLA). In addition, extensive fish population habitat modeling was conducted, which is presented in AQ 1 - Instream Flow Technical Study Report and is summarized in Volume 3, Exhibit E, Sections 7.5 and 8.5 in the DLA and FLA.</p> <p>There were relatively few young-of-the-year (YOY) trout observed in the peaking reach (AQ 2 Fish Population Report), however, all other age classes of fish were abundant.</p> <p>Components of the Proposed Action, such as increasing minimum flows, reducing flow fluctuations, reducing ramping rates were designed to enhance aquatic habitat for all species and life stages, including spawning and YOY. The extensive data collected and analyzed in the technical studies, including habitat modeling, and analyses provided in the DLA and FLA are sufficient to analyze the potential effects of the Proposed Action on fish populations and habitat, including YOY, and to develop reasonable and feasible mitigation measures, if necessary. In addition, the Fish Population Monitoring Plan (FLA) provides a monitoring and reporting component specifically for monitoring YOY fish.</p> <p>Also, see response to FWN-23.</p>

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects			
FAC-5	Peaking Reach Analysis	In doing its flow analysis, PCWA did not take into account available information relating to a settlement that occurred relative to the Yuba River, on peaking issues...This issue was addressed in the Yuba River settlement and should have been considered by PCWA before producing the DLA.	PCWAs Proposed Action is an attempt to balance competing interests. The Proposed Action relied on the science and information from the FERC-approved Technical Study Plans and additional consultation completed specifically for the MFP. With respect to fisheries the studies included fish populations, macroinvertebrates, water temperature, instream flow habitat (flow fluctuations, flow dependent habitat availability, habitat diversity), fish entrainment, fish passage, geomorphology, and water quality. Similarly, the Yuba River Accord represented an effort on the part of Yuba River stakeholders to balance and find a solution to the challenges of competing interests of water for water supply, hydropower generation, recreation, and fisheries (anadromous salmon and steelhead based on site-specific information. Both the Proposed Action for the MFP and the Yuba River Settlement represent efforts to balance competing interests based on site-specific resource information. Site-specific information developed in the Yuba River and balancing between competing interests in the Yuba River Accord should not be used as a basis for making decisions in the MFP relicensing.
FAC-6	Reintroduction of Steelhead	This issue was covered in the Foothills Water Network comment document. FAC wishes to add only one point that was not mentioned because the event had not occurred at the time of filing of those comments: NIMFS has filed its Biological Opinion and Conference Opinion and Draft Recovery Plan for Central Valley Listed Salmonids in the record of these proceedings.	Comment noted.
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
FAC-7	Fishery Management Provisions	Although not identified in the DLA, FWN recommends that portions of the existing FERC No. 2079 License Amendment Language be retained and modified in the new License for fishery management purposes. This new language is referenced to the current 1981 License Amendment; FERC Project No. 2079; ORDER AMENDING LICENSE (MAJOR); (Issued March 18, 1981); Page 5: (E) Article 37: Footnote; 2/ New License language would be modified to read as follows: "Oxbow Powerplant releases: The scheduled flow releases may be modified for beneficial aquatic and fishery management purposes upon consensus among the Licensee, the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Should consensus be unobtainable, parties will employ appropriate mediation and/or arbitration processes to reach a determination."	PCWA disagrees with the proposed language. Modification of scheduled flow releases is under FERC jurisdiction. Further, Article 37 only allowed for <u>temporary</u> modification of flows for <u>short periods</u> of fisheries management purposes upon mutual agreement among the Licensee, U.S. Forest Service, U.S. Fish and Wildlife Service, and the California Department of Fish and Game.
FAC-8	BMI Monitoring Plan	It is essential that whatever flow regimes are identified under the new license, PCWA must be held responsible to evaluate the instream flow impacts on BMI habitat and production. Should licensed flow regimes indicate decreases or adverse trends in BMI populations, then further studies should be conducted in developing and adapting regimes that are more conducive to BMI populations and overall aquatic ecosystem health.	A Benthic Macroinvertebrate (BMI) Monitoring Plan is provided in the FLA (Volume 3, Exhibit E, SD A). Reporting and agency consultation after each year of study is a part of all of PCWA's monitoring plans.

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Study Requests			
FAC-9	Additional Fish and BMI Habitat Studies	FAC requests that PCWA conduct the reasonable studies to determine the effect of water sales on fish and BMI habitat and numbers, and on other issues such as water availability for increases in minimum flows and similar issues, and specifically the adverse effects on the angling interest.	<p>See response to comment FWN-6.</p> <p>In addition, all the studies necessary for evaluation of impacts under the Proposed Action and evaluation of potential PM&E measures have been completed. Further, PCWA completed study plan development and implementation consistent with FERC regulations (Volume 3, Exhibit E, Section 14.0).</p> <p>The Pre-Application Document (PAD) filed by PCWA with FERC on December 13, 2007, included relicensing participant-approved Technical Study Plans (TSPs). One of the TSPs (AQ-1-Instream Flow TSP) was subsequently revised based on comments received on the PAD. On June 2, 2008, FERC issued a study plan determination. During the study process, PCWA developed and filed three progress reports, as follows:</p> <ul style="list-style-type: none"> • January 22, 2008 – 2007 Study Implementation Progress Report for the Middle Fork American River Project • January 21, 2009 – 2008 Study Implementation Progress Report for the Middle Fork American River Project • January 21, 2010 – 2009 Updated Study Report and Notification of Intent to File a Draft License Application for the Middle Fork American River Project <p>As required, the annual progress reports summarized PCWA's overall progress, any variances from the TSPs, and any modifications to ongoing studies or new studies proposed by PCWA. Each annual progress report was distributed to the relicensing participants for review. Within 15 days of each distribution, PCWA held a meeting to discuss the contents of the progress reports and to address comments regarding study plan implementation. The meeting discussions were documented in meeting summaries, which were distributed to relicensing participants for a 30-day review and comment period.</p> <p>The technical studies were implemented as outlined in the FERC-approved TSPs. PCWA did not propose any modifications to the TSPs and no major modifications were proposed by the relicensing participants as part of the study implementation process. Three of the TSPs (AQ 3, REC 4, and TERR 2) were refined in response to new information developed during study implementation. These refinements were documented in the 2008 Study Implementation Progress Report (January 21, 2009) and subsequently discussed at the 2008 Study Implementation Progress Report Meeting. No participant or the FERC filed a disagreement concerning the progress report or the meeting summary. Therefore, the study refinements were deemed approved.</p> <p>To date, no relicensing participant has filed any formal additional study requests with PCWA or FERC (consistent with FERC regulations) for consideration in the MFP relicensing, despite numerous opportunities to provide these requests during the Integrated Licensing Process. All technical studies have been completed consistent with the FERC's study plan determination. Therefore, PCWA will not conduct any additional studies unless requested by the FERC.</p>
FAC-10	<i>O. mykiss</i>	FAC requests that PCWA conduct the necessary studies to determine the nature and extent of, and the habits of the <i>O. mykiss</i> that inhabit the main stem.	<p>See response to comment FAC-9.</p> <p><i>Oncorhynchus mykiss</i> (or <i>O. mykiss</i>) is commonly referred to as rainbow trout. Many of the approved TSP's focused on the life cycle and life history strategy of this species. See results in AQ 1, AQ 2, AQ 5, and AQ 6 (Volume 3, Exhibit E, SD B). Further, Volume 3, Exhibit E, Section 8.5 evaluated effects of the Proposed Action compared to the No-Action Alternative on rainbow trout habitat.</p>

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Study Requests			
FAC-11	Fish and BMI Studies in the Peaking Reach	Studies relating to angling interest. There are none. In the FWN comments, there are requests for studies on angler safety and flow-related issues pertaining to angling. These studies should have been done in the same manner as they were for the boating interests, and the trail crossing interests...Another issue was created by PCWA's repeated refusal to conduct fish-related and BMI related studies on the Horseshoe Bar Preserve property below the tunnel chute fish barrier despite repeated requests to do so. Leaving a significant portion of the peaking reach renders PCWA's conclusions regarding fish and BMIs in the rest of the peaking reach faulty and incomplete. FAC requests that PCWA conduct reasonable studies within the preserve area in the same manner as it did elsewhere on the river, in order to collect more accurate data upon which to base its conclusions.	Relicensing participant-approved TSPs proposed for the MFP were filed with FERC in December 2007 as Supporting Document H of the PAD. FERC issued its study plan determination on July 18, 2008 thereby approving the technical studies required for the relicensing of the MFP. PCWA has completed the technical fish-related and BMI studies in the peaking reach in the FERC-approved TSPs. The corresponding technical study reports contain all the information necessary to identify potential Project effects and develop appropriate fish and BMI PM&E measures for the MFP peaking reach. No additional studies are necessary. In the AQ 1 – Instream Flow TSR; AQ 2 – Fish Population TSR; AQ 3 – Macroinvertebrate and Aquatic Mollusk TSR, fish and BMI studies were conducted in representative habitats throughout the peaking reach. Please refer to these studies for maps of the sampling locations in the peaking reach. In the FLA, PCWA has included an angling analysis for angler wading safety and flow-related issues pertaining to angling (Volume 3, Exhibit E, Section 8.9).
Foothills Water Network Comment Letter Dated October 19, 2010; Filed with FERC October 20, 2010 (20101020-5097)			
Comment Period for DLA			
FWN-1	Requested Extension of Comment Period	<u>Request to FERC by FWN</u> The Foothills Water Network requested that FERC extend the comment period on the DLA due to the absence of all relicensing study results and management plans.	<u>FERC Response to FWN</u> FERC denied FWN's request for an extended DLA comment period in a letter dated 11/8/10. FERC encouraged FWN to comment on the material contained in the DLA by December 27, 2010, and then use the 60-day comment period on the FLA to provide comments on any new information that was not previously provided.
Foothills Water Network Comment Letter Dated December 20, 2010; Filed with FERC December 20, 2010 (20101220-5080)			
Volume 3, Exhibit E, Section 1.0 Application			
FWN-2	Final License Application - License Term	PCWA is requesting a 50-year license term. Given the current DLA measures, the Foothills Water Network does not see a basis for such a lengthy license term.	PCWA requested a 50-year license term based on the substantial costs associated with relicensing of the MFP; capital improvements; new environmental measures, programs, and facilities; and extensive monitoring and ongoing resource agency consultation to ensure continued resource protection over the term of the new license. As identified in Volume 3, Exhibit E, Section 11.0 of the FLA, the annualized cost over a 50-year license of these activities are over \$28,125,700 Million per year. Extensive monitoring and consultation with the resource agencies required over the term of the license provide long-term protection of environmental and cultural resources.

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 7.9 Recreation Resources Affected Environment			
FWN-3	Peaking Reach Whitewater Feature - Confluence Run	The Network also requests that PCWA's FLA provide us with the information on the initial design of the whitewater features including the flows for which the features were designed.	<p>PCWA believes that this comment refers to the river channel adjacent to PCWA's American River Pump Station. The American River Pump Station is not a part of the MFP. The pump station was constructed concurrent with the restoration of the North Fork American River channel, as explained in the REC 4 – TSR (Volume 3, Exhibit E, SD B), and summarized in the following.</p> <p>Prior to 2008, a portion of North Fork American River below the confluence was dewatered because the river was routed through a tunnel around the Auburn Dam site. In 2008, the US Bureau of Reclamation (USBR) closed the Auburn Dam diversion tunnel and restored the previously dewatered section of the North Fork American River to its natural channel. The river restoration project was conducted concurrent with the construction of PCWA's American River Pump Station, which is located upstream of the Birsdall Access, near the former Auburn Dam site. The pump station is located on river right (looking downstream).</p> <p>The river channel adjacent to the pump station was configured to include an "intake channel" and a "main channel", separated by a concrete wall. A screened intake at the bottom of the intake channel allows PCWA to draw water through the pump station. The main channel was not designed as a "whitewater feature", but was constructed to allow for safe passage by boaters and other stream users. The main passage includes a series of hydraulic features that are attractive to whitewater boaters. A concrete portage on river left allows boaters and other stream users to walk around the river in this location, if desired.</p> <p>After the American River Pump Station and river restoration projects were completed, test boaters ran the main channel and the intake channel. The test boaters rated the hydraulics in the main channel as Class II+/III, which is consistent with the ratings provided by the boaters who participated in the relicensing boating studies. The test boaters rated the intake channel as Class III (slightly more difficult than the main channel). The test boaters who participated in this assessment did not identify a boatable flow range.</p> <p>The American River Pump Station is located on a run now referred to as the "Confluence Run". PCWA conducted whitewater boating studies on this run as part of the MFP relicensing studies at controlled flows of 368 cubic feet per second (cfs), 600 cfs, 800 cfs, and 1,000 cfs. The main channel adjacent to the pump station was boatable under all of the test flows.</p>
Volume 3, Exhibit E, Section 8.1 Analytical Approach			
FWN-4	Environmental Analysis	PCWA uses the term "enhance" quite liberally in describing the effects of its Proposed Action. In most cases when PCWA claims to enhance the project-affected river reaches, the Proposed Action really only results in marginal, incremental improvement...In some cases it would be more accurate for PCWA to describe its proposed improvements as "mitigations."	PCWA disagrees with this statement. The impact analysis in the DLA included an overall impact determination based on extensive analytical analysis and accompanying discussion. PCWA's determination of enhancement was based on comparing changes in environmental conditions under the No-Action Alternative-Impaired Hydrology and the Proposed Action. This approach, and the use of the term "enhancement" is consistent with the analysis of an existing hydroelectric project under the National Environmental Policy Act (NEPA).
FWN-5	Build-out Alternative	The PCWA Final License Application should include a "Build-out Alternative" for formal NEPA analysis by FERC.	Both the DLA and FLA include analysis of the Proposed Action under full build-out consumptive water demands. Volume 3, Exhibit E, Section 8.1 provided a detailed description of the modeling approach used to analyze potential effects of the Proposed Action on environmental resources. In the environmental analysis, two Proposed Action Alternatives were analyzed. The Proposed Action-Existing Demand (42,000 acre feet [ac-ft] of consumptive demand) was used in almost all the effects analyses to identify potential Project effects. A second model run, Proposed Action-Future Demand (120,000 ac-ft of consumptive demand plus up to 47,000 acre-feet of water dedicated for environmental purposes in the Lower American River), was also developed which incorporates operations of the MFP with future consumptive demands under full build-out. The two Proposed Action model runs are very similar (almost indistinguishable) in terms of instream flows in the different water years in the bypass reaches. The primary difference of consequence between the model runs is the water surface elevation in Hell Hole and French Meadows reservoirs in some water years and instream flow in the peaking reach. In such cases, the environmental analysis presents modeling results from both Proposed Action alternatives compared to the No-Action Alternative.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.1 Analytical Approach			
FWN-6	Analysis of Water Transfers	In its Final License Application, PCWA should describe its frequent water transfers that are part of the baseline No-Action Alternative so that FERC can analyze them under NEPA. These water transfers are reflected in the hydrology for the period of record and can affect the magnitude and timing of flows in the Peaking Reach...The CEQA Analysis should address the impact of PCWA's water transfers.	Historic water transfers have been made consistent with the MFP water rights, FERC license conditions and the California Environmental Quality Act (CEQA). No additional analysis is necessary under NEPA or CEQA of these historical water transfers. Further, the No-Action Alternative analyzed in the DLA and FLA incorporates water transfer in the historic impaired hydrology. Analysis of the Proposed Action included two alternatives based on differences in consumptive demand. The Proposed Action-Existing Demand (42,000 ac-ft of consumptive demand) was used in almost all the effects analyses to identify potential Project effects. A second model run of the Proposed Action-Future Demand (120,000 ac-ft of consumptive demand plus up to 47,000 acre-feet of water dedicated for environmental purposes in the Lower American River) was also developed that incorporates operations of the MFP with future consumptive demand under full build-out. The analysis of the two Proposed Action Alternatives fully encompasses the effects of any future water transfer that may occur over the term of the new license (i.e., under full build-out, no additional water is available for water transfer).
Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects and Section 8.9 Recreation Resources Environmental Effects			
FWN-7	Analysis of Proposed Action - Aquatic and Recreational Resources	<p>PCWA's Final License Application should describe recent operations as they have been on the ground. It should compare proposed license conditions to actual recent operations. The FLA should not claim that proposed measures will be an "enhancement" when the measures will simply make existing operations a condition of the license; rather, it should say that there will be certainty that existing conditions will be maintained.</p> <p>Incremental improvements should also not simply be characterized as enhancements. The degree of enhancement should be stated. If PCWA believes that enhancements will provide a qualitative improvement in the conditions of a resource, that should be stated, and the reasons for that evaluation should be presented and if possible quantified.</p> <p>The No-Action Alternative in many instances reflects the paper reality of PCWA's license condition minimum, not the operational reality of existing conditions resulting from a longstanding practice of releasing higher-than-required minimum flows. Accordingly, the comparison between the No-Action Alternative and the Proposed Action does not accurately describe improvements that we will actually see in the river. In fact, a comparison between the existing conditions and operations and the Proposed Action Alternative would reveal much smaller improvements for the ecosystem than are represented in the DLA.</p>	See response to comment FAC-3.
Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects			
FWN-8	Peaking Reach - Ramping Rate Comparison (Historic and Existing)	We also request that PCWA make available the hydraulic engineering calculations, notes and descriptive narratives that provide the technical context for benchmarking the original ramp rates of 12 inches per hour in the original/amended license to the new "lower" ramp rates of 18 inches per hour for the Peaking Reach. PCWA has stated that moving the gauge from the original position to where it is now located resulted in a new ramping rate of three feet per hour. Network members would like to confirm PCWA's assertion that the move resulted in a change in ramping rate to three feet per hour.	<p>On October 24, 1988, PCWA filed an application to amend Article 37 of their license dated March 13, 1963. Specifically, PCWA stated that the portion of Article 37 pertaining to the Oxbow development should be amended because the river morphology downstream of this facility had changed since the license was issued and the US Geological Survey (USGS) relocated the gaging station. As a result of these changes, PCWA was unable to satisfy the ramping rate requirement of Article 37. PCWA proposed to modify the ramping rates in a request to the California Department of Fish and Game (CDFG). On September 26, 1988, a letter was sent by the regional manager at California Department Fish and Game (James D. Messersmith) stating that the "proposal to change the ramping rate from one-foot/hour to three-feet/hour is acceptable since this only represents a change in gage location and not a change in the historic operation of the powerplant."</p> <p>FERC's Order Amending Article 37 was dated December 16, 1988. This order includes the following: <u>"The Director orders:</u> (A) The third paragraph of article 37 of the license issued March 13, 1963, pertaining to releases from Oxbow Powerplant is amended as follows: "Provided further that Oxbow Powerplant releases shall not cause vertical fluctuations in stream gages (measured in representative section) greater than three feet per hour."</p> <p>These documents are available for download on PCWA's website for the MFP relicensing (http://relicensing.pcwa.net/).</p>

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects			
FWN-9	Peaking Reach – Ramping Rate	The Network agrees with PCWA's ramping rate of 18 inches per hour for the Peaking Reach. However, we are concerned about the proposed "averaging" proposed to meet the ramp rate. We understand there may be a compliance issue and that licensee will make best efforts to keep the ramping as even as possible. We look forward to talking with PCWA about how we might craft a compliance measure that meets both of our interests.	The Flow and Reservoir Monitoring Plan (Volume 3, Exhibit E, SD A) states that Oxbow Powerhouse release shall not exceed the hourly flow change specified in the Instream Flow and Reservoir Minimum Pool Measure (Volume 3, Exhibit E, SD A). The Instream Flow and Reservoir Minimum Pool Measure includes ramping rate categories which are based on an 18-inch per hour ramping rate at the peaking reach instream flow study sites. Averaging is not used in determining compliance with the 18-inch per hour ramping rate.
FWN-10	Benthic Macroinvertebrates Impacts - Peaking Reach	The PCWA Macroinvertebrate and Aquatic Mollusk Study Report also shows lower Index of Biological Integrity (IBI) scores just below the Ralston Afterbay in comparison to unimpaired reference reaches (PCWA DLA, Macroinvertebrate and Aquatic Mollusk Technical Study Report p. 8). The Network disagrees with PCWA's interpretation of study results that lower IBI scores at the downstream sites on the Peaking Reach can be attributed to elevation. We suggest that lower scores can be attributed to the adverse impacts of the Project. The Lower Yuba below Englebright, a nearby river at an elevation similar to the Middle Fork American below Oxbow Powerhouse, has an extremely rich and diverse macroinvertebrate population (Yuba Accord River Management Team).	PCWA avoided conclusionary statements regarding effects of peaking on IBI scores in the AQ 3 – Macroinvertebrate and Aquatic Mollusk TSR (Volume 3, Exhibit E, SD A). PCWA identified that IBI scores were correlated with elevation and temperature, refer to Figure AQ 3-2 in AQ 3 – Macroinvertebrate and Aquatic Mollusk TSR. PCWA's discussion on pg.8 of this report shows that IBI scores were comparatively low at the top of the peaking reach, higher through the middle portion of the peaking reach, and lower at the bottom portion of the peaking reach. In addition to the peaking effects mentioned in the comment, the correlation between IBI scores and elevation/temperature should be considered when interpreting the IBI scores within the peaking reach, particularly with respect to the lower IBI scores in the bottom of the peaking reach where elevations are lower and temperatures are warmer compared to the middle of the peaking reach.
FWN-11	Analysis of spawning winter run <i>O. mykiss</i>	The Foothills Water Network also recommends the PCWA FLA include an analysis of weighted usable area (WUA) for Winter-spawning <i>O. mykiss</i> spawning.... As currently written, PCWA's AQ1 Instream Flow Technical Study Report does not analyze flows for winter-spawning <i>O. mykiss</i> .	PCWA completed the FERC-approved TSPs and the final TSRs relevant to this request (e.g., AQ 1 – Instream Flow TSR; AQ 2 – Fish Population TSR; AQ 6 – Fish Passage TSR [Volume 3, Exhibit E, SD B]). As part of the AQ 1 – Instream Flow TSR, PCWA developed the life stage periodicity for spawning rainbow trout in coordination with the Aquatic Technical Working Group, including Agency biologists (e.g., CDFG and USDA-FS biologists), which included spring spawning of rainbow trout (<i>O. mykiss</i>). However, the relationship between flow on rainbow trout spawning habitat (WUA) and effective habitat were developed in the peaking reach, irrespective of spawning timing. The aforementioned TSRs contain all the information necessary to identify potential Project effects and develop appropriate fish and BMI PM&E measures for the MFP peaking reach. Also see response to comment FAC-10.
FWN-12	Comparison of No-Action and Proposed Action Alternatives - Flow Fluctuations	The Network requests that in its FLA PCWA use a more precise metric to compare the decrease in flow fluctuations in the Proposed Action to No Action in addition to the average-based metric used in the DLA. In conclusion, we propose that in its FLA, PCWA use an additional analysis to measure the benefits to flow fluctuations as compared between the No-Action Alternative and Proposed Action Alternative. The metric should compare the different alternatives' maximum daily fluctuations, which we agree is the important result associated with decreasing flow fluctuations. The comparison should also describe the lowest minimum flow in any given month or season, as well as highest resulting maximum flow in that month or season. The comparison should include side-by-side hydrographs showing the difference in fluctuation in a month or a season. Averaging creates a less precise analysis that can mask the critical results of an alternative. Though more complex, these suggested metrics and results will be more precise.	PCWA's analysis of flow fluctuations was based on all of the daily flow fluctuations for the period of record (1988-2007). The daily values were summarized by time period (season and by water year type). To ensure that all of the data are available, PCWA has included in the FLA exceedance plots that show all the daily flow fluctuations by season and water year type (Volume 3, Exhibit E, Section 8.5). These plots can be used to identify the maximum, minimum, and median daily fluctuations (and any exceedance percentile fluctuation) for the period of record for the Proposed Action and the No-Action Alternative. PCWA has also included time series plots of the Proposed Action and the No-Action Alternative flows by water year type, which show the individual daily flow fluctuations.
FWN-13	Comparison of No-Action and Proposed Action Proposed Flows	The Foothills Water Network requests that the Final License Application include a table comparing the flows in the No-Action Alternative to Existing Regulated Flows to the Proposed Action Alternative in the Supporting Document A...This table will make it easier to quickly understand how the DLA's proposed flows compare to existing license flows and regulated flows.	The No-Action Alternative flows and minimum pool requirements are provided in Volume 3, Exhibit E, Section 3.0, Table 3-14 and Exhibit B, Table B-1. The Proposed Action Alternative flows are provided in the Instream Flow and Reservoir Minimum Pool Measure (Volume 3, Exhibit E, SD A).

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects			
FWN-14	Fish Stranding – Peaking Reach	<p>PCWA's stranding study concluded: The majority of fish temporarily trapped (approximately 250 fish) were located in a dredge hole developed by recent mining activities. Temporarily trapped / isolated fish consisted of a mix of species (trout dry, California roach, hardhead, Sacramento pikeminnow, and sculpin) that were found swimming in pool areas isolated from the main channel.</p> <p>We respectfully disagree with PCWA's estimation that "trapped fish would survive until another peaking event inundated the habitat." The Stranding Evaluation was a snapshot in time and does not tell us whether the stranded fish survived the stranding. Fish may not have survived due to predation by raccoons or other terrestrial animals or due to lethal temperatures.</p>	<p>The results of the stranding study were summarized in the AQ 1 – TSR as follows:</p> <p>"One dead sculpin was observed stranded in the Fords Bar study area and approximately 289 live fish were observed temporarily trapped (isolated) in disconnected pools in the Gray Eagle Bar - American Bar study area (AQ 1 – Instream Flow TSR, Appendix F, Table F-1). No fish were observed that were permanently trapped. The majority of fish temporarily trapped (approximately 250 fish) were located in a dredge hole developed by recent mining activities. Temporarily trapped/isolated fish consisted of a mix of species (trout fry, California roach, hardhead, Sacramento pikeminnow, and sculpin) that were found swimming in pool areas isolated from the main channel. It was estimated that the trapped fish would survive until another peaking event inundated the habitat. The trapping pools were very near to the active channel, and in most cases had some flow-through or were at groundwater level (i.e., had subsurface hydraulic connectivity to the main channel) (see photographs in Appendix F, Attachment A)."</p> <p>The estimate by the biologists that fish would survive until the next peaking event inundated the habitat was based on the quality of habitat the trapped fish were in. Depth of water, water temperature, water quality, and connectivity of the habitats to groundwater. Pictures showing this habitat are provided in the AQ 1 – TSR, Appendix F. The water temperature in these locations was cold and they were connected to groundwater and/or surface water. The potential for predation of temporarily trapped fish (e.g., birds) was not specifically assessed. It is possible that predation of the trapped fish could have occurred prior to the next peaking event as the trapped fish were not monitored until the next peaking event occurred. However, in any event, the MFP is not responsible for potential fish stranding in dredge holes created by on-going mining activities.</p>
Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
FWN-15	Wild & Scenic Eligibility	We recommend PCWA manage the Project in such a manner as to not hinder designation of the Rubicon River and the Middle Fork American River as suitable for inclusion in the National Wild and Scenic Rivers System as they have been found eligible.	The Proposed Action was analyzed to determine whether implementation of proposed PM&E measures could adversely affect the eligibility of the Rubicon River, the Middle Fork American River, or the North Fork American River for inclusion in the National Wild and Scenic River (W&SR) System. The results of this analysis are provided in Volume 3, Exhibit E, Section 8.9 and 12.0. The analysis concluded that implementation of the Proposed Action will not adversely affect the values for which these rivers are considered eligible for inclusion in the National W&SR System.
FWN-16	Boatable Opportunity Days - Below Interbay Dam	We request that PCWA's Final License Application assess boatable opportunity days based on the optimum flows resulting from the PCWA test flow study below Interbay Dam (REC4 Contingency Whitewater Boating Study Report). Results from this study show that optimum boatable flows were identified as the range between 400 and 500 cfs. The metrics in the PCWA DLA that assess boater opportunity days for this reach are based on a much larger flow range of 200-800 cfs. We request that these metrics be revised so we can better understand the effects of the Proposed Alternative on the boatable opportunity days below Interbay.	Boatable flow ranges for the Middle Fork American River between French Meadows Reservoir and Ralston Afterbay were determined based on whitewater boating studies conducted by PCWA in 2009. The results of these studies are documented in the REC 4 – Whitewater Boating Contingency Study TSR and they are summarized Volume 3, Exhibit E, Sections 7.9 and 8.9. As indicated, the boatable flow range for the Middle Fork American River between French Meadows Dam and Middle Fork Interbay was determined to be 215-450 cfs as measured at the take-out. The boatable flow range for the Middle Fork American River between Middle Fork Interbay and Ralston Afterbay was determined to be 450-600 cfs as measured at the take-out. These flow ranges were used to evaluate boating opportunities under the No-Action Alternative-Impaired Hydrology compared to the Proposed Action - Existing Demand. The results of these analyses are provided in Volume 3, Exhibit E, Section 8.9, Tables 8.9c and 8.9d.
FWN-17	Peaking Reach Flows - Effects on Angling	The Network recommends that in its DLA, PCWA include an Angling section that analyzes the benefits of the Proposed Action on angling...The Foothills Water Network requests that PCWA analyze the effects of its proposed Peaking Reach flows on angling opportunities as well as angling safety...we would like PCWA's FLA analysis on Angling benefits to address when Peaking Reach flows proposed in the DLA provide preferred angling flows at preferred times, and how the flows affect crossing and wading safety at the following angling locations: below Ralston Afterbay and at Horseshoe Bar, Cache Rock, Drivers Flat, and the confluence of the Middle Fork American with the North Fork American.	In the FLA, Volume 3, Exhibit E, Section 8.9, PCWA has included an analysis of angling opportunities in the Peaking Reach using preferred angling flows and preferred times. The analysis also evaluates the effect of flows in the Proposed Action and No-Action Alternative on crossing and wading at the following angling locations: below Ralston Afterbay and at Horseshoe Bar, Cache Rock, Drivers Flat, and the confluence of the Middle Fork American with the North Fork American River.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
FWN-18	Need for Pre-season Scheduled Flows	Commercial whitewater boating requires flows to be scheduled prior to the rafting season, which begins in May. The boating opportunity days identified in PCWA's DLA do not take into account the need for pre-season scheduled flows. Unscheduled opportunities are useless to commercial whitewater outfitters and their clients as they cannot book trips on days with unscheduled flows...As written, PCWA's DLA does not take into account the need for pre-season scheduling of flows.	The Instream Flow and Reservoir Minimum Pool Measure provided in the License Application (Volume 3, Exhibit E, SD A) did provide <u>scheduled</u> recreation flows for commercial boaters on every Saturday and Sunday (100% of time) between the first Saturday before Memorial Day through Labor Day in all water years, except extreme critical (only Saturday provided). In addition, in wet and above normal years additional recreational boating flows were provided 5 weekdays per week (100% of the time) between June 1 and Labor Day. In other water years, the number of scheduled weekdays provided varied from 4 weekdays per week (below normal water years) to 1 weekday per week (critical water years). PCWA is willing to discuss with the commercial boaters additional pre-season scheduling of flows. However, the Instream Flow and Reservoir Minimum Pool Measure provided in the License Application (Volume 3, Exhibit E, SD A) provides substantial number of days that are scheduled prior to the commercial boating season.
FWN-19	Peaking Reach Boating Opportunities - Whitewater Feature Confluence Run	...we request that PCWA evaluate in its FLA whether the installed whitewater features at China Bar provide a recreational opportunity at the flows under consideration for the new license.	See response to comment FWN-3. The analysis of whitewater boating opportunities in the DLA and FLA were conducted using flow criteria that allowed for passage through the channel adjacent to the American River Pump Station.
FWN-20	Analysis of Angling	PCWA's DLA included angling as an interest that is benefited by the Proposed Action but does not provide an evaluation or supporting rationale. We request that PCWA's Final License Application includes this rationale specifically related to Angling as a recreational use.	In the DLA and FLA benefits to anglers were identified as appropriate when implementation of the Proposed Action enhanced habitat conditions for fish and BMIs. These improved habitat conditions will lead to higher fish populations and increases in fish growth enhancing angling experience.
Volume 3, Exhibit E, Section 9.0 Cumulative Effects Analysis			
FWN-21	Effects of Yuba-Bear Drum-Spaulding Water Availability	Because PCWA's Middle Fork Project operations are affected by the availability of water from the Yuba-Bear Drum-Spaulding system, we recommend that PCWA's FLA also include an analysis of various reductions of water availability from Yuba-Bear Drum-Spaulding system and the ensuing changes that could be made to the Middle Fork Project to meet PCWA's water supply obligations...PCWA should address the question of how changed Middle Fork American operations resulting from reductions in water available from the Yuba-Bear Drum-Spaulding system could affect temperatures in Folsom Reservoir and the Bureau of Reclamation's flow releases into the Lower American River...the analysis should take into account the potential cumulative effects on the salmon and steelhead in Auburn Ravine and other West Placer creeks of changed Middle Fork American Project operations, resulting from reductions in water available from the Yuba-Bear Drum-Spaulding system.	The analysis of changes in water deliveries to PCWA's retail consumptive water customers from the Nevada Irrigation District's (NID) Yuba-Bear Hydroelectric Project and PG&E's Drum-Spaulding Project on flows and temperature conditions in Folsom Reservoir, the Lower American River, and western Placer County streams is not the responsibility of PCWA nor is it appropriate in the MFP relicensing. Any reduction in water deliveries from these projects should be analyzed in the cumulative effects section of the NID's and PG&E's Application for New License. PCWA recently filed (January 2011) detailed comments regarding this issue with the FERC on both NID's Yuba-Bear Hydroelectric Project and PG&E's Drum-Spaulding Project. Further, the operations of the MFP will not change if water deliveries from NID's Yuba-Bear Hydroelectric Project and PG&E's Drum-Spaulding Project are reduced. At full build-out, the entire water supplies from NID's and PGE's projects and the MFP are necessary to meet consumptive demand in Placer County. There is no additional water available from the MFP to replace losses from NID's and PGE's projects. This water is irreplaceable for the existing and future residents of Placer County and, if reduced, would cause irreparable damage to Placer County residents and impact western Placer County streams which support anadromous fish (Central Valley steelhead - <i>Oncorhynchus mykiss</i> and fall-run Chinook salmon - <i>O. tshawytscha</i>).

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 9.0 Cumulative Effects Analysis			
FWN-22	Effects of Proposed Action on Future Reintroduction of Central Valley Steelhead	In its FLA, PCWA should address the effects of its Proposed Action on the proposed reintroduction of Central Valley Steelhead to the American River system above Folsom Reservoir. . .Based on study of potential habitat for reintroduction of steelhead, we recommend that PCWA work with NMFS to conduct fish passage studies for Central Valley Steelhead to inform improvements to facilitate reintroduction of Steelhead.	<p>No anadromous species are currently present in bypass or peaking reaches associated with the MFP. Anadromous species were extirpated in the vicinity of MFP as a result of the construction of impassable dams on the lower American River (Nimbus and Folsom dams were constructed by the USBR in approximately 1955 and 1956, respectively).</p> <p>Although the re-introduction of Central Valley steelhead above Folsom Dam has been proposed in the BiOP, the feasibility is uncertain at this time. In addition, the potential for re-introduction of anadromous fish and long-term management above Folsom Dam are unknown at this time. There are a number of actions that would need to be completed prior to re-introduction above Folsom Dam, including planning and scheduling, permitting, evaluations, and funding. These include, but are not limited to:</p> <ul style="list-style-type: none"> • Evaluation of potential habitat in all three forks of the American River above Folsom and Nimbus dams • Development of fish passage pilot plan • Development of a 3-year pilot program • Implementation of pilot re-introduction program, including construction and collection of handling facilities, adult release sites above dams, trapping of juvenile downstream migrating fish, etc. • Pilot Program Effectiveness Monitoring and Evaluation <p>However, to date, most of the actions associated with this evaluation have not been implemented. Elements of the potential re-introduction are "virtually untested" and "prototype" (pg. 666, NOAA 2009). The results of the pilot program will be used to determine the feasibility of long-term passage alternatives and evaluate whether comprehensive fish passage programs should be pursued. During the pilot program, steelhead introduced above Folsom Reservoir would likely be designated as an experimental population under Section 10 [16 U.S.C. 1539] (a)(1)(j) of the Endangered Species Act. PCWA is committed to collaborate with the NMFS regarding potential reintroductions into the American River Basin, including the Fish Passage Committee. PCWA acknowledges the potential need to reevaluate the new License Order if a viable population of steelhead is established in reaches of the North Fork American River or Middle Fork American River affected by MFP operations and the population is determined to be essential for the continued existence of Central Valley steelhead. Therefore, it is unnecessary at this time to analyze the potential effects of Project operation on future reintroduction.</p>
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
FWN-23	Flow - Bypass and Peaking Reaches	The Foothills Water Network provided numerous comments on the Instream Flow and Reservoir Minimum Pool Measure.	The Instream Flow and Reservoir Minimum Pool Measure and Flow and Reservoir Monitoring Plan included in the License Application (Volume 3, Exhibit E, SD A) represent PCWA's proposal. Currently, PCWA and relicensing participants have not agreed on the content of the Instream Flow and Reservoir Minimum Pool Measure or the Flow and Reservoir Monitoring Plan. PCWA is committed to continuing discussions on the Instream Flow and Reservoir Minimum Pool Measure and the Flow and Reservoir Monitoring Plan with relicensing participants. These discussions are proposed to occur in March through June 2011 following submittal of the FLA. If consensus is reached, supplemental information will be prepared and filed with FERC.
FWN-24	Bypass Reach - Pulse Flows	We recommend that in its FLA, PCWA include a back-up alternative or set of alternatives for PCWA to provide the pulse flows should the valve fail to test high enough to provide geomorphologic and optimum boating flows. One option is that PCWA could supplement flows on the Rubicon River with water purchased from the Sacramento Municipal Utility District (SMUD) which operates the Upper American River Project.	PCWA believes that the package of PM&Es dedicated to the Rubicon River contained in the License Application is an appropriate balance of developmental and non-developmental values. PCWA believes that there is significant hydrologic and financial uncertainty associated with relying on a third party to implement additional enhancements desired by some parties. Therefore, PCWA does not propose to include any backup alternatives in the Instream Flow and Reservoir Minimum Pool Measure (Volume 3, Exhibit E, SD A).
FWN-25	Foothill Yellow-Legged Frog Monitoring	In order to better understand the development of Foothill Yellow-Legged Frogs, the Network recommends that PCWA's FLA include formal monitoring of Foothill Yellow-Legged Frogs during the annual maintenance outage be required as a license condition. The monitoring should compare developmental stages of the frogs at the upstream and downstream limits of their populations, in order to understand whether there is a difference in timing of development related to flow, elevation, and temperature.	The revised Foothill Yellow-legged Frog (FYLF) Monitoring Plan (Volume 3, Exhibit E, SD A) includes special purpose monitoring of FYLF during the annual maintenance outage. The plan also specifies analyses and coordination with data collection from other monitoring plans and measures, including the Water Temperature Monitoring Plan (Volume 3, Exhibit E, SD A) and flow data.

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
FWN-26	Infrastructure Modification - Outage Flows	Furthermore, the Network requests that PCWA investigate options and a cost estimate for constructing a bypass past the turbines for electrical outages. A physical bypass could provide instream flows during long-term electrical outages. This back up infrastructure is important for safety reasons and protection of the aquatic ecosystem during long unplanned outages affecting the electrical system. We understand that the bypass would not be able to provide flows during a mechanical outage at the dam outlets.	The MFP has operated in a safe and reliable manner for nearly 44 years without the need for a turbine bypass system at Middle Fork and Ralston powerhouses. PCWA sees no evidence in the record to suggest that the wholesale reconstruction of the two largest generating facilities of the MFP is required in order to provide protection of instream resources or public safety.
FWN-27	Emergency Outage Flows	We recommend PCWA include a license condition in its Final License Application to evaluate and mitigate for the impacts of any emergency outage flows that are lower than the minimum flows in the Peaking Reach or bypass reaches.	The License Application is only required to evaluate potential impacts of the Project's routine operations and maintenance activities. Historically, PCWA has released flows during emergency outages consistent with the minimum flow requirements in the existing license. Any deviations in minimum flow releases during future emergency outages are required to be reported to FERC and the resource agencies. At such times, the impact and need for any mitigation would be evaluated, if appropriate.
FWN-28	Recreation Plan - Notice of Timing of Annual Maintenance Outage	The Network recommends that PCWA include a condition in its FLA that it will give four weeks notice of the start date for down-ramping to the annual maintenance outage. The notice should be distributed to local fishing clubs including Horseshoe Bar Club, Granite Bay Flycasters as well as State and Federal resource agencies including California Department of Fish and Game. This notice will give time to the clubs and resource agencies to coordinate fish rescues.	Studies conducted for the MFP relicensing have not identified fish stranding or mortality associated with the annual maintenance outage that would require fish rescue. The one instance of fish stranding that was documented occurred in a dredge hole created by commercial gold mining efforts at Horseshoe Bar Fish and Game preserve. PCWA believes it should be the responsibility of the commercial gold mining interests that created the stranding situation to provide appropriate mitigation for their actions.
FWN-29	BMI Monitoring Plan	The Network recommends that PCWA include an adaptive management clause in its FLA that if licensed flow regime studies indicate decreases or adverse trends in BMI populations, then PCWA will adapt instream flow regimes that provide for increases in BMI habitat and production.	A Benthic Macroinvertebrate Monitoring Plan is provided in the FLA (Volume 3, Exhibit E, SD A). Reporting and agency consultation after each year of study is part of all of PCWA's monitoring plans.
FWN-30	Rainbow Trout Spawning Monitoring Plan - Peaking Reach	The Network recommends that PCWA's FLA include a Rainbow Trout spawning monitoring plan that requires the licensee to inform the objective of enhancing Rainbow Trout spawning in the Peaking Reach below Oxbow Powerhouse over the first ten years after license issuance. The plan should include monitoring of juvenile and adult fish populations, gravel, and downstream migrant trapping in tributaries to the mainstem Middle Fork American River below Oxbow Powerhouse. The monitoring plan should be coupled with an adaptive management program of spawning enhancement in the mainstem and tributaries, beginning with implementation and evaluation of targeted gravel augmentation. The plan should include definition of decisions points, decision makers, and potential measures and timelines for their implementation, to enhance spawning in the Peaking Reach.	PCWA's Fish Population Monitoring Plan (FPMP) (Volume 3, Exhibit E, SD A) specifies monitoring of all fish species in the bypass and peaking reaches. The FPMP requires monitoring in six years of the first fourteen years after license issuance, and thereafter for two consecutive years during every ten-year period for the term of the license at all monitoring sites. PCWA has also revised the FPMP to include three years of young-of-the-year sampling in the peaking reach. Gravel augmentation and monitoring in the Middle Fork American River peaking reach and in the Middle Fork American River below Middle Fork Interbay are described in the Sediment Management Plan (SMP) (Volume 3, Exhibit E, SD A). Monitoring of channel conditions in the peaking and bypass reaches where gravel augmentation is proposed is part of the SMP. Therefore, it is not necessary to prepare a specific Rainbow Trout Spawning Monitoring Plan.
FWN-31	Fishery Management Provisions	The Foothills Water Network recommends that PCWA's new license retain and appropriately modify portions of the existing FERC No. 2079 License Amendment Language related to Fishery Management. The current 1981 License Amendment includes a provision that allows fishery management to be modified by mutual agreement of US Forest Service, California Department of Fish and Game, and US Fish & Wildlife Services. We believe that the new license should also contain this provision with the following appropriate modifications (FERC Project No. 2079 ORDER AMENDING LICENSE (MAJOR) issued March 18, 1981 Page 5: (E) Article 37: Footnote; 2/) New License language would be modified to read as follows: Oxbow Powerplant releases: The scheduled flow releases may be modified for beneficial aquatic and fishery management purposes upon consensus among the Licensee, the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Should consensus be unobtainable, parties will employ appropriate mediation and/or arbitration processes to reach a determination.	See response to comment FAC-7.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
FWN-32	Instream Flow and Reservoir Minimum Pool Measure	The Network recommends the following edits to the section on Tevis Cup and Western States 100 Events. • Event Coordination Coordinate with representatives of the Tevis Cup and Western States 100 to identify and provide flows suitable for adequate trail crossing conditions for these events (when flows are controllable by the MFP). The annual Tevis Cup/Western States 100 event recreation flows, when they occur, take precedence over whitewater boating flows. If possible, Whitewater boating flows will be provided under a modified schedule (e.g., earlier in the day) that meets Tevis Cup and Western States 100 flows. The target flow for trail crossings during the races changes year to year because of changes in channel geometry. In wetter water years, meeting target flows for the races may be impossible because flows exceed the project's control. The flow will not go below the minimum instream flow in the license (Instream Flow and Monitoring Plan, p. 10).	See response to comment FWN-23.
FWN-33	Instream Flow and Reservoir Minimum Pool Measure	In the DLA, PCWA proposes different recession rates coming off of spills when there is more than one spill in any year. We recommend that in its Final License Application, PCWA simplify this requirement so that the recession rate following any spill is the same as the rate prescribed for the year's first spill. Part of our concern stems from the fact that it may be difficult to define when a first spill event has actually occurred. This would make compliance requirements difficult to determine. We have additional concerns that a more accelerated ramping off of a second spill event could adversely affect Foothill Yellow-legged Frogs.	The Instream Flow and Reservoir Minimum Pool Measure (Volume 3, Exhibit E, SD A) has been revised in the FLA to provide for the same down ramping rate (recession rates) for all spills occurring within a reach. This was the intent in the DLA, however, there was an error in the down ramp table for spills.
FWN-34	Instream Flow and Reservoir Minimum Pool Measure	The Network requests that PCWA provide a steady fishable flow during the four day annual Wounded Warrior event. The event is scheduled in September or October. Since the annual maintenance outage begins in late September, it's likely the event will fall during the outage when there are no peaking flows. This year, the event organizers appreciated that though the event was held before the outage, PCWA provided 400-500 cfs for the four-day event.	See response to comment FWN-23.
FWN-35	Non-Flow Mitigations for Peaking Reach Aquatic Resources	The FWN requested a number of non-flow mitigations for enhancing trout spawning in the peaking reach including: <ul style="list-style-type: none"> • Tributary Connectivity • Spawning Flows for Ralston Bypass Channel • American Bar Side Channel • Onsite Wild Trout Captive Breeding Program • Horseshoe Bar Channel • Catch and Release Regulations 	PCWA believes that these suggested non-flow measures for enhancing trout in the peaking reach are unnecessary and not the responsibility of the MFP. However, PCWA is available to meet with relicensing participants after submittal of the FLA to discuss this issue. See response to comment FWN-23.
FWN-36	Flow and Reservoir Monitoring Plan	The Network recommends that PCWA revise its schedule for gaging installation and availability of online information...the FLA schedule should include installation of gages no later than the third year after license issuance.	At many locations, gage installation is part of an overall outlet work modification (Volume 3, Exhibit E, Section 3.0, Appendix A). Therefore, the schedule of gage installation is dependent on implementation of more involved outlet works projects which require additional time to complete final design and acquire the appropriate permits and agreements.
FWN-37	Recreation Plan	The Foothills Water Network provided a number of comments and requested a number of changes to PCWA's Recreation Plan including the format and content of real-time flow information, installation of staff gages, posting of travel time information, weekly flow forecasting, signage to inform public of fluctuating water levels, and access and facility improvements in the bypass and peaking reaches.	The Recreation Plan (Volume 3, Exhibit E, SD A) included in the DLA and FLA incorporates PM&E measures which adequately maintain and enhance recreation access and opportunities associated with the MFP. PCWA and relicensing participants have not agreed on the content of the Recreation Plan. PCWA is committed to continue consultation on the content of the Recreation Plan with relicensing participants. These discussions are proposed to occur in March through June 2011 following submittal of the FLA. If consensus is reached, Supplemental Information will be prepared and filed with FERC reflecting any agreements.
FWN-38	Recreation Plan	The Network recommends that PCWA FLA include conditions to remove the concrete debris alongside and steel bridge debris in the North Fork caused by Hell Hole Dam failure in 1964.	Hell Hole Dam failed in 1964 while under construction. PCWA was absolved by several courts of law of any responsibility for damages related to the Hell Hole Dam failure. Debris deposited in the river and the loss of the Highway 49 Bridge as a result of the Hell Hole Dam failure is not the responsibility of PCWA, nor is it under FERC jurisdiction, therefore it is not addressed in the License Application.

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
FWN-39	Recreation Plan	We recommend that PCWA provide a replacement recreational bridge for the destroyed Greenwood Bridge caused by failure of the incomplete Hell Hole Dam of the Middle Fork Project.	See response to comment FWN-38.
FWN-40	Recreation Plan – Angling	The Foothills Water Network requests that the Recreation Plan in PCWA's FLA include angling as a stand-alone recreational component.	See response to comment FWN-37.
FWN-41	Sediment Management Plan	The Foothills Water Network recommends that PCWA's FLA include a measure that spawning gravels will be hauled to a point downstream of the Tunnel Chute where the sediment can be deposited for distribution downstream...The Network thinks that we could reach an agreement with the private property owner of the Horseshoe Bar to provide the roads and access to deliver sediment to this site. We are willing to discuss this option as a side agreement outside the license as implementation would require an agreement with a private property owner.	PCWA has proposed sediment augmentation at two locations in the peaking reach (Indian Bar and Junction Bar) to enhance spawning gravels in the Sediment Management Plan (Volume 3, Exhibit E, SD A). PCWA does not feel additional sediment augmentation at Tunnel Chute is necessary to enhance aquatic habitat.
FWN-42	Monitoring Plans	PCWA's Monitoring Plan should include monitoring of Rainbow Trout, benthic macroinvertebrates, Foothill Yellow-Legged Frogs, and invasive aquatic weed species...In particular, monitoring should include installation of temperature loggers in the margin waters and compare those temperatures to ongoing water temperature monitoring in the thalweg.	The DLA included a Foothill Yellow-legged Frog Monitoring Plan (FYLFMP) and a Water Temperature Monitoring Plan (WTMP) in Volume 3, Exhibit E, SD A. These plans were revised in the FLA to incorporate relicensing participant comments. The FLA includes a Benthic Macroinvertebrate Monitoring Plan and a Water Quality Monitoring Plan in Volume 3, Exhibit E, SD A. Also see response to comment FWN-30 regarding the need for a Rainbow Trout Monitoring Plan.
Study Requests			
FWN-43	Whitewater Study - Rubicon River	As discussed during negotiations, the boatable flow for the Rubicon River below Ellicotts Bridge still needs testing...Accordingly, we appreciate PCWA's willingness to conduct a test boating flow study on the Rubicon River below Ellicotts Bridge. PCWA has agreed that if Hell Hole spills from April 1 to May 1, 2011 then PCWA will organize a whitewater boating test flow for the Rubicon Run...If Hell Hole doesn't spill or is not projected to spill at least 400 cfs between April 15 and May 1, 2011, then PCWA will purchase water from Sacramento Municipal Utility District (SMUD) to be released down the South Fork Rubicon to provide the test flow for the study.	PCWA has voluntarily committed to working with relicensing participants to determine the minimum acceptable whitewater boating flow in the Rubicon River below Ellicott Bridge. This may include conducting a scheduled whitewater boating study on the Rubicon River or interviewing boaters who recreate on the river under opportunistic circumstances.
FWN-44	Expansion of Ralston Afterbay	We request that PCWA conduct a study of potential options for engineering and operations modifications at Ralston Afterbay that would increase its usable storage capacity and thus its ability to serve as a re-regulating facility.	During the relicensing of the MFP, PCWA conducted an assessment to identify potential modifications or additions to existing Project facilities that would improve operations and maintenance of the Project and result in an increase in net or peak generation. Potential modifications to Ralston Afterbay were evaluated in this assessment including options to increase useable storage capacity. The assessment did not identify any cost-effective modification to increase storage in Ralston Afterbay. These studies contain proprietary business enhancement information and will not be released to the public.
FWN-45	Radio Tag Study - Chinook Salmon in Peaking Reach	In order to evaluate the Peaking Reach flow regime in relation to reintroduction of Steelhead, the Network requests that PCWA conduct a Radio-tagging Study of the reproducing Chinook population in Folsom Reservoir to ascertain the relationship between flows released from Ralston Afterbay and passage barriers for Chinook on the Peaking Reach.	See response to comment FAC-9.
Foresthill Residents for respOnsible Growth (FROG) Comment Letter Dated December 19, 2010; Filed with FERC December 23, 2010 (20101223-5037)			
Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
FROG-1	Fire Risk	We request that PCWA more fully address the concerns of increased fire protection that would be needed with the increased recreational use of the Middle Fork American River.	The Proposed Action includes additional measures to reduce fuels around Project facilities, Project roads and trails, and Project recreation facilities compared to the No-Action Alternative (refer to the Vegetation and Integrated Pest Management Plan, Transportation System Management Plan, and Recreation Plan in Volume 3, Exhibit E, SD A). The Fire Prevention and Suppression Plan (Volume 3, Exhibit E, SD A) developed for the Proposed Action outlines the responsibility of PCWA and its contractor(s) for fire prevention and suppression activities; sets up reporting and attack procedures in the event of a fire in the vicinity of the MFP; and ensures that fire prevention and suppression techniques are carried out in accordance with federal, state, and local regulations including, the Forest Service Manual (FSM) 5100 (USDA-FS 2004a), FERC License Articles, and the California Public Resources Code (CPRC) (State of California 2009). Additionally, each proposed construction project included in the Proposed Action requires a project-specific fire plan.

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.14 Socioeconomic Conditions Environmental Effects			
FROG-2	Jobs	We request that the socioeconomic portion of the DLA be re-evaluated due to the impact of Foresthill's loss of industrial land to a public entity (PCWA). This land was "to provide opportunities for...job-generating businesses" and is now expected to become part of a much larger on-going, daily operation of the Middle Fork American River Project with little or no benefit to Foresthill.	PCWA's Foresthill Facilities Center is located at the Mill Site in the town of Foresthill. It is used by the Agency as a multi-purpose communication, storage, operations, and management facility for both the water system and power system operation. This facility is on private property owned by PCWA and is not part of the current or proposed FERC Project.
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
FROG-3	Recreation Plan	There's a nexus with PCWA's operation of the five hydroelectric dams in the Middle Fork American River Project that will sell electricity, as well as water, and the amount of water released. We feel that flow releases, which are related to generating electricity and marketing water, should also benefit boaters and anglers...both recreational and commercial... This includes, but is not limited to, real-time flow information, precise flow data throughout the Project, increased storage in Ralston Afterbay, improved recreational campsites and sanitation facilities, current safety informational signs and debris cleanup along streams that pose a health and safety issue.	See response to comment FWN-23, FWN-37, and FWN-38.
Gibbs, Patricia - Member of the Public Comment Letter Dated October 27, 2010; Filed with FERC November 3, 2010 (20101103-5003)¹			
Volume 3, Exhibit E, Section 7.9 Recreation Resources Affected Environment			
GIBBS-1	Management and Economic Development - ASRA	The document omits important facts and context regarding changes to management plans that govern the area, current financial situation of the federal agency that administers the area (Bureau of Reclamation), the economic development efforts related to the canyon/river environment, and existing recreation facilities.	Volume 3, Exhibit E, Section 7.9 was revised in the FLA to describe changes in management directions in the area and the current financial situation. A description of existing recreation facilities is provided in Volume 3, Exhibit E, Section 7.9. Current economic development efforts related to the canyon/river environment by private groups in Auburn Project Lands and the greater Watershed are unrelated to the MFP.
GIBBS-2	Auburn Dam	No mention of the loss of water rights for Auburn Dam and the very real possibility, within the next 50 years, the project will be entirely cancelled through Congressional action.	The Auburn Dam Project is currently a Congressional-approved project. Citing the possibility of the cancellation of the Auburn Dam Project is speculative and, therefore, is not discussed in the License Application. PCWA's Proposed Action does not conflict with the Auburn Dam Project. A statement regarding the current status of the water rights for the Auburn Dam Project was added in Volume 3, Exhibit E, Section 7.1 of the FLA.
GIBBS-3	Stream-based Recreation - ASRA	Stream based and river enhanced recreation has expanded significantly over time in ASRA. The characterization of stream based recreation should be broader and more descriptive in order to better assess impacts and the value of the claimed enhancements of the Project. The statement regarding commercial whitewater boating being 'the primary public use' on the Middle Fork American River is circular and dated...Over the course of 18 years, many groups have formed to provide volunteer support for the Park and to promote the river environment through festivals, clean up campaigns and swimming and kayaking safety courses. In addition, the opportunity for other types of public use have been limited by failure to add public access facilities as a result of USBR reservoir management restrictions.	Information regarding stream-based recreation opportunities was developed as specified in the REC 4 – Stream-based Recreation Opportunities TSR (Volume 3, Exhibit E, SD B), and focuses on flow-related recreation activities identified in consultation with the relicensing participants. In the peaking reach, the focus of the recreation studies and discussion was related to river-related recreation and river crossing activities, the only activities potentially affected by MFP operations. The discussion was not intended to provide a history of voluntary efforts by groups and individuals related to recreation in the river reach. In regard to current management of the area, the Auburn Project Lands are currently managed in accordance with the Interim Management Plan (USBR 1992), which emphasizes commercial whitewater boating along the peaking reach. PCWA's proposed flow measures are consistent with the objectives outlined in the Interim Management Plan.
GIBBS-4	Trail and Economic Development - ASRA	With regard to socioeconomic conditions, there is no mention, that tourism as it relates to the vast, internationally known trail system in ASRA and the new potential for river based recreation has been actively pursued for its' economic potential over the last few years. The trails and river system is becoming more and more an economic engine in the area.	Volume 3, Exhibit E, Sections 7.14 and 8.14 describe specific socioeconomic conditions and effects relative to MFP. The sections were never intended to provide an overall perspective of socioeconomic conditions in the region, nor speculate on potential contribution of the trail or river systems in the Watershed to the local economy.
GIBBS-5	Visitor Use – ASRA	The DLA conclusion is flawed with respect to ASRA visitor use, both now and in the future...The DLA conclusion, " In general, recreation demand and facility utilization is not expected to substantial increase over time, primarily due to shifts in the visitor demographics, and declining participation rates in the types of recreation activities that occur associated with the MFP. " (Affected Environment, p 7.9-49) may apply to Project facilities but in not relevant to ASRA.	PCWA conducted recreation visitor surveys at all of the Project recreation facilities and at five locations in ASRA. Demographic information provided by recreation visitors intercepted in ASRA was similar to demographic information provided by recreation visitors intercepted at the MFP facilities. For example, the majority of respondents intercepted at both the MFP facilities and within ASRA reside primarily in Placer, Sacramento, and El Dorado counties. Similarly, most people intercepted at the MFP facilities and within ASRA identified themselves as Caucasian (85.8% and 84.3%) respectively, followed by Hispanic or Latino (3.8% and 3.6%, respectively). Therefore, conclusions regarding potential future use as they relate to demographic and population trends are applicable to both the MFP facilities and ASRA.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
GIBBS-6	Recreation Impact Analysis - ASRA	...the claimed enhancements, formalized flows and additional boating runs in ASRA, will actually not enhance recreation but put an added load on already reduced resources in the area.	<p>In the peaking reach, the Instream Flow and Reservoir Minimum Pool Measure provided in the License Application (Volume 3, Exhibit E, SD A) maintains commercial boating opportunities relative to the No-Action Alternative. In addition, the Proposed Action includes improvements to one developed recreation facility – Indian Bar Raft Access. The improvements at Indian Bar include better sanitation facilities and a new boat ramp, which will relieve congestion during peak use periods. These measures would not be implemented under the No-Action Alternative, and are therefore considered enhancements. In addition, early morning releases from Oxbow Powerhouse in wet and above normal years on Saturdays between the first Saturday before Memorial Day and Labor Day increases boating opportunities on the Confluence Run. The USBR can manage the level of recreation use of this run (i.e., through a permit system) and have a kiosk at the take-out point to collect day-use fees from the recreationists.</p> <p>Management of public use on Auburn Project Lands (also referred to as ASRA) is under the jurisdiction of the USBR. Currently, State Parks manages public use through an interim contract with USBR. The USBR has the ability to actively manage public use on Auburn Project Lands commensurate with available resources. The USBR and State of California, at their discretion, provide the level of funding they deem appropriate to support public use in the peaking reach. Further, the USBR also has the ability to collect reasonable user fees from recreationists to offset operation and maintenance costs.</p> <p>In general, implementation of the Proposed Action will enhance the recreational experience for existing users in the peaking reach while not substantially increasing overall use.</p>
Volume 3, Exhibit E, Section 9.0 Cumulative Effects Analysis			
GIBBS-7	Future Funding – ASRA	There is no mention of Bureau of Reclamation's reduced funding over the course of several years for operation and maintenance of ASRA.	Volume 3, Exhibit E, Section 7.9 has been revised to address this comment.
GIBBS-8	Past Project Mitigation – ASRA	The cumulative effects analysis should evaluate the current effects of the lack of appropriate mitigation for the past impacts in Auburn State Recreation Area under the first license.	Volume 3, Exhibit E, Section 9.0 has been revised to address this comment.
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
GIBBS-9	Recreation Plan - Peaking Reach (ASRA)	<p>To mitigate impacts of the flows in Auburn State Recreation, the licensee should provide:</p> <ul style="list-style-type: none"> • their 'fair share' of operation, maintenance, public safety, emergency response and fire prevention costs for river related recreation activities in ASRA • additional recreation facilities to serve flow/river enhanced recreation in ASRA • funding and improvements to resolve impacts of their past project (The Pump Station Project) in which trail enthusiasts were ousted by river access improvements and trails had been cut off by river flows in ASRA. 	<p>Management of public use and safety in Auburn Project Lands (also referred to as ASRA) is the responsibility of the USBR. The USBR has the ability to manage public use of the area commensurate with available funding. The vast majority of emergency responses related to stream-based recreation in Auburn Project Lands (i.e., sheriff and fire) are provided by Placer County. The majority of this stream-based recreation (with the exception of commercial whitewater boating during the summer) would occur regardless of operations of the MFP.</p> <p>See response to comment DW-2 regarding past impacts related to development of the American River Pump Station by PCWA and restoration of the North Fork American River Channel by USBR.</p>

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Reference	Topic Area	Comment	Response
Gibbs, Patricia - Member of the Public Comment Letter Dated November 6, 2010; Filed with FERC November 15, 2010 (20101116-0008) Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
GIBBS-10	Trail Crossings	PCWA's Hydropower Project flows cut off trail connectivity for recreationists on the vast, historical, continuous Western States Trail and its local connector trails in Auburn State Recreation Area... Under the first MFP 2079 license, the impacts of project flows on public safety and trail connectivity of this premier, trans Sierra trail system in the watershed were not addressed.	It is not required or appropriate to evaluate historical impacts of construction and operations of an existing hydroelectric project under the National Environment Policy Act (NEPA) during the FERC relicensing process. The Western States Trail (WST) and the primary connector trails in ASRA are described in Section 6.3.2 of the REC 4 – Stream-based Recreation Opportunities TSR (Volume 3, Exhibit E, SD B). The WST and the primary trails in ASRA are also graphically depicted on Map REC 4-1, which is included in the REC 4 – TSR. MFP operations only affect the WST at two river crossings (both located in the peaking reach) namely Ruck-a-Chucky and Poverty Bar. The Instream Flow and Reservoir Minimum Pool Measure included in the License Application (Volume 3, Exhibit E, SD A) provides for coordination with representatives of the Tevis Cup and Western States 100 (nationally acclaimed races using portions of the Western States Trail) to identify and provide flows suitable for adequate trail crossing conditions for these events (when flows are controllable by the MFP). Volume 3, Exhibit E, Section 8.9 provides an analysis of changes in river crossing opportunities in the peaking reach including Ruck-a-Chucky and Poverty Bar under the Proposed Action as compared to the No-Action Alternative.
GIBBS-11	Trail Crossings	Contrary to the licensee's, vague and conditional, assertion; " In general, implementation of the Proposed Action will maintain crossing opportunities at all of the crossing locations, depending on water year type and season, particularly at the higher crossing threshold. " (8.9-29), the Proposed Action will reduce trail crossing opportunities, for the average trail enthusiast in ASRA during peak recreation season, as a result of typical daily operations of the Middle Fork American River Hydropower Project MFP 2079...The data, as presented, doesn't represent the Project effects on the primary recreation season and the use of the higher crossing threshold is inappropriate for analysis of flow effects on this river.	Volume 3, Exhibit E, Section 8.9 has been revised to more clearly identify and explain how the Proposed Action affects trails crossing opportunities in the peaking reach compared to the No-Action Alternative. Trail crossing opportunities are summarized for both the easy/moderate and moderate/difficult thresholds under the Proposed Action and No-Action Alternative annually, seasonally, by water year type, and by crossing. The Proposed Action will not substantially affect crossing opportunities at any of the crossing locations. Overall, in all water year types, implementation of the Proposed Action will reduce easy/moderate crossing opportunities at the crossings in the peaking reach by an average of 0.36 hours per day (22 minutes/day) compared to the No-Action Alternative. Similarly, implementation of the Proposed Action will reduce moderate/difficult crossing opportunities at the crossings in the peaking reach by an average of 0.29 hours a day (17 minutes/day). These relative changes are considered negligible.
GIBBS-12	Trail Crossings	Licensee has used two flow thresholds to evaluate crossing opportunities that occur as a result of the Project's default minimum flows. The inclusion of the higher of the two flows in analyzing crossing opportunities is flawed...The use of the high crossing flow is not applicable, it contradicts the Focus Group information and it does not take into account the other physical features encountered in this river that have a direct effect on crossing possibilities for the average recreationist in the area.	Two crossing flows were determined at each site. These flows represent: (1) the flow at which crossing suitability shifts from easy/moderate to moderate/difficult; and (2) the flow at which crossing shifts from moderate/difficult to difficult. Both of the crossing thresholds were utilized to analyze crossing opportunities under the No-Action Alternative and Proposed Action. The analytical results for both crossing thresholds are presented in Tables 8.9a and 8.9b, Figures 8.9a-8.9e, and Figures 8.9-4a-8.9-4e (Volume 3, Exhibit E, Section 8.9).
GIBBS-13	Trail Crossings	The Draft License Application suggests if the higher crossing threshold flows, appear to be too difficult, then the lower threshold can be used to interpret the report results...the Application continually intermixes the two flows when summarizing data and drawing conclusions...There is no support for the use of this flow as a threshold flow upon which to analyze Project affects...The high flow is not appropriate for the analysis of crossing opportunities. However, if it is used, than all data presentation and conclusions must be clearly separated for each flow.	See response to comments GIBBS-11 and GIBBS-12.
GIBBS-14	Trail Crossings	All data, for river crossing/wading must be presented as a seasonal breakdown. The use of averages across the winter and spring seasons diminishes the real flow effects that occur during the peak recreation season. Provide a table that compares Summer and Fall (easy/mod) crossing opportunities under the Proposed Action and the No Action Alternative.	All stream crossing opportunity data discussed in the License Application are presented by season. Specifically, Volume 3, Exhibit E, Section 8.9, Tables 8.9a and 8.9b are organized by season and summarize the average number of hours per day (7:00 AM – 7:00 PM) that trail crossing was possible at the trail crossings in the peaking reach under the No-Action Alternative and Proposed Action, respectively. Figures 8.95a-e graphically show the average number of trail crossing opportunities by water year type and season.

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
GIBBS-15	Trail Crossings	Segregate out the fall maintenance outages for the Fall season in this table so that the average number of hours per day crossing is possible is based on normal project operations. Include the outage crossing opportunities as a separate item.	The fall maintenance outage is part of normal MFP operations. Therefore, flows present in the peaking reach during the maintenance outage factor into the availability of crossing opportunities. The hydrology model used for all of the environmental analyses, including the crossing analysis, includes a maintenance outage during the entire month of October (consistent with future operations of the Project) with minimum instream flows ranging between 75 cfs during extreme critical years to 150 cfs during wet years. These flows are below the easy/moderate crossing threshold for all five stream crossing locations in the peaking reach, except at Ruck-a-Chucky where the easy/moderate crossing threshold was determined to be 125 cfs.
GIBBS-16	Trail Crossings	The 2007 outage lasted from October through February 21, 2008, basically 2/3 of the Fall and most all of the Winter season. Could this account for unusually high crossing hours per day for these seasons? In addition, please explain why the Dry Water year is based on 4 years yet both the Fall and Winter seasons only count 3 years.	The period of record used for the modeling and various flow-related analyses in the peaking reach extends from 1987 through September 30, 2007. Therefore, the hydrologic data for the time period specified in the comment is not included in the analysis and does not factor into the crossing opportunities analysis. The other comment appears to be referring to the number of days used to calculate the crossing opportunities available during each season. The dry water year calculations relied on hydrologic data collected in water years 1990, 1991, 2001, and 2007. The 2007 water year ends on September 30, 2007, meaning data for fall and winter of 2007 is unavailable. Therefore, the calculations for fall and winter periods of dry water years relied on only three years of data rather than 4 years for spring and summer periods.
GIBBS-17	Trail Crossings	It is unclear how the crossing opportunities for the Proposed Action were developed. As an example, Ruck-a-chucky, Fall, Wet year Figure 8.9-4b and Table 8.9-6b, indicates 1 hour average per day crossable for the low flow. Low flow for Ruck-a-Chucky is 125 cfs, the proposed minimum flow for a wet year Fall is 150 cfs, 25 cfs higher than the low flow crossing threshold for Ruck-a-Chucky. Please explain. Also, do these figures in the above Tables for the Proposed Action depend on the added storage at Hell Hole?	The reason this occurred is because the minimum flow was not a "wet year" minimum flow as assumed in the comment. The Proposed Action resets minimum flows several times within a calendar year (March 15, June 1, and November 1) based on forecasts of the water year type. Not only do the forecasts change, but they can be different than the actual water type determined at the end of the water year (October – September). In addition, the minimum flows prior to March 15 (November – March 14) are based on the water year type designation of the previous water year (October – September) rather than the current water year. The original analysis in the DLA has been revised to reduce potential confusion related to: (1) actual water year types; and (2) forecasts of water year type used to set minimum flows in the Proposed Action. The original analysis of trail crossing opportunities was correct, but the data were summarized into the actual water types that occurred rather than the forecasted water year types used to set minimum flows in the Proposed Action. The new summary of trail crossings in the final license application is based on the water year type forecasts that were used to set the minimum flows in any particular month. The hydrologic model used for the Proposed Action includes the Hell Hole Seasonal Storage Increase Improvement. Therefore, all results, including those presented in the crossing opportunities figures and tables, include this improvement.
GIBBS-18	Trail Crossings	Please provide an explanation for the changes in crossing opportunities as a result of the Proposed Action.	Volume 3, Exhibit E, Section 8.9 has been revised to include additional explanation about changes in crossing opportunities that would result under the Proposed Action.
GIBBS-19	Trail Crossings	I request that an additional Table be prepared that develops data based on consecutive flows occurring below the threshold for 4 hours during the 7 A.M. - 7 P.M. time period.	Discussion regarding the Instream Flow and Reservoir Minimum Pool Measure (Volume 3, Exhibit E, SD A) will continue after filing of the License Application as explained in response to comment FWN-23. Additional analysis will be addressed as part of that discussion, as appropriate.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
GIBBS-20	Trail Crossings	The two crossings farthest from Oxbow Powerhouse, Mammoth Bar and Coffer Dam, are affected by very slow down ramp rates per REC 4 Report. Daily peaking duration can be a few hours to most of the day (Aquatics 1, p39) It takes 9 hours to ramp down from 900 cfs at Mammoth Bar. If the peaking duration occurred most of the day is it possible that both Mammoth Bar and Coffer Dam crossing would not be below threshold flows before the next peaking event occurred? Down ramp effects may be especially slow under the new proposed lower down ramp rates. How was this accounted for in the average hourly crossing Tables for the Proposed Action and No Action Alternatives?	<p>We do not expect the lower ramping rates in the Proposed Action to have a substantial effect on the slow decline from high to low flows that occurs in the lower river. The slow decline in the lower river is primarily the result of the large volume of water that is stored in the river upstream slowly "draining out" when the flows are decreased (e.g., 1000 cfs to 200 cfs). The volume of water is approximately the same with the Proposed Action compared to the No-Action Alternative.</p> <p>The trail crossing opportunities analysis relies on the best available hydrology information. Both the 15-minute historical impaired hydrology (No-Action Alternative) and the hourly Operations Model hydrology (Proposed Action) are available only at the top of the peaking reach. Both data sets show the peaking pulses that occur in the upper river and neither of the data sets includes the slow draining from high flow to low flow that occurs in the lower river. The analysis accounts for the time it takes water to travel from Oxbow Powerhouse to each crossing and for accretion flows from the primary tributaries. However, the analysis does not account for the change in down ramping rate that occurs as water travels downstream. Therefore, the trail crossing opportunities may be somewhat over-estimated for both the Proposed Action and No-Action Alternatives at the downstream locations. The analysis, however, is a comparative analysis and the Proposed Action does not substantially change trail crossing opportunities compared to the No-Action Alternative.</p>
GIBBS-21	Trail Crossings	What effect would the flows needed to accommodate pumping water through the PCWA Pump station located near the Coffer Dam site have on the flows needed to allow for trail crossing?	The Coffer Dam crossing is located about 1/3-mile downstream of the American River Pump Station (ARPS). The minimum flow requirement below the ARPS is 75 cfs, as specified in PCWA's water rights. The pump station is permitted to withdraw up to 100 cfs of water from the North Fork American River. The MFP Operations model accounted for water withdrawals from the ARPS and therefore, the trail crossing analysis provided in Volume 1, Exhibit E, Section 8.9 incorporated the best available hydrologic information at the Coffer Dam Site.
GIBBS-22	Trail Crossings	Describe what effect the volume and timing of the flow requirements for the Pump station will have on river crossing opportunities.	See response to comment GIBBS-21.
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
GIBBS-23	Recreation Plan - Peaking Reach (ASRA)	<p>Requested Mitigation and Enhancement Measures to be considered in the Draft License Application:</p> <ul style="list-style-type: none"> Add vehicle access to the North Fork American River by repurposing an existing Auburn Dam construction road. Build a bridge to serve as a trail crossing and State Parks vehicle circulation over the North Fork American River near the kayak play park or anywhere downstream to Oregon Bar. Cumulative impact repair lost trails as a result of earlier PCWA/USBR Pump Station project. Provide full fair share of operation and maintenance costs for management of the ASRA. 	<p>These proposed mitigation and enhancement measures are not the responsibility of the MFP. The USBR is responsible for management of Auburn Project Lands (also referred to as ASRA). The references related to providing a bridge over the North Fork American River and mitigation effects of the American River Pump Station are not related to the MFP, but to a different Project that was mitigated under its own NEPA and CEQA process.</p> <p>See response to comment DW-2 for a complete description.</p>
Gibbs, Patricia - Member of the Public Comment Letter Dated December 27, 2010; Filed with FERC December 27, 2010 (20101227-5032)			
Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
GIBBS-24	Trail Crossings	Project flows in the peaking reach completely impact and cut off trail connectivity throughout ASRA on a daily basis.	<p>A variety of trails traverse Auburn Project Lands. As shown in Volume 3, Exhibit E, Section 7.9, Map 7.9-6, some of those trails intersect the Middle Fork and North Forks of the American River. It is possible to cross the North Fork American River at No Hands Bridge and near the confluence, via State Highway 49 and Old Foresthill Road. Otherwise, trail connectivity only occurs when the flows in the North Fork and Middle Fork of the American River are low enough to cross.</p> <p>Volume 3, Exhibit E, Section 8.9 provides an analysis of trail crossing opportunities under the Proposed Action compared to the No-Action Alternative. In general, trail crossing opportunities under the Proposed Action are similar to the No-Action Alternative.</p>

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
GIBBS-25	Trail Crossings	The Stream Based Recreation Study Plan originally called for field review to assess crossing conditions at various flows... The focus group indicated that river crossing is not possible at flows above 350 cfs. Therefore, conducting flow studies at flows above 350 cfs would not yield meaningful information. More importantly, conducting studies at flows above 350 cfs would impose unacceptable risk to the study participants and horses ...Surprisingly, the resulting REC4 Report stated flows much higher than 350 cfs were deemed crossable...No doubt the higher flow is crossable by some individuals, some individuals are also willing to swim and take more chances in order to cross the river, however, this study was intended to review trail crossing opportunities for the average hiker, biker and equestrian in a recreational setting.	The REC 4 – TSP was developed in consultation with the Recreation TWG, and was subsequently refined based on information provided by the Trail User/Stream Crossing Focus Group. The REC 4 – TSP and subsequent study plan refinements were approved by the REC TWG. As indicated in the comment, the focus group indicated that river crossing is not possible at flows above 350 cfs. However, based on the flow studies conducted by PCWA after the focus group session, stream crossing was determined to be possible at higher flows, with crossing flows varying by location. PCWA conducted flow studies at five stream crossing locations in the peaking reach. Two crossing flows (thresholds) were determined for each location. The crossing thresholds represent: (1) the flow at which crossing suitability shifts from easy/moderate to moderate/difficult; and (2) the flow at which crossing shifts from moderate/difficult to difficult. Both of the crossing thresholds were utilized for the analyses contained in the REC 4 – TSR (Volume 3, Exhibit E, SD B) and in Volume 3, Exhibit E, Section 8.9 of the License Application. As suggested in the comment, the lower thresholds are appropriate for the average hiker, biker, and equestrian in a recreational setting. The higher thresholds are also valid, but may be more appropriate for more athletic individuals.
Horseshoe Bar Fish & Game Preserve (HBP) Comment Letter Dated December 23, 2010; Filed with FERC December 28, 2010 (20101228-5004) MFP Relicensing Process			
HBP-1	Process	The DLA is Not a "Consensus" Document as it Applies to the MFA's Peaking Reach ...It is HBP's sincere desire that meaningful discussions and negotiations regarding the will continue so that a true consensus can be formed.	See response to comment FAC-1.
HBP-2	Process	Throughout the process, the angling interest was treated in a manner significantly different than other interests. At the outset of the proceedings, an "angler focus group" meeting was held, from which erroneous, superficial information was drawn. Requests were made repeatedly for additional meetings, but until late in the process those requests were summarily denied...As a result of our filing the complaint PCWA held a second meeting in March of 2010. The angling interest was well represented at that meeting. Information that was generated from the Angler's meeting unfortunately did not find its way into the DLA. We have attached the summary of that meeting as prepared by Entrix, so that it is clear that it is part of the record.	See response to comment FAC-2.
Volume 3, Exhibit E, Section 7.9 Recreation Resources Affected Environment			
HBP-3	California State Parks Study	It is important to note that the California State Parks conducted a comprehensive study and user survey of the Auburn State Recreation Area in 2006. This study showed that 28% of the MFA users surveyed were involved in white water boating. This same study showed that 18% of the users surveyed were anglers.	The survey conducted by California State Parks is described and summarized in the REC 4 – TSR (Volume 3, Exhibit E, SD B). The purpose of State Park's recreation surveys was to learn more about visitor use patterns and visitor preferences within ASRA. A total of 528 useable surveys were completed by visitors at a variety of locations throughout ASRA from May through October of 2006. California State Parks survey was administered throughout ASRA, including areas that are not located along the Middle Fork American River (i.e., the peaking reach), including Lake Clementine, the North Fork American River upstream of Lake Clementine, Foresthill Road, and various upland staging areas. Importantly, the survey results presented in the California State Park survey report are not differentiated by area or by stream. The data presented in the summary tables represent the combined total of all of the surveys collected throughout ASRA. Therefore, it is not possible to use the data presented in the survey report to make conclusions about boating or angling participation on the Middle Fork American River.
Volume 3, Exhibit E, Section 8.1 Analytical Approach			
HBP-4	Environmental Analysis	HBP requests that PCWA provide a discussion of its rationale for using the existing license condition as opposed to the existing operating condition, or at least do a comparative analysis using both metrics.	See response to comment FAC-3.
HBP-5	Analysis of Water Sales	HBP requests that PCWA conduct the reasonable studies to determine the effect of water sales on fish and BMI habitat and numbers, and on other issues such as water availability for increases in minimum flows and similar issues, and specifically the adverse effects on the angling interest.	See response to comment FAC-9.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects			
HBP-6	Reintroduction of Steelhead	This issue was covered in the Foothills Water Network comment document. HBP wishes to add only one point that was not mentioned because the event had not occurred at the time of filing of those comments: NIMFS has filed its Biological Opinion and Conference Opinion and Draft Recovery Plan for Central Valley Listed Salmonids in the record of these proceedings.	Comment noted.
HBP-7	Analysis of Spawning Winter Run <i>O. mykiss</i>	Additionally, in spite of FWN's formal request, PCWA has not included in the DLA any analysis, comparison, requirements or considerations of the MFA's documented winter-spawning <i>O. mykiss</i> (rainbow trout) populations...HBP requests that further study, analysis and flow-related requirements/considerations of winter-spawning <i>O. mykiss</i> be required of PCWA as part of their license application.	See response to comments FAC-9 and FWN-11.
HBP-8	Fish Stranding – Peaking Reach	The requests for fish stranding studies were by in large limited and ignored considering the numerous letters and communications PCWA received over the last three years. Additionally information concerning the standing that was observed during the Oct 8th 2008 maintenance period was not entered into the record and included in DLA.	See response to comment FAC-9. Additionally, PCWA reviewed hydrology data for October 2008. Power generation was occurring at this time; no maintenance outage occurred. Perhaps the comment is referring to the maintenance outage that occurred in November 2008. PCWA conducted a stranding study in Grey Eagle Bar in November 2008 during the maintenance outage period. PCWA also conducted a stranding study in June 2008 as part of the AQ – 1 TSR (Volume 3, Exhibit E, SD B). Tables, figures, maps, and photographs from the June 5, 2008 and October 8, 2008 stranding studies are included in Appendix F and the results are summarized in Section 6.4.3 of the AQ – 1 TSR. Stranding is also discussed in Volume 3, Exhibit E, Section 7.5 and analyzed under the Proposed Action and No-Action Alternative in Volume 3, Exhibit E, Section 8.5.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects			
HBP-9	Flow Evaluation in Peaking Reach	<p>PCWA failed to follow and implement the science that Entrix produced for the peaking reach, relating to the effects of peaking on available habitat for trout spawning, young-of-the-year rearing, and benthic macroinvertebrate refugia.</p> <p>PCWA's studies demonstrate two very significant scientific facts: (i) peaking drastically affects trout spawning habitat, young of the year rearing habitat, and BMI production and refugia habitat; (ii) there is virtually no spawning within the main channel of the Middle Fork below Oxbow dam because of the peaking of the system. These two facts are related, but bear specific separate mention.</p> <p>The trout spawning habitat studies showed that 94% of the effective trout spawning habitat is destroyed by peaking flows at the RM 4.8 study site under current license conditions, and that at the RM 14.1 study site peaking flows destroy 81% of the spawning habitat. The DLA proposal would continue to destroy 88% of the spawning habitat at RM 4.8 and 75% of the spawning habitat at RM 14.1. To suggest that by virtue of this small reduction in adverse impact the DLA would provide "enhancement" to spawning habitat is equivalent to saying that it is ok to destroy 88% of the spawning habitat because previously only 94% was destroyed by PCWA...</p> <p>This, of course, is the reason that there is no spawning in the main stem of the river. Such spawning as does occur happens in the few tributaries that exist below Oxbow dam. PCWA's sole mitigation for this impact is to propose that gravels be introduced to re-establish spawning habitat. There are a number of problems with this: (i) PCWA proposes to introduce gravels above the tunnel chute. However, any gravel introduced in that area will simple wash into the tunnel, which is 50 feet in depth, and/or into the "lake" area beyond the tunnel, which area is over 70 feet deep. It will remain there until a storm of at least 100 year magnitude occurs to move the gravel out and downstream. HBP requests that PCWA conduct a study to determine feasible areas for gravel introduction below the tunnel chute and lake. Horseshoe Bar Preserve will provide access to PCWA for this purpose if PCWA determines that introduction below the tunnel and lake is a feasible area. (ii) Still, peaking will inevitably and immediately wash introduced gravels (even below the tunnel and lake) to the sides of the river as is currently the situation, so gravel introduction is probably not even a workable solution. HBP requests that in its geomorphology analyses, PCWA consider this question and produce the necessary science to support a conclusion that gravel introduction will in fact mitigate for loss of spawning habitat caused by peaking. Finally, if spawning gravels are introduced in suitable locations as a mitigation measure, then that should be done regularly to encourage spawning in the side channel at Grey Eagle Bar and other areas.</p> <p>The studies show that there are virtually no small fish in the mainstem river, and virtually no young of the year...HBP requests that PCWA produce the necessary science to determine reasonable and feasible mitigation measures designed to provide suitable habitat for small fish.</p>	See response to comment FAC-4.
HBP-10	Peaking Reach Analysis	In doing its flow analysis, PCWA did not take into account available information relating to a settlement that occurred relative to the Yuba River, on peaking issues...This issue was addressed in the Yuba River settlement and should have been considered by PCWA before producing the DLA.	See response to comment FAC-5.

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
HBP-11	Fishery Management Provisions	Although not identified in the DLA, FWN recommends that portions of the existing FERC No. 2079 License Amendment Language be retained and modified in the new License for fishery management purposes. This new language is referenced to the current 1981 License Amendment; FERC Project No. 2079; ORDER AMENDING LICENSE (MAJOR); (Issued March 18, 1981); Page 5: (E) Article 37: Footnote; 2/ New License language would be modified to read as follows: "Oxbow Powerplant releases: The scheduled flow releases may be modified for beneficial aquatic and fishery management purposes upon consensus among the Licensee, the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Should consensus be unobtainable, parties will employ appropriate mediation and/or arbitration processes to reach a determination."	See response to comment FAC-7.
HBP-12	BMI Monitoring	It is essential that whatever flow regimes are identified under the new license, PCWA would be held responsible to evaluate the instream flow impacts on BMI habitat and production. Should licensed flow regimes indicate decreases or adverse trends in BMI populations, then further studies should be conducted in developing and adapting regimes that are more conducive to BMI populations and overall aquatic ecosystem health.	See response to comment FAC-8.
HBP-13	Instream Flow and Reservoir Minimum Pool Measure	HBP's annual event for seriously wounded veterans brings together veterans from across the country in an effort to help them adjust and rehabilitate from both physical and mental injuries suffered during their service in the Iraq and Afghanistan wars...PCWA has made provisions in the DLA to cooperate with Tevis Cup and Western States 100 events. We believe that the HBP Wounded Warrior Event to help rehabilitate returning seriously wounded veterans deserve the same consideration and cooperation..."	See response to comment FWN-23.
HBP-14	Outage Flow Period	We would like to craft license terms and conditions that require PCWA to reduce the outage flow periods to the absolute minimum.	See response to comment FWN-23.
Study Requests			
HBP-15	Angling Studies	The initial recreational studies completely ignored a major recreational use of the MFA. In the FWN and HBP comments there are requests for studies on angler safety, fish stranding, river crossing and numerous other flow-related issues pertaining to angling.	See response to comment FAC-11.
HBP-16	Fish and BMI Studies in the Peaking Reach	PCWA's repetitive avoidance to conduct fish-related and BMI related studies on the Horseshoe Bar Preserve property below the tunnel chute fish barrier despite repeated requests to do so. This in turn renders PCWA's conclusions regarding fish and BMIs in the peaking reach faulty and incomplete. HBP requests that PCWA conduct reasonable studies within the preserve area below the fish barrier of the Tunnel Chute in the same manner as it did elsewhere on the river, in order to collect more accurate data upon which to base its conclusions.	See response to comment FAC-11.
HBP-17	<i>O. mykiss</i>	HBP has repeatedly requested over the last three years that PCWA conduct studies and investigate the <i>O.mykiss</i> reported spawning in the Grey Eagle Bar area of the MFA. PCWA was also asked to investigate the dewatering /destruction of <i>O.mykiss</i> Redds on the MFA...HBP requests that PCWA conduct the necessary studies to determine the nature and extent of the <i>O.mykiss</i> presence in the MFA, and the habits of the <i>O.Mykiss</i> that inhabit the main stem.	See response to comments FAC-9 and FWN-11.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
<p>Schweitzer, Hilde - Member of the Public Comment Letter Dated December 15, 2010; Filed with FERC December 21, 2010 (20101221-5013)</p>			
<p>Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects</p>			
<p>HS-1</p>	<p>Pulse Flows - Rubicon River below Hell Hole Dam</p>	<p>On the large river bypass reach of the Rubicon below Hell Hole dam the proposed pulse flow range of between 200 and 600 is unacceptable for several reasons, many of which have been stated above. In Wet, AN, and BN years this reach has historically under impaired conditions spilled with greater volume and greater duration than the proposal. (See Vol 3 Exhibit E Appendix B1) It is also proposed that the pulse events begin in year 6 after license issue. This potentially changes existing baseline historical events for spill and as such affects the riparian environment and historical flow conditions negatively. It also potentially reduces the number of boatable days during this time.</p> <p>Please explain the rationale for the use of flows less than required to initiate motion to create a "pulse" in the DLA...Please explain whether the proposed flow volumes and duration will accomplish a pulse for geomorphologic benefit.</p>	<p>Volume 3, Exhibit E, Appendix B1 in DLA included impaired and unimpaired flows by example water year types. The hydrology information included in this appendix in the DLA does not include flows under the Proposed Action. This same information is available in Volume 3, Exhibit E, Appendix B1e in the FLA.</p> <p>The Proposed Action and No-Action Alternative monthly exceedance flows in the Rubicon River below Hell Hole Dam are compared in Volume 3, Exhibit E, Section 8.3, Figure 8.3-1 and Table 8.3-1a in the FLA.</p> <p>The Proposed Action maintains/schedules a similar frequency of scouring and initiation of motion flows that have historically occurred in the No-Action Alternative. The number of days of scouring and initiation of motion flows between the Proposed Action and No-Action Alternative are compared in Volume 3, Exhibit E, Section 8.7, Tables 8.7-3a and Table 8.7-4a, respectively. The results are also summarized in Section 8.7. At the top of the reach, the total number of scouring days is essentially the same under the Proposed Action and No-Action Alternative. The number of initiation of motion days under the Proposed Action was a total of 207 days during the period of record under the Proposed Action and a total of 225 days under the No-Action Alternative.</p> <p>At the bottom of the reach, the number of days that scouring flows is similar under the Proposed Action (15 days) and the No-Action Alternative (14 days). The total number of days in the period of record that initiation of motion occurs is essentially the same (193 in the Proposed Action and 208 in the No-Action Alternative).</p> <p>The number of riparian recruitment days (May and June only) under the Proposed Action and No-Action Alternative are compared in Volume 3, Exhibit E, Section 8.8, Table 8.8-3a and results are summarized in Section 8.8. Below Hell Hole Dam, the average number of days per year when recruitment flows occurred in above normal and wet water years typically increases under the Proposed Action (16–32% [3–6 more days]) compared to the No-Action Alternative. At the bottom of the Rubicon River reach, the average number of days per year when recruitment flows occurred in above normal and wet water years is the same under the Proposed Action and No-Action Alternative.</p> <p>Whitewater boating opportunity days under the Proposed Action and No-Action Alternative on the Rubicon River (400-1,500 cfs) are compared in Volume 3, Exhibit E, Section 8.9, Table 8.9-3a. The total number of boating opportunity days in Wet, Above Normal, and Below Normal water years increases under the Proposed Action (259 days) compared to the No-Action Alternative (206 days).</p> <p>As stated in the Instream Flow and Reservoir Minimum Pool Measure (and Attachment A to that document) (Volume 3, Exhibit E, SD A), the peak magnitude of the pulse flow specified for the Rubicon River below Hell Hole Dam is an interim pulse flow. The final pulse flow magnitude will be between 200 and 600 cfs, and will be determined based on the results of a valve testing program.</p> <p>Although 200 cfs is not sufficient by itself to initiate sediment motion or overbank flows, it is sufficient to create a 'pulse' of water in the spring that is greater than the minimum instream flows. The pulse flow will provide a more natural flow regime pattern. A flow of this magnitude would be sufficient for seed dispersion by water, and downstream transport of material important for stream ecological processes, such as leaf litter, small wood, bark, macroinvertebrates. In addition, as described in Volume 3, Exhibit E, Section 7.3, considerable accretion flow inputs occur along the length of the Rubicon River. The 'pulse' flow release is scheduled to occur during the natural snowmelt period and to coincide with accretion inflows. In some cases, the combination of the pulse flow and accretions can provide boatable flows. More specifically, however, the 200 cfs 'pulse' release would provide ecological benefits in the Rubicon River.</p>

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects			
HS-2	Boating Opportunities - Rubicon River below Hell Hole Dam	Please provide the rationale for using the range of 200-600 for boating opportunities.	The current release capability at Hell Hole Dam is 200 cfs. A valve testing program will be completed to determine if this can be increased up to 600 cfs. The Proposed Action included an environmental pulse flow release of 200 cfs. Accretion flows between Hell Hole Dam and Ellicott Bridge increase flows within the Rubicon River. For the environmental impact analyses (DLA and FLA), PCWA evaluated the number of boatable days at Ellicott Bridge. A boatable flow range between 400-1,500 cfs was used for the analysis (Volume 3, Exhibit E, Section 8.9 and Figure 8.9-1a). The total number of boating opportunity days in Wet, Above Normal, and Below Normal water years increases under the Proposed Action (259 days) compared to the No-Action Alternative (206 days).
HS-3	Pulse Flows - Middle Fork American River below French Meadows Dam	...please provide evidence that a flow of 400 cfs will be sufficient to create any pulse or initiation of motion for geomorphologic benefit in this reach.	Based on the initiation of motion analyses included in the AQ 1 – TSR (Appendix G, Evaluation of Sediment Transport Conditions, and Table G-1) (Volume 3, Exhibit E, SD B), and also summarized in Volume 3, Exhibit E, Section 7.7 and Table 7.7-5, 343 cfs was the flow estimated to mobilize 25% of suitable gravels. Therefore, the 400 cfs release included in the Proposed Action are sufficient for initiation of motion in this reach.
HS-4	Pulse Flows – Rubicon River	Initiation of motion begins in this reach at approximately 2198 cfs at the upper end of the reach and goes down to 500 cfs lower in the reach so flows lower than this would likely not result in any type of movement. Please provide rationale for using flow volumes less than what would initiate motion as a pulse flow base.	Initiation of motion at the top of the reach below Hell Hole Dam occurs at 500 cfs and at the bottom of the reach initiation of motion occurs at 2,198 cfs (AQ 1 – TSR, Table G-1 [Volume 3, Exhibit E, SD B]). The Rubicon River reach is approximately 30 miles long. The channel gets bigger in the downstream direction and significant accretion occurs along the reach. Pulse flow releases at the top of the reach are augmented by accretion. At the bottom of the reach, 193 days of initiation of motion occurs during the period of record under the Proposed Action compared to 208 days under the No-Action Alternative. See response to comment HS-1.
HS-5	Boating Opportunities - Middle Fork American River below Middle Fork Interbay	The proposed DLA allows for approximately 8 boating opportunity days (range of 400-500 cfs at put in) in Wet water years, 2 opportunities in AN water year types, and none in BN water year types. These numbers represent significantly less boating opportunity than under present impaired conditions. Please explain the rationale for decreasing the number of boating days... Also, please explain whether a maximum release of 450 cfs is sufficient for initiation of motion for this reach.	As stated in Volume 3, Exhibit E, Section 8.9, the Proposed Action will increase boating opportunities during above normal and wet water years (Figure 8.9-1d). Boating opportunities are not available in the other years under the No-Action Alternative or the Proposed Action. As shown in Figure 8.9-1d, the average number of opportunity days that would occur in the period of record under the Proposed Action compared to the No-Action Alternative is slightly increased. In above normal water years, under the Proposed Action, there is an average of 2 boating days compared to 1 boating day for the No-Action Alternative. In wet water years, there are 9 boating opportunity days on average in the Proposed Action and 8 days on average for the No-Action Alternative. Based on the initiation of motion analyses included in the AQ 1 – TSR (Appendix G, Evaluation of Sediment Transport Conditions, and Table G-1) (Volume 3, Exhibit E, SD B), and also summarized in Volume 3, Exhibit E, Section 8.7 and Table 8.7-4a, 532 cfs is required to mobilize 25% of suitable gravels at the bottom of the reach above Ralston Afterbay. With the modeled contribution from accretion flows that occur in the spring when the pulse flows are scheduled, a 450 cfs release from Middle Fork Interbay will initiate sediment motion for 518 days over the period of record under the Proposed Action and 512 days under the No-Action Alternative.
Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
HS-6	Whitewater Boating Opportunities - Rubicon River	If the Contingency Study cannot be completed before the FLA is filed, the flow numbers (<i>Rubicon River</i>) as well as best approximations of accretions from the actual verified dates that the section has been run should be used to determine minimum acceptable flows. Also please note that in follow-up consultation a minimum boatable flow was determined to be 500 cfs but PCWA uses the range from 400-1500 as an acceptable range for boating to determine boating opportunities. Until a test study is done to determine the minimum flow these numbers are speculative and should not be used.	The 400-1500 cfs flow range used to evaluate boating opportunities in the Rubicon River downstream of Ellicott Bridge in the License Application represents the best available information at this time. Boatable flow ranges, including minimum boating flows, were based on a review of available literature (Holbeck and Stanley 1988 and California Creek's website (www.cacreeks.com)), consultation with the Whitewater Boating Focus Group, and through follow-up consultation with experienced boaters. The range of boatable flows developed through these sources is summarized in the REC 4 – Contingency Whitewater Boating Study Report (Volume 3, Exhibit E, SD B).
HS-7	Whitewater Boating Opportunities - Rubicon River		
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
HS-8	Flow and Reservoir Monitoring Plan and Instream Flow and Reservoir Minimum Pool Measure	A number of comments related to minimum instream flows and recreation flows in the bypass reach were identified.	See response to comment FWN-23.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, SD B: Final Technical Study Reports			
HS-9	REC 4 Contingency Whitewater Boating Study	The statement "All study elements from Rec 4-Contingency Whitewater Boating Study have been completed" is not accurate. The flow study on the Rubicon River below Ellicott Bridge on the Rubicon was never completed...There is a proposed test flow on a spill event for 2011 on the Rubicon if spill occurs.	PCWA filed a revised study plan (January 21, 2009) that committed to conducting a flow study on the Rubicon River under certain conditions. These conditions never materialized during the time frame specified in study plan (winter 2009-summer 2010). The revised study plan did not commit to continuing the study in future years. Therefore, the study was completed as specified in the revised study plan. However, PCWA is committed to conducting a flow study on the Rubicon River in 2011. PCWA has voluntarily committed to working with relicensing participants to determine the minimum acceptable whitewater boating flow in the Rubicon River below Ellicott Bridge. This may include conducting a scheduled whitewater boating study on the Rubicon River or interviewing boaters who recreate on the river under opportunistic circumstances.
HS-10	REC 4 Stream-based Recreational Opportunities Technical Study Report	The bullet paragraph below is not an accurate or complete statement. "Middle Fork American River – French Meadows Dam to Middle Fork Interbay. PCWA agreed to conduct a single flow study during the spring of 2010, with the target flow range to be determined by the study team. This study was conducted on May 22, 2010. The study flow at the put-in was 252 cfs. The study team was unable to complete the run due to the extensive amount of logs and downed trees in the river." It should be noted that the temperature during the flow study was in the 20's and it was snowing which significantly impeded progress. A subsequent unsponsored attempt was made a week later and successfully completed the run (putting in near the river mile where the sponsored group hiked out). A relatively accurate flow level was determined to be 175-200 for the run.	The requested information is discussed in detail in Section 6.3 of the REC 4 – Contingency Whitewater Boating Study report (Volume 3, Exhibit E, SD B). The report specifically indicates that "weather conditions during the study were inclement, with intermittent snow and air temperature in the 20s and 30s." The study report also includes a detailed description of a run that was successfully completed by a group of boaters on May 29, 2010. The boatable flow range for this reach was refined based on the information developed by this group of boaters, and is provided in the REC 4 – Contingency Whitewater Boating Study Report. As indicated, "for the section of the run upstream of the Duncan Creek confluence, the boating group estimated that the optimal flow range is between 175 and 200 cfs." The flow range for the entire reach (from French Meadows Dam to Middle Fork Interbay) is as follows: <ul style="list-style-type: none"> • Minimum Acceptable Flow – 215 cfs near take-out • Optimal Flow – 300-350 cfs near take-out • Maximum Acceptable Flow – 450 cfs near take-out.
Information Request			
HS-11	Hell Hole Dam Low-level Outlet	Please provide engineering studies and cost estimates for the repair of the outlet valve. Given the additional storage capacity of 7600 AF with the Betterment project, the valve should be brought up to current dam safety standards or an alternate method of meeting standards should be provided in a more timely manner than proposed in the Feasibility Study...Also, please provide evidence from DSOD that the current state of the valve system given the Betterment's increased storage capacity will be sufficient to allow current standards of reservoir drawdown. Does the Betterment project require the dam be brought up to current standards in terms of drawdown and dam safety or can PCWA provide adequate drawdown by an alternate means?	Engineers from FERC and the DWR Division of Safety of Dams (DSOD) conduct annual inspections at each PCWA dam (Hell Hole, French Meadows, Ralston Afterbay, and Middle Fork Interbay) and review the collected monitoring data. Once every five years, PCWA's FERC-approved dam safety consultant inspects French Meadows, Hell Hole, and Ralston Afterbay dams in accordance with FERC's Part 12 inspection criteria, and issues a report on the stability and condition of the dams to FERC. The inspection process is described in Volume 1, Exhibits F and H. PCWA prepared a Supporting Design Report for the Hell Hole Reservoir Seasonal Storage Increase Improvement to demonstrate that the structures are safe and adequate to fulfill their stated functions. This report is provided in Exhibit F, Attachment F-2 as: "Exhibit F: Preliminary Supporting Design Report, Middle Fork American River Project." The current low-level outlet infrastructure is adequate to perform its intended task of drawing down Hell Hole Reservoir in an emergency situation. No engineering studies are required at this facility at this time, as the facility is fully operational for its intended purpose.
State Water Resources Control Board Comment Letter Dated December 23, 2010; Filed with FERC December 23, 2010 (20101223-5101)²			
Volume 3, Exhibit E, Section 3.0 No-Action Alternative			
SWRCB-1	Commission Actions	At some point the Commission would need to take action to either issue a new license, open the project to other applicants, or require the project to be decommissioned. The No-Action alternative should be defined in more realistic terms to include likely actions by the Commission.	The No-Action Alternative described in Volume 3, Exhibit E, Section 3.0 and analyzed in Volume 3, Exhibit E, Section 8.0 is defined correctly and consistent with NEPA. The License Application also identifies other actions that the Commission considers prior to issuing a new issue for the MFP including: (1) Federal government takeover, (2) issuing a non-power license, and (3) retirement of the Project. These alternatives were eliminated from further consideration in the environmental analysis because they are not applicable, deemed unreasonable, or not practical. A rationale is provided in Volume 3, Exhibit E, Section 5.0.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 4.0 Proposed Action and Section 8.4 Water Quality Environmental Effects			
SWRCB-2	Construction Methods and Water Quality Certification	Before the State Water Board can issue water quality certification, construction plans and information about construction methods must be available to determine conditions necessary to protect water quality...State Water Board staff prefers to develop water quality certification for the entire action, rather than separate approvals for the relicensing of the Project and subsequent construction projects.	The information available in the FLA on the proposed modifications and improvements, including project description, construction methods and activities, and plans are provided in Volume 3, Exhibit E, Section 3.0, Appendix A. This information is more than adequate for the purpose of issuing a Water Quality Certification and in fact, exceeds the information in other License Applications which SWRCB have previously issued a Water Quality Certification.
Volume 3, Exhibit E, Section 8.1 Analytical Approach			
SWRCB-3	Analysis of Water Transfers	During certain years PCWA sells water to San Diego County or other jurisdictions. The water transfers require PCWA to leave vacant in the reservoirs a combined storage capacity equal to the amount of the transfer. The DLA does not disclose if there is an impact from this reduction of reservoir elevation. Additional information should be provided on any impacts that result from the water transfers.	See response to comment FWN-6.
Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects and Section 9.0 Cumulative Effects Analysis			
SWRCB-4	Reintroduction of Steelhead	It is reasonably foreseeable that steelhead will be reintroduced into the American River above Folsom Dam. Reintroduction of anadromous fish listed under the Endangered Species Act could require changes in operation of the Project. This should be evaluated in the final license application and environmental documents.	See response to comment FWN-22.
SWRCB-5	Entrainment Monitoring at Small Diversions Post Construction	PCWA is proposing to modify the small diversion dams at North and South Long Canyon and Duncan Creeks...Monitoring of the effectiveness of the new facilities to reduce entrainment should also be conducted.	The screens on the modified diversions will meet current CDFG and NMFS standards. A study to monitor the effectiveness of the screens is unnecessary.
Volume 3, Exhibit E, Section 9.0 Cumulative Effects Analysis			
SWRCB-6	Climate Change/Greenhouse Gases	This section evaluates the impact of the proposed project on climate change and quantifies the generation of greenhouse gases...Significant details on the methodology used to calculate the tons of carbon resulting from the reduction in power in the proposed project are not included.	Volume 3, Exhibit E, Section 9.0 has been revised to include an explanation of the methodology used to calculate the tons of carbon resulting from the reduction in power under the Proposed Action.
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
SWRCB-7	Bioaccumulation Monitoring Plan and Recreation Plan	PCWA may have future obligations to periodically monitor fish tissue, post warning notices, or otherwise assist in protecting the public from consumption of contaminated fish or conduct studies on methylation.	A Mercury Bioaccumulation Monitoring Plan is provided in the FLA (Volume 3, Exhibit E SD A). However, the resource agencies have been provided with the study results on fish tissue mercury concentrations in the vicinity of the MFP. Under California law, it is the resource agencies' responsibility to determine if posting of public health warnings are necessary. PCWA encourages the agencies to make a quick determination on this matter. If deemed appropriate by the resource agencies, PCWA will promptly post public health warning.
SWRCB-8	Management and Monitoring Plans Identified but Not Included in DLA	The geomorphic, riparian and visual monitoring plans were not included in the DLA. State Water Board will comment on these plans when they are available...Any plans that involve adaptive management or future consultation must specify the agencies with authority to approve changes... Therefore it is also important to include specific timeframes and reporting requirements into the plans.	The FLA includes a combined Geomorphology/Riparian Monitoring Plan and a Visual Resource Management Plan (Volume 3, Exhibit E, SD A). All the monitoring plans include a section that specifies the schedule for each of the studies through the term of the license (Monitoring Approach) and a section that specifies a schedule for reporting, comment periods, and consultation with specific agencies for each monitoring report (Reporting and Consultation).
SWRCB-9	Compilation of PM&E Measures	For clarity and ease of review the recommended Protection, Mitigation, and Enhancement (PM&E) measures should be compiled into a single document...Compilation of the PM&E measures into a single document will make it easier to spot conflicting measures or overlapping measures.	The PM&E measures have been incorporated into a single document, Volume 3, Exhibit E, SD A.
SWRCB-10	Flow and Reservoir Monitoring Plan	PCWA proposes that instream flow releases may be temporarily modified for short periods in response to directives from the Independent System Operator (ISO). Please explain the legal authority the ISO maintains to control operations of the Project.	The DLA inaccurately portrayed the ISO's role. The ISO can only modify output from MFP generation facilities in order to stabilize the electric service grid. The text has been revised accordingly.
SWRCB-11	Flow and Reservoir Monitoring Plan	PCWA also proposes to release minimum flows within five days of the dates specified in the license issued by the Commission...PCWA should explain why flows cannot be released on the date specified.	Due to the remoteness of some Project facilities, and the weather in Northern California that may occur when changes in minimum instream flow are required, PCWA believes it is reasonable to provide operations staff with a window of time to access the facility and make the necessary adjustments.
SWRCB-12	Flow and Reservoir Monitoring Plan	State Water Board staff recommends that flow compliance be instantaneous except in certain circumstances where facilities cannot be remotely operated or access is difficult.	Discussion regarding the Instream Flow and Reservoir Minimum Pool Measure (Volume 3, Exhibit E, SD A) will continue after filing of the License Application as explained in response to comment FWN-23.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
SWRCB-13	Sediment Management Plan	The sediment management plan provides information on how the sediment will be removed from the reservoirs but does not include a water quality protection plan. Before State Water Board can include these activities in any water quality certification that may be issued for the Project, a water quality protection plan for the long term and interim sediment removal projects should be provided.	The SMP (Volume 3, Exhibit E, SD A) has been revised to include the development of a Water Quality Protection Plan (WQPP). The WQPP will be developed in consultation with the State Water Board, to address both interim and long-term sediment management activities, and be submitted to the State Water Board for approval. Note: SMP Table 5 includes many additional AP measures designed to minimize water quality impacts during sediment removal activities including water quality BMPs, and fugitive dust reduction measures.
SWRCB-14	Sediment Management Plan	This water quality protection plan will also be required for construction of the modifications at the three small diversions.	Volume 3, Exhibit E, Section 3.0, Appendix A, has been revised to include the development of a WQPP for each construction project including modification of the three small diversions. The WQPP will be developed in consultation with the State Water Board after submittal of the FLA, once detailed construction designs are available. The WQPP will be submitted to the State Water Board for approval.
SWRCB-15	Sediment Management Plan	PCWA is proposing to modify the small diversion dams at North and South Long Canyon and Duncan Creeks...Some level of post construction monitoring should be conducted to monitor the effectiveness of the ability of the facilities to pass sediment.	The SMP (Volume 3, Exhibit E, SD A) has been revised to include post-construction monitoring at the small diversions to assess the effectiveness of the facility to pass sediment.
SWRCB-16	Instream Flow and Reservoir Minimum Pool Measure	Attachment A to this section is a feasibility study on Hell Hole Dam low level outlet release capability...State Water Board staff supports the approach proposed by PCWA to establish the maximum amount of water that can be safely released through the valve.	Comment noted.
SWRCB-17	PM&E Measures - Peaking Reach	Additional time is needed to finalize discussions concerning PM&E measures in the peaking reach. There are a number of beneficial uses in the peaking reach, some of which have inherent conflicts that are best resolved through collaboration. State Water Board staff is committed to working toward the collaborative development of PM&E measures.	See response to comment FWN-23.
Volume 3, Exhibit E, SD B: Final Technical Study Reports			
SWRCB-18	Boatable Flows in the Rubicon River	A controlled flow study is needed to determine the minimum acceptable boatable flow in the Rubicon River. State Water Board staff understands that PCWA is committed to completing the flow study.	Comment noted.
SWRCB-19	Technical Study Reports Identified but Not Included in DLA	The bioenergetics, entrainment contingency, reservoir fish habitat study reports were not included in the DLA. State Water Board staff will comment on these plans as they become available.	The AQ 7 – Entrainment Contingency and AQ 8 – Reservoir Fish Habitat TSRs were distributed to the relicensing participants, including State Water Board, for a 30-day review and comment period after PCWA's submittal of the DLA (December 27, 2010 and December 16, 2010, respectively). No comments were received. Final TSRs are included in the FLA (Volume 3, Exhibit E, SD B). The AQ 5 – Bioenergetics TSR is included in SD B of the FLA.
United States Department of Agriculture - Forest Service, et.al. (resource agencies) Comment Letter Dated December 20, 2010; Filed with FERC December 22, 2010 (20101222-5008)			
Volume 1, Exhibit A			
RA-1	Brushy Canyon Adit	Page A-14. The project description does not address needed repairs at Brushy Canyon Adit.	Currently, Brushy Canyon Adit Road is impassable, as a result of a landslide. Accordingly, PCWA is planning on repairing the road in 2011 or 2012, pending the appropriate approvals from the USDA-FS. PCWA has been consulting with the El Dorado National Forest, Georgetown Ranger District since 2009 on the required repairs. Planned repairs include removing landslide debris, brushing, grading, and installing drainage features. Since these repairs will occur prior to license issuance, they are not addressed in the License Application. After Brushy Canyon Adit Road is repaired, it will be maintained on an as-needed basis, as specified in the Transportation System Management Plan (TSMP). Routine annual and periodic maintenance of Brushy Canyon Adit Road is included in the TSMP.
Volume 1, Exhibit D			
RA-2	Economic Analysis	Pg D-3 addresses the betterment at Hell Hole Reservoir. It is not clear if the cost figures include costs for new road construction.	The Hell Hole Reservoir Seasonal Storage Increase Improvement includes the construction of one new Project road. The cost figures included in Volume 1, Exhibit D and Volume 3, Exhibit E, Section 11.0 include the cost of constructing this new road.
RA-3	Construction and Maintenance Costs	Table D-1 shows the transportation system maintenance costs at \$119,000 per year. Please clarify if these costs reflect needed repairs at Brushy Canyon Adit or the proposed new construction and maintenance costs associated with proposed new projects.	Volume 1, Exhibit D, Table D-1 does not include the cost of repairing Brushy Canyon Adit road because this road will be repaired prior to license issuance (see response RA-1). The cost figures identified in Table D-1 include the construction of one new Project road that will be constructed in association with the Hell Hole Reservoir Seasonal Storage Increase Improvement. In addition, the costs include annual and periodic (deferred) maintenance of all Project roads and trails. The costs in Table D-1 represent annualized costs over the license term.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 1.0 Application			
RA-4	Final License Application - License Term	The licensee has based the cumulative effects analysis on a 50-year license term...Until a new license has been granted, this analysis should be based on the conservative 30-year license term.	PCWA requested a 50-year license term based on the substantial costs associated with relicensing of the MFP; capital improvements; new environmental measures, programs, and facilities; and extensive monitoring and ongoing resource agency consultation to ensure continued resource protection over the term of the new license. As such, the cumulative impacts analysis is based on a 50-year license term. However, conclusions describe in cumulative effects analysis would not change if a 30-year license term was assumed.
Volume 3, Exhibit E, Section 3.0 No-Action Alternative			
RA-5	Non-project Roads and Trails	Page 3.1.9. This section includes only roads and trails proposed to be "Project Roads and Trails. Please include other roads and trails impacted by Project operations and maintenance activities.	Volume 3, Exhibit E, Section 3.0 (and associated tables) identifies Project roads and trails that are used for operation and maintenance of the MFP. PCWA also utilizes non-Project general access roads to access the MFP facilities. Non-Project general access roads are not used exclusively by PCWA for operation and maintenance of the MFP and therefore are not under FERC jurisdiction (see letter from FERC dated July 18, 2008). As such, non-Project general access roads are not addressed in the License Application. PCWA's responsibilities as they relate to non-Project general access roads will be addressed separately in a Road Use and Maintenance Agreement with the USDA-FS.
RA-6	Non-project Roads and Trails	Page 3.1.10. Please include roads and trails impacted by project recreation activities. The licensee acknowledges the facilities they built or maintain, but impacts to access routes are not discussed.	Roads that are used exclusively to access Project recreation facilities are considered part of the MFP and are identified in Table 3 of the TSMP (Volume 3, Exhibit E, SD A). As specified in the TSMP, PCWA will be 100% responsible for the operation and maintenance of all Project recreation facility access roads and all of the parking areas and loop roads associated with each of the Project recreation facilities. PCWA's responsibilities as they relate to non-Project general access roads will be addressed separately in a Road Use and Maintenance Agreement with the USDA-FS. Also see response to comment RA-5.
RA-7	Non-project Roads and Trails	Page 3.3. The document acknowledges impacts to roads and trails, but Table 3-9 only lists "Project Roads and Trails" and not facility access routes. The licensee should discuss a proposal for commensurate share maintenance resulting from all project-related activities.	See response to comments RA-4 and RA-5.
RA-8	Maintenance Agreement	Page 3.3.10. The licensee discusses current cooperative maintenance agreements. The Transportation System Management Plan (TSMP) and any future agreement should address all roads impacted by the project activities and should include a proposal for responsibilities.	See response to comments RA-4 and RA-5.
RA-9	Project Roads	Table 3-7 Big Meadow and Middle Meadow Campground water tank routes are roads...These roads should be moved to the appropriate Project Roads Table.	The Big Meadows Water Supply Trail (14N43A) and the Middle Meadows Campground Water Supply Trail (14N28A) have been removed from the list of Project trails, renamed as roads, and added to the list of Project roads. Similarly, the French Meadows Campground Water Supply Facility Access Trail (96-77-05) was removed from the list of Project trails, renamed as a road, and added to the list of Project roads.
Volume 3, Exhibit E, Section 4.0 Proposed Action			
RA-10	Project Boundary	Page 4.2. Please include the footprint of the access road from road 17N02 to the campground. This entire route serves as the campground road just as the interior roads do and should be included in the project boundary.	Three campgrounds can be accessed from road 17N02: Middle Meadows Campground, Big Meadows Campground, and Hell Hole Campground. All Project recreation facility access roads branching off of road 17N02 on USDA-FS lands are included in the FERC Project boundary. A small portion of the access road to Big Meadows Campground from road 17N02 is not included in the FERC Project boundary because this portion of road is a multi-use road segment located on private property and considered to be a non-project general access road.
Volume 3, Exhibit E, Section 8.6 Botanical and Wildlife Resources Environmental Effects			
RA-11	Special-status Plants	The list of FS Sensitive species will change during the life of the license and possibly the list of state and federally listed species. This is not addressed.	Volume 3, Exhibit E, Section 8.6 has been revised to address this comment.
RA-12	Special-status Plants	This section is written to address primarily Stebbins' phacelia although other Sensitive plants during the life of the license are a concern.	Volume 3, Exhibit E, Section 8.6 was written to address all special-status plant species, including Stebbins' phacelia. Because Stebbins' phacelia was the only special-status plant species identified in the vicinity of the Project during focused special-status plant surveys, the majority of the effects analysis focuses on analyzing potential impacts to this species. However, Section 8.6 includes measures for the protection of Stebbins' phacelia and other upland special-status plants that may be identified during the term of the license. In addition, Section 8.6 has been revised to address resource agency comments and includes annual review of resource agency special-status species lists.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.6 Botanical and Wildlife Resources Environmental Effects			
RA-13	Special-status Plants	Many non-routine recreation facility projects have potential impacts to Stebbins' phacelia. These are not addressed. For example, activities around Hell Hole Vista and the boat ramp parking areas that are listed in the resource agency recreation plan have potential impacts.	Volume 3, Exhibit E, Section 8.6 provides an analysis of potential impacts to special-status plants, including Stebbins' phacelia, from implementation of the Proposed Action. The resource agency recreation plan was included as part of FS comments on the DLA and therefore was not analyzed in the DLA. Currently there is disagreement between PCWA and resource agencies on the content of the Recreation Plan. However, PCWA is committed to continue consultation with resources agencies and other relicensing participants. These discussions are proposed to occur March through June 2011 following submittal of the FLA. If consensus is reached on the Recreation Plan, an amended license application will be prepared and filed with FERC that analyzes potential effects on special-status plants from implementation of the revised Recreation Plan.
RA-14	Special-status Plants	It is incorrect to state that "Implementation of these AP measures will avoid impacts to Stebbins' phacelia under the Proposed Action at all but three locations."	Volume 3, Exhibit E, Section 8.6 has been modified to clarify that with implementation of AP measures in the Vegetation and Integrated Pest Management Plan (VIPMP), Recreation Plan, and TSMP, impacts to Stebbins' phacelia under the Proposed Action would occur at three locations. Analysis of potential effects from other components of the Proposed Action is provided in subsequent sections.
RA-15	Special-status Plants	Stebbins' phacelia is an annual species whose population fluctuates through time. Given that, the following statement is not accurate: "In addition, implementation of periodic maintenance at the Rubicon River Gage at Ellicott Bridge Trail (an existing trail that has been added to the MFP) will impact Stebbins' phacelia. Specifically, trail maintenance will result in the removal of four individual Stebbins' phacelia that are growing within the footprint of the trail." There could be any number of plants at the time of maintenance.	The Rubicon River Gage at Ellicott Bridge Trail was proposed for inclusion in the MFP at the time that the DLA was developed. However, since that time, the trail has been removed from the list of Project facilities and features, and will not be improved or maintained as part of the MFP. This trail is a general use trail used by the public that pre-date installation of the gage. This trail would continue to be available for general public use. The gaging station in this vicinity (i.e., the Rubicon River Gage at Ellicott Bridge) would be retained as an MFP facility. The Stebbins' phacelia populations are located outside of the area necessary for routine operation and maintenance of the gage. Therefore, routine maintenance of the gaging station would not impact these populations. Although maintenance of the gaging station is not expected to affect these populations, measures included in the DLA will provide an opportunity to monitor the status of these populations over time. Specifically, DLA, Volume 3, Exhibit E, Section 8.6, requires PCWA to conduct special-status plant inventory surveys the first year following license issuance, and every five years thereafter. The results of these surveys will be provided to USDA-FS for review, and PCWA will consult annually with resource agencies to determine whether site-specific protection measures are necessary to protect populations based on the results of the surveys.
RA-16	Special-status Plants	Please change the bullet regarding annual consultation to the following: <ul style="list-style-type: none"> Consulting annually with resource agencies to discuss the effectiveness of AP measures to protect special-status plants, to revise or develop new AP measures as needed, and to develop site-specific protective measures for any new special-status plant populations identified during inventory surveys; and 	Volume 3, Exhibit E, Section 8.6 has been modified as requested.
RA-17	Special-status Plants	Effects from activities in the recreation plan are not addressed.	The Recreation Plan (Volume 3, Exhibit E, SD A) does include Avoidance and Protection (AP) measures for the protection of special-status plants in Table 8, Resource Protection Measures for Activities Identified in the Recreation Plan. Biological resource measures include: vegetation and noxious weed management measures, riparian measures, special-status plant measures, Stebbins' phacelia site-specific measures, and raptor measures.
RA-18	Special-status Plants	PA measures will not enhance Stebbins' phacelia, as stated, but possibly would impact a smaller area and fewer individuals than under the existing condition.	Volume 3, Exhibit E, Section 8.6 has been modified to address this comment.
RA-19	Special-status Plants	Mitigation is needed to address impacts to Stebbins' phacelia if assumptions regarding effects from changes in Hell Hole elevations are wrong.	The analysis provided in the DLA, Volume 3, Exhibit E, Section 8.6, was developed based on best available information, including the known presence of Stebbins' phacelia populations along the Hell Hole Reservoir shoreline and modeled Hell Hole Reservoir water surface elevation fluctuations. During the term of the license, PCWA will conduct surveys for Stebbins' phacelia populations along the perimeter of Hell Hole Reservoir, in conjunction with special-status plant inventory surveys, to document population trends. PCWA will consult with the resource agencies on the results from this on-going monitoring program.

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
RA-20	Whitewater Boating Opportunities	<p>The whitewater boating opportunity days use a number of assumptions, including the minimum acceptable flows for each of the runs identified in the DLA. The resource agencies do not agree that all of these minimum acceptable flows are appropriate. Using different minimum acceptable flows would alter the number of whitewater boating opportunities and perhaps the conclusions in this section that whitewater boating opportunities are maintained or enhanced for all runs in the peaking reach. Another consideration when analyzing whitewater boating opportunity days is how real the opportunities are for users if there is insufficient information and fore knowledge that the opportunity exists. This is particularly true for commercial whitewater outfitters that need scheduled flows well in advance in order to operate their businesses. While "private" boaters may be more flexible in taking advantage of "opportunistic" flows, this does not provide the same type of access as required scheduled recreation flows which recreationalists can plan on in advance. The whitewater boating opportunity analysis in the DLA also includes assumptions on the acceptable timing of flows for the various runs in the peaking reach.</p> <p>While the DLA does provide whitewater boating flows in Volume 3, Exhibit E, Book 3, the resource agencies believe that in some instances the proposed recreation flows in the DLA may be less than what has actually been provided in the past for all water year types.</p>	<p>The analysis of whitewater boating opportunities in the License Application used the best available information regarding minimal acceptable flows in each of the river reaches.</p> <p>See response to comment FWN-18 regarding schedule and timing of flows.</p>
RA-21	Hell Hole/French Meadows Reservoir Access	The reservoir minimum pool analysis does not address the issue of access to the upper portion of Hell Hole or the shallow water depths at the upper end of the French Meadows Reservoirs. Nor does the analysis address obstacles (e.g., tree stumps) in French Meadows Reservoir, and the related affect on recreational use of the reservoirs (REC 3 – TSR (PCWA 2010))....Provide an analysis regarding the effects of implementing an action. Additionally, the minimum pool analysis should provide information regarding water surface elevation, as well as water volume and the effects to recreationists.	Volume 3, Exhibit E, Section 8.9 was revised to describe how implementation of the Proposed Action affects reservoir recreation opportunities and access in Hell Hole and French Meadows reservoirs relative to the No-Action Alternative.
Volume 3, Exhibit E, Section 8.11 Aesthetic Resources Environmental Effects			
RA-22	Aesthetics	The resource agencies list a number of general comments related to aesthetic resources.	Volume 3, Exhibit E, Section 7.11 and Section 8.11 were revised to address resource agency comments. All comments were incorporated except for those related to the French Meadows Powerhouse Upgrade Betterment. This betterment was removed from consideration after the filing of the PAD and was not included in the Proposed Action in the License Application.
Volume 3, Exhibit E, Section 9.0 Cumulative Effects Analysis			
RA-23	Cumulative Effects Analysis - Instream Flow	...cumulative effects of the flow changes in the project should not be limited to a comparison with the no-action alternative, which is essentially the existing condition. Cumulative project effects of instream flows are, in many cases, more appropriately compared to pre-project hydrologic conditions.	<p>Volume 3, Exhibit E, Section 9.0 has been revised.</p> <p>In addition, for a complete discussion of unimpaired flows in the bypass and peaking reaches see the 2005-2006 Hydrology Study Status Report (September 2007).</p>
RA-24	Cumulative Effects Analysis - Terrestrial Resources	The cumulative effects analysis for terrestrial resources, specifically sensitive plants, is missing.	In Volume 3, Exhibit E, Section 9.0 sensitive plants were not identified as a target resource that may be affected cumulatively by the incremental actions of the MFP in combination with other past, present, and reasonably foreseeable actions.
Volume 3, Exhibit E, Section 11.0 Economic Analysis			
RA-25	License Term	The draft license application (DLA) evaluates project economics assuming a 50-year period of analysis (based on a requested 50-year license term). This is inconsistent with the approach used by the Federal Energy Regulatory Commission for evaluating the economics of hydropower projects, as articulated in the Mead Corporation, Publishing Paper Division decision. As specified in this decision, FERC applies a 30-year period in all economic analyses. The licensee should revise their economic analysis to reflect a 30-year period of analysis.	<p>See response to comment FWN-2.</p> <p>In addition, all the information necessary for FERC to evaluate Project economics is provided in the FLA, regardless of the License Term. If a shorter license term (i.e., 30 years) was used in an analysis, the annualized costs associated with implementation of the Proposed Action would increase substantially.</p>

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, Section 11.0 Economic Analysis			
RA-26	Annualized Cost Calculation - Depreciation	...in Table 11-2 and 11-3 of the DLA, PCWA includes depreciation as a component of the annualized cost of the project. The depreciation value used is about \$10 million for the No-Action and Proposed Action alternatives, which is a substantial component of the approximately \$26,000,000 and \$28,000,000 annual cost of the two project alternatives, respectively...In the absence of a reasonable explanation as to why it is appropriate to include depreciation as an element of the annualized cost of the project alternatives for the MFAR Project, we believe depreciation should be removed from the annualized cost calculation.	Volume 3, Exhibit E, Section 11.0, Tables 11-2 and 11-3 of the License Application are intended to present all cost information associated with the No-Action and Proposed Action alternatives, respectively. This includes depreciation expense. PCWA's intent is to provide all cost information associated with the Middle Fork Project to FERC for their analysis, therefore, the line item for depreciation will remain in Tables 11-2 and 11-3 and no change will be made. It is ultimately FERC's decision what cost data it will include and analyze in its environmental document. PCWA believes in providing FERC with as much information as possible so that educated decisions can be made. Depreciation costs have been included in numerous License Applications filed by other licensees.
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
RA-27	Bald Eagle Management Plan	The resource agencies participated in the development of this management plan and have no comments specific to the plan at this time. However, the resource agencies would like to discuss whether there are potential project effects that warrant the need to prepare an Avian Collision and Electrocutation Plan that addresses raptors other than bald eagle.	The Bald Eagle Management Plan (BEMP) (Volume 3, Exhibit E, SD A) includes measures that would be implemented to reduce the risk of bald eagle collision and electrocution on Project power poles and powerlines. These measures were developed consistent with Avian Power Line Interaction Committee (APLIC) guidelines, which are protective of all raptor species, and not bald eagle specifically. Therefore, implementation of these measures (i.e., replacement of power poles and lines with raptor-safe configurations) would benefit all raptor species. In addition, resource and land management plans included in DLA, Exhibit E including the TSMP (SD A), Recreation Plan (SD A), VIPMP (SD A), and SMP (SD A) include measures to protect raptor nests and avoid disturbance of breeding raptors during implementation of routine and periodic maintenance, or during non-routine construction associated with special projects described in those plans. These measures include implementation of limited operating periods, activity buffers around active nests, pre-construction surveys, and consultation with resource agencies as necessary to develop appropriate measures to protect raptor nests. Implementation of measures included in the DLA, Exhibit E, would provide protection for raptor species on Project power poles and lines, as well as during implementation of other proposed routine or non-routine activities. Therefore, preparation of an Avian Collision and Electrocutation Plan will not be necessary.
RA-28	Vegetation and Integrated Pest Management Plan	For the AP measures in the VIPMP, include language to indicate that the VIPMP has not been finalized and agreed upon. The list of AP measures must come from the approved VIPMP.	The VIPMP included in the License Application (Volume 3, Exhibit E, SD A) represents PCWA's proposal. Currently, PCWA and relicensing participants have not agreed on the content of the VIPMP. PCWA is committed to continuing discussions on the VIPMP with relicensing participants, including development of AP measures. These discussions are proposed to occur in March through June 2011 following submittal of the FLA. If consensus is reached, supplemental information will be prepared and filed with FERC.
RA-29	Vegetation and Integrated Pest Management Plan	The resource agencies have participated in efforts to develop an appropriate Vegetation and Integrated Pest Management Plan; however, we continue to have similar concerns to those we have expressed throughout the time the plan has been being developed.	See response to comment RA-28.
RA-30	Instream Flow and Reservoir Minimum Pool Measure	The resource agencies proposed substantial changes to the Instream Flow and Reservoir Minimum Pool Measure and requested further discussion on a number of flow-related topics.	See response to comment FWN-23.
RA-31	Instream Flow and Reservoir Minimum Pool Measure (initiation of motion)	Pulse flows based entirely on Initiation of Motion for spawning gravel do not take into account the full range of channel maintenance objectives. Objectives should include maintenance of all essential attributes or a properly functioning channel including; <ul style="list-style-type: none"> • Maintenance of long-term sediment balance • Maintenance of appropriate riparian vegetation • Maintenance of streambank stability • Maintenance of functioning floodplains (construction, inundation, nutrient exchange) • Prevention of in-channel vegetation encroachment;7) Maintenance of complex channel morphology. 	Numerous aquatic, geomorphic, and riparian technical studies were completed as part of the relicensing to assess the existing conditions. The existing hydrology is maintaining channel conditions (low fine sediment concentrations in pools and gravels; stream bank stability) and riparian resources (recruitment, species composition diversity). The Proposed Action maintains or enhances the existing channel conditions and riparian resources by scheduling spring pulse flows with specified magnitudes, down ramp rates, timing, frequency, and duration. The Proposed Action maintains/enhances the number of initiation of motion days, riparian recruitment days, and days of high magnitude scouring flows. The Proposed Action also includes down ramping rates for spill events. <p>A full range of benefits were considered in the development of the spring pulse flows in addition to initiation of motion, including:</p> <ul style="list-style-type: none"> • Riparian vegetation (timing, down ramping rates, duration, magnitude for overbanking) • Water temperature (timing, magnitude) • Accretion along the length of the river reaches (magnitude, duration, and ramping rates) • Aquatic biotic including fish, BMI, and foothill yellow-legged frogs (timing, ramping rates, duration, and magnitude) • Channel conditions (magnitude, frequency, duration)

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
RA-32	Instream Flow and Reservoir Minimum Pool Measure (initiation of motion)	<p>Modeling appears to be based on the transport model (a model for mixed sand/gravel sediments) by Wilcock and Crowe (2003); however, how closely the details of the methodology used follow Wilcock and Crowe's method is not entirely clear. It needs to be clarified which elements of the methodology used were adaptations/deviations from the Wilcock and Crowe method.</p> <p>"The discharge at which initiation of motion occurred for 25 percent of the gravel [with gravel being defined as spawning gravel ranging from 0.3-2.5 inches (8-64 mm)] within the portion of the channel wetted at the high flow calibration discharge was used as the initiation of motion threshold (SD-B, AQ1, p. 23)." Target and actual instream flow modeling calibration flows are shown in Table AQ 1-5 (SD-B, AQ1, p. 58). Actual instream calibration flow was, in some instances, considerably lower than the target instream calibration flow. For example: (1) Hell Hole dam, the highest target calibration flow was 315cfs and the actual calibration flow was 77cfs; (2) Middle Fork Interbay, the highest target calibration flow was 374cfs and the actual calibration flow was 188cfs; and (3) for the Rubicon River below SF Rubicon River, the highest target calibration flow was 370cfs and the actual calibration flow was 130-218cfs."</p>	<p>The equations in Wilcock and Crowe (2003) were used to calculate the critical dimensionless shear stress needed to mobilize the sediment as they are presented in the paper without any deviations. No adaptations or deviations from the method outlined in Wilcock and Crowe (2003) occurred, with the one exception that is stated on page G-4 in AQ 1 - Instream Flow TSR (Volume 3, Exhibit E, SD B), Appendix G: 'The reference shear stress values presented in Wilcock and Crowe (2003) were converted to critical shear stress values by reducing the reference shear stress by 10%, per Wilcock 1998.'</p> <p>The calibration flows were primarily designed to assist in instream flow modeling (AQ 1 – Instream Flow TSR). They were also used to develop the hydraulic models for determining the initiation of motion. The hydraulic models are applicable to a wide range of discharges. Initiation of motion was determined by using the hydraulic model estimates of bed shear stress (τ) and by using Shield's criterion that defines the critical shear stress (τ_{ci}) at which incipient motion occurs. The bed shear stress obtained from the hydraulic models and the Shield's criterion were used to determine the amount of gravel mobilized over a range of flows (see the flow range in Table AQ 1-6). Wilcock's (1996) method was used to calculate bed shear stress and the Wilcock and Crowe (2003) method was used to calculate the critical shear stress needed to initiate sediment movement for mixed-size sediment.</p>
RA-33	Instream Flow and Reservoir Minimum Pool Measure (initiation of motion)	In the licensee's study, for the surface layer for bulk samples used in initiation of motion calculations, "surface" was defined as "a depth equal to the maximum particle size. (SD-B, AQ1, p. 22)." It is not clear whether the maximum particle sizes were used to define the "surface" layer at each site. It would seem that large maximum particle sizes could affect the transport estimates by effectively turning a "surface sample" into a bulk sample. Predicting transport from bulk grain size is potentially a problem because "uncontrolled variation in the relevant initial and boundary conditions imposes unpredictable variability in transport rate (Wilcox and Crowe 2003, p. 120)."	Grain size (percentages and sizes of sand and gravel) of surface sediments and sub-surface sediments (referred to as 'bulk sediment' and 'substrate' in Wilcock and Crowe [2003]) in the stream channels were determined by collecting and analyzing bulk samples collected from the surface and sub-surface, respectively. The depth of the surface bulk sample was based on the maximum particle size of the surface sediments within the sampling area, not of the substrate.
RA-34	Instream Flow and Reservoir Minimum Pool Measure (initiation of motion)	"Approximately 37 percent of the initiation of motion cross-sections were located in the tailout areas of pool habitat units. The remaining cross-sections were located in other types of habitats (e.g. runs, low gradient riffles, high gradient riffles, pools) or complicated boulder channels. Some of these other habitat types were not as well-behaved for the hydraulic and sediment transport modeling (e.g. uncertain hydraulics or exhibited extremely high flows for initiation of motion). Problem sites were not included in the analysis (SD-B, AQ1, p. 23)." Please clarify the percentage of sites that were actually included in the analysis and the breakdown (habitat types, individual reaches) of sites that were and were not included.	All the transects used for the sediment transport analysis are included in Table G-1, in AQ 1 – Instream Flow TSR (Volume 3, Exhibit E, SD B). Thirty transects, plus two ¾-mile long 2D modeling sites, were used for the sediment transport analysis. Of these transects, five transects were not 'well-behaved' (16%) and were excluded from the sediment analyses. A footnote (in the "Site" column) explains the rationale for not including each of these transect in the sediment analyses. The habitat types of each of the transects are shown in Table G-1, in the AQ 1 – Instream Flow TSR.
RA-35	Instream Flow and Reservoir Minimum Pool Measure (initiation of motion)	Initiation of motion calculations are based on the composition of the existing channel bed. Over time, however, the project may affect the composition of the channel bed due to trapping of sediment at reservoirs, infrastructure modifications, and sediment augmentation activities.	The MFP has been in operation since 1963. The channels appear to be in quasi-equilibrium. The Proposed Action is designed to maintain channel processes and conditions.
RA-36	Recreation Plan	The resource agencies offered an alternative Recreation Plan to the plan proposed in the DLA to assist continued collaboration to develop a mutually agreeable final Recreation Plan.	See response to comment FWN-37.
RA-37	Recreation Plan - Special-status Plants	The AP measures for the Recreation Plan need to be developed (none were found in the RMP). A botanist needs to be included at the outside of project design if sensitive plant species are known to be present or if the project area has not been recently surveyed.	The Recreation Plan (Volume 3, Exhibit E, SD A) includes AP measures for the protection of special-status plants in Table 8, Resource Protection Measures for Activities Identified in the Recreation Plan. See response to comment FWN-37.
RA-38	Recreation Plan - Special-status Plants	Activities identified in the resource agency recreation plan could impact Stebbins' phacelia in the Hell Hole area, specifically.	Volume 3, Exhibit E, Section 8.6 provides an analysis of potential impacts to special-status plants, including Stebbins' phacelia, from implementation of the Proposed Action. The resource agency recreation plan was included as part of USDA-FS comments on the DLA and, therefore, was not analyzed in the DLA. See response to comment FWN-37.
RA-39	Recreation Plan - Special-status Plants	No protection measures for sensitive plants were found here although the Environmental Effects section for Botanical and Wildlife Resources refer to some measures.	Table 8 of the Recreation Plan (Volume 3, Exhibit E, SD A) includes AP measures for the protection of special-status plants. The biological resource measures include: vegetation and noxious weed management measures, riparian measures, special-status plant measures, Stebbins' phacelia site-specific measures, and raptor measures.

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
RA-40	Flow and Reservoir Monitoring Plan	The resource agencies propose changes to the Flow and Reservoir Monitoring Plan.	See response to comment FWN-23.
RA-41	Monitoring Plans	<p>The resource agencies propose changes to the following Plans:</p> <ul style="list-style-type: none"> • Fish Population Monitoring Plan • Foothill Yellow-legged Frog Monitoring Plan • Water Temperature Monitoring Plan • Fire Prevention and Suppression Plan 	<p>PCWA incorporated the majority of the resource agency comments into the revised Fish Population Monitoring Plan (FPMP) (Volume 3, Exhibit E, SD A), including hardhead radio tagging, interim monitoring in the Rubicon River, and surveys in the peaking reach specifically focused on young fish, with the following exceptions:</p> <ul style="list-style-type: none"> • Three years of fish surveys (years 2-4) focused on detecting and quantifying young-of-the-year and juvenile fish in the peaking reach were incorporated into the FPMP rather than the proposed five years (years 1-5). • See response to comment FWN-22 about the potential future reintroduction of anadromous fish above Nimbus and Folsom dams. <p>PCWA incorporated the resource agency comments into the revised Water Temperature Monitoring Plan (WTMP) (Volume 3, Exhibit E, SD A). PCWA will monitor temperatures on all the bypass and peaking reaches, as well as on the North Fork of the Middle Fork American River (1 site) and North Fork American River (2 sites).</p> <p>PCWA incorporated the majority of the resource agency comments into the revised Foothill Yellow-legged Frog Monitoring Plan (FYLFMP) (Volume 3, Exhibit E, SD A), including additional monitoring locations, additional sampling during each monitoring period, additional analysis methods, monitoring during the fall maintenance outage for the first three years, and monitoring after emergency outages in the bypass reaches, with the following exceptions:</p> <ul style="list-style-type: none"> • Three years of surveys during the first five years were incorporated into the FYLFMP rather than the proposed five years of surveys during the first five years. • After the first five years, the survey schedule in the FYLFMP is the same schedule as other aquatic monitoring plans (years 7,8,13,14, and thereafter for two consecutive years during every ten-year period for the term of the license) rather than the more extensive proposal by the resource agencies to sample FYLF in four years out of every ten-year period (see discussion below on coordinated timing of studies). • Surveyor and sampling bias will be reduced in the FYLFMP by using only highly experienced survey personnel; using the same protocols for all surveys through the license term; and training of all personnel on the survey protocols prior to each field season rather than the proposed double observers or some other type statistical method of incorporating error. • Increased monitoring frequency at the end of the new license period was not incorporated into the FYLFMP (i.e., last three years of the license). <p>PCWA has modified the applicable monitoring plans to include coordination of timing and locations of data collection. In addition, all of PCWA's monitoring plans include a section reporting and agency consultation after each report.</p> <p>PCWA has incorporated all the resource agency comments in the revised Fire Prevention and Suppression Plan (Volume 3, Exhibit E, SD A).</p>

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
RA-42	Sediment Management Plan	The resource agencies propose changes to the Sediment Management Plan.	All resource agency comments were accepted and incorporated into a revised Sediment Management Plan (Volume 3, Exhibit E, SD A) that is included in the FLA. The SMP has been revised to include the following: <ul style="list-style-type: none"> • Methylmercury monitoring at Ralston Afterbay during sediment management activities • LWD relocation and monitoring • List of required permits • Turbidity monitoring plan for SPT • Vegetation removal at toe of augmentation area, Table 5 discrepancy • Description of vegetation treatment and consultation • Ralston Afterbay hardhead monitoring during sediment removal • FYLF surveys at the sediment augmentation areas in the peaking reach • Reservoir elevation and minimum instream flow requirement during sediment removal at Ralston Afterbay
RA-43	Transportation System Management Plan	The resource agencies propose changes to the Transportation System Management Plan.	All resource agency comments were addressed in the TSMP (Volume 3, Exhibit E, SD A), with the following exceptions: <ul style="list-style-type: none"> • Improvements to Hell Hole Boat Ramp are discussed in the Recreation Plan and are therefore not discussed in the TSMP. • Dispersed sites are not discussed in the TSMP because they are not MFP facilities. • Repairs to Brushy Canyon Adit Road are not discussed in the TSMP because these repairs will be completed in 2011 or 2012, prior to license issuance, pending approval by the USDA-FS. • The portion of Road 14N16A used exclusively by PCWA for operation of the MFP is a Project road (included in FERC Project boundary) and is included in the TSMP. The remainder of the road, which is open to the public, and not used exclusively by PCWA is a general access road. • Non-project general access roads are not included because they are not under FERC jurisdiction (see response to comment RA-5).
RA-44	Transportation System Management Plan - Special-status Plants	AP measures for the Transportation System Management Plan (TSMP) should include the possibility of Limited Operating Periods to allow for activities that could occur with reduced impacts depending on the phenology of Sensitive plants at the time of activities.	Measures to protect special-status plant populations during annual and periodic road and trail maintenance are included in the TSMP (Volume 3, Exhibit E, SD A). As defined in Volume 3, Exhibit E, Section 8.6 of the DLA, these measures avoid impacts to special-status plant populations at all but two roads—Brushy Canyon Adit Road and Hell Hole Dam Spillway Discharge Channel Road. At these two locations, Stebbins' phacelia is growing within the graveled road surface where road maintenance activities must be implemented for continued operation and maintenance of the MFP. Road maintenance would include grading and graveling the road surfaces. These maintenance activities must be conducted during the sensitive period for Stebbins' phacelia (April–August) to maintain safe access to Project facilities. Therefore, impacts to Stebbins' phacelia at these locations have been identified in the Exhibit E.
RA-45	Geomorphology Monitoring Plan	The resource agencies identified that the Geomorphology Monitoring Plan was not included in the DLA and recommend that the plan be collaboratively developed and agreed upon.	The FLA includes a combined Geomorphology/Riparian Monitoring Plan (Volume 3, Exhibit E, SD A).
RA-46	Riparian Monitoring Plan	The resource agencies identified that the Riparian Monitoring Plan was not included in the DLA and recommend that the plan be collaboratively developed and agreed upon.	The FLA includes a combined Geomorphology/Riparian Monitoring Plan (Volume 3, Exhibit E, SD A).
RA-47	Visual Management Plan	The resource agencies identified that the Visual Management Plan was not included in the DLA and recommend that the plan be collaboratively developed and agreed upon.	The FLA includes a Visual Resource Management Plan (Volume 3, Exhibit E, SD A) incorporating resource agency recommendations except for the following: <ul style="list-style-type: none"> • The resources agencies recommend painting the yellow handrails at the South Fork Long Canyon Creek Diversion Dam matte black. The handrails at the South Fork Long Canyon Creek Diversion dam are painted yellow for safety reasons. Under the Proposed Action, the South Fork Long Canyon Creek Diversion Dam will be modified. USDA-FS will be consulted during final design of the project which includes consideration of visual quality objectives. • Electrical components at Ralston Powerhouse will remain white to reduce heat. • In certain cases, the timeframe for implementation of measures will occur as part of normal facility maintenance.

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Reference	Topic Area	Comment	Response
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
RA-48	Additional Management and Monitoring Plans Proposed by Resource Agencies	The resource agencies proposed additional monitoring plans that were not included in the DLA, including: (1) Water Quality Monitoring Plan; (2) Bioaccumulation Monitoring Plan; (3) Benthic Macroinvertebrate Monitoring Plan; (4) Western Pond Turtle Management Plan; (5) Mollusk Management Plan; and (6) Sensitive Plant Monitoring Plan.	The FLA includes a Water Quality Monitoring Plan, Mercury Bioaccumulation Monitoring Plan, Benthic Macroinvertebrate Monitoring Plan, and Western Pond Turtle Management Plan (Volume 3, Exhibit E, SD A). A Mollusk Management Plan will be developed in collaboration with the resource agencies if <i>Margaritifera falcata</i> is designated a USDA-FS Sensitive Species. Monitoring of sensitive and invasive (e.g., noxious weed species) plants is included in the VIPMP, along with an implementation schedule.
RA-49	Sensitive Plant Monitoring Plan	The plan should address the schedule of implementation. Stebbins' phacelia and periodic monitoring for new occurrences would be included as well as monitoring for infestations of invasive plant species within sensitive plant occurrences. The plan should address any new listings of special status plant species and monitoring for their existence.	Monitoring of sensitive and invasive (e.g., noxious weed species) plants is included in the VIPMP (Volume 3, Exhibit E, SD A), along with an implementation schedule (Volume 3, Exhibit E, SD A, VIPMP Section 5.1 - Special-status Plant Inventory Surveys, Section 3.2.1 - Noxious Weed Management, and Section 5.2 - Target Noxious Weed Inventory Surveys). Therefore, a Sensitive Plant Monitoring Plan would not be necessary.
Volume 3, Exhibit E, SD B: Final Technical Study Reports			
RA-50	REC 5 TSR	The resource agencies reviewed the Final Visual Quality Assessment Report (REC 5) and provided additional comments.	The Draft REC 5 – Visual Quality Assessment TSR (Volume 3, Exhibit E, SD B) was distributed on March 27, 2009 for a 60-day review and comment period, with comments due on May 26, 2009. No comments were received. Accordingly, PCWA finalized the report and notified relicensing participants that the final report was available on June 5, 2009. The USDA-FS subsequently provided comments on the Final REC 5 – TSR, which PCWA addressed in collaboration with the USDA-FS. PCWA subsequently issued a revised Final REC 5 –TSR on August 26, 2009. The Final REC 5 – TSR is included in Volume 3, Exhibit E, SD B of the FLA. New comments provided by the USDA-FS are addressed in Volume 3, Exhibit E, Sections 7.11 and 8.11 of the FLA, as applicable.
Volume 3, Exhibit E, SD C: Biological Assessment/Biological Evaluation (BA/BE)			
RA-51	Adequacy of Protection Measures and Impact Conclusions	The resource agencies did not participate in the development of this document and do not necessarily agree with the adequacy of protection measures or the conclusions regarding impacts that are contained within the document.	The BA/BE (Volume 3, Exhibit E, SD C) was provided to resource agencies for review and comment as part of the DLA. The objective of providing the BA/BE was to obtain specific comments on the document, including the effects determinations and the appropriateness of AP measures. PCWA is available to discuss with the resources agencies any comments on the BA/BE. USFWS reviewed the BA/BE and determined that it included the necessary information to analyze potential Project effects consistent with Section 7 of the ESA.
RA-52	Special-status Plants and Wildlife	The BA/BE needs to address the special-status plants and wildlife that have potential habitat within the project area even if they have not been identified.	The BA/BE (Volume 3, Exhibit E, SD C) addresses all special-status species that are known to occur in the MFP based on the best available data, as well as those species that have the potential to occur based on available habitat and the elevation and geographic range of the species (refer to Section 5.0, 6.0, and 8.0 and Tables 1 and 2).
RA-53	Future Changes to Current Special-status Species List	The BA/BE needs to address that the current list of special-status plant species will change during the life of the license.	Section 6.0 of the BA/BE (Volume 3, Exhibit E, SD C) has been revised to incorporate this comment.
RA-54	VIPMP	Under Section 2 (Consultation), the BA/BE states that specific topic areas pertinent to this BA/BE that were developed include Vegetation and Integrated Pest Management Plan (VIPMP). This topic area is still being developed. The effects of a plan that has not been developed cannot be properly analyzed.	See response to comment RA-28.
Volume 5, Exhibit E, SD E: Historic Properties Management Plan			
RA-55	Process for Unavoidable Adverse Effects	There are four National Register eligible Native American sites located within the APE of the MFP. All of these sites are located within or near Project Recreation facilities on federal public lands administered by the Eldorado National Forest. The DLA and the HPMP list a variety of activities that have the potential to adversely affect these Historic Properties ranging from routine and heavy maintenance to removal, reduction and consolidated of the recreation facilities. However, other than identifying avoidance measures such as design and the use of buffers, there is nothing included within the DLA or the HPMP that arrays the process if adverse effects are unavoidable.	The HPMP (Volume 5, Exhibit E, SD E) has been revised to address this concern. Specifically, the HPMP was revised to: (1) further describe PCWA's site condition monitoring efforts; and (2) describe the process that PCWA will implement if an adverse impact to an NRHP-eligible site is identified.
RA-56	Appendix C - Activities Exempt from Further Review	In addition, the EI Dorado National Forest has reviewed HPMP Appendix C - Activities Exempt from Further Review. The HPMP identifies these activities as exempt from further evaluation. The ENF strongly disagrees with the inclusion of several of these activities due to the above concerns, including, but not limited to, the construction of new project facilities and non-routine recreation facility activities.	Appendix C of the HPMP (Volume 5, Exhibit E, SD E) identifies all of the elements of the Proposed Action that were evaluated in the License Application. Procedures for addressing new projects (e.g., new construction projects and non-routine recreation facility activities) are specified in Sections 8.0 and 11.0 of the HPMP.

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Reference	Topic Area	Comment	Response
Volume 5, Exhibit E, SD E: Historic Properties Management Plan			
RA-57	Section 106 Compliance	It is unclear as to how Section 106 obligations are incorporated in the DLA, as the development on an HPMP is a standard component of FERC's two party Programmatic Agreements (PA) in consultation with SHPO. The execution of the PA and its subsequent implementation satisfies FERC responsibilities per the Section 106 of the National Preservation Act, as amended for all actions carried out under the license. However, the DLA does not make mention of an anticipated PA or include a discussion of compliance under the full 36 CFR 800 process, only the process up to 36 CFR 800.4.	Section 1.0 of the HPMP (Volume 5, Exhibit E, SD E) , has been revised to include a discussion of the process FERC will implement to complete Section 106 obligations after submittal of the FLA.
RA-58	SHPO Review of Draft DLA and HPMP	Additionally, it is unclear if SHPO received the DLA (not on the distribution list) or the draft HPMP for their review and comment.	The Draft HPMP included in the DLA was not submitted to the SHPO for review and comment. PCWA will provide the SHPO with a copy of the Draft HPMP when the FLA is filed.
RA-59	Tribal Resources - Traditional Gathering	Both the DLA and HPMP addresses Tribal resources and issues related to cultural resources. However, it is unclear if non-cultural resource issues have been raised or what processes will be undertaken to consult with Tribes outside of cultural resource sites. Of particular concern is Traditional Gathering. As it appears not to be addressed in the DLF Tribal Resources section or HPMP, it is unknown if this is an issue. However, it is one such activity or practice that a consultation process should be established. At present it is not. Compounding this issue is the fact that, at present, herbicides and pesticides are included as 'Activities Exempt from Further Evaluation' in the HPMP.	The HPMP (Volume 5, Exhibit E, SD E) has been revised to incorporate measures to protect traditional gathering areas from implementation of Project activities (e.g., VIPMP).
United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service Comment Letter Dated December 17, 2010; Filed with FERC December 20, 2010 (20101220-5100)			
Volume 3, Exhibit E, Section 12.5 Consistency with Comprehensive Plans			
NOAA-1	Biological Opinion and Draft Recovery Plan - Steelhead	NOAA's National Marine Fisheries Service (NMFS) is filing electronically NMFS' " <i>Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and California State Water Project</i> " (OCAP Biological Opinion), dated June 4, 2009, and NMFS' " <i>Public Draft Recovery Plan for Central Valley Winter-run and Spring-run Chinook Salmon and Steelhead</i> " (Draft Recovery Plan), dated October 7, 2009, with the Federal Energy Regulatory Commission (FERC or Commission) as information to be considered during the relicensing proceedings for the Middle Fork American River Hydroelectric Project, FERC Project No. P-2079, Middle Fork American River, California.	Comment noted.
United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service Comment Letter Dated December 21, 2010; Filed with FERC December 22, 2010 (20101222-5007)			
Volume 3, Exhibit E, Section 8.5 Fish and Aquatic Resources Environmental Effects and Section 12.5 Consistency with Comprehensive Plans			
NOAA-2	Reintroduction of Steelhead	NMFS emphasizes that future reintroduction of migratory anadromous fishes to areas of the American River upstream of the U.S. Bureau of Reclamation's (USBR) Nimbus and Folsom dams should be considered in the design, planning, implementation, and operations of the Project.	See response to comment FWN-22.
United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service Comment Letter Dated January 10, 2011; Filed with FERC January 13, 2011 (20110113-5012)			
Volume 3, Exhibit E, Section 12.5 Consistency with Comprehensive Plans			
NOAA-3	Re-filing Biological Opinion	NOAA's National Marine Fisheries Service (NMFS) is re-filing electronically NMFS' entire " <i>Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and California State Water Project</i> " (OCAP BiOP), dated June 4, 2009 (including Appendices and Essential Fish Habitat Recommendations). The entire OCAP BiOP now enclosed should be considered during the relicensing proceedings for the Middle Fork American River Hydroelectric Project, FERC Project No. P-2079, Middle Fork American River, California.	Comment noted.

Appendix D. Response to Comments on the Draft License Application.

Reference	Topic Area	Comment	Response
Williams, Donna - Member of the Public Comment Letter Dated October 4, 2010; Filed with FERC October 13, 2010 (20101013-0054)			
Volume 3, Exhibit E, Section 8.9 Recreation Resources Environmental Effects			
DW-1	Project Nexus - Trails	Require that the nexus sphere of influence include the American River Canyon recreation trails and their PM&E.	<p>None of the trails located in the American River Canyon downstream of Oxbow Powerhouse (i.e., in ASRA) are within the FERC Project boundary. Recreation trails that lie outside of the FERC Project boundary are not under FERC jurisdiction and are therefore not the responsibility of the licensee.</p> <p>With the possible exception of stream crossing, operation and maintenance of the MFP does not affect recreation trails in the Middle Fork American River Watershed (Watershed) or in the Auburn Project Lands. Stream crossing at specific locations along the bypass and peaking reaches was addressed as part of the REC 4 – Stream-based Recreation Opportunities TSP, which was developed in collaboration with the Recreation TWG. Stream crossing conditions and opportunities along the bypass and peaking reaches are documented in detail in the REC 4 – Stream-based Recreation Opportunities TSR.</p>
Volume 3, Exhibit E, SD A: Proposed Environmental Measures			
DW-2	Recreation Plan - Bridges	Require as part of the relicensing the restoration of recreation access across the Middle Fork by mandating the rebuilding of the Greenwood Bridge and a new bridge to replace the lost crossing at the Coffer Dam tunnel.	<p>Greenwood Bridge. Greenwood Bridge was destroyed in 1964 when Hell Hole Dam failed while under construction. PCWA was absolved by several courts of law of responsibility for damages related to the Hell Hole Dam failure.</p> <p>Lost Crossing at the Coffer Dam tunnel. Dry crossing in the vicinity of the Coffer Dam tunnel was lost when the Coffer Dam tunnel was closed and the river was restored to its natural channel by the USBR. Before proceeding with the Project, the USBR and PCWA prepared a joint American River Pump Station Project Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (USBR and 2002). The EIR/EIS identified the loss of the trail crossing as a significant and unavoidable impact on recreation resources. To mitigate their "fair share" of the impact, PCWA committed to allocating "a maximum of \$500,000 towards future construction of a river crossing or similar mitigation – if, after a project-specific NEPA/CEQA process, the USBR and CDPR choose to proceed with such a crossing" (USBR/PCWA, 2002). To date, neither the USBR nor CDPR have committed to developing the crossing.</p>
DW-3	Recreation Plan - Funding	Require the establishment and permanent funding of a recreational PM&E advisory board made up of elected officials from the various non-profit recreation boards that serve the communities within the Middle fork watershed; The dedicated funding to come from the power and the water revenues from the Middle Fork of the American River.	PCWA is not responsible for enhancing recreation in the Watershed or funding the establishment of a recreational PM&E advisory board. The Recreation Plan (Volume 3, Exhibit E, SD A) describes commitments by PCWA for <u>Project-related</u> recreation in the vicinity of the MFP.

¹20101116-0009 (Duplicate of Patricia Gibbs filed November 15, 2010_20101103-5003)²20101228-0016 (Duplicate of SWRCB filed December 28, 2010_20101223-5101)

**Federal Energy Regulatory Commission
Comment Letter Dated November 8, 2010;
Filed with FERC November 8, 2010 (20101108-3030)**

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON D.C. 20426
November 8, 2010

OFFICE OF ENERGY PROJECTS

Project No. 2079-061 – California
Middle Fork American River Project
Placer County Water Agency

Julie Leimbach, Coordinator
Foothills Water Network
P.O. Box 713
Lotus, CA, 95651

Reference: Response to Request for Extension of Comment Period on Draft License Application

Dear Ms. Leimbach:

On October 20, 2010, you filed, on behalf of the Foothills Water Network, a request that the Commission grant an extension of the deadline for filing comments on Placer County Water Agency's (PCWA) draft license application (DLA) for the Middle Fork American River Project relicensing. Comments on the DLA are due to PCWA by December 27, 2010. The basis for your request is that PCWA has three outstanding relicensing studies (Entrainment, Bioenergetics, and Reservoir Fish Habitat) and three outstanding management plans (Visual, Geomorphology, and Riparian Monitoring) that have not yet been completed and are therefore not discussed in the DLA.

PCWA's final license application is due by February 28, 2011, and will include the three outstanding relicensing studies and the three outstanding management plans listed above. Pursuant to 18 CFR § 5.22 of the Commission's regulations, when the Commission has determined that the final license application meets the requirements specified in §§ 5.18 and 5.19, we will issue public notice accepting the application for filing; finding that the application is ready for environmental analysis; requesting comments, protests, and interventions; requesting recommendations, preliminary terms and conditions, and preliminary fishway prescriptions; establishing the date for final amendments to applications for new or subsequent licenses; and updating the schedule issued with the tendering notice for processing the application. After issuance of this notice, stakeholders will have 60 days to provide comments on the final license application.

Since the deadline for filing comments on the DLA and the date by which PCWA must file their final license application are only two months apart, it does not appear to be necessary to extend the comment period on the DLA. We encourage you to comment on the material contained in the DLA by December 27, 2010, and then use the 60-day comment period on the final license application to provide comments on any new information that was not previously provided.

If you have any questions you may contact Carolyn Templeton at (202) 502-8785 or carolyn.templeton@ferc.gov.

Sincerely,

Ann F. Miles, Director
Division of Hydropower
Licensing

cc: Public Files
Mailing List
Service List

Andy Fecko
Placer County Water Agency
144 Ferguson Road
Auburn, CA 95603

Patricia Gibbs
5425 Lake Forest Drive
Loomis, CA 95650

Document Content(s)

P-2079-061Letter.DOC.....1-2

**Federal Energy Regulatory Commission
Comment Letter Dated December 22, 2010;
Filed with FERC December 22, 2010 (20101222-3037)**

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426
December 22, 2010

OFFICE OF ENERGY PROJECTS

Project No. 2079-061 – California
Middle Fork American Hydroelectric Project
Placer County Water Agency

Andrew Fecko, Resource Planning Administrator
Placer County Water Agency
144 Ferguson Road
Auburn, CA 95603

Subject: Comments on Draft License Application for the Middle Fork American Hydroelectric Project

Dear Mr. Fecko:

Pursuant to 18 CFR § 5.16(e), this letter contains Commission staff's comments on your draft license application (DLA) for the Middle Fork American Hydroelectric Project, filed on September 29, 2010.

We reviewed the DLA and determined that, in general, your DLA includes the necessary contents for a license application. In some instances, however, the description and analysis of your proposal lacks sufficient detail for Commission staff to conduct its required environmental analysis; and therefore, additional information requests and clarification questions are necessary.

Our additional information requests and clarification questions on the DLA are included in Appendix A.

Project No. 2079-061

2

If you have any questions regarding this letter, please contact Carolyn Templeton at (202) 502-8785, or via email at carolyn.templeton@ferc.gov.

Sincerely,

Timothy J. Welch, Chief
West Branch
Division of Hydropower Licensing

cc: Mailing List
Public Files

Project No. 2079-061

3

Appendix A Comments on the Draft License Application

Commission staff has identified that your draft license application (DLA) requires additional information and clarification regarding your licensing proposal. In our comments, we note the areas of the DLA where additional information will be needed in order for Commission staff to conduct its required environmental analysis.

Exhibit D

- On Page D-4 of your DLA, please add text or a footnote explaining how the depreciation expense was calculated, including the book value you used and rate of financing.
- On Page D-5 of your DLA, please include an estimate of the value of the project's power based on your existing power sales contract with Pacific Gas and Electric. Be sure to break out both the energy value and any capacity value.
- Please clarify if your estimates of project power shown on page D-5 of your DLA include capacity value.

Exhibit H

- On Page H-16 of your DLA, please clarify whether Placer County Water Agency (PCWA) serves any end-use customers and say how PCWA plans to sell the output of the project.

Historic Properties Management Plan

- In sections 2.2 and 5.6 of your Historic Properties Management Plan (HPMP), you cite an area of potential effects (APE) map and a map 6; respectively. However, these maps do not appear in the HPMP. Please provide these and all other maps and figures cited in the HPMP.

Document Content(s)

P-2079-061Letter Fecko.DOC.....1-3

**Foothills Angler Coalition
Comment Letter Dated December 26, 2010;
Filed with FERC December 28, 2010 (20101228-5006)**

Foot hills Angler Coalition
Comments on Placer
County Water Agency's
Draft License Application
For the Middle Fork
American River
Hydroelectric Project No.
2079



Healthy Watershed, Healthy
Fishery, Healthy Fish



Via Electronic Submittal

Hon. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

December 26, 2010

**RE: COMMENTS ON PLACER COUNTY WATER AGENCY'S
DRAFT LICENSE APPLICATION FOR THE MIDDLE FORK AMERICAN HYDROELECTRIC PROJECT #2079**

Dear Secretary Bose:

We are writing, pursuant to 18 CFR 5.18(e), in response to Placer County Water Agency's Draft License Application (DLA) for the Middle Fork American River Project, FERC No. 2079. The Foothills Angler Coalition ("FAC") submits this letter in response to Placer County Water Agency's September 27, 2010 submission of its Draft License Application for project # 2079. FAC is a member of the Middle Fork American River ("MFA") Working Group; as a member of that group, we have been ably represented by the Foothills Water Network ("FWN"), which has submitted its comments by separate letter. As specified below, FAC fully supports and has adopted the comments filed by FWN.

Before setting out our separate comments on certain issues, the following prefatory remarks are essential:

1. FAC is a duly organized and existing California non-profit corporation.
 2. FAC's Mission Statement reads as follows: "Mission Statement: The Foothills Anglers Coalition is a fisheries and aquatic habitat conservation organization dedicated to the protection and restoration of Sierra Nevada trout, steelhead, and salmon resources, along with their habitat and the Sierra Nevada foothill watersheds that sustain those resources, as well as the enhancement of the sport of fishing. We support an ecosystem-based approach to watershed management, and the protection and preservation of all native species, including wildlife and plant populations.
Vision Statement: Foothills Anglers Coalition will collaboratively work towards ensuring a healthy aquatic ecosystem, so that robust populations of native and anadromous fish species, as well as other animal and plant populations can once again thrive in the Sierra Nevada Foothill watersheds.
Core Principles and Values: Foothills Anglers Coalition promotes a science-based approach to fulfill our Mission & Vision Statements."
 3. FAC is fully supportive of all of the FWN comments, having signed them, and joins in and adopts those comments as a member of the MFA Working Group.
 4. It has always been the understanding and policy of the MFA Working Group that individual members have the option to submit separate comments on any specific issue, while joining in the FWN comments. This comment letter has been submitted pursuant to that policy.
 5. The views and opinions of FAC, as expressed in this document, may not necessarily reflect the views and opinions of any individual or organization listed in FAC's interest statement as supporting individual or organization.
1. **General comments.** As set forth above, FAC concurs with, joins in, and adopts FWN's comments on the DLA. We do, however, have a few additional comments of a general nature.
- 1.1 **Issues with the process.**
- a. **The DLA is not a "consensus" document.** Because insufficient time was allotted for discussions and negotiations regarding the peaking reach, consensus was not reached on the content of the DLA. Consensus may well have been reached, at least for most of the issues, had more meetings and time been allotted.

- b. Angling interest input minimized.** Throughout the process, the angling interest was treated in a manner significantly different than other interests. At the outset of the proceedings, an “angler focus group” meeting was held, from which erroneous, superficial information was drawn. Requests were made repeatedly for additional meetings, but until late in the process those requests were summarily denied. A second meeting was held in March of 2010, near the time when the negotiations were to begin. The angling interest was well represented at that meeting. The information that was generated from that meeting unfortunately did not find its way into the DLA. As “**Attachment A**” we have attached the summary of that meeting as prepared by Entrix, so that it is clear that it is part of the record, together with letters associated with requests for additional focus group meetings. The disparate treatment of the angling interest group by PCWA, and paucity of meetings with the angling interest group should be contrasted with the deferential treatment accorded, and the numerous meetings that were held with other interest groups, such as the whitewater boating interests. By way of example, in the Final REC-4 Technical Study Report, Exhibit E, there are approximately 806 pages devoted to whitewater interests, while there are only 93 pages devoted to the angling interest. This is not to say that it is inappropriate to devote that many pages to whitewater studies; rather, that may certainly be warranted. Nevertheless, there are issues associated with angling that are of equal import, but were not studied at all—which, of course, accounts for the seemingly inexplicable difference in study efforts.
- c. Studies relating to angling interest.** There are none. In the FWN comments there are requests for studies on angler safety and flow-related issues pertaining to angling. These studies should have been done in the same manner as they were for the boating interests, and the trail crossing interests. Another issue was created by PCWA’s repeated refusal to conduct fish-related and BMI related studies on the Horseshoe Bar Preserve property below the tunnel chute fish barrier despite repeated requests to do so. Leaving a significant portion of the peaking reach renders PCWA’s conclusions regarding fish and BMIs in the rest of the peaking reach faulty and incomplete. FAC requests that PCWA conduct reasonable studies within the preserve area in the same manner as it did elsewhere on the river, in order to collect more accurate data upon which to base its conclusions.

1.2 **O. Mykiss.** The record is replete with evidence that O. Mykiss are present in the main stem of the river. PCWA refused to consider this in conducting their studies on the peaking reach. FAC requests that PCWA conduct the necessary studies to determine the nature and extent of, and the habits of the O. Mykiss that inhabit the main stem.

2. **Water sales.** Historically, PCWA has engaged in water transfers and sales. This clearly has an effect on reservoir storage levels, and that effect trickles down in a manner as to affect other issues in the peaking reach, such as the effect on fish and BMI habitat and numbers, of prolonged high flows required to ensure delivery of the water. FAC requests that PCWA conduct the reasonable studies to determine the effect of water sales on fish and BMI habitat and numbers, and on other issues such as water availability for increases in minimum flows and similar issues, and specifically the adverse effects on the angling interest. For example, in 2009, water sales caused unseasonably high flows below Oxbow Reservoir that made angling not only extremely difficult for a significant period of time, but created a dangerous condition for anglers trying to access the river.

3. **Specific comments.**

3.1 **Metric for measuring claimed enhancements.** By its own admission, PCWA has not utilized the 75 cfs minimum flow in the peaking reach as its operating standard. Rather, as shown clearly by the operating history presented by PCWA, it has historically operated the system at around 200 cfs as the minimum flow. Yet, in claiming “enhancements” PCWC refers to the minimum flow of 75 cfs required by the existing license. In effect, there is little if any enhancement if the existing license condition is used as the metric for measuring claimed enhancements. In fact, in some respects there would be reductions in benefit to the riverine ecosystem when compared to the existing condition. FAC requests that PCWA provide a discussion of its rationale for using the existing license condition as opposed to the existing operating condition, or at least do a comparative analysis using both metrics.

3.2 **Available alternative to address adverse impacts associated with peaking.** In doing its flow analysis, PCWA did not take into account available information relating to a settlement that occurred relative to the Yuba River, on peaking issues. The reason for bringing this to FERC’s attention via a comment, is that there is no

dispute that peaking is harmful to the river and its ecosystem. While clearly minimum flows are of vast importance, the difference between the high and low peaks is also critical. This issue was addressed in the Yuba River settlement and should have been considered by PCWA before producing the DLA.

3.3 PCWA failed to follow and implement the science that Entrix produced for the peaking reach, relating to the effects of peaking on available habitat for trout spawning, young-of-the-year rearing, and benthic macroinvertebrate refugia.

- a. PCWA's studies demonstrate two very significant scientific facts: (i) peaking drastically affects trout spawning habitat, young of the year rearing habitat, and BMI production and refugia habitat; (ii) there is virtually no spawning within the main channel of the Middle Fork below Oxbow dam because of the peaking of the system. These two facts are related, but bear specific separate mention.
- b. The trout spawning habitat studies showed that 94% of the effective trout spawning habitat is destroyed by peaking flows at the RM 4.8 study site under current license conditions, and that at the RM 14.1 study site peaking flows destroy 81% of the spawning habitat. The DLA proposal would continue to destroy 88% of the spawning habitat at RM 4.8 and 75% of the spawning habitat at RM 14.1. To suggest that by virtue of this small reduction in adverse impact the DLA would provide "enhancement" to spawning habitat is equivalent to saying that it is ok to destroy 88% of the spawning habitat because previously only 94% was destroyed by PCWA. The numbers specified in this paragraph are drawn from Appendix AQ1, Figures O-18 and 19, of the DLA. Those figures from the DLA are specifically incorporated into this document by reference as "**Attachment B.**"

This, of course, is the reason that there is no spawning in the main stem of the river. Such spawning as does occur happens in the few tributaries that exist below Oxbow dam. PCWA's sole mitigation for this impact is to propose that gravels be introduced to re-establish spawning habitat. There are a number of problems with this: (i) PCWA proposes to introduce gravels above the tunnel chute. However, any gravel introduced in that area will simple wash into the tunnel, which is 50 feet in depth, and/or into the "lake" area beyond the tunnel, which area is over 70 feet deep. It will remain there until a storm of at least 100 year magnitude occurs to move the gravel out and downstream. FAC requests that PCWA conduct a study to determine feasible areas for gravel introduction below the tunnel chute and lake. Horseshoe Bar Preserve will provide access to PCWA for the purpose of these studies, and for stockpiling of gravels there if PCWA determines, based on the studies, that introduction below the tunnel and lake is a feasible area. (ii) Still, peaking will inevitably and immediately wash introduced gravels (even below the tunnel and lake) to the sides of the river as is currently the situation, so gravel introduction may not even be a workable solution. FAC requests that in its geomorphology analyses, PCWA consider this question and produce the necessary science to support a conclusion that gravel introduction will in fact mitigate for loss of spawning habitat caused by peaking. Finally, if spawning gravels are introduced in suitable locations as a mitigation measure, then that should be done regularly to encourage spawning in the side channel at Grey Eagle Bar and other areas.

- c. The studies show that there are virtually no small fish in the mainstem river, and virtually no young of the year. This is because peaking disturbs their refugia, strands them, and makes them available for easy predation by bigger fish and other terrestrial predators. FAC requests that PCWA produce the necessary science to determine reasonable and feasible mitigation measures designed to provide suitable habitat for small fish.
- d. The studies for the RM 4.8 study site show that BMI habitat is reduced to 20% at 75 cfs. A similar loss of habitat occurred at the RM 14.1 study site. The DLA proposes a minimum flow of 125 cfs which will reduce the habitat to 34%. Under the current operating policy PCWA minimum flows have been approximately 200 cfs which results in a reduction of habitat to approximately 50%. As a consequence, the DLA is actually asking to reduce the BMI habitat by 16% from its current operating policy. Therefore, the DLA request to increase the destruction of habitat is in fact not an enhancement and should be disallowed. BMI numbers clearly affect the number (few, as shown by the fish population studies) and size (all larger—larger fish eat small fish) of fish in the system. There are too few BMIs to support good populations of small fish. FAC members provided clear anecdotal information to PCWA during the study process that demonstrated that BMIs that did hatch were stranded and preyed upon so that their

numbers were reduced nearly to zero. PCWA did not take this evidence into account. Letters expressing the issue to PCWA are attached to these comments as "**Attachment C**," so that it is clear that they are part of the record. FAC requests that PCWA produce the necessary science to determine reasonable and feasible mitigation measures designed to provide suitable habitat for BMIs. The information specified in this paragraph was drawn from Appendix AQ1, Figures O-15 and 24, of the DLA. Those figures from the DLA are specifically incorporated into this document as "**Attachment D**."

3.4. **Reintroduction of Salmonids into the Upper American River: NIMFS filing with FERC.**

This issue was covered in the Foothills Water Network comment document. FAC wishes to add only one point that was not mentioned because the event had not occurred at the time of filing of those comments: NIMFS has now filed its Biological Opinion and Conference Opinion and Draft Recovery Plan for Central Valley Listed Salmonids in the record of these proceedings.

3.5. **Adaptive management issues.**

It is essential that whatever flow regimes are identified under the new license, PCWA must be held responsible to evaluate the instream flow impacts on BMI habitat and production. Should licensed flow regimes indicate decreases or adverse trends in BMI populations, then further studies should be conducted in developing and adapting regimes that are more conducive to BMI populations and overall aquatic ecosystem health.

3.6. **Retention and modification of fishery management provisions in existing license amendment language.**

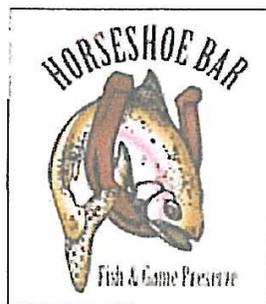
Although not identified in the DLA, FWN recommends that portions of the existing FERC No. 2079 License Amendment Language be retained and modified in the new License for fishery management purposes. This new language is referenced to the current 1981 License Amendment; FERC Project No. 2079; ORDER AMENDING LICENSE (MAJOR); (Issued March 18, 1981); Page 5: (E) Article 37: Footnote; 2/ New License language would be modified to read as follows: "Oxbow Powerplant releases: The scheduled flow releases may be modified for beneficial aquatic and fishery management purposes upon consensus among the Licensee, the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Should consensus be unobtainable, parties will employ appropriate mediation and/or arbitration processes to reach a determination."

ATTACHMENT A

(Documents relating to angler focus group meetings)

**Excerpt from a May, 2008 letter from William Carnazzo to PCWA
(See DLA, vol. 3, Exhibit E, SD-B, Rec-4 final TSR, Appendix J)**

“Due to time constraints relating to my guide business, I have been unable to actively participate in the relicensing process, and could not attend the one angler focus group meeting allowed by PCWA. When I called PCWA to ask if there was further opportunity for angler focus group meetings, I was peremptorily told that it had been decided by PCWA and its consultants that one meeting was enough. I was dismayed by this cavalier attitude, which appears to have carried over into this flawed (at least as to the angling portions) study.”



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Granite Bay, CA 95746
Ph: 916-205-6073
E-mail: hbp@surewest.net
<http://horseshoebarpreserve.com/>

2/19/10

Placer County Water Agency
Resource Development Department
Mr. Mal Toy
Project Manager
P.O. Box 6570
144 Ferguson Road
Auburn, CA 95604

RE: FERC Project # 2079 Middle Fork of the American River Project

Dear Mr Toy,

Horseshoe Bar Fish & Game Preserve (HBP) is a private organization that was created to expand the recreational activity on the Middle Fork of the American River (MFA). HBP is a stakeholder in MFA FERC project # 2079. HBP hosts a variety of events for philanthropic and nonprofit organizations, such as Wounded Warriors, Casting for Recovery (breast cancer survivors) numerous Nonprofit Fly Fishing clubs, scouting, as well as, fund raisers and events for local schools and other nonprofit organizations in Northern CA. In addition, HBP brings guests from all walks of life (in both public and private sector) to use and enjoy the property/river which extends five miles on both sides of the river. HBP has been attending the FERC meetings on a regular basis and has participated in various studies. The reason for writing this letter and submitting the attached survey is to put forth an accurate picture of the angling and recreational activity that occurs on the MFA Peaking Reach project.

Since the creation of HBP the recreational activity and angling on the upper MFA peaking reach has doubled each year. During the calendar year of 2009 angling activity at HBP exceeded 1200 visits and is expected to nearly double during the 2010 calendar year. Recreational activities, such as camping, hiking, observing nature, bird watching, recreational mineral exploration, historical and cultural field trips, that have occurred at HBP *have not* been recorded in any of the project Recreational Studies. The members of the public that participated in all of these activities come from a wide range of cultural, ethnic, geographical and economic

backgrounds. Their ages range from kindergarten school children to senior citizens. Their uses and activities *should be* included in the Recreational Study.

HBP is also actively involved in the restoration of fish habitat and population throughout the MFA and other FERC projects in Northern California. HBP is currently pursuing the restoration and recreation of over a mile and a half stretch of river, known as Horseshoe Bar. During the 1880's the Tunnel Chute was created that diverted the river in order to dewater the mile and a half of the MFA River known as Horseshoe Bar. HBP efforts to restore a flow around Horseshoe Bar to create a native and wild fish spawning area will not only benefit the members and guests, it will also benefit many miles above and below the property and could eventually become an important and key asset to the restoration of anadromous fish.

The PCWA Recreational Study relied on the input from relatively few anglers to establish its findings. Had the 1200 plus anglers who fish the upper reach of the MFA been allowed to have their input considered, the results would have been significantly different.

Our desire is to work with other recreational groups to develop a flow regime that best serves all vested parties. From an angling perspective we believe that flows of 400 CFS to 600 CFS will provide a safe and successful angling experience. Of course, the scientific studies developed to maintain a healthy fishery must take precedent over all of the interests.

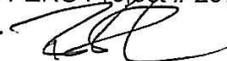
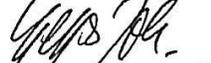
HBP would be happy to supply documented accounts and letters confirming the activity and accuracy of this letter and survey. Please ensure that this letter and all of its attachments are entered as part of the official records of these proceedings.

Sincerely,



Thomas G.M. Bartos
President

CC: Kimberly D. Bose, Secretary Federal Energy Regulatory Commission
Placer County Supervisors
PCWA Board of Directors
Department Fish & Game
US Department of Forestry
Stakeholders FERC Project # 2079

1. Bob Schwan  bs@sokwest.net
2. Nick Strelchuk  STRELCH@AOL.COM
3. Hans Geyer  HANSGEYER@HOTMAIL.COM
4. Frank Rivella  SERRAGUISE@SBCglobal.NET
5. Joe Byrne  JOE@BYRNECOMPANIES.COM
6. Bill Carnazzo  Bcarnazzo@ftcnet.net
(COVER)

(Excerpt from 3-10 angler focus group meeting notes provided to meeting participants; **none** of the meeting notes were included within the DLA). Documents from this meeting are found at DLA, vol. 3, Exhibit E, SD-B, Rec-4 final TSR, Appendix J.

Middle Fork American River - Oxbow to Ruck-a-Chucky

Fishing Location and Access Points	
Road or trail used to access fishing location	Refer to previous meeting comments
Public or private access	Both
Support facilities available at this fishing location	Paved parking, restrooms at Indian Bar, chemical toilets at Tunnel Chute, Horseshoe Bar Preserve, extraction equipment at Tunnel Chute
Adequacy of support facilities	Adequate
Typical season of use	Year round

Fishing Characterization and Quality	
Typical fishing gear used at this location	All gear types - Horseshoe Bar Preserve fly fishing only, catch and release
Typical method used to fish this location (bank, wading, boat)	Bank, wading, flow tubes behind tunnel, and boats
Target species	Trout (rainbow and brown)
Average size of fish typically caught at this location	5% are below 12 inches, 65% are 12-14 inches, 25% are 16-18 inches. The average is approximately 12-16 inches.
Approximate number of fish typically caught per day	Approx. 5-6 on average (anywhere from 2-15)

Fishing Experience	
Rate your satisfaction with the following factors as they relate to this location:	
Number of fish caught	Good or better than average
Variety of fishing areas	Wide variety when the flows are low, definitely depends on flows (depth, velocity, etc.) and variety/access. For example, at 1,000 cfs - can't fish it and it is more difficult to access. Fishing areas can be hindered during high flows. And anglers can be crowded when the flow subsides.
Variety of fish species	Good variety
Size of fish	Good
Road access to fishing location	Good
Trail access to fishing location	Good
Overall fishing experience	Depends upon flows; can be very good or can be very bad (fishing is better during low flows people are compacted in smaller areas but during low flows people are more spread out then better).

Flow Related Effects on Fishability	
How does flow affect:	
Availability of usable instream fishing area	See above (fishing is depressed during ramping periods and for some areas during high flows)
Variety of useable instream fishing areas	See above
Ability to fish from streambank	800-1,000 cfs most factors decrease and fishing becomes dangerous
Ability to walk shoreline/bank	
Ability to stand/wade in stream	
Ability to cross the stream	400 cfs is about max for crossing

Flow Estimates	
Minimum flow at which you would fish at this location (in cfs)	300 cfs
Maximum flow at which you would fish at this location (in cfs)	600 cfs for all types of anglers, fishable flows may increase in magnitude and experienced/athletic (1,000 cfs max)

Other Information	
Safety concerns	See above, also fast ramping with no warning and no consistency - g the other side of the stream for hours
Conflicts with other users	None
Comparable regional fishing streams	NA

Sources of Other Pertinent Information	
Sources of other pertinent information (e.g. guide books, anglers, web sites):	Horseshoe Bar website, CDEC site, other anglers

2008-2009 Freshwater Sportfishing Regulations	
American River, North Fork, Middle Fork, South Fork and their tributaries w/in the Sierra District (Placer, Eldorado, Amador, and Alpine cos.)	
Open Season	Bag Limit
Last Saturday in April through November 15	5 per day 10 in possession
November 16 through the Friday preceding the last Saturday in April. Only artificial lures with barbless hooks may be used.	0

ATTACHMENT B

(Appendix AQ-1, Figures O-18 and O-19, incorporated herein by this reference)

ATTACHMENT C

(Documents and pictures showing notice given to PCWA of dewatering and stranding in the peaking reach)



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8/15/2010

Placer County Water Agency
Resource Development Department
Steve Jones, Director
Andy Fecko, FERC Project Manager
P.O. Box 6570
144 Ferguson Road
Auburn, CA 95604

RE: MFA FERC Project Dewatering Gray Eagle Bar

Dear Mr. Jones & Mr. Fecko,

We are approaching the fall outage maintenance period and the prospect of dewatering the Gray Eagle Bar area and side channel. Over the last three years we have written e-mailed and spoken to PCWA on a number of occasions expressing our concern over the dewatering of the above areas and the resulting stranding and predation of fish, as well as, the destruction of the macro & micro invertebrates.

In October 2008 Andy Fecko gave us assurance that PCWA would have people at the Gray Eagle Bar area to rescue any fish that were stranded. Unfortunately, Andy and the workers arrived several days after the stranding occurred. If you recall, there was an issue with you asking our caretaker for permission to bring your crew down to Gray Eagle Bar to rescue the fish that had been stranded for several days.

On 3-3-09 we wrote to Mal Toy expressing our concerns and asking for an interim flow arrangement to prevent the destruction of wild native spawning trout and the macro and micro invertebrates.

In July of 2009 we wrote to you again requesting that PCWA take steps to prevent the stranding and predation of fish and destruction of invertebrates. Unfortunately, PCWA lowered the flows to 75 CFS with the result being that fish were stranded and the invertebrates destroyed. Below is an e-mail I received from Glen Ikeda owner of Ikedas in Auburn concerning the Gray Eagle Bar area and side channel.

Tom,

My son and I went down to fish the middle fork of the American river, on the Horseshoe bar club property, yesterday, Sunday, October 18th at around 8:30 am. We noticed something very alarming. The side channel that always has water running through it was dry as a bone with only a couple of 2 foot pools. There were multiple pods of large trout stranded in these puddles with now where to go. I am sure many more were killed down the rest of the side channel. My 11 year old son also pointed out how much bug life that was dried up and dead on the rocks that the water had left. If this sort of water level management continues we will loose the robust life of the river that seems to be hanging on.

Concerned,

Glen and Brendyn Ikeda

Attached is a copy of a report that was completed by PCWA during the FERC relicensing project that describes the dewatering that occurs during the fall outage maintenance period. I was unable to find this report in the FERC project website. Please have someone check to insure that this report is posted to the FERC website along with this letter and its attachments. We have also included a brief we prepared showing before and after pics of the Gray Eagle Bar area during the fall outage maintenacnce period.

Once again we request that PCWA take whatever steps are necessary to prevent the stranding and predation of fish and destruction of the invertebrates during the fall outage for maintenance.

Sincerely,

Thomas G.M. Bartos
President

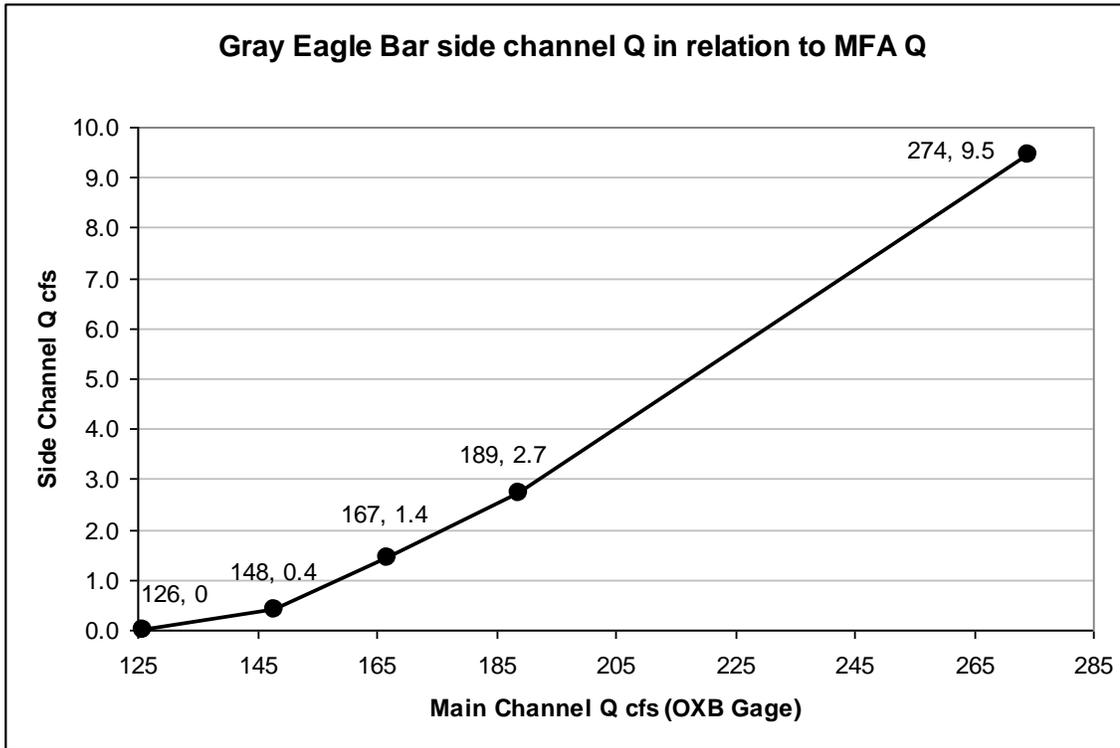
CC:

Robert Weygandt
Jennifer Montgomery
Sharon Stohrer DF&G
Bob Hughes DF&G
Marylisa Lynch DF&G
Jann Williams ENF
Dennis Smith USFS
Russ Kranz SWRCB
Julie Leimbach FWN

GRAY EAGLE BAR SIDE CHANNEL OBSERVATIONS

Flow into the Gray Eagle Bar side channel was observed at five different discharges in the Middle Fork American River. The figure below relates the flow (cfs) measured at the Oxbow Gage (using the CDEC rating table) to the measured¹ discharge (cfs) at the top of side channel.

¹ At the lowest flow observed, discharge in the side channel was not measured. Field observation suggested flow into the side channel was essentially zero cfs.



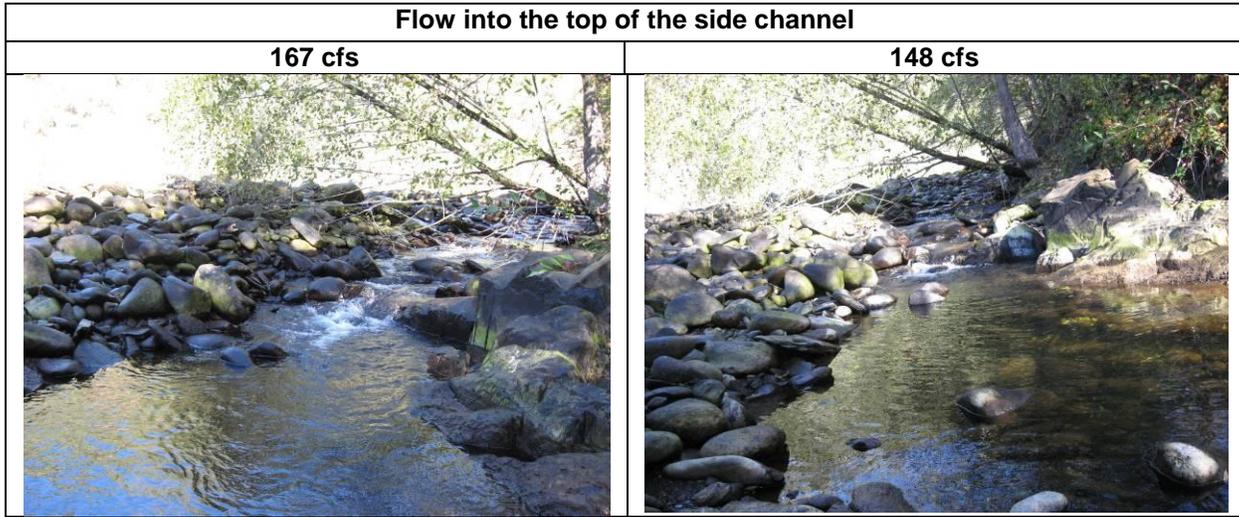
Main Channel cfs vs Side Channel cfs		
Date	Main (cfs)	Side (cfs)
11/13/2008	274	9.5
11/13/2008	189	2.7
11/14/2008	167	1.4
11/17/2008	148	0.4
11/21/2008 ¹	126	0

At a discharge of 148 cfs in the main channel some flow (0.4 cfs) remained in the side channel. However, two riffles, one in the midsection of the channel and one at the end of the channel, were dewatered. This resulted in disconnected pool habitat.

At a discharge of 126 cfs in the main channel no flow (or nearly no flow) existed in the side channel. The disconnected pools remained, however surface flow appeared to have ceased.

GRAY EAGLE BAR SIDE CHANNEL OBSERVATIONS (CONTINUED)

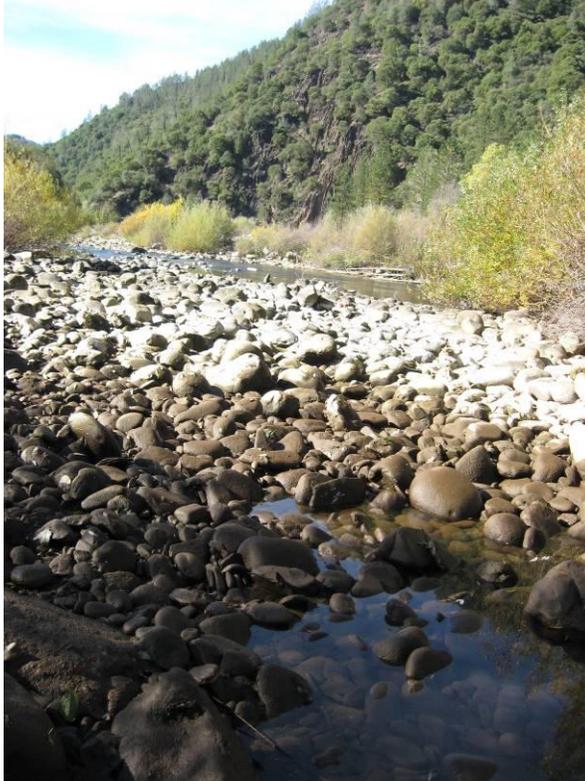
Below are photos of habitat conditions in the side channel at 167 cfs and 148 cfs (11/17/08 and 11/14/08, respectively) in the MFA main channel.



GRAY EAGLE BAR SIDE CHANNEL OBSERVATIONS (CONTINUED)

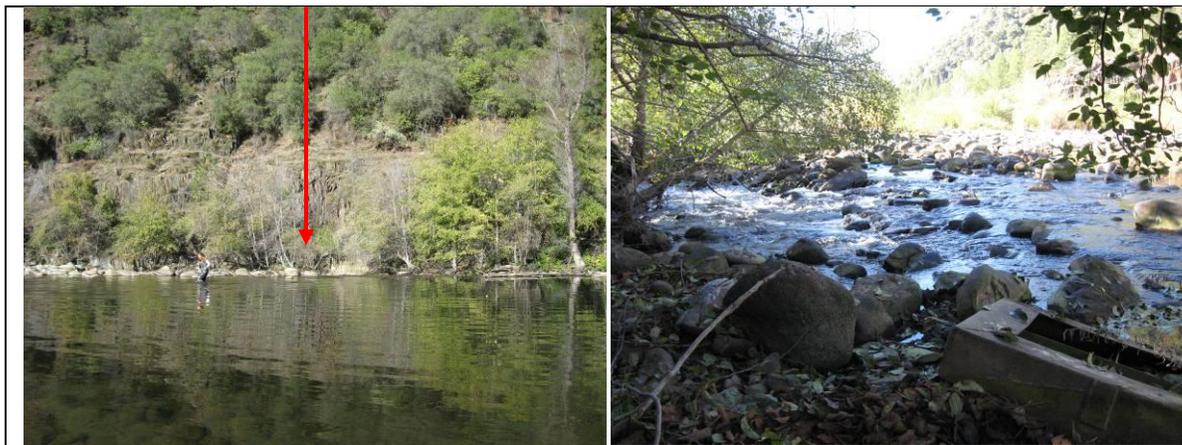
Long riffle habitat in the mid-section of the side channel	
167 cfs	148 cfs
	

Looking downstream at the last pool in the side channel disconnected from main channel

167 cfs	148 cfs
No photo	

GRAY EAGLE BAR SIDE CHANNEL OBSERVATIONS (CONTINUED)

Hydraulic Control in Main Channel and Side Channel	
Main channel at 167 cfs	Side channel at 167 cfs



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11/25/2008

Placer County Water Agency
Resource Development Department
Mal Toy
Director
P.O. Box 6570
144 Ferguson Road
Auburn, CA 95604

RE: Gray Eagle Channel

Dear Mr. Toy,

As I stated in my e-mail today it is our and Walt Stevens, the owner of the property, belief that the channel at Gray Eagle Bar is a genuine lawful channel on the Middle Fork of the American River. I have communicated

with Walt Stevens today and he has indicated that this channel has been in documented existence for over 75 years. Mr. Stevens has aerial photos of this channel dating back to 1948. He also has maps that predate these photos that show the side channel as a legitimate channel. Mr Steven also indicated that there was a bridge at one time at the Gray Eagle Bar to allow access vehicles to cross over the Middle Fork and Gray Eagle Bar area.

We believe this channel is vital to the continued health of the native trout that are in the Middle Fork of the American River. Each fall the native Brown and a strain of Rainbow trout spawn in this channel. We believe the Rainbow trout that spawn in this channel during the fall are dependences of the Steelhead that were trapped up stream when Folsom Dam was built in the 50's. To lose this spawning ground would certainly have a dramatic negative effect on the fishery and these native fish.

We therefore ask that PCWA take whatever actions are necessary to insure that this channel continues to receive enough water to prevent the fish from being trapped and allowed to die. It is also imperative that there be sufficient water to allow the fish to spawn as they have for many years.

Sincerely,

Thomas G.M. Bartos
President & Founder



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07/09/2009

Placer County Water Agency
Resource Development Department
Mr. Mal Toy
Project Manager
P.O. Box 6570
144 Ferguson Road
Auburn, CA 95604

RE: Request for fish study

Dear Mr. Toy,

On May 21, 2009 I had an opportunity to fish with Bill Carnarrazo a noted guide and board member of the Upper American River Foundation. We happen to fishing below the Tunnel Chute in the wide expanse area above the side

channel at Gray Eagle Bar that afternoon. Bill showed me the October caddis and how they moved around on the rocks. This large expanse covers approximately 10 acres and drains into the side channel. The sheer amounts of the October caddis was overwhelming and certainly presents a major source of food for the native rainbow trout.

Several weeks later I returned to the area with a member and tried to show him the October Caddis that had covered the rocks. To my surprise I could not find a single caddis. When I arrived home I went to the river flow website and saw that the peaking flows where the water peaks daily at over 1000 CFS and down to 200 CFS had begun. The area above that had been covered with October Caddis had become dry which allowed the birds and other predators to pick clean the caddis. Also the small rainbow fry are also trapped and end up with the same faith. This obviously has an impact on the fishery.

With the determination that the Tunnel Chute is a fish barrier the fish study that was conducted above the Tunnel Chute provides information as to the fish above. The river below the Tunnel Chute is very different in that the river has many wide expanses such as the above that gets flooded and become dry daily. Also, as I explained to you in my correspondence over the last year, the dewatering of the Gray Eagle Bar side channel has a devastating effect on the fall spawning fish in that area. We are very concerned that during the maintenance period this year the fish in the side channel spawning will again be trapped and perish because it is dewatered.

Because there is a dramatic difference in the river topography above and below the fish barrier at the Tunnel Chute we request that a fish study be done to determine the effects of the peaking flows on the fishery. We would also request that PCWA give consideration to the dewatering of the Gray Eagle side channel when it does its maintenance this October, We understand that by the terms of the license you are permitted to reduce the flows to 75 CFS, however the destruction to the fishery and spawning fish could be mitigated by keeping the flows at the 300 CFS to 400 CFS range. Hopefully this should allow the fish and aquatic life in the area to survive.

Sincerely,

Thomas G.M. Bartos
President



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03/03/2009

Placer County Water Agency
Resource Development Department
Mr. Mal Toy
Project Manager

P.O. Box 6570
144 Ferguson Road
Auburn, CA 95604

RE: Gray Eagle Channel Dewatering Event; Interim Aquatic Habitat Management Objectives of the Horseshoe Bar Fish and Game Preserve

Dear Mr. Toy,

The following narrative details the interim management objectives of the HBP:

Interim Gray Eagle Bar Flows

The HBP will seek to ensure that the Gray Eagle Bar channel receives sufficient water to function as critical aquatic and spawning habitat, which is vital to the continued health and natural regeneration of the wild trout.

- When the MFAR in stream flow (in the reach below Oxbow Dam) is released at a level below 200-175 cfs, it results in the dewatering of this important channel. This reduction of flows to below 200 CFS dewater a channel located on our property killing the fish and destroying a majority of the invertebrate and other aquatic life in the channel.
- In the case of the most recent dewatering incident (late November, 2008), not only did the in-stream flow reduction totally negate the existing spawning redds, but also resulted in the stranding of spawning wild trout. These stranded trout represented a viable spawning population, and quickly perished as a result of a lack of cover and escape, and eventual predation.
- The HBP requests that PCWA take whatever actions are necessary to insure that the Gray Eagle Bar channel continues to receive sufficient in-stream flow to prevent these wild and native fish from being stranded and allowed to die.
- The HBP has observed Rainbow trout spawning in this channel during the fall and early-winter months. These fish could be descendents of Coastal Steelhead species which were trapped in the North/Middle Fork when Folsom Dam was built in the 50's. Any loss of this critical spawning habitat would certainly have a dramatic and long lasting negative effect on the fishery, and specifically, on these native Rainbow trout.

Interim HBP Instream Flow Regime Objectives

- The HBP will seek an interim flow prescription that provides for in stream flows that are not lower than a rate of 300 cfs to 400 cfs.

Interim HBP Instream Flow Ramp Rate Objectives

Up-Ramp Flow Rate Targets:

- Target flow up-ramp rates that **generally would not exceed 130 cfs per hour** in the Oxbow Dam peaking reach.

Down-Ramp Rate:

- Target flow down-ramp rates that **generally would not exceed 200 cfs per hour for flows exceeding 1,000 cfs**, except for flow conditions beyond PCWA's control.
- Target flow down-ramp rates that **generally would not exceed 100 cfs per hour for flows less than 1,000 cfs**, except for flow conditions beyond PCWA's control.

Potential Adverse Effects of Current High Impact MFAR Flow Fluctuations:

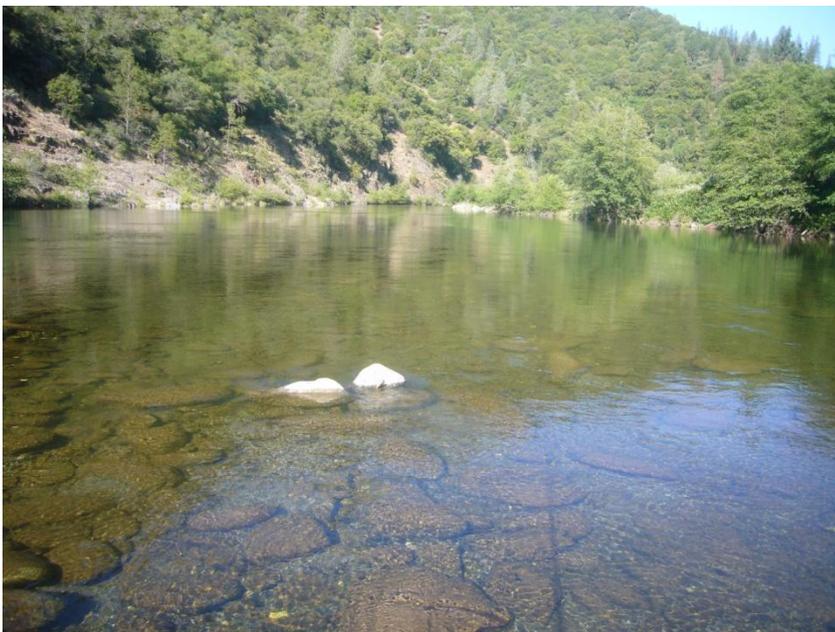
- Reductions in available habitat
- Reduced access to side channels, upstream habitat, tributaries, and floodplain habitat
- Alteration of benthic macroinvertebrate (BMI) assemblage
- Forced movement or migration of fish
- Stranding of fish or dewatering their redds
- Altered quality of and access to rearing and spawning habitat
- Decreased habitat stability and therefore increased predation

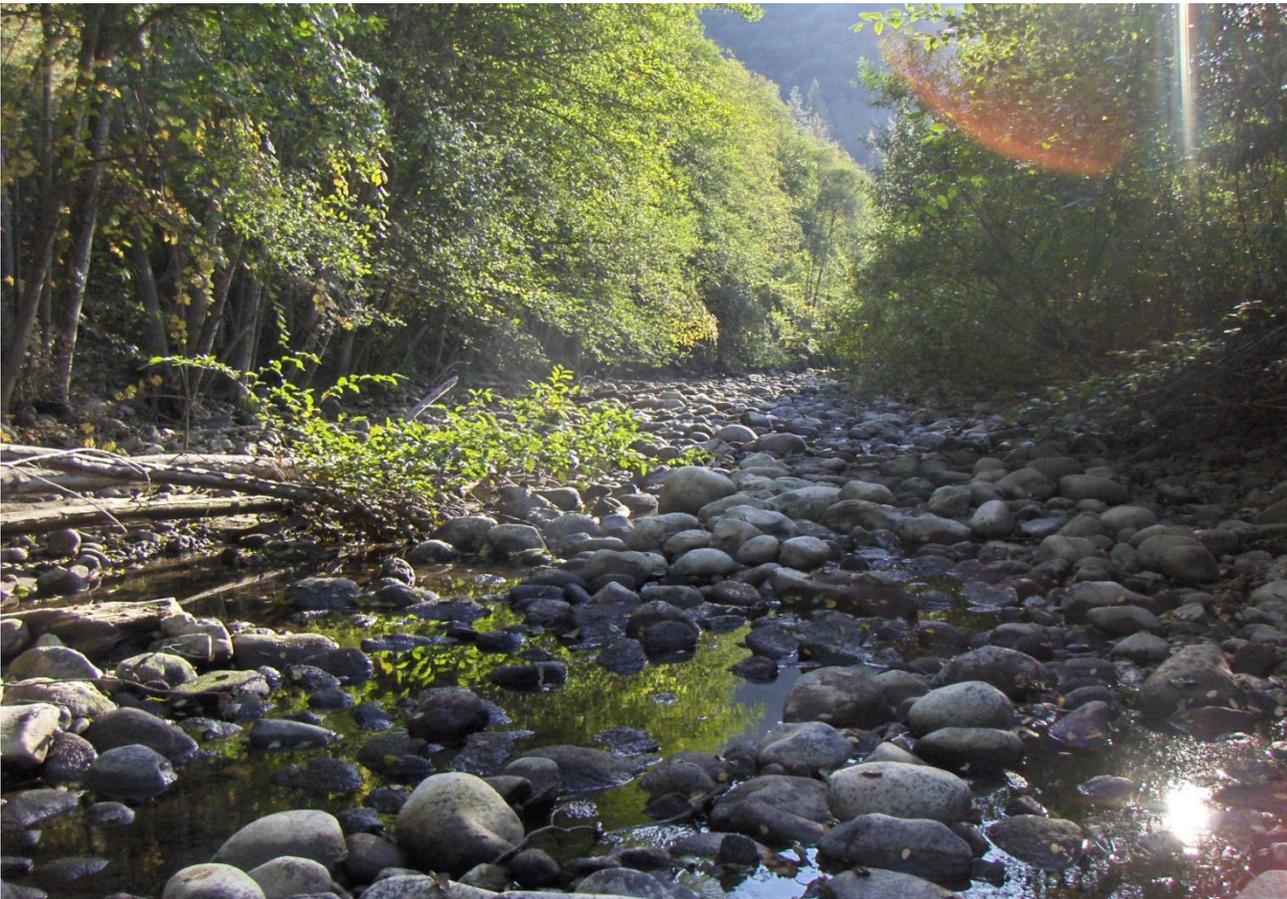
Desired Stable Flow Periods

- The HBP will seek a constant flow during the weekly Tuesday through Friday period that would not be less than a 300 cfs to 400 cfs range throughout the year.

Thomas G.M. Bartos
President

Series of photographs depicting dewatering of the MFA at Grey Eagle Bar







ATTACHMENT D

(Appendix AQ-1, Figures O-15 and O-24, incorporated herein by this reference)

Document Content(s)

fac separate comments on dla v 6 12-17-10.PDF.....1-24

**Foothills Water Network
Comment Letter Dated October 19, 2010;
Filed with FERC October 20, 2010 (20101020-5097)**



FOOTHILLS WATER NETWORK

Via Electronic Submittal

Hon. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

October 19, 2010

Re: Comment on Due Process Middle Fork American Hydropower Project Relicensing #2079

Dear Secretary Bose:

The Foothills Water Network is filing this letter to request that FERC address the compressed timeline for the Placer County Water Agency (PCWA) Hydropower Relicensing that requires relicensing participants to comment on the Draft License Application without the benefit of all relicensing study results and all management plans requested by FERC.

Study Results:

PCWA still has three outstanding relicensing studies that have not been completed. They include:

- Entrainment Study
- Bioenergetics Study
- Reservoir Fish Habitat Study

PCWA projects that these outstanding studies will be complete before the end of 2010.

As per FERC's Integrated Licensing Process, comments on PCWA's Draft License Application (DLA) are due December 27, 2010. Given the current timelines, it seems that the release of the study results will not be in time to inform our Comments on the PCWA's DLA nor the seven negotiation meetings scheduled between the release of PCWA's DLA and December 27, 2010.

These study results will provide key information that will enable us to formulate specific license conditions for the Middle Fork American Hydropower Project. By way of example: (i) the Entrainment Study results will provide information that will assist us in determining whether it is necessary to negotiate conditions related to modifications to intake valves and diversions to avoid entrainment of fish; and (ii) the Bioenergetics Study will provide information regarding the nature and extent of trout food resources, which in turn will provide a predicate for license conditions related to protection and mitigation of the fisheries in all river reaches affected by the project.

Without these study results, the Foothills Water Network cannot provide complete comments on PCWA's DLA on December 27, 2010.

Management Plans:

At FERC's request, PCWA has included many management plans in its Draft License Application. Since the Commission has required the licensee to develop these plans for inclusion in the license, we should have the opportunity to comment on them, with a reasonable amount of time for review. It is understandable that in this compressed timeline, PCWA could not complete three plans and so did not include them in the Draft License Application. The licensee should have a reasonable amount of time to draft the plans and relicensing participants have a reasonable amount of time to comment on them in Draft and Final forms. Three plans are still outstanding:

- Visual Management Plan
- Geomorphology Management Plan
- Riparian Monitoring Plan

PCWA is planning on including these management plans in its Final License Application. Without these management plans, the Foothills Water Network cannot provide complete comments on PCWA's DLA on December 27, 2010.

Perhaps the most obvious answer is for FERC to grant an extension of deadline for comments on the PCWA DLA. We ask the Commission propose a solution that addresses the issue of the compressed timeline and the unavailability of study results and management plans to inform our comments on the Draft License Application related to license conditions.

We ask the Commission to please address its response to the signatories of this letter, members of the Foothills Water Network. If you have any questions or comments on this letter, please contact Julie Leimbach at julie@foothillswaternetwork.org or 530-622-8497.

Sincerely,

Julie Leimbach
Coordinator, Foothills Water Network

Foothills Water Network Middle Fork American Work Group Members:

Bill Carnazzo, Northern California Federation of Flyfishers, Spring Creek Guide Service
and Upper American River Foundation

Chris Shutes, California Sportfishing Protection Alliance

Gary Estes, Protect American River Canyons

Hilde Schweitzer, Private Boater

Nate Rangel, California Outdoors

Tom Bartos, Foothill Angler Coalition

Document Content(s)

Request to FERC re PCWA FWN final 101910.PDF.....1-2

**Foothills Water Network
Comment Letter Dated December 20, 2010;
Filed with FERC December 20, 2010 (20101220-5080)**



FOOTHILLS WATER NETWORK

Via Electronic Submittal

Hon. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

December 20, 2010

RE: COMMENTS ON PLACER COUNTY WATER AGENCY'S DRAFT LICENSE APPLICATION FOR THE MIDDLE FORK AMERICAN HYDROELECTRIC PROJECT #2079

Dear Secretary Bose:

The Foothills Water Network submits this letter in response to Placer County Water Agency's September 27, 2010 submission of its Draft License Application for project # 2079.

Foothills Water Network

This response was jointly developed and has been signed by non-governmental organizations and by individuals participating in the Middle Fork American Relicensing. The Foothills Water Network represents a broad group of non-governmental organizations and water resource stakeholders in the Yuba, Bear, and American Watersheds. The overall goal of the Foothills Water Network is to provide a forum that increases the effectiveness of non-profit conservation organizations to achieve river and watershed restoration and protection benefits for the Yuba, Bear, and American Rivers. This includes negotiations at the county, state, and federal levels, with an immediate focus on the FERC relicensing processes.

The following members of the Middle Fork American Work Group of the Foothills Water Network are signatories to these comments.

Bill Carnazzo, Federation of Flyfishers, Upper American River Foundation, and Foothill Angler Coalition
Chris Shutes, California Sportfishing Protection Alliance
Dave Steindorf, American Whitewater,
Gary Estes, Protect American River Canyons
Hilde Schweitzer, Private Boater
John Donovan, Member of the Public
Julie Leimbach, Foothills Water Network

Nate Rangel, California Outdoors,
 Thomas Bartos, Foothill Angler Coalition and Horseshoe Bar Fish and Game Preserve
 Inc.

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1 General Comments

1.1 PCWA's Collaborative Approach

PCWA has made a good faith effort to provide a collaborative relicensing process. It has worked closely with an impartial facilitator to plan and carry out a process that allows a real opportunity for relicensing participants to reach a collaborative agreement. PCWA's relicensing team has been well prepared for our numerous meetings. The team has prepared materials in advance and presented those materials in an understandable and organized way. In addition, PCWA has kept the process looking forward with proposed timelines and topics for future meetings. We value PCWA's advance preparation in such a long and data-driven regulatory process.

Generally, PCWA has also been forthcoming with their interests, scientific rationales, data, and analysis. They have provided days of scientific review and facilitated negotiations with the goal of coming to consensus on the interpretation of information. Upon request, PCWA has modeled the Foothills Water Network's flow scenarios to foster fact-finding investigation and inform flow proposals and negotiations. When it could improve joint understanding of the issues, PCWA has also conducted analysis in addition to the formal study results. PCWA also developed a user-friendly Excel-based tool for modeling flows in the project's Peaking Reach, and provided training for using this tool. This tool has helped our group to reach a better understanding of the system constraints, and to develop solutions that address our interests. Finally, PCWA has provided on its own and upon request an enormous amount of information on its website.

The PCWA Draft License Application is a serious proposal, and an effort to meet the many interests represented in this relicensing. In general response to the DLA, the Foothills Water Network thinks that we are relatively close to agreement on many issues. With that background in mind, we are providing the following recommendations and comments on the Draft License Application.

1.2 Inadequate Negotiation Time on Peaking Reach

The collaborative negotiations on the Peaking Reach prior to PCWA's submission of the DLA only consisted of two days. In comparison, we spent several months negotiating conditions for the bypass reaches. The two days were clearly insufficient to present all interests, objectives, arrive at an understanding of study results as they relate to the potential license conditions, and negotiate collaborative resolutions. Because we value the Peaking Reach and the many interests in its natural and recreational resources, we expect to spend a significant amount of our remaining negotiation time addressing the Peaking Reach. Based on the commitment of PCWA and other relicensing participants to reaching collaborative agreement, we expect to reconvene our collaborative relicensing meetings in order to further negotiate license conditions for the Peaking Reach.

1.3 Analysis of Enhancements

The No-Action Alternative only reflects the paper reality of PCWA's license condition minimum, not the operational reality of existing conditions resulting from voluntary

release of higher minimum flows. Accordingly, the comparison between the No-Action Alternative and the Proposed Action often does not describe improvements that we will actually see in the river. In some cases the DLA low flows conditions would actually create a diminished condition of the river and environment. A comparison between actual existing conditions and operations and the Proposed Action Alternative would present a picture of much smaller improvements for the ecosystem than is portrayed in the DLA. Relicensing studies are examinations of the existing conditions of the natural resources resulting from recent historic operations, not from paper minimums stated in the current FERC license. We request PCWA include in its Final License Application a more accurate portrayal of any enhancement to be achieved by the Proposed Action Alternative that compares the existing condition created by actual recent operations with the Proposed Action Alternative.

1.4 Wild & Scenic Eligibility

We recommend PCWA manage the Project in such a manner as to not hinder designation of the Rubicon River and the Middle Fork American River as suitable for inclusion in the National Wild and Scenic Rivers System as they have been found eligible. We must protect the outstanding and remarkable values of these river reaches to protect their potential for being designated Wild & Scenic in the future.

1.5 Dispute Resolution

In the DLA, PCWA proposes that a dispute between resource agency and PCWA be addressed following a specified procedure.¹ We request that PCWA revise this section so that the Final License Application includes non-governmental organizations involved in the relicensing and private citizens in the dispute resolution procedure.

2 Bypass Reaches

The Foothills Water Network thinks we are relatively close to agreement with PCWA's Draft License Application flows on the bypass reaches. We provide the following comments and recommendations.

2.1 Foothills Water Network Objectives

The Foothills Water Network's objectives for the bypass reaches on the Middle Fork American River below French Meadows Dam and below Interbay Dam, and on the Rubicon River below Hell Hole Dam include:

1. Enhance whitewater boating opportunities.
2. Protect Foothill Yellow-Legged Frog populations in existing reaches below Interbay Dam and Hell Hole Reservoir.
3. Enhance Rainbow Trout in all life stages, with particular emphasis on spawning and rearing.

¹ PCWA, DLA. Section 11.0

4. Enhance benthic macroinvertebrates below French Meadows Reservoir, Interbay Dam, and Hell Hole Reservoir, thereby enhancing the Rainbow Trout fishery as well as angling opportunities.
5. Protect aquatic organisms during PCWA's annual maintenance and emergency outages.

2.2 Minimum Instream Flows

Closure of Diversion on Duncan Creek

In its DLA, PCWA proposes to close the diversion structure on Duncan Creek on July 1st.

During our negotiations on March 10, 2010, Foothill Angler Coalition, a Foothills Water Network member, proposed that PCWA close the diversion on May 15th for each of the three small streams (Duncan Creek, and North and South Forks of Long Canyon Creek). Foothills Water Network still believes that changing the closure date of the diversion on Duncan Creek to May 15th would benefit the watershed by providing greater wetted area and more area for fish and benthic macroinvertebrates, and that this would therefore enhance the angling experience. However, if PCWA is willing to agree to the Network's proposed increased minimum flows for Duncan Creek (as compared to flow proposed in the DLA), we are willing to consider accepting PCWA's proposed diversion closure date of July 1st.

Duncan Creek Minimum Flows

The Network agrees with PCWA's proposal that required flows in Duncan Creek be the lesser of the stated numeric minimum flow or the actual inflow to Duncan Diversion. Operating under this principle, the flow below the Duncan Creek Diversion will often be less than the stated numeric minimum flow.

The Foothills Water Network recommends higher minimum instream flows in Duncan Creek than those proposed in the DLA. In its DLA, PCWA proposes to modify the outlet works on Duncan Creek Diversion to eliminate clogging of the diversion.² The elimination of this clogging will reduce leakage, therefore decreasing the actual flow below Duncan Creek Diversion when compared to historic conditions. The Network's slightly increased proposed minimum flows attempts to offset this on-the-ground reduction in releases from Duncan Diversion.

Our recommended increase of stated minimum flows will retain the existing wetted perimeter to the benefit of benthic macroinvertebrates, which will in turn benefit fish. In addition, our proposed flows will maintain the current angling experience for the winter months through July 1st, PCWA's proposed shutoff date for the diversion. A reduction in actual streamflow would reduce habitat for Rainbow Trout. For instance, the difference between 4 cfs (DLA) and 6 cfs (FWN) in Critically Dry years is 10% of the Weighted Useable Area.

The chart below compares the Network's flow recommendations for Duncan Creek to PCWA's proposed flows in the DLA. We have placed a dash wherever the Foothills Water Network's proposed flows are the same as flows proposed in the DLA.

² PCWA DLA, Exhibit E, Section 8.3.1.1, and in the BA/BE, Section 6.0

Figure 1 Duncan Creek Minimum Instream Flows

Months	PCWA CD	FWN CD	PCWA Dry	FWN Dry	PCWA BN	FWN BN	PCWA AN	FWN AN	PCWA Wet	FWN Wet
Oct	4	6	8	10	8	10	8	10	8	10
Nov	4	6	8	10	8	10	8	10	8	10
Dec	4	6	8	10	8	10	8	10	8	10
Jan	4	6	8	10	8	10	8	10	8	10
Feb	4	6	8	10	8	10	8	10	8	10
March 1-14	4	6	8	10	8	10	8	10	8	10
March 15-30	8.5	-	11	11.5	12.5	-	16	-	16	-
April	13	-	14	-	17	-	24	-	24	-
May	13	-	14	-	17	-	24	-	24	-
June	6.5	8	7	12	8.5	12	12	14.5	12	14.5
July	PCWA DLA proposes ending diversions July 1st; Minimum Instream Flow or Inflow									
August										
Sept										

Rubicon River Minimum Flows

In Wet and Above Normal years, we recommend increasing minimum instream flows in the Rubicon River below Hell Hole Reservoir from June 15 through September 30. This small flow increase provides an important benefit for Rainbow Trout rearing and holding through the hotter summer months of the year.

In the chart below, we have included the Network's proposal for increased flows for Wet and Above Normal years as compared to PCWA's proposed flows in the DLA. We have placed a dash wherever the Foothills Water Network's proposed flows for Above Normal and Wet years are the same as flows proposed in the DLA.

Figure 2 Rubicon River Minimum Instream Flows

Months	CD	D	BN	PCWA AN	FWN AN	PCWA Wet	FWN Wet
Oct	15	20	20	25	-	25	-
Nov	15	20	20	25	-	25	-
Dec	15	20	20	25	-	25	-
Jan	15	20	20	25	-	25	-
Feb	15	20	20	25	-	25	-
March 1-14	15	20	20	25	-	25	-
March 15-30	31	35	42	55	-	60	-
April	31	35	42	55	-	60	-
May	23	35	42	55	-	60	-
Jun 1-14	19	28	31	50	-	50	-
Jun 15-30	15	20	20	40	45	40	45
July	15	20	20	30	40	30	40
August	15	20	20	30	40	30	40
Sept	15	20	20	30	35	30	35

Middle Fork American River below French Meadows Reservoir Minimum Flows

The Foothills Water Network recommends increasing minimum instream flows in the Middle Fork American River below French Meadows Reservoir in the summer months of Wet years. In the chart below, we have included our proposal for increased flows for Wet years as compared to PCWA's proposed flows in the DLA. We have placed a dash wherever Wet year flows are the same as flows proposed in the DLA.

Figure 3 French Meadows Minimum Instream Flows

Months	CD	D	BN	PCWA AN	PCWA Wet	FWN Wet
Oct	8	9	10	11	13	-
Nov	8	9	10	11	13	-
Dec	8	9	10	11	13	-
Jan	8	9	10	11	13	-
Feb	8	9	10	11	13	-
March 1-14	8	9	10	11	13	-
March 15-30	11	11	11.5	15.5	16.5	-
April	11	13	13	20	20	-
May	11	13	13	20	20	-
June	8	11	11.5	15.5	16.5	20
July	8	9	10	11	16.5	20
August	8	9	10	11	16.5	20
Sept	8	9	10	11	16.5	15

2.3 Pulse Flows

Flows that more closely mimic the natural hydrograph are extremely important to maintain the health of the ecosystem; particularly the bypass reaches on this project.³ The Foothills Water Network appreciates and supports PCWA's objective of emulating the spring snowmelt recession limb of the hydrograph. Our discussions and negotiations on this issue have been positive and fruitful; PCWA's inclusion of the pulse flows to emulate the snowmelt recession in the DLA is a testament to our joint commitment to this mitigation. The Network offers these comments on PCWA's approach to providing a snowmelt recession limb that emulates the natural spring snowmelt recession.

The Foothills Water Network recommends consistency in our ramping rates to mimic the snowmelt recession across the bypass reaches. In some cases the schedule proposed in the DLA to ramp down flows coming off of pulse and spill events, is too fast to avoid adverse effects on Foothill Yellow-Legged Frogs. Recent analysis by scientists at University of California at Davis suggests that a 9% per day recession rate is the limit for flow changes that is protective of Foothill Yellow-Legged Frogs.⁴ Therefore, we recommend that PCWA slow the rate of ramping down off pulse flows so the recession limb more closely emulates the unimpaired snowmelt recession rate and meets this criteria of 9%/day. This rate should be applied globally across the bypass reaches for pulses and down-ramping from spill. Mimicking the snowmelt recession will benefit aquatic organisms including Foothill Yellow-Legged Frogs, Rainbow Trout and benthic macroinvertebrates.

The Foothills Water Network members recommend PCWA provide a pulse flow that emulates the spring snowmelt pulse and associated recession rates in Wet, Above Normal, and Below Normal year types. PCWA only proposes pulse flows in Wet and Above Normal year types in its DLA. However, the unimpaired hydrology shows that snowmelt pulses occurred in all water year types. The spring pulse flows are important to initiate motion of gravels, reduce encroachment of riparian vegetation, and provide spawning flows for Rainbow Trout. Though we think the pulses

³ Yarnell, Sarah M., Viers, Josh H., Mount, Jeff F. Ecology and Management of the Spring Snowmelt Recession. *BioScience* Vol 60. ISSN 0006-3568, electronic ISSN 1525-3244. 2010. American Institute of Biological Sciences. p. 114-127.

⁴ Pers. comm, Sarah Yarnell, UC Davis.

are important in all year types, we are not asking for a snowmelt recession pulse in Dry and Critically Dry years. This is in consideration of foregone power and reduced water availability for water supply.

French Meadows

The Foothills Water Network recommends that PCWA's Final License Application include a pulse flow in the Middle Fork American River below French Meadows Reservoir in Below Normal years, in addition to the pulse flows in Wet and Above Normal years proposed in the DLA.

In addition, we recommend that PCWA modify its proposed ramp rate for pulse flow below French Meadows in its Final License Application. The ramp rate should be slowed to 9%/day to limit encroachment of riparian vegetation and benefit aquatic organisms including Rainbow Trout and benthic macroinvertebrates. The slowed ramping rate will also have the added benefit of providing more opportunity days for boaters at around 200 cfs.

Interbay

The Foothills Water Network recommends that PCWA's Final License Application include a pulse flow in the Middle Fork American River below Interbay Dam in Below Normal years, in addition to the pulse flows in Wet and Above Normal years proposed in the DLA.

For the Interbay whitewater boating reach, the Proposed Action proposes less boatable opportunity days than the No-Action Alternative it appears that this is due to the fact the proposed ramping rate from spills is actually faster than the rates applied under historical operations. The Network recommends that PCWA's Final License Application include a pulse flow that provides equal to or more whitewater boating opportunity days than the No-Action Alternative.

We request that in its Final License Application, PCWA clarify its level of control on releases from Interbay to inform the ability to refine its ramp down schedule.

We request that PCWA's Final License Application assess boatable opportunity days based on the optimum flows resulting from the PCWA test flow study below Interbay Dam⁵. Results from this study show that optimum boatable flows were identified as the range between 400 and 500 cfs. The metrics in the PCWA DLA that assess boater opportunity days for this reach are based on a much larger flow range of 200-800 cfs. We request that these metrics be revised so we can better understand the effects of the Proposed Alternative on the boatable opportunity days below Interbay.

Duncan Creek Pulse Flows

The Foothills Water Network recommends that PCWA include in its Final License Application a pulse flow in Duncan Creek below Duncan Diversion in Below Normal years, in addition to the pulse flows in Wet and Above Normal years proposed in the DLA. The spring pulse flows are important to initiate motion of gravels and vegetative management in all water year types.

⁵ REC4 Contingency Whitewater Boating Study Report.

In addition, we recommend slowing PCWA's proposed snowmelt recession rate to limit encroachment of riparian vegetation. The duration of pulse flows are particularly important on Duncan Creek because inundating the vegetation under the high water mark will, in the long term, help in keeping riparian vegetation from continuing its encroachment into the stream channel. Riparian vegetation encroachment makes wading difficult and reduces mobilization of cobble bars along the creek. A slow recession rate following a pulse will benefit aquatic organisms including Rainbow Trout and benthic macroinvertebrates.

Rubicon River Pulse Flows

In the DLA, PCWA proposes different recession rates coming off of spills when there is more than one spill in any year. We recommend that in its Final License Application, PCWA simplify this requirement so that the recession rate following any spill is the same as the rate prescribed for the year's first spill. Part of our concern stems from the fact that it may be difficult to define when a first spill event has actually occurred. This would make compliance requirements difficult to determine. We have additional concerns that a more accelerated ramping off a second spill event could adversely affect Foothill Yellow-Legged Frogs.

The Network also recommends that in its FLA, PCWA apply its proposed Above Normal Pulse Flow schedule to the Below Normal Year Type. The rationale is that the snowmelt recession rate is important to species protection in all year types. Late snowmelt or rain events cause flow peaks that can quickly change stage and adversely affect Foothill Yellow-Legged Frogs egg masses and stages of tadpole emergence. We understand that releasing the pulse in Below Normal years might not be possible using a combination of spill gates and the instream flow valve because the water might not reach the spill gates until a time when its release would adversely affect the eggs and emergence of Foothill Yellow-Legged Frogs below Hell Hole Dam. Accordingly, we look forward to continuing our discussion with PCWA on their proposed valve testing and alternative plans to provide pulse flows that meet the geomorphologic range of flows that can initiate motion.

In addition, pulse flows are important to more frequently inundate the banks and mid-channel bars to reduce encroachment of vegetation. Please see aerial photos comparing the North Fork American at Moonshine Ravine below Euchre Bar at 1,842 feet elevation and the Rubicon downstream of the South Fork Rubicon at 1,822 feet elevation. The North Fork American, which is unimpaired, has banks that are free of vegetation and open cobble bars under the high water mark. In contrast, the Rubicon has banks and mid-channel bars covered with vegetation that had time to grow between more infrequent high flow events. (See Appendix A Comparison of Riparian on Rubicon River and North Fork American) The seasonal storage betterment, Hell Hole Reservoir will require an additional 7,600 af to spill, delaying the spill even more than under current operations and facilities. The betterment will reduce the spill events for Below Normal water years further justifying the need to schedule pulse flows in Below Normal years.

The Network requests that PCWA move its start date for Rubicon pulse flows to the first weekend of May. The rationale for this change is so that boaters can more easily take advantage of boatable flows on the weekend rather than weekdays. Additionally, we would like a pulse flow regime that sets a predictable schedule including a minimum of two days of whitewater

boating flows in Wet, Above Normal, and Below Normal year types. Historically, boatable flows have occurred in Below Normal years.

We do not agree with PCWA's proposal in the DLA that we fix the volume of water available for the pulse flow below Rubicon at this time due to lack of information regarding boatable flows. We request that in its FLA, if PCWA proposes to set the volumes for the pulse flows and recession rate, they also include a criterion that the pulse will provide adequate boating opportunity days. In the DLA, PCWA proposes to set the volume of water available for the pulse flow to 15,808 acre-feet in a Wet year and 7,081 acre-feet in an Above Normal year as well as retain the proposed ramping rates in the event that we increase the magnitude of the pulse itself. However, at this time, we do not have verified optimum boatable flows for the Rubicon River. If, based on successful testing of the Hell Hole valve at higher flows, the pulse flow increases from 200 to 400 or 600 cfs, we don't expect the proposed volumetric constraints to meet all the interests. In particular, we don't expect that the proposed volumes for Above Normal year types will allow for a reshaping of the pulse flow to meet the threshold for initiation of motion and boatable flows as well as the proposed ramping rates. That said, we lack the boating flow information to test our hypothesis.

As discussed during negotiations, the boatable flow for the Rubicon River below Ellicotts Bridge still needs testing. Historically, boaters have had to estimate the flow because there was no publicly available gauging information. Most boaters participating in the consultation did not have the actual dates they boated the Rubicon so their flow estimates could not be correlated with actual historic hydrology for verification. PCWA's Contingency Whitewater Boating Study results state that the minimum boatable flow is 400 cfs, but it is clear from the study data that this is an unverified flow estimate collected from boater interviews and consultation.⁶ Subsequent to filing the DLA, stakeholders provided data to PCWA with date-certain whitewater boating runs correlated with spill volume and volume estimates for the South Fork Rubicon. These data indicate that a minimum flow much greater than the 400 cfs flow that appears in the REC 4 Contingency Whitewater Boating Study would be more appropriate optimum flow. The negotiations and tradeoffs surrounding the pulse flows to be released from Hell Hole require more precise information from a test flow boating study in order to come to collaborative agreement.

Accordingly, we appreciate PCWA's willingness to conduct a test boating flow study on the Rubicon River below Ellicotts Bridge. PCWA has agreed that if Hell Hole spills from April 1 to May 1, 2011 then PCWA will organize a whitewater boating test flow for the Rubicon Run. Based on the timing of the Foothill Yellow-Legged Frog tadpole emergence, this timing should not adversely affect Foothill Yellow-Legged Frog populations in the Rubicon River.

If Hell Hole doesn't spill or is not projected to spill at least 400 cfs between April 15 and May 1, 2011, then PCWA will purchase water from Sacramento Municipal Utility District (SMUD) to be released down the South Fork Rubicon to provide the test flow for the study.

⁶ PCWA DLA, Technical Study Reports, REC 4: Streambased Recreation Opportunities, Contingency Whitewater Boating Study Report.

2.4 Hell Hole Feasibility Study

The Network does not agree to the criteria PCWA sets forth constraining the volume of the pulse flows after future valve testing. We request that in its FLA, PCWA include additional criteria that the pulse flow must accommodate at least a 2-day boatable flow as well as ecologically appropriate ramping rate.⁷ At this time, we lack information on optimum boatable flows for the Rubicon Run. In particular, we are concerned that PCWA's DLA pulse flows volumes for an Above Normal year will not accommodate potential pulse magnitudes of 400 and 600 cfs, 2 consecutive boatable opportunity days, and an appropriate ramp down rate.

We recommend that in its FLA, PCWA include a back-up alternative or set of alternatives for PCWA to provide the pulse flows should the valve fail to test high enough to provide geomorphologic and optimum boating flows. One option is that PCWA could supplement flows on the Rubicon River with water purchased from the Sacramento Municipal Utility District (SMUD) which operates the Upper American River Project.

The Whitewater Boating Test Flow Study on the Rubicon River below Ellicotts Bridge is an incomplete study and we reserve the right to comment in the future on how it affects PCWA's Draft and Final License Applications.

2.5 Outages

Annual Maintenance Outage

During the outage maintenance period scheduled for the last week in September to November 1st, PCWA must meet minimum instream flows in the Peaking Reach by releasing the water down the Middle Fork American and Rubicon Rivers. It is our understanding that during an outage, no flows can be delivered via PCWA's pipes so all instream flows for the Peaking Reach must be delivered via the bypass reaches.

Foothills Water Network believes that during annual maintenance outages, PCWA will be able to meet its DLA minimum flows in the Peaking Reach without causing adverse effects on Foothill Yellow-Legged Frogs in the Middle Fork American and Rubicon River bypass reaches.

As we understand it, flows in the bypass reaches that inundate mid-channel bars could potentially trap and wash away juvenile Foothill Yellow-Legged Frogs. Therefore, maintaining flows below this inundation level is important for habitat retention in the fall period. We think that the stage change in the bypass reaches resulting from conveying minimum flows for the Peaking Reach would not inundate mid-channel bars. For example, if the Peaking Reach minimum flow during the outage is 200 cfs and each bypass reach conveys half of that flow, then the Rubicon River's minimum flows and additional 100 cfs would produce a stage change not exceeding 1.25 feet at river mile 20.9. We do not believe this incremental stage change would inundate mid-channel bars. See the Table 1 below for Stage Discharge Relationships for the Rubicon Resulting from Conveying Peaking Reach Minimum Flows During the Annual Maintenance Outage. Table 1 is based on Appendix B: PCWA's Rubicon River Stage Discharge Relationship at River Mile 20.9.

⁷ PCWA DLA, Instream Flow Reservoir Minimum Pool Measure, p. A-1

Table 1: Stage Discharge Relationships for the Rubicon Resulting from Conveying Peaking Reach Minimum Flows During the Annual Maintenance Outage

Months	CD			Dry			Below Normal			Above Normal			Wet		
	Rub. Min	Rub Min + Peak Min*	Stage Change at RM 20.9	Rub. Min	Rub Min + Peak Min	Stage Change at RM 20.9	Rub. Min	Rub Min + Peak Min	Stage Change at RM 20.9	Rub. Min	Rub Min + Peak Min	Stage Change at RM 20.9	Rub. Min	Rub Min + Peak Min	Stage Change at RM 20.9
Sept	15	115	1.25	20	120	1.12	20	120	1.12	35	135	0.86	35	135	0.80
Oct	15	115	1.25	20	120	1.12	20	120	1.12	25	125	0.97	25	125	0.97
Nov	15	115	1.25	20	120	1.12	20	120	1.12	25	125	0.97	25	125	0.97

Peaking Reach Minimum Flow Example 200
Half of Peaking Reach Minimum Flow Example:** 100

Stage Change at RM 20.9 based on PCWA's stage change figure and table with averages of all 22 cross-sections at this site. Flows changes represented by the closest data point for flow from PCWA's stage change charts

* Rubicon Minimum Instream Flow plus Peaking Reach Minimum Instream Flow as represented by 200 cfs as an example

** Half of the peaking reach flows can be delivered via the Middle Fork American River.

FWN Proposed Minimum Flow highlighted in green

In addition, by the start of the annual maintenance outage, Foothill Yellow-Legged Frogs will have developed sufficient mobility to move away from water rising incrementally at the proposed ramping rate. Therefore, the associated lateral rise of water on the channel banks should not risk washing away juvenile Foothill Yellow-Legged Frogs.

In addition, we do not believe that the ramping rates need to be modified from the DLA proposed ramping rate in order to protect Foothill Yellow-Legged Frogs during emergency outages. Based on the minimal resulting stage change, a slower ramping rate during emergency outages is not necessary to protect Foothill Yellow-Legged Frogs from the increase in flows.

Barring physical constraints due to maintenance and repair, PCWA should release flows during the annual outage in a way that generally provides close to an even split of flow releases between the Rubicon and Middle Fork American rivers, in order to provide the required outage flow in the Peaking Reach.

Consequently, the Network recommends that PCWA's FLA include minimum flows for the Peaking Reach that will not adversely affect Foothill Yellow-Legged Frogs in the bypass reaches and still enhance habitat on the Peaking Reach during annual outage.

In order to better understand the development of Foothill Yellow-Legged Frogs, the Network recommends that PCWA's FLA include formal monitoring of Foothill Yellow-Legged Frogs during the annual maintenance outage be required as a license condition. The monitoring should compare developmental stages of the frogs at the upstream and downstream limits of their populations, in order to understand whether there is a difference in timing of development related to flow, elevation, and temperature. These results would help answer the question of whether the bypass reach flows needed to meet the Peaking Reach outage flow are detrimental to the abundance of frogs in the bypass reaches.

Emergency Outages

As during the annual maintenance outage, the Network believes that during emergency outages, PCWA will be able to meet its DLA minimum flows in the Peaking Reach without causing adverse effects on Foothill Yellow-Legged Frogs in the bypass reaches.

For example, PCWA's DLA proposes that the Peaking Reach's highest minimum flow be 450 cfs in May of Wet year types. The PCWA DLA also includes a minimum flow of 60 cfs in the Rubicon River for the same time period. In the spring of a Wet year, the bypass reaches' minimum flows will likely be exceeded by the pulse flows proposed in the DLA in addition to spring accretion and inflow. In other words, based on review of the historical record, it is highly unlikely that the bypass flows will be running at their minimum instream flows during the spring of Wet water years. That said, even if the Rubicon River was running at its minimum instream flow – 60 cfs – it could convey half of the minimum flows for the Peaking Reach – 225 cfs – (the other half traveling down the Middle Fork American), and only result in a 1.32 stage change at river mile 20.9.

In addition, we do not believe that the ramping rate needs to be modified from the DLA Proposed ramping rate for emergency outages for the same reasons discussed above in our comments on the annual maintenance outage flows in the bypass reaches.

Furthermore, the Network requests that PCWA investigate options and a cost estimate for constructing a bypass past the turbines for electrical outages. A physical bypass could provide instream flows during long-term electrical outages. This back up infrastructure is important for safety reasons and protection of the aquatic ecosystem during long unplanned outages affecting the electrical system. We understand that the bypass would not be able to provide flows during a mechanical outage at the dam outlets.

We recommend PCWA include a license condition in its Final License Application to evaluate and mitigate for the impacts of any emergency outage flows that are lower than the minimum flows in the Peaking Reach or bypass reaches.

3 Peaking Reach Aquatic Resources

3.1 Foothills Water Network Objectives

The Foothills Water Network's objectives in the Peaking Reach below Oxbow Powerhouse are:

1. Enhance Rainbow Trout in all life stages, with emphasis on spawning and rearing.
2. Enhance benthic macroinvertebrate populations to enhance the fishery and angling.
3. Protect Brown Trout in all life stages.

3.2 Minimum Instream Flows

At this time, the Foothills Water Network is not providing an alternative flow scenario for the Peaking Reach. Compared to the time we have spent negotiating flows on the bypass reaches, we have spent very few days doing the same on the Peaking Reach. To date, we have not sufficiently explored various alternative flow scenarios on the Peaking Reach with the operations model. We are currently working closely with the State and Federal resource agencies to explore alternative model runs that meet our interests and will discuss those alternatives with PCWA in our future relicensing meetings.

Generally, the Foothills Water Network recommends that DLA proposed minimum flows should be increased in order to enhance the overall aquatic ecosystem, enhance Adult Rainbow Trout habitat, increase food production, and decrease the magnitude of fluctuation between minimum and peak flows. This decrease in the magnitude of fluctuation will enhance overall aquatic ecosystem health, as well as fishery and benthic macroinvertebrate populations by increasing wetted perimeter and wetted area at the lowest flows, and decreasing the magnitude of fluctuation between minimums and peaks.

After reviewing the PCWA DLA flows, the Network believes that increasing minimum instream flows is of greater importance than decreasing maximum flows in order to benefit fisheries and macroinvertebrates and the overall health of the aquatic ecosystem in the Peaking Reach.

The Network recommends that the PCWA Final License Application include a condition that operations be limited to one peaking fluctuation from minimum flow to peak flow every 24 hours. We would like to craft license terms and conditions that discourage if not prohibit PCWA from “double-peaking” within a 24-hour period. We look forward to working with PCWA to craft a clear definition for this concept that is operable and enforceable.

The Network agrees with PCWA that as we have discussed, the limited storage capability of Ralston Afterbay is a primary bottleneck constraining the Project’s flexibility. Upon review of the hydrology and PCWA’s Excel tool for the Peaking Reach, the Network has concluded that the capacity bottleneck at Ralston Afterbay is the primary obstacle that prevents PCWA from providing increased minimum flows. It is our understanding that for some of the summertime the obstacle to providing higher minimum flows is not the availability or expense of the water; rather, it is simply that Ralston Afterbay’s capacity is too small to provide the flexibility required to re-regulate the peaking flows from the large upstream generation units in a way that provides consistent and higher minimum instream flows. For this reason, we request that PCWA conduct a study of potential options for engineering and operations modifications at Ralston Afterbay that would increase its usable storage capacity and thus its ability to serve as a re-regulating facility. Please see Section 5.1 for our Request for a study to increase capacity at Ralston Afterbay.

Ramping Rates

The Network agrees with PCWA’s ramping rate of 18 inches per hour for the Peaking Reach. However, we are concerned about the proposed “averaging” proposed to meet the ramp rate. We understand there may be a compliance issue and that licensee will make best efforts to keep the ramping as even as possible. We look forward to talking with PCWA about how we might craft a compliance measure that meets both of our interests.

We also request that PCWA make available the hydraulic engineering calculations, notes and descriptive narratives that provide the technical context for benchmarking the original ramp rates of 12 inches per hour in the original/amended license to the new “lower” ramp rates of 18 inches per hour for the Peaking Reach. PCWA has stated that moving the gauge from the original position to where it is now located resulted in a new ramping rate of three feet per hour. Network members would like to confirm PCWA’s assertion that the move resulted in a change in ramping rate to three feet per hour.

Annual Maintenance Outage Minimum Flows

We request that PCWA's Final License Application include higher minimum instream flows in the Peaking Reach during the outage period that those flows proposed in the DLA. As we discussed in Section 2.5, we do not think conveyance of higher flows will adversely affect Foothill Yellow-Legged Frogs in the bypass reaches.

The Peaking Reach's aquatic environment should not have to endure extreme low minimum flows for up to 30 days or more merely because of maintenance work. We would like to craft license terms and conditions that require PCWA to reduce the outage flow periods to the absolute minimum. The project's license requirements should meet the needs of the environment, not the reverse.

Ramping Rates for Annual Maintenance Outage

The Network proposes that PCWA include in its FLA a special ramping rate for ramping down from minimum flows to outage flows at the beginning of the annual maintenance outage. The 'outage ramping rate' should be slower than the proposed 18"/hour in order to avoid fish stranding.

PCWA studies documented fish stranding at Gray Eagle Bar resulting from dropping flows .

PCWA's Stranding Evaluation concluded:

The majority of fish temporarily trapped (approximately 250 fish) were located in a dredge hole developed by recent mining activities. Temporarily trapped/isolated fish consisted of a mix of species (trout fry, California roach, hardhead, Sacramento pikeminnow, and sculpin) that were found swimming in pool areas isolated from the main channel.⁸

We respectfully disagree with PCWA's estimation that "trapped fish would survive until another peaking event inundated the habitat."⁹ The Stranding Evaluation was a snapshot in time and does not tell us whether the stranded fish survived the stranding. Fish may not have survived due to predation by raccoons or other terrestrial animals or due to lethal temperatures.

Notice of Timing of Annual Maintenance Outage

The Network recommends that PCWA include a condition in its FLA that it will give four weeks notice of the start date for down-ramping to the annual maintenance outage. The notice should be distributed to local fishing clubs including Horseshoe Bar Club, Granite Bay Flycasters as well as State and Federal resource agencies including California Department of Fish and Game This notice will give time to the clubs and resource agencies to coordinate fish rescues.

⁸ PCWA DLA, Technical Study Reports, AQ1-Instream Flow Technical Study Report, p. 41

⁹ PCWA DLA, Technical Study Reports, AQ1-Instream Flow Technical Study Report, p. 41

3.3 Aquatic Resources in the Middle Fork American River below Oxbow Powerhouse

Benthic Macroinvertebrates

The Foothills Water Network recommends that PCWA include conditions in its FLA that reduce flow fluctuations in the Peaking Reach to increase benthic macroinvertebrates (BMI) populations and food production for fish. Based on PCWA's Effective Food Habitat Matrices for the Peaking Reach, food production increases as the magnitude of flow fluctuations decrease.¹⁰ (See Appendix C for AQ1-Instream Flow Study Report, Figure O-15 and O-24 Middle Fork American Effective Food Habitat Matrices.) An increase in minimum instream flows from the PCWA DLA proposed minimum flows would increase food production and BMI habitat in the Peaking Reach.

The AQ3 Macroinvertebrate and Aquatic Mollusk Study Report shows that the BMI composition at the top of the Peaking Reach contains a higher percentage of tolerant taxa than the BMI composition further downstream. Specifically, the study shows that at the top of the Middle Fork American River Peaking Reach immediately below Ralston Afterbay Dam (MF24.4) and immediately below Oxbow Powerhouse (MF23.6) there were "fewer intolerant EPT taxa, more high tolerance individuals, and lower taxa richness."¹¹

The PCWA Macroinvertebrate and Aquatic Mollusk Study Report also shows lower Index of Biological Integrity (IBI) scores just below the Ralston Afterbay in comparison to unimpaired reference reaches.¹² The Network disagrees with PCWA's interpretation of study results that lower IBI scores at the downstream sites on the Peaking Reach can be attributed to elevation. We suggest that lower scores can be attributed to the adverse impacts of the Project. The Lower Yuba below Englebright, a nearby river at an elevation similar to the Middle Fork American below Oxbow Powerhouse, has an extremely rich and diverse macroinvertebrate population.¹³

Adaptive Management

It is essential that whatever flow regimes are identified under the new license, PCWA would be responsible to evaluate the instream flow impacts on BMI habitat and production. Should licensed flow regimes indicate decreases or adverse trends in BMI populations, then further studies should be conducted in developing and adapting instream flow regimes that are more conducive to BMI populations and overall aquatic ecosystem health.

The Network recommends that PCWA include an adaptive management clause in its FLA that if licensed flow regime studies indicate decreases or adverse trends in BMI populations, then PCWA will adapt instream flow regimes that provide for increases in BMI habitat and production.

¹⁰ PCWA DLA, Technical Study Reports, AQ1 Instream Flow Technical Study Report, Figure O-15 and O-24 Middle Fork American Effective Food Habitat Matrices.

¹¹ PCWA DLA, SDA Proposed Environmental Measures, Section 7.5.7.2 Benthic Macroinvertebrates, p. 7.5-15

¹² PCWA DLA, Macroinvertebrate and Aquatic Mollusk Technical Study Report p. 8.

¹³ Yuba Accord River Management Team.

Fisheries and Spawning

The Peaking Reach below Oxbow Powerhouse offers very limited Rainbow Trout spawning gravels in the mainstem, and limited Rainbow Trout spawning habitat due to the peaking flow fluctuations. In comparison, the North Fork of the Middle Fork American River provides better Rainbow Trout spawning habitat because it is unimpaired and contains suitable spawning gravels. Other tributaries to the Middle Fork American below Oxbow Powerhouse also offer potential spawning habitat that could be enhanced.

The Network recommends that PCWA's FLA include a Rainbow Trout spawning monitoring plan that requires the licensee to inform the objective of enhancing Rainbow Trout spawning in the Peaking Reach below Oxbow Powerhouse over the first ten years after license issuance. The plan should include monitoring of juvenile and adult fish populations, gravel, and downstream migrant trapping in tributaries to the mainstem Middle Fork American River below Oxbow Powerhouse. The monitoring plan should be coupled with an adaptive management program of spawning enhancement in the mainstem and tributaries, beginning with implementation and evaluation of targeted gravel augmentation. The plan should include definition of decision points, decision makers, and potential measures and timelines for their implementation, to enhance spawning in the Peaking Reach. We are recommending additional potential non-flow spawning mitigations in Section 5.2 below.

The Foothills Water Network also recommends the PCWA FLA include an analysis of weighted usable area (WUA) for Winter-spawning *O. mykiss* spawning. For winter-spawning *O. mykiss*, this analysis should inform management decisions for winter spawning flows, winter base flows and flows during fall and winter outage periods for the bypass and peaking reaches. In addition, the WUA analysis should inform management of flows for juvenile rearing habitat, for winter-spawning *O. mykiss*, which takes place earlier than for spring spawning *O. mykiss*. As currently written, PCWA's AQ1 Instream Flow Technical Study Report does not analyze flows for winter-spawning *O. mykiss*.

The Foothills Water Network first filed this comment on PCWA's Draft AQ1 Instream Flow Technical Study Report. PCWA responded that flow-related analysis and comparisons for would not be included in the technical study reports "for any time period other than spring." The Network still maintains that PCWA should conduct the flow analysis for spawning for winter-spawning *O. mykiss* in order to inform license conditions.

Fishery Management Provisions

The Foothills Water Network recommends that PCWA's new license retain and appropriately modify portions of the existing FERC No. 2079 License Amendment Language related to Fishery Management. The current 1981 License Amendment includes a provision that allows fishery management to be modified by mutual agreement of US Forest Service, California Department of Fish and Game, and US Fish & Wildlife Services. We believe that the new license should also contain this provision with the following appropriate modifications.¹⁴

New License language would be modified to read as follows:

¹⁴ FERC Project No. 2079 ORDER AMENDING LICENSE (MAJOR) issued March 18, 1981 Page 5: (E) Article 37: Footnote; 2

Oxbow Powerplant releases: The scheduled flow releases may be modified for beneficial aquatic and fishery management purposes upon consensus among the Licensee, the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Should consensus be unobtainable, parties will employ appropriate mediation and/or arbitration processes to reach a determination.

4 Peaking Reach Recreation Flows

4.1 Foothills Water Network Objectives

The Foothills Water Network objectives for recreation flows in the Peaking Reach are:

1. Enhance angling opportunities that are compatible with sustaining robust fisheries and thriving populations of other desirable biota.
2. Enhance whitewater boating opportunities.
3. Protect trail crossing opportunities.

4.2 Angling

The 2007 “Report of Findings from the 2006 Auburn State Recreation Area Visitor Survey” is based on extensive recreational surveys developed in 2006 for California State Parks in support of the Auburn SRA General Plan/Interim Resource Plan. The Bureau of Reclamation has suspended the planning process. The surveys that inform the Report indicate that river angling is a recreational benefit on the Peaking Reach.¹⁵

The Network recommends that in its DLA, PCWA include an Angling section that analyzes the benefits of the Proposed Action on angling. In its analysis of the Peaking Reach below Oxbow Powerhouse, the DLA states that the Proposed Action enhances angling but provides no analytical support for this statement¹⁶. No further mention of angling in the Peaking Reach is made. The Foothills Water Network requests that PCWA analyze the effects of its proposed Peaking Reach flows on angling opportunities as well as angling safety. The analysis in the DLA of trail crossings provides a good model for analyzing proposed flow effects on angling opportunities. The results of REC 4: Streambased Recreation Opportunities Technical Study Report and the discussion in the Proposed-Action Alternative provide extensive analysis of trail crossing and whitewater boating recreation uses. The Network requests that PCWA apply their considerable talents towards developing the same type of analysis for the recreational use of angling in order to inform our collaborative negotiations.

In particular, we would like PCWA’s FLA analysis on Angling benefits to address when Peaking Reach flows proposed in the DLA provide preferred angling flows at preferred times, and how the flows affect crossing and wading safety at the following angling locations: below Ralston Afterbay and at Horseshoe Bar, Cache Rock, Drivers Flat, and the confluence of the Middle Fork American with the North Fork American. In the experience of the Network members, the primary demand for angling recreational use occurs between April and November, though some

¹⁵ Auburn State Recreation Area Survey Report, Table 19, p. 17.

¹⁶ PCWA DLA, Biological Assessment Biological Evaluation, Figure 28, p. 20.

anglers also fish during the winter. Generally, anglers prefer the mornings, late afternoons, and evenings and avoid the midday. During the summertime, anglers in the Foothills Water Network prefer fishing between from Sunrise until 11:00 AM and from 3:00 PM and ½ hour after sunset. For preferred flows and timing, please also refer to the REC 4: Streambased Recreation Opportunities Technical Study Report's Appendix of the March 10, 2010 Angler Focus Group Notes. Like whitewater boating activities, angling benefits from a degree of predictability. Similar to commercial boating, commercial angling outfitters depend on pre-scheduled or long-term predictability in order to book clients. Safety for anglers also depends on predictability in terms of flow changes and hourly ramping rates. Therefore, the analysis of timing for angling flows should also inform the predictability of those flows months and weeks in advance.

PCWA's FLA should relate the preferred angling times and safe wadeable flows. The FLA should include an analysis of safe wadeable flows based on the crossing information developed to analyze trail crossings combined with input from the two angler focus group meetings, which appear in the REC 4: Streambased Recreation Opportunities Technical Study Report¹⁷.

The Network considered proposing recreational angling flows on the Peaking Reach at specific times during the day. Such flows might have maintained, during prime fishing hours, somewhat higher flows than the minimum flows. However, in analyzing the combined constraints of power generation operations and storage capacity in Ralston Afterbay, the Network decided that the limited water available to shape non-peak flows in the Peaking Reach would best be used to maintain minimum flows as high as possible. Should there be an opportunity to increase the usable storage capacity of Ralston Afterbay in the future; the Network believes that benefits to recreational angling could be achieved by reshaping the daily movement of water through the Peaking Reach to allow optimum fishing flows during times of day most suited seasonally to greatest angling interest.

4.3 Whitewater Boating

Tunnel Chute Run (downstream of Oxbow Powerhouse)

For over 25 years, the Project operations (through the use of Pacific Gas and Electric's contract to run the project) have provided scheduled flows which were agreed to in consultation between professional outfitter representatives and PG&E personnel early each spring. Indeed, for the past 19 years – in all water year types – scheduled releases have produced flows *seven days a week* with this informal arrangement (with the exception of 2001 due to the "energy crisis" we endured in California, as well as the extreme dry year. That year saw a resumption of scheduled water from late June on through the summer). In comparison, the Proposed Action in the DLA represents a reduction of scheduled whitewater releases on the Tunnel Chute Run.

Commercial whitewater boating requires flows to be scheduled prior to the rafting season, which begins in May. The boating opportunity days identified in PCWA's DLA do not take into account the need for pre-season scheduled flows. Unscheduled opportunities are useless to commercial whitewater outfitters and their clients as they cannot book trips on days with

¹⁷ PCWA DLA, REC 4: Streambased Recreation Opportunities Technical Study Report, Section 5.3 p. 10 and related Appendices.

unscheduled flows. Reliance on the informal arrangement that has been used in the past is not an acceptable mitigation for a 40 or 50 year license.

That said, PCWA's DLA analysis of it's the boatable flows in the Tunnel Chute reach does show that the volume of water is available. And in many days, months, and water years, the interests of PCWA and commercial whitewater boating align. With that in mind we will, in the future, make more specific comments - including quantity of water, time of release and days released - on what we'd like to see as regards recreational boating releases on the Tunnel Chute Run.

We request that PCWA's FLA include an analysis of boating opportunity days that are scheduled and predictable at least by the time the year type has been established. Commercial whitewater boating requires that flows be scheduled prior to the rafting season. As written, PCWA's DLA does not take into account the need for pre-season scheduling of flows. Unscheduled opportunities are of no benefit to commercial whitewater outfitters and their clients, since outfitters cannot book trips on days with unscheduled flows.

Whitewater Boating on Mammoth Bar and Confluence Runs

In its DLA, PCWA proposes an early release of 800 cfs at 5 am in the summer of Wet year in order to provide a boating opportunity on the Mammoth Bar and Confluence Runs during the middle of the day. This is the type of timing we would like to discuss further in our upcoming negotiations. If PCWA does not make early releases such as those proposed in the DLA for Wet years, then in many cases, boatable flows will arrive too late in the day at Ruck-A-Chucky and the Confluence for boaters to take advantage of them.¹⁸ The Network understands that in order to release earlier flows, PCWA would like to start the day with a full reservoir. We also understand the timing of the release can affect PCWA's flexibility to generate peak power.

The Network also requests that PCWA's FLA provide us with the information on the initial design of the whitewater features including the flows for which the features were designed. In our upcoming negotiations, we would like to take into account this recreation use as well as the angler experience and trout habitat negotiating flows for the Peaking Reach.

In addition, we request that PCWA evaluate in its FLA whether the installed whitewater features at China Bar provide a recreational opportunity at the flows under consideration for the new license. As part of this analysis, PCWA should publish at what range of flows the installed whitewater features provide opportunities for play boating.

Adaptive Management

The Network requests that PCWA and relicensing stakeholders discuss development of an adaptive management clause that if whitewater boating users on the Confluence Reach exceed a certain number by 2016, PCWA will increase whitewater boating opportunities provided by flow released from Ralston Afterbay. We are looking forward to a discussion on this topic which should address the threshold numbers for boating use, increased days, days of the week, and seasonality. In addition, we should discuss how increased frequency of early flows for the

¹⁸ Ruck-A-Chucky is the put-in for the Mammoth Bar whitewater boating run and the Confluence is the put-in for the Confluence whitewater boating run.

Confluence Reach could be timed and shaped to avoid adverse affects on other beneficial uses including angling and trail crossings.

4.4 Other Recreational Flow Events

Tevis Cup and Western States 100 Events

The Network recommends the following edits to the section on Tevis Cup and Western States 100 Events. The Tevis Cup and Western States 100 may have other training events on the trails, but these training events should not take precedence over the whitewater boating flows. It is the actual annual race events that should take precedence over boating. The narrative should be edited in the following way:

- **Event Coordination**

Coordinate with representatives of the Tevis Cup and Western States 100 to identify and provide flows suitable for adequate trail crossing conditions for these events (when flows are controllable by the MFP). The **annual** Tevis Cup/Western States 100 event recreation flows, when they occur, take precedence over whitewater boating flows. ~~If possible,~~ **Whitewater boating flows will be provided under a modified schedule (e.g., earlier in the day) that meets Tevis Cup and Western States 100 flows. The target flow for trail crossings during the races changes year to year because of changes in channel geometry. In wetter water years, meeting target flows for the races may be impossible because flows exceed the project's control. The flow will not go below the minimum instream flow in the license.**¹⁹

Wounded Warrior Event

The Network requests that PCWA provide a steady fishable flow during the four day annual Wounded Warrior event. The event is scheduled in September or October. Since the annual maintenance outage begins in late September, it's likely the event will fall during the outage when there are no peaking flows. This year, the event organizers appreciated that though the event was held before the outage, PCWA provided 400-500 cfs for the four-day event.

The Horseshoe Bar Preserve located on the Middle Fork American River at the Tunnel Chute hosts this event for the benefit of present and former military personnel wounded in service to the country. During the event the Preserve offers instruction in fly fishing, fly tying and gold panning as well as counseling sessions and information on assistance programs.

5 Non-Flow Mitigations for Peaking Reach Aquatic Resources

5.1 Request for Engineering Study of Potential Modifications of Ralston Afterbay and its Operations

¹⁹ PCWA DLA, Instream Flow and Monitoring Plan, p.10.

The Foothills Water Network requests that PCWA's FLA include a plan for an engineering study of potential modifications of Ralston Afterbay and its Operations. After analyzing model runs and alternatives, the Network members recognized that such an engineering study of potential modifications to Ralston Afterbay is needed. The Network's analysis included use of an Excel model of daily peaking operations at Oxbow Powerhouse (referenced above) provided by PCWA.

The current facility and resulting operations at Ralston Afterbay often do not meet our interests. PCWA has stated its willingness to shape flows downstream of Oxbow Powerhouse to maximize recreational benefits, so long as releases from Oxbow do not constrain operation of Ralston and Middle Fork powerhouses upstream. However, the lack of usable storage in Ralston Afterbay limits the Afterbay's re-regulating ability, and power operations upstream limit flow options that might significantly increase minimum instream flows thereby improving fisheries while still allowing recreational opportunities in the Peaking Reach. ***Consequently, the Network members have concluded that the current storage capacity limits of Ralston Afterbay is the primary obstacle to PCWA increasing minimum flows to levels that truly enhance the river to sustain a thriving fishery as well as provide for recreation opportunities.***

We suggest the analysis consider the initial usable storage in Ralston's original design as a target for modifying Ralston's capacity. Currently, Oxbow is operating at a percentage of its original storage capacity. We are not recommending any particular engineering design in recognition that any facilities modification would need to be analyzed for both positive and possible adverse effects.

It has been our observation that FERC is reluctant to endorse engineering studies until a specific need and objective have been identified. For example, after resource agencies and NGO's in the relicensing of the Merced River Hydroelectric Project requested an engineering study to examine options for providing and preserving cold water in the project's storage reservoir, FERC responded that it would consider an engineering study only if study of project effects first demonstrated a specific need for the engineering study. In the PCWA relicensing, we believe that the study results and negotiations have demonstrated that Ralston Afterbay is a constraint to meeting interests of the licensee, the resource agencies, and the Network.

The Foothills Water Network's and (as we understand it) resource agencies' interests below Ralston Afterbay include:

- A thriving Rainbow and Brown Trout fishery in the Middle Fork American River below Ralston Afterbay. The flows should support the fishery in all life stages. The health fo the fishery depends upon a strong and diverse benthic macroinvertebrate community.
- A range of publicly accessible whitewater boating opportunities on the Tunnel Chute Run, Mammoth Bar Run, and Confluence Run.
- A range of angling opportunities at multiple access points that provide a variety of angling experiences from wilderness to easy access.
- Trail crossings available for runners, hikers, and equestrians.
- Habitat for future reintroduction of Central Valley Steelhead.

It is our understanding that PCWA's interests include:

- Preserving flexibility in the operations of the hydropower system.
- Preserve the ability to generate peak power with PCWA's largest units: Middle Fork Powerhouse and Ralston Powerhouse.

In order to meet our stated interests, PCWA would frequently have to run its big units – Middle Fork Powerhouse and Ralston Powerhouse – during off-peak times, which would decrease their flexibility and potential revenue stream. Rather than ask PCWA to generate during off-peak times, we suggest a formal exploration into increasing the capacity of Ralston Afterbay to meet our interests as well as PCWA's.

If the Ralston Afterbay had more usable storage, it could better meet the aforementioned interests by doing the following:

- Store and release sufficient water for higher minimum flows during the spring and summertime in order to improve the fishery and other biota in the Peaking Reach, while protecting PCWA's generation flexibility and on-peak power generation in their large units in the upstream bypass reaches.
- Increase flexibility for PCWA to vary the timing of different flows downstream of Oxbow powerhouse, to allow additional recreational boating opportunities and to support enhanced angling opportunities at various desirable times and locations downstream of Oxbow Powerhouse.

5.2 Non-Flow Mitigations for Enhancing Trout Spawning

As we have not discussed non-flow mitigations for the trout spawning in the Peaking Reach in the relicensing meetings, we look forward to discussing and developing these non-flow mitigation alternatives with PCWA in the upcoming months.

Foothills Water Network Objectives

- Enhance Rainbow Trout spawning and rearing in the Peaking Reach and its tributaries.
- Enhance Brown Trout spawning and rearing in the Peaking Reach.

Rationale

- The creation of the Ralston Afterbay facility functionally severed the upper tributary system (bypass reaches) from access of mainstem (Peaking Reach) fish populations to historic spawning areas. This barrier was created without significant spawning mitigation measures identified in the original License.
- Low numbers of juvenile Rainbow Trout were found in the Peaking Reach during the fish populations study.
- Lack of spawning gravels in the Peaking Reach below Ralston Afterbay.
- Peaking flow fluctuations in the spring, which result in fluctuations down to minimum flows result in loss of trout spawning habitat.
- Peaking flow fluctuations in the fall during the Brown Trout spawning period result in loss of spawning habitat
- Depending on the duration of the annual maintenance outage, low flows during the outage may result in loss of Brown Trout spawning habitat.

- Peaking fluctuations and low minimum flows in the wintertime result in loss of rearing habitat in winter for Brown Trout.
- It is the interest of the Foothills Water Network to naturally enhance the existing wild Rainbow Trout population; it is not desired to stock wild trout streams with hatchery fish.

Non-Flow Rainbow Trout Spawning Mitigation Alternatives

Tributary Connectivity

Objective: Enhance rainbow and brown trout spawning habitat by increasing access to spawning habitat in the tributaries to the Middle Fork American River. The North Fork of the Middle Fork of the American River is the only un-dammed major tributary found on the Middle Fork of the American River.

Potential Protection, Mitigation, and Enhancement (PM&E) Measure:

- Enhance the connectivity of Otter Creek and the North Fork of the Middle Fork American River to the mainstem of the Middle Fork American River to facilitate Rainbow Trout passage into and out of Otter Creek.
- Conduct stream restoration measures that enhance native trout spawning on the North Fork of the Middle Fork American River and Otter Creek.
- Augment spawning gravel in the mouth and lower tributary sections of Otter Creek and the North Fork of the Middle Fork American River.

Spawning Flows for Ralston Bypass Channel

Objective: Enhance rainbow and brown trout spawning and rearing in the Ralston Bypass channel between Ralston Afterbay and the outlet of the Oxbow Powerhouse.

Potential PM&Es:

- Increased flows for spawning in spring and fall
- Potential gravel augmentation

American Bar Side Channel

Objective: Enhance rainbow and brown trout spawning and rearing in this side channel a half mile downstream of Ralston Afterbay. The American Bar is located at river mile 22 above the Oxbow Gauging Station.

Potential PM&E's:

- Modify the elevation of American Bar entrance and exit so that the channel receives water at lower flow releases from Ralston Afterbay and provides suitable habitat for spawning and rearing of Rainbow Trout.
- Such channel modifications would require construction and maintenance on the property of American Quartz Company. The company supports the project.

Onsite Wild Trout Captive Breeding Program

Objective: Enhance rainbow and brown trout spawning habitat and populations

Potential PM&E:

- In addition to making the channel modifications outlined for American Bar above, develop an onsite wild trout captive breeding program in the modified stream channel. A potential model is the onsite captive breeding program on Sand Creek in Nevada.

Horseshoe Bar Channel

Objective: Enhance fish passage, and Rainbow Trout and Brown Trout spawning and rearing habitat.

Potential PM&E:

- Rewater the historic Horseshoe Bar channel to aid fish passage to the Middle Fork American River above Tunnel Chute and the known spawning habitat North Fork of the Middle Fork American River and to provide spawning and rearing habitat.
- Engineer the rewatered Horseshoe Bar channel to allow fish to disperse both downstream and upstream to benefit trout fisheries in the mainstem of the Middle Fork American River.
- Enhance passage for reintroduction of Central Valley Steelhead.
- Consider options for upstream and downstream volitional fish passage.

Catch and Release Regulations

Objective: Enhance trout in all life stages downstream of Ralston Afterbay and upstream of Ruck-A-Chucky Rapids.

- Request for support from PCWA to request the Fish and Game Commission to change the fishing regulations to catch and release between Oxbow Powerhouse and Ruck-A-Chucky Rapids to enhance fish populations.

6 Recreation Plan

6.1 Public Information

Gauge Installation

The Network recommends that PCWA revise its schedule for gauge installation and availability of online information and provide that schedule in its FLA. The FLA schedule should include installation of gauges no later than the third year after license issuance. The PCWA DLA states that gauges will be installed as long as six years after the license issuance. Gauge installation and the resulting publicly available real-time online flow information is a top priority for the Network and its constituencies to support angling and whitewater boating and to generally improve public safety. The availability of real-time flow information allows anglers to check the flows suitability for angling, increasing the real-time opportunities for angling recreation. Likewise, whitewater boaters can check the real-time flow information provided by gauges to opportunistically take advantage of boatable flows resulting from spills and accretion.

PCWA has already installed a gauge at Ellicotts Bridge and made flow information from this gauge available in real-time to relicensing participants with the possibility of making it public prior to license issuance. We appreciate PCWA's willingness to install this gauge pre-licensing. We look forward to discussing with PCWA how we can advance the schedule for installation of the remaining proposed gauges.

PCWA's FLA should include a condition that online gauge information will be 15-minute data not 1-hour data as proposed in the DLA. The condition should also say that both instantaneous and historical data should also be posted online. Recreation users and conservationists would like to have historical flow data to understand the long-term management of the watershed.

The PCWA FLA should include installation of staff gauges at the Confluence for public safety. Bathers and swimmers who are not aware of flow changes can reference a staff gauge to indicate water level changes that might make swimming or wading more dangerous and avoid stranding. A staff gauge provides an objective reference point for observing water level change, both up and down. The staff gauges on the Peaking Reach should be located at Greenwood Creek Trail Crossing located at Ruck-A-Chucky Campground and at Indian Bar Rafting put-in.

On the bypass reaches, staff gauges should be installed at the put-in and take-out of the Rubicon whitewater boating run at Ellicotts Bridge and the upstream end of Ralston Afterbay. The Rubicon River flows can change quickly due to accretion and inflow from its tributaries. Whitewater boaters will benefit by being able to check the flows online before entering the canyon, again at the take-out and finally at the put-in before starting their run. This is important for safe boating practices because the flows can change in the time it takes to drive from the take-out to the put-in.

Travel Time Online

We recommend that the PCWA FLA include a condition that it will post a travel time table on its flow website so that people can understand when flows will arrive at a points of interest on the Peaking Reach. In addition, we ask that PCWA revise the Recreation Management Plan Table 6 Travel Time Matrix to show times for upramping and downramping and travel time based on the minimum instream flows proposed in the DLA, to facilitate comparison with to alternative flow schedules.

Weekly Flow Forecasting

The Network requests that PCWA's FLA include a condition for weekly forecasting of flows on the Peaking Reach to facilitate angler, boater, and trail crossing recreational use. We understand that PCWA provides predicted flows as submitted to the Cal ISO every week throughout the year. We understand that the electricity market is in constant flux, and can change PCWA operations. We suggest PCWA include a caveat to the effect that PCWA weekly flow predictions can change without notice, but that PCWA will make a good faith effort to post changes to the flow predictions to the website as they become known.

This weekly service will provide information for anglers about when flows will rise, thereby ameliorating the safety issues involved in wading and angling activities (i.e., prevent anglers from becoming stranded on one or the other side of the river because of rising water). Forecasting will also notify anglers of prime angling opportunities. The weekly forecasting will also aid trail crossers in planning their equestrian rides and trail runs so they time their crossings when the flow is appropriate. The forecasting will allow boaters to plan to take advantage of the flows provided to the Confluence and Mammoth Bar Runs a week in advance.

Provide Fluctuating Water Level Signs for Public Safety

We recommend that PCWA work with the California Dept. of Parks and Recreation to develop signs to inform the general public about fluctuating water levels and the potential danger and that PCWA's FLA include a condition that PCWA will provide the appropriate signage.

6.2 Debris Removal

The Network recommends that the PCWA FLA include conditions to remove the concrete debris alongside and steel bridge debris in the North Fork caused by Hell Hole Dam failure in 1964. The steel bridge debris presents a hazard to people navigating the river. The concrete is a visual blight on a section of river found eligible for inclusion in the National Wild and Scenic River System. The potential exists for personal injury, property damage to boats, and drowning from snagging on the instream debris.

The Middle Fork American River Project is responsible for the loss of the State Highway 49 Bridge over the North Fork of the American River just downstream of the confluence of the North and Middle Forks. This occurred when the Project's partially completed Hell Hole Dam broke during December 1964. The resulting wave of water and debris caused by the dam's failure took out the bridge between Placer County and El Dorado County.

A new bridge was built, but the concrete and steel debris from the destroyed bridge has remained in the river. The bridge debris was not removed from the river because in September 1965 legislation authorizing Auburn Dam was signed into law by President Lyndon Johnson. The debris in the river would have been buried under the reservoir's water and therefore was not removed. Construction on Auburn Dam stopped in the late 1970's due to earthquake safety issues, and the U.S. Bureau of Reclamation has indicated it has no plans to complete the dam. Reclamation's water right permits for the dam were revoked by the State Water Resources Control Board On December 2, 2008.

In 1974 the flow of the North Fork American River was diverted into a bypass tunnel to allow the construction of Auburn Dam. This diversion ended on September 4, 2007 when the river was returned to its original channel. As a result of the closure of the bypass tunnel and re-watering of the river channel, a four mile stretch of river that had been closed to public use for more than thirty years has now been re-opened for recreational boating.

This section of river was closed to public boating from 1974 until 2007. PCWA, Bureau of Reclamation, and State Parks included recreational features as part of the pump station project. Birdsall and China Bar recreational improvements were built and the public is now boating this once closed river reach.

6.3 Access and Facilities in the Peaking Reach

The Foothills Water Network members recommend that PCWA include the following non-flow recreation mitigations and enhancements in its Final License Application. As we have not had much, if any, time to discuss some of these mitigations, we look forward to discussing these non-flow access and facilities mitigations in the Peaking Reach in the upcoming months.

China Bar Recreation Area

We recommend that PCWA include in its FLA conditions that it will invest in opening and enhancing recreational access to the China Bar Recreation Area from the south side of the North Fork of the American. In particular, we recommend that PCWA invest in law enforcement and fire protection for this access point. In order to facilitate responsible recreation use at the China Bar Recreation Area, we recommend that PCWA be responsible for installing bathrooms, picnic

tables, and garbage receptacles. Finally, we think it is reasonable for PCWA, State Parks, or a managing body to charge the public a fee for access to China Bar Recreation Area to help pay for its management and use.

More specifically, we recommend PCWA invest in opening public access via Knickerbocker Road, which starts at the Cool Fire Station in El Dorado County and connects to the North Fork American River at China Bar Recreation Area. Under current management, State Parks has the Knickerbocker Road gated, thereby blocking all vehicle access. We are willing to discuss different levels of access, enforcement, and fire protection in different seasons.

China Bar recreation area could become a very popular river recreation area for a variety of recreational groups including anglers, whitewater boaters, and swimmers/water play recreators. Anglers are interested in accessing the river at this site to wade up and downstream as well as drift boat from the Confluence down to China Bar. Whitewater boaters are interested in boating at the park and play wave features installed after the Bureau of Reclamation rewatered the river at the former Auburn Dam site. The current access restricts whitewater boaters to boating from the Confluence to Birdsall/Oregon Bar. The Birdsall/Oregon Bar takeout is a difficult and largely disliked takeout for boaters because of the restricted days of the week, seasons, and parking ½ mile distance from the river. The restricted use is largely a result of the adjoining neighborhood's concerns about vehicle traffic. Accordingly, opening the access via Knickerbocker Road on the south side of the river is more attractive as it does not run through a concerned neighborhood and allows for park n play access to the installed whitewater features.

In addition, China Bar Recreation Area could attract some of the recreators who frequent the Confluence. The Confluence has become overcrowded in the summer season, making parking dangerous along Highway 49. Inner tubers and beach goers would also use the China Bar Recreation Area to recreate.

Cache Rock

We recommend that PCWA invest in securing legal public access to Cache Rock on the Middle Fork American River. In addition, we recommend that PCWA invest in providing law enforcement, ensuring fire protection, and providing bathrooms and sanitation services at this site.

Cache Rock is located on the south side of the Middle Fork American River below Kanaka Falls at river mile 19. Cache Rock is currently an undeveloped Forest Service campground with parking and several campsites. Access road requires 4WD and is very steep. Anglers use the access to wade upstream and downstream from the campsites. It is one of the few access points in the upper portion of the Peaking Reach where the fishing is better than the warmer downstream reaches.

Canyon Creek Road

The Network recommends that PCWA invest in increasing public access, in particular for boaters and anglers, to the Middle Fork American River via the Canyon Creek Road. This access road extends about one mile upstream from Ruck-A-Chucky Campground, connecting to a small

beach upstream across from Canyon Creek at River Mile 11. Canyon Creek Access is located at the end of the Class II section and beginning of a section of Class IV rapids.

This access road has historically been open to the public. Under current management, Auburn State Recreation Area locks a gate across the road to prohibit vehicle access. ASRA provides keys for access upon request or special arrangements with commercial boating outfitters who take out their overnight gear at this point rather than run their loaded oar boats through Ruck-A-Chucky Falls.

Anglers, drift boaters, and private boaters would like access to this road again for multiple reasons. Drift boaters and Class II boaters would like to boat this section from Cache Rock. Additionally, boaters are interested in putting in at Canyon Creek in order to boat the one mile of Class IV rapids from Chunder rapid down to Ruck-A-Chucky Campground.

Fords Bar

The Network recommends that PCWA invest in increasing access to the existing road for pedestrians and mountain bikers to Fords Bar. Fords Bar is located at river mile 14. Access is currently prohibited by private property owners. Pedestrian and bike access at Fords Bar would enhance opportunities for angling, hikers, campers and bikers at the Middle Fork of the American River. Fords Bar is a large cobble beach with wilderness campsites.

Recreational Bridge to Replace Greenwood Bridge over Middle Fork

We recommend that PCWA provide a replacement recreational bridge for the destroyed Greenwood Bridge caused by failure of the incomplete Hell Hole Dam of the Middle Fork Project. We propose a pedestrian and equestrian bridge that can facilitate trail crossings year-round and in particular on race days for Western States Trail and Tevis Cup if the flows are too high to wade safely. A recreational bridge will help resolve the hazards to people crossing the river and returning. In the past, trail crossers have crossed at low flows and become stranded when they return to find higher flows. A bridge would increase safety and reduce the possibility of injury or drowning due to attempted crossing at higher flows.

The Middle Fork American River Project (Project) is responsible for the loss of the Greenwood Bridge over the Middle Fork of the American River. This occurred when the Project's partially completed Hell Hole Dam broke during December 1964. The resulting wave of water and debris caused by the dam's failure took out the Greenwood Bridge located on Driver's Flat Road connecting Placer County and El Dorado County near Ruck-A-Chucky rapids.

Replacing the bridge would have occurred in the 1960's but for the authorization of Auburn Dam. Construction on Auburn Dam stopped in the late 1970's due to earthquake safety issues, and the U.S. Bureau of Reclamation has indicated it has no plans to complete the dam. Reclamation's water right permits for the dam were revoked by the State Water Resources Control Board On December 2, 2008.

Ralston Afterbay Boat Launch

We recommend that PCWA's FLA condition PCWA to develop a proper, paved launch ramp with adequate facilities for parking, launch, and turn-around, as well as facilities for trash and a

restroom for users at the Ralston Afterbay. In addition, the FLA should condition PCWA to develop another access point nearby for sediment removal equipment, during construction of an appropriate boat ramp. In its DLA, PCWA proposes a new dirt ramp at the Ralston Afterbay Boat launch and develop another place to remove sediment. The measures regarding this site proposed in the DLA will not support recreation use. Parking at the picnic area is a poor option, since it is located some distance away, and there is no room for boat trailer parking and turn-around.

It is not possible to launch a boat at this site safely, contrary to what is stated in the DLA. There is a drop-off at the edge of the water which precludes trailer-launched boats. If this area was improved to include a paved parking area as well as a paved ramp, use would increase dramatically. As it is, we believe that the recreation use of the existing boat ramp at the sediment removal access point for Ralston Afterbay is more extensive than that stated in the DLA.²⁰

Projects at Ralston Afterbay

The Network recommends that PCWA's FLA include conditions to provide a "hardened" public campground on or near Ralston Afterbay, with adequate trash and toilet facilities. Dispersed camping is presently occurring at or near this location. An organized facility should be constructed. This area is frequented by boat and other watercraft owners for boating, fishing, and camping recreation. Although in the past, PCWA has not wanted camping in this area, people do camp and leave garbage at the site. Therefore, we request that PCWA develop a 2-3 formal campsites with bathrooms and garbage receptacles to enhance recreation and avoid damage to the natural resources.

We also recommend that PCWA's FLA include a condition to develop a trail down to the Rubicon River beginning just upstream of Oxbow Powerhouse, and extend it across the bedrock face on river right adjacent to the first large pool. Anglers are interested in accessing this location, especially in colder months, but access is currently limited and difficult.

6.4 Access and Facilities in the Bypass Reaches

Fish Stocking

We recommend that PCWA's FLA include significant increases to trout stocking rates for French Meadows and Hell Hole reservoirs for recreational angling. Stocking should include kokanee and silver salmon where applicable.

Closure of Upper Hell Hole Campground

The Network recommends that PCWA's FLA exclude the proposal to close Upper Hell Hole Campground. The campground is used by hikers on their way into and out of the two wilderness areas above Hell Hole Reservoir.

The DLA explains its rationale for proposing closure of the campground: "Detailed use data are not available for this site; therefore, PCWA estimated use using a combination of vehicle

²⁰ PCWA DLA, Section 4.2.7, Recreation Plan Map 9

count...and visitor survey data.”²¹ However, we believe that the methodology of using a vehicle count to estimate use in Upper Hell Hole Campground is inappropriate, because the campground is only accessible by trail. PCWA should provide a rationale for its use of vehicle count as a metric for estimating campground use, and should support its conclusion that the campground should be closed.

PCWA also states that there are “sensitive resources” in the area, but PCWA does not explain why closure of the campground is needed to protect those resources. We are not aware of study results that support the conclusion that these sensitive resources have been damaged by campers, or that they will be any less likely to be damaged if the campground is closed.

Duncan Creek Primitive Recreation Site

We recommend that PCWA invest in sanitation facilities at the Duncan Creek Primitive Recreation Site including restroom, trash facilities, and maintenance. We also recommend PCWA harden the primitive campsite to reduce erosion and adverse effects of runoff on the stream.

The Duncan Creek Primitive Site is located near the Duncan Creek Diversion just off the shoulder of the road. Recreation users and campers are attracted to the site by the small pool created by the Duncan Creek Diversion where they swim and cool off during the summer. The Duncan Creek Primitive Site is roughly ¼ mile from the Duncan Creek Diversion. Users also hike from the Duncan Creek Primitive Site down to PCWA’s upper gauging station which is between the campground and the Duncan Creek Diversion facility. Anglers also camp at the Duncan Creek Primitive Site to fish in Duncan Creek, which is affected by PCWA’s Duncan Creek Diversion.

The Duncan Creek Primitive Recreation Site is located a short distance northeast of the Duncan Creek Diversion Dam.²² Currently there are no facilities at this heavily-used site. Partly due to the lack of facilities and enforcement presence, the site is littered with garbage, toilet paper, residue of gun use (shells, powder, lead) and other trash. Users urinate and defecate throughout the area. The Duncan Creek Primitive Recreation Site is located immediately adjacent to Duncan Creek, a tiny, beautiful alpine stream that supports a plethora of wildlife and flora and their habitat.

Because of its proximity to the stream, we recommend PCWA harden the site to reduce erosion and re-route runoff away from the stream to reduce adverse impacts to creek.

One of the Network’s members, the Foothill Angler Coalition, made comments on this topic in the relicensing negotiations. We believe that the improvements suggested by PCWA in its DLA are inadequate to address the problems associated with this site. In addition to the improvements proposed in PCWA’s DLA we recommend that the FLA include:

- a. Develop formal campsites, with properly designed fire rings, in a sufficient number to address the heavy usage. We recommend that a minimum of five sites be constructed.

²¹ PCWA DLA, Section 4.1.1, Recreation Plan Map 5

²² PCWA DLA, Section 4.7.1, Recreation Plan Map 2 - inset

- b. To reduce drainage and erosion problems associated with vehicular traffic within and adjacent to the site, the entire facility should be paved, along with measures designed to manage runoff so that water is directed away from areas subject to erosion.
- c. Develop a parking area apart from the campground to accommodate visitors to the area who are not camping—i.e., picnicking families and individuals; hikers; anglers, and other visitors.

Duncan Creek Gauge Trail Signs

We request that PCWA install and maintain adequate signage indicating the location of the trailhead to the PCWA gauge 11427750 on Duncan Creek. Currently, there is no trailhead marker on the Project Road indicating the location of the trail, and the trail is not mentioned in the DLA.²³ This trail is used (and presumably maintained) by PCWA staff to access the PCWA gauge. The trail to the gauge also attracts anglers to the creek where they can fish downstream of the Duncan Creek Diversion Dam and above FR 96, which crosses the creek southwest of the dam.

Angling Access to Middle Fork American River at Middle Fork Powerhouse

Foothills Water Network requests that PCWA's FLA include measures to re-establish public access to the Middle Fork American River upstream of the Middle Fork Powerhouse. We recommend that PCWA provide in its Final License Application an assessment of alternatives and propose the one that PCWA believes to be the most efficient and cost effective way to meet the interest.

Prior to 2001, PCWA allowed access to the river through its Middle Fork Powerhouse. Anglers, hikers, and others used this access to recreate on the Middle Fork American River upstream of the powerhouse. In or about 2001, PCWA eliminated this access by installing new fences equipped with "concertina" or razor wire. Since then, public access has been prohibited. This blocks access to the river. Restoration of river access at this location is important to the Network and particularly to its angling constituency.

Request for Enhancement and Mitigations of Recreation Facilities

Below, we provide a list of recommendations to improve access and recreation facilities that are related directly to project reservoirs and diversions, and to rivers and smaller streams that have been affected by the Project.

We recommend making the following mitigations and enhancements for recreational facilities:

Projects related to the Rubicon River:

1. Improvements for USFS Road 21 Area

Hale's Crossing area and trail are used by anglers attracted to the area by the flows released from Hell Hole Reservoir.

- Repair Road 21.

²³ PCWA DLA, Section 5.5.2; Recreation Plan Map 2 - inset

- Improve signage for access to Hales Crossing area from Road 21 and clearly mark trailhead for access to Hale’s Crossing at or near end of the dirt road
- Mark trail intersection on east side of Rubicon, pointing to Parsley Bar

2. Improvements in the area above and at Ellicott’s Bridge

The area around Ellicotts Bridge and the Hunter Trail are used by anglers and whitewater boaters attracted to the area by flows released by the Project’s Hell Hole Reservoir as well as hikers and picknickers/bathers. A formal campground is needed at Ellicotts Bridge to provide an overnight camping opportunity to campers, anglers, and whitewater boaters. Since the Rubicon Run is a very long one day run or a multi-day trip, whitewater boaters would camp at this spot in preparation for their trip. The hardening of a campground in this area is needed to control erosion into the river.

- Provide signage for access to historic Ellicott’s Ranch
- Repair Hunter Trail signs
- Provide new “hardened” campground to replace informal campground at the south end of the bridge; include adequate toilet and trash facilities

3. Nevada Point Trail

- Improve signage at Georgetown side trailhead
- Rebuild bridge washed out in 1997 flood that connects south side of Nevada Point Trail to the north side of the Rubicon
- Trail maintenance on both sides of the river.

4. Pennsylvania Point/Buckeye Flat Area

- Improve signage at intersection of Blacksmith Flat Road and USFS Road 14N25G, indicating Rubicon River angler access
- Perform maintenance on footbridge at base of OHV trail
- Repair washed out trail on the Georgetown side of the Rubicon
- Install toilet facilities at the informal camping area that exists at the base of the trail, along with trash containers

Projects Related to the Middle Fork American River upstream of Ralston Afterbay

1. Improvements for French Meadows Reservoir Area

- Provide trail near dam down to Middle Fork American River below French Meadows Dam, and along the stream for 1 mile

2. Improvements at Interbay

- Re-establish river access above Middle Fork Powerhouse
- Provide parking area for anglers
- Provide restroom and trash management facilities for anglers at parking area

3. Improvements at Ralston Picnic Area

- Improve and extend trail from picnic area along MF upstream for an additional 1 mile

Projects related to Long Canyon Creek:

- 1. Middle Meadows Campground on Long Canyon Creek**
 - Improve signage for campground
 - Improve campground with adequate tables, parking sites, trash receptacles, and fire pits
 - Provide adequate restroom
- 2. Improvements at Ramsey Crossing Area**
 - Improve parking area
 - Post anti-litter signs
 - Provide trash receptacle
- 3. Improvements at Blacksmith Flat Area**
 - Perform repairs and maintenance on interpretive area
 - Improve trail down to Long Canyon Creek for angler access and provide adequate trailhead signage
 - Extend this trail to the footbridge across Wallace Creek
- 4. Improvements at “upper bridge” on Long Canyon Creek**
 - Install adequate restroom and trash facilities with three or four “designated” campsites with concrete table and fire ring and barrier rocks well defining where vehicles can go. No water system so no need for fees and first come first served.

Projects related to Duncan Creek:

- 1. Duncan Creek Diversion Area**
 - Provide angler parking near bridge across creek
 - Provide restroom for anglers
 - Provide picnic tables near bridge
 - Provide trash receptacle near picnic area/campground
 - Improve makeshift campground near bridge to “hardened” status
 - Improve and mark trail from access road down to gauging station

6.5 Angling

The Foothills Water Network requests that the Recreation Plan in PCWA’s FLA include angling as a stand-alone recreational component and that the associated benefits be described in the comparison of the Proposed Action and No-Action Alternatives.

The 2007 “Report of Findings from the 2006 Auburn State Recreation Area Visitor Survey” is based on extensive recreational surveys developed in 2006 for California State Parks in support of the Auburn SRA General Plan/Interim Resource Plan. As we stated, the surveys that inform the Report indicate that river angling accounts for a significant portion of recreational use days on the Peaking Reach. PCWA studies also demonstrate that angling is an important recreation use on the Peaking Reach and should be addressed in the PCWA Final License Application.

PCWA's DLA included angling as an interest that is benefited by the Proposed Action but does not provide an evaluation or supporting rationale. We request that PCWA's Final License Application includes this rationale specifically related to Angling as a recreational use.

7 Sediment Management Plan

The Foothills Water Network recommends that PCWA's FLA include a measure that spawning gravels will be hauled to a point downstream of the Tunnel Chute where the sediment can be deposited for distribution downstream.

PCWA's proposed plan in the DLA for gravel augmentation is not an adequate solution to mitigating for Rainbow Trout spawning in the Peaking Reach. PCWA's proposed gravel augmentation below Ralston Afterbay could result in filling the deep pool below the Tunnel Chute where fish take refuge. The sediment augmentations could re-sort the sediment material in a way that deprives the rest of the river of spawning gravels.

There is a site below the Chute where sediment can be deposited in this area. Gravel has been placed in this area for many years during the 1900's. Over the years the practice was stopped and much of the gravel has been washed downstream. The Network thinks that we could reach an agreement with the private property owner of the Horseshoe Bar to provide the roads and access to deliver sediment to this site. We are willing to discuss this option as a side agreement outside the license as implementation would require an agreement with a private property owner.

8 Monitoring Plans

PCWA's Monitoring Plan should include monitoring of Rainbow Trout, benthic macroinvertebrates, Foothill Yellow-Legged Frogs, and invasive aquatic weed species for validation of the nascent science regarding the links between temperature and frog health. In particular, monitoring should include installation of temperature loggers in the margin waters and compare those temperatures to ongoing water temperature monitoring in the thalweg. The difference between the margin and thalweg temperatures will inform adaptive management of flows and temperatures for Foothill Yellow-Legged Frogs, Rainbow Trout, and BMIs.

9 Environmental Analysis

9.1 Enhancements

PCWA uses the term "enhance" quite liberally in describing the effects of its Proposed Action. In most cases when PCWA claims to enhance the project-affected river reaches, the Proposed Action really only results in marginal, incremental improvement. The improvements are often very hard to quantify, and are not quantified in comparison with alternative flow scenarios provided by the Foothills Water Network or others. In some cases it would be more accurate for PCWA to describe its proposed improvements as "mitigations."

The Network requests that the PCWA FLA include a comparison of the Network flows and PCWA proposed flow scenarios to compare the degree of enhancement proposed by both parties.

9.2 Comparison of No-Action and Proposed Action Alternatives

Flow Fluctuations

The Network requests that in its FLA PCWA use a more precise metric to compare the decrease in flow fluctuations in the Proposed Action to No Action in addition to the average-based metric used in the DLA.²⁴ (See Appendix D: Figure 8.52a and 8.52b Average Flow Fluctuations in the Peaking Reach for the Proposed Action and No-Action Alternatives). PCWA's methodology of averaging the flow fluctuation differential between the Proposed Action and No Action alternatives fails to measure the effect of the proposed maximum *daily* flow fluctuations. As PCWA's DLA states,

Many aquatic species have specific habitat requirements and limited mobility (e.g., Edington 1968) and *daily* flow fluctuations modify the location and amount of habitat (depths and velocities and/or location of the channel margin) thereby decreasing overall habitat quality and availability.²⁵ [emphasis added]

Overall, the effective habitat matrix results show that for non-mobile or low mobility species/life stages (RBT spawning, FYLF breeding and tadpoles, and macroinvertebrates), changes in flow cause a large reduction in habitat.²⁶

We agree with PCWA's statement that it is the "daily" fluctuation that is critical not just the "average monthly" or "average seasonal". Accordingly, we do not think that a "seasonal average" or "monthly average" is either representative or accurate as a metric by which to measure the benefits of changed flows.

One of the problems with averaging the flow fluctuation on a daily basis is that it ignores the critical importance of the minimum flow from which flow fluctuation starts. The daily averaging applies the same weight or importance to the low and high flows on either side of the average. This treatment fails to present a critical difference in importance between the daily low and high flows. The minimum flow, which defines the bottom of the flow fluctuation, is more important ecologically than the top of the flow fluctuation. If minimum flows are too low, immobile aquatic organisms such as redds and macroinvertebrates may be desiccated. In contrast, within the framework of the daily flow fluctuations, the higher flows defining the top of the flow fluctuation are less important than the low flows. For instance, the low flow in a flow fluctuation from 100 cfs to 700 cfs is likely to be more damaging to immobile aquatic organisms than the same magnitude of flow fluctuation that starts at a higher minimum flow from 300 cfs to 900 cfs. This means that the minimum from which the flow fluctuation starts is important biologically and should be discussed in a comparison of alternatives and the resulting metrics.

In addition, it is not very informative or precise to average flow fluctuations over a month or season in comparing alternatives because the averaging over time ignores the importance of

²⁴ PCWA DLA, Section 8 Environmental Effects, October 2010, Figure 8.5-2a and 2b, p.8.5-5

²⁵ PCWA DLA, Biological Assessment / Biological Evaluation October 2010 p. 6-20

²⁶ PCWA DLA, Technical Study Reports, AQ1-Instream Flow Technical Study Report, p. 35

single event flow fluctuations and only addresses the frequency of flow fluctuations. Though the decrease in frequency of daily flow fluctuations may result in a benefit to the ecosystem, any single flow fluctuation might deliver its own, potentially catastrophic, negative impacts regardless of the decreased frequency of such events. For instance, the effects of a single day's event of fluctuating flows that desiccate immobile aquatic organisms will not necessarily be worsened by frequent following daily fluctuations. Rather, the damage is done in one single event within one day. That means that daily fluctuations, especially at the low end of the flows, matter to the ecosystem in their own right. While averaging the days of flow fluctuation over time does inform a comparison of frequency under different flow scenarios, it is equally - if not more important - to also compare results for the resulting low flows at the bottom of the flow fluctuation for each month or season to ascertain if the low flows are high enough to avoid desiccation.

In PCWA's analysis of the flow fluctuations effects on the varial zone, again it is unclear how an average of flow fluctuations by season in the Peaking Reach would reveal how frequently the varial zone is subject to drying as a result of hydropower peaking. An average would still hide the frequency of minimum flows and drying of the varial zone between the maximum and minimum flows. While we agree that PCWA's Proposed Action does decrease the varial zone and therefore, increase abundance of benthic macroinvertebrates, we would also prefer using a more precise metric than averages to demonstrate the effectiveness of that increase.

In conclusion, we propose that in its FLA, PCWA use an additional analysis to measure the benefits to flow fluctuations as compared between the No-Action Alternative and Proposed Action Alternative. The metric should compare the different alternatives' maximum *daily* fluctuations, which we agree is the important result associated with decreasing flow fluctuations. The comparison should also describe the lowest minimum flow in any given month or season, as well as highest resulting maximum flow in that month or season. The comparison should include side-by-side hydrographs showing the difference in fluctuation in a month or a season. Averaging creates a less precise analysis that can mask the critical results of an alternative. Though more complex, these suggested metrics and results will be more precise.

9.3 NEPA Analysis Alternatives

Build-out Alternative

The PCWA Final License Application should include a "Build-out Alternative" for formal NEPA analysis by FERC. The Application should describe PCWA's water supply plans for long-term build out of Placer County. PCWA modeled the "Build-out" scenario as an alternative scenario during flow negotiations in the relicensing proceeding. FERC should analyze this "Build-out" Alternative under NEPA.

Water Transfers in No-Action Alternative

In its Final License Application, PCWA should describe its frequent water transfers that are part of the baseline No-Action Alternative so that FERC can analyze them under NEPA. These water

transfers are reflected in the hydrology for the period of record and can affect the magnitude and timing of flows in the Peaking Reach.

The CEQA Analysis should address the impact of PCWA's water transfers. Historically PCWA has not been required to provide detailed environmental analysis or compliance with California Environmental Quality Act (CEQA); Water Code section 1729, by implementing large-scale water transfers (typically 10,000 to 20,000 acre feet) as "temporary changes" to its water rights applications/permits, which is allowed under Water Code sections 1725, et seq.. PCWA's petitions for "temporary changes" are exempt from the requirements from CEQA and other applicable parts of Water Code sections 1725. However, when considering the frequency of PCWA's implementation of large-scale water transfers in 2001, 2004, 2005 and 2009, it is arguable that these numerous transfers should continue to qualify for a CEQA exemption.

No-Action Alternative Does Not Represent Existing Conditions

PCWA's Final License Application should describe recent operations as they have been on the ground. It should compare proposed license conditions to actual recent operations. The FLA should not claim that proposed measures will be an "enhancement" when the measures will simply make existing operations a condition of the license; rather, it should say that there will be certainty that existing conditions will be maintained.

Incremental improvements should also not simply be characterized as enhancements. The degree of enhancement should be stated. If PCWA believes that enhancements will provide a qualitative improvement in the conditions of a resource, that should be stated, and the reasons for that evaluation should be presented and if possible quantified.

The No-Action Alternative in many instances reflects the paper reality of PCWA's license condition minimum, not the operational reality of existing conditions resulting from a longstanding practice of releasing higher-than-required minimum flows. Accordingly, the comparison between the No-Action Alternative and the Proposed Action does not accurately describe improvements that we will actually see in the river. In fact, a comparison between the existing conditions and operations and the Proposed Action Alternative would reveal much smaller improvements for the ecosystem than are represented in the DLA. Relicensing studies were examinations of the condition of the natural resources resulting from actual existing operations.

Cumulative Effects on Folsom, Lower American, and West Placer Creeks

We appreciate PCWA's discussion in the DLA of Cumulative Effects on Water Resources and the information and analysis provided in relation to anadromous fish. Because PCWA's Middle Fork Project operations are affected by the availability of water from the Yuba-Bear Drum-Spaulding system, we recommend that PCWA's FLA also include an analysis of various reductions of water availability from Yuba-Bear Drum-Spaulding system and the ensuing changes that could be made to the Middle Fork Project to meet PCWA's water supply obligations.

As PCWA states in its DLA, "The Drum-Spaulding Project is currently undergoing FERC relicensing, however, it is unknown at this time, or to what extent, the existing license conditions

will change.”²⁷ Therefore, we cannot know at this time what the outcome will be but for the purposes of the Middle Fork Project Relicensing the NEPA analysis must consider a range of outcomes that include some reduction of water from Yuba-Bear Drum-Spaulding Project’s out of basin water transfers. As we have learned in the Yuba-Bear Drum-Spaulding Relicensing, PG&E currently abandons roughly 125,000 acre-feet in Folsom Reservoir. In addition, PG&E and PCWA’s water contracts expire in 2013. The combination of outcomes of the Yuba-Bear Drum-Spaulding relicensing and the renegotiation of contracts could alter PCWA’s water supply and, therefore, their Middle Fork Project operations.

Therefore, we recommend that PCWA’s FLA include an analysis of different levels of reduction of water availability from the Yuba-Bear Drum-Spaulding system. The Foothills Water Network recommends analysis of 10,000 af and 15,000 af reductions in all year types. PCWA should model these flow reductions and include the results in its Final License Application. Results metrics should include whether PCWA can meet its water demand under the No-Action Alternative, and under “Build-out” conditions as represented by the “Build-out” Alternative.

Further, PCWA should address the question of how changed Middle Fork American operations resulting from reductions in water available from the Yuba-Bear Drum-Spaulding system could affect temperatures in Folsom Reservoir and the Bureau of Reclamation’s flow releases into the Lower American River. The discussion of effects on Folsom and the Lower American River should address effects on temperatures in Folsom Reservoir, volume of cold-water pool in Folsom, and volume of inflow to Folsom upon which rests the development of the Sacramento Water Forum Flow Standard, which will define releases to the Lower American River for salmon and steelhead.

Finally, the analysis should take into account the potential cumulative effects on the salmon and steelhead in Auburn Ravine and other West Placer creeks of changed Middle Fork American Project operations, resulting from reductions in water available from the Yuba-Bear Drum-Spaulding system,

Effects of Proposed Action on Future Reintroduction of Central Valley Steelhead

In its FLA, PCWA should address the effects of its Proposed Action on the proposed reintroduction of Central Valley Steelhead to the American River system above Folsom Reservoir. The reintroduction of Central Valley Steelhead into the Middle Fork American is has become likely based on the *NMFS Biological and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project*. Based on this Biological Opinion, it is reasonable and foreseeable that NMFS might trap and haul Central Valley Steelhead to river reaches affected by the PCWA Middle Fork American River Project and in the future achieve volitional passage. The trap and haul plan is scheduled to be initiated before 2013, the date of license expiration for the Middle Fork American Project. Accordingly, PCWA’s Final License Application and FERC’s NEPA Analysis should examine the potential effects of reintroduction, and in particular the potential for “take” of reintroduced protected species during the new license term.

²⁷ PCWA DLA, Exhibit E, Section 9 Cumulative Effects Analysis, 9.2 Cumulative Effects on Water Resources, p. 9-4.

The *NMFS Biological and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project* is available at the following URL:

<http://swr.nmfs.noaa.gov/ocap.htm>. In the NFMS Biological Opinion's Section V. Fish Passage Program, the following language is used to specifically describe the NFMS mandated fish passage program:

Therefore, NMFS believes it is necessary for Reclamation, in cooperation with NMFS, other fisheries agencies, and DWR, to undertake a program to provide fish passage above currently impassable artificial barriers for Sacramento River winter-run, spring-run, and CV steelhead, and to reintroduce these fish to historical habitats above Shasta and Folsom Dams. Substantial areas of high quality habitat exist above these dams: there are approximately 60 mainstem miles above Lake Shasta **and 50 mainstem miles above Lake Folsom**. These high-elevation areas of suitable habitat will provide a refuge for cold water fish in the face of climate change. [Emphasis added]

The NMFS Biological Opinion states in part:

From January 2012 through 2015, Reclamation shall begin to implement the Pilot Reintroduction Program (see specific actions below). The Pilot Program will, in a phased approach, provide for pilot reintroduction of winter-run and spring-run to habitat above Shasta Dam in the Sacramento River, and CV steelhead above Folsom Dam in the American River.

By March 2012, Reclamation shall implement upstream fish passage for adults via "trap and transport" facilities while it conducts studies to develop and assess long-term upstream and downstream volitional fish passage alternatives.²⁸

Under Fish Passage Actions, the NMFS Biological Opinion states that NMFS plans to build an American River Fish Collection Facility, due to become operational no later than March 2012.²⁹

The following is a brief excerpt from the Biological Opinion, at pages 663-664 of the latest Operations, Criteria and Plan document for the Central Valley Project and the State Water Project:

NF 3. Development of Fish Passage Pilot Plan

Action: From January 2010 through January, 2011, Reclamation, with assistance from the Steering Committee, shall complete a 3-year plan for the Fish Passage Pilot program. The plan shall include: **(1) a schedule for implementing a 3-year Pilot Passage program on the American River above Nimbus and Folsom dams**, and on the Sacramento River above Keswick and Shasta dams; and **(2) a plan for funding the passage program.**

²⁸ NMFS Biological and Conference Opinion on the Long-Term Operations of the CVP and SWP, June 4, 2009; Section 11.2.2 V. "Fish Passage Program", p. 659.

²⁹ NMFS Biological and Conference Opinion on the Long-Term Operations of the CVP and SWP, June 4, 2009; Section 11.2.2 V. "Fish Passage Program", p. 665.

This plan and its annual revisions shall be implemented upon concurrence by NMFS that it is in compliance with ESA requirements.

Rationale: The Fish Passage Pilot Plan is a critical link between measures in the Proposed Action and this RPA and the long-term fish passage program. The plan will provide a blueprint for obtaining critical information about the chances of successful reintroduction of fish to historical habitats and increasing the spatial distribution of the affected populations.

NF 4. Implementation of Pilot Reintroduction Program

Objective: To implement short-term fish passage actions that will inform the planning for long-term passage actions.

Actions: *From January 2012 through 2015*, Reclamation shall begin to implement the Pilot Reintroduction Program (see specific actions below). The Pilot Program will, in a phased approach, *provide for pilot reintroduction of* winter-run and spring-run to habitat above Shasta Dam in the Sacramento River, and *CV steelhead above Folsom Dam in the American River*. This interim program will be scalable depending on source population abundance, and will not impede the future installation of permanent facilities, which require less oversight and could be more beneficial to fish. This program is not intended to achieve passage of all anadromous fish that arrive at collection points, but rather to phase in passage as experience with the passage facilities and their benefits is gained.

Rationale: The extent to which habitats above Central Valley dams can be successfully utilized for the survival and production of anadromous fish is currently unknown. A pilot reintroduction program will allow fishery managers to incrementally evaluate adult reintroduction locations, techniques, survival, distribution, spawning, and production, and juvenile rearing, migration. The pilot program also will test juvenile collection facilities.

This action requires facility improvements or replacements, as needed, and establishes dates to complete work and begin operation. In some cases, work could be initiated sooner than listed above, and NMFS expects Reclamation and partner agencies to make these improvements as soon as possible.

Because these facilities will be used in lieu of volitional fish passage to provide access to historical habitat above the dams, this measure is an essential first step toward addressing low population numbers caused by decreased spatial distribution, which is a key limiting factor for Chinook salmon and CV steelhead.

Upstream fish passage is the initial step toward restoring productivity of listed fish by using large reaches of good quality habitat above project dams. Restriction to degraded habitat below the dams has significantly impaired reproductive success and caused steep declines in abundance.”
[Emphasis added]

In addition, the National Marine Fisheries Service *Draft Recovery Plan* also addresses their plans for reintroducing Central Valley Steelhead into the American River Watershed. With this reference, we submit to the FERC record, the NMFS Draft Recovery Plan, which can be found at the following URL:
http://swr.nmfs.noaa.gov/recovery/cent_val/Public_Draft_Recovery_Plan.pdf .

We expect NMFS to file both its Recovery Plan and the Biological Opinion. In the event that they are not filed, we will file them in time for them to be considered by FERC in its NEPA analysis.

Based on study of potential habitat for reintroduction of steelhead, we recommend that PCWA work with NMFS to conduct fish passage studies for Central Valley Steelhead to inform improvements to facilitate reintroduction of Steelhead.

In order to evaluate the Peaking Reach flow regime in relation to reintroduction of Steelhead, the Network requests that PCWA conduct a Radio-tagging Study of the reproducing Chinook population in Folsom Reservoir to ascertain the relationship between flows released from Ralston Afterbay and passage barriers for Chinook on the Peaking Reach.

10 Final License Application

10.1 License Term

PCWA is requesting a 50-year license term. Given the current DLA measures, the Foothills Water Network does not see a basis for such a lengthy license term. However, we look forward to continuing negotiations with PCWA and will consider license term as part of those discussions.

10.2 Incomplete Studies

The Foothills Water Network reserves the right to comment on incomplete studies and alter our comments on the Draft License Application based on those study results. We intend to comment on these currently incomplete studies in response to PCWA's Final License Application

PCWA still has three outstanding relicensing studies that have not been completed. They include:

- Entrainment Study
- Bioenergetics Study
- Reservoir Fish Habitat Study
- Whitewater Boating Test Flow on the Rubicon River

There are also three management plans that are still outstanding including:

- Visual Management Plan
- Geomorphology Management Plan
- Riparian Monitoring Plan

The Foothills Water Network reserves the right to comment on these outstanding studies and management plans as well as to revise our recommendations for PM&Es as a result of the study outcomes.

Final License Application – Request for Table

The Foothills Water Network requests that the Final License Application include a table comparing the flows in the No-Action Alternative to Existing Regulated Flows to the Proposed Action Alternative in the Supporting Document A. This table is in addition to the table found in Volume 1, Exhibit B, Table B-1. This table will make it easier to quickly understand how the DLA's proposed flows compare to existing license flows and regulated flows. As it is presented in the DLA, readers need to keep referring back and forth between Table B-1 and the text of the SD-A instream flows discussion in the DLA to make the comparison.

Signatories to the Foothills Water Network Comments

The signatories to the comments by the Foothills Water Network reserve the right to make additional comments on the DLA and other filings on the PCWA relicensing general.

Thank you for your consideration of these comments. If you have any questions or comments on this filing, please contact Julie Leimbach at julie@foothillswaternetwork.org or 530-622-8497.

Sincerely,

Foothills Water Network Middle Fork American Work Group

Bill Carnazzo, Federation of Flyfishers, Upper American River Foundation, and Foothill Angler Coalition (Vice President)

Chris Shutes, California Sportfishing Protection Alliance

Dave Steindorf, American Whitewater,

Gary Estes, Protect American River Canyons

Hilde Schweitzer, Private Boater

John Donovan, Member of the Public

Julie Leimbach, Foothills Water Network

Nate Rangel, California Outdoors,

Thomas Bartos, Foothill Angler Coalition (President) and Horseshoe Bar Fish and Game Preserve Inc.

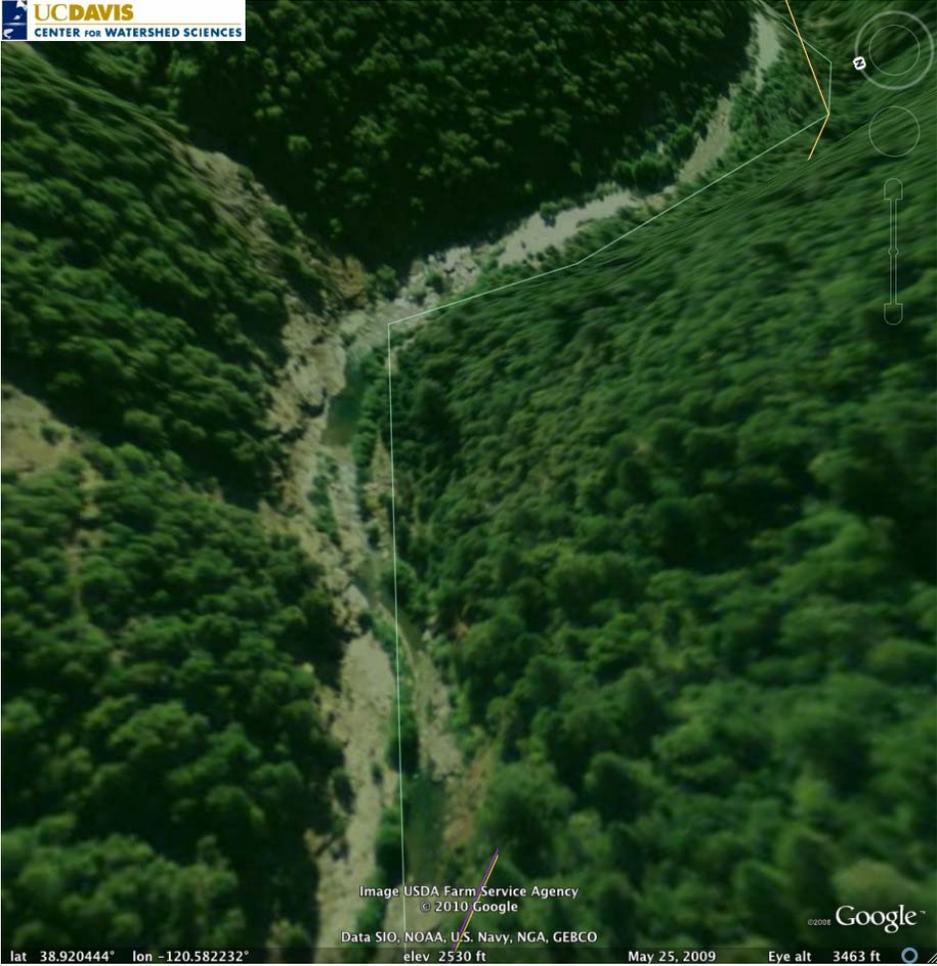
1 Appendices

Appendix A: Comparison of Riparian on Rubicon River and North Fork American

North Fork of the American River at Moonshine Ravine

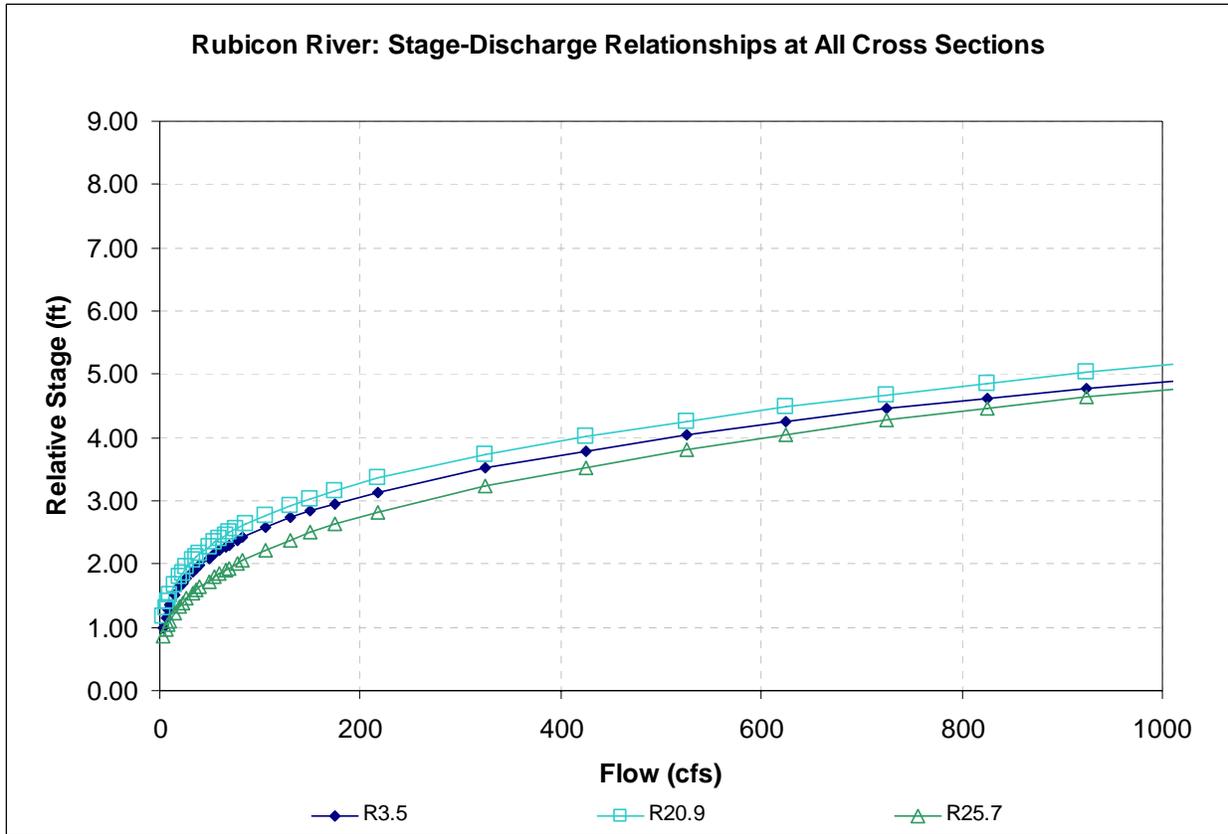


Rubicon River Below Confluence with South Fork Rubicon



Appendix B: PCWA's Stage-Discharge Relationships on Rubicon River at All Cross-Sections

R3.5			R20.9			R25.7		
19 Cross Sections (8 Run/LGR Cross Sections)			22 Cross Sections (6 Runs/LGR Cross Sections)			26 Cross Sections (11 Runs/LGR Cross Sections)		
Flow (cfs)	All Cross Sections	RUN/LGR Cross Sections	Flow (cfs)	All Cross Sections	RUN/LGR Cross Sections	Flow (cfs)	All Cross Sections	RUN/LGR Cross Sections
4	1.00	1.11	4	1.18	1.14	4	0.86	1.01
6	1.16	1.22	6	1.31	1.30	6	0.95	1.12
8	1.28	1.32	8	1.42	1.41	8	1.03	1.20
10	1.36	1.39	10	1.50	1.51	10	1.10	1.27
15	1.52	1.54	15	1.67	1.66	15	1.22	1.41
20	1.64	1.65	20	1.80	1.78	20	1.33	1.51
22.6	1.69	1.70	22.6	1.86	1.84	22.6	1.38	1.57
27	1.78	1.79	27	1.95	1.93	27	1.45	1.64
32.4	1.87	1.88	32.4	2.05	2.01	32.4	1.53	1.72
36.6	1.94	1.95	36.6	2.12	2.08	36.6	1.59	1.78
40	1.98	1.99	40	2.17	2.13	40	1.63	1.83
48.6	2.09	2.09	48.6	2.28	2.24	48.6	1.73	1.93
55	2.16	2.16	55	2.35	2.31	55	1.80	1.99
60	2.21	2.21	60	2.40	2.36	60	1.85	2.05
66.2	2.27	2.26	66.2	2.46	2.41	66.2	1.91	2.11
70	2.31	2.29	70	2.49	2.44	70	1.94	2.14
76.9	2.37	2.35	76.5	2.55	2.50	76.9	2.00	2.21
82.7	2.42	2.40	86.3	2.63	2.57	82.7	2.05	2.25
105	2.58	2.56	105	2.76	2.69	105	2.22	2.42
129.8	2.73	2.70	129.8	2.92	2.83	129.8	2.38	2.58
150	2.84	2.79	150	3.03	2.93	150	2.50	2.68
175	2.96	2.90	175	3.17	3.08	175	2.63	2.79
218.1	3.14	3.07	218.1	3.35	3.25	218.1	2.82	2.94
325	3.51	3.40	325	3.72	3.55	325	3.23	3.28
425	3.79	3.66	425	4.01	3.78	425	3.53	3.51
525	4.05	3.88	525	4.26	3.96	525	3.81	3.72
625	4.26	4.08	625	4.48	4.11	625	4.05	3.88
725	4.45	4.24	725	4.68	4.25	725	4.27	4.03
825	4.62	4.39	825	4.86	4.38	825	4.47	4.16
925	4.78	4.54	925	5.02	4.50	925	4.65	4.28
1200	5.15	4.88	1250	5.49	4.84	1500	5.43	4.86
2500	6.41	6.01	1750	6.12	5.29	1987	6.02	5.24
3234	6.61	5.68	2259	6.65	5.65	2500	6.56	5.59
5000	7.65	6.49	3000	7.34	6.10	3000	7.02	5.89
6338	8.25	7.01	3799	7.97	6.51	3576	7.50	6.20



Appendix C AQ1-Instream Flow Study, Figure O-15 and O-24 Middle Fork American Effective Food Habitat Matrices

Figure O-15. Middle Fork American River MF14.1 Effective Food Production Habitat Matrix.

Starting Discharge (cfs)	Ending Discharge (cfs)															Initial Habitat vs Flow Relationship		
	2500	2000	1500	1018	800	600	452	407	300	225	175	125	101	80	60		40	30
2500 cfs	82078	75359	69776	62262	56087	50125	45857	43702	38740	33765	29679	24269	19538	13730	7722	4545	2991	82078
2000 cfs		95204	89029	80958	74435	67745	62485	59653	53125	47537	42921	36110	29840	22754	15214	10075	7229	95204
1500 cfs			103390	94561	87679	80521	74838	71687	64269	57964	52757	45277	38412	30878	22524	16130	12019	103390
1018 cfs				107696	100096	92600	86482	83084	74980	68155	62509	54447	47017	38860	29565	21977	17005	107696
800 cfs					107013	98431	92093	88533	80072	73036	67171	58926	51346	43003	33328	25361	19976	107013
600 cfs						106258	99025	95302	86446	79204	73224	64848	57162	48698	38772	30516	24884	106258
452 cfs							103990	99247	90064	82633	76597	68134	60383	51856	41834	33422	27649	103990
407.6 cfs								101210	91371	83587	77487	68985	61160	52619	42553	34120	28320	101210
300 cfs									93632	85023	78704	70164	62286	53696	43567	35103	29276	93632
225 cfs										87534	80338	71248	62925	54098	43804	35334	29500	87534
175 cfs											81336	71735	63317	54467	44130	35655	29817	81336
125 cfs												72341	63646	54711	44308	35831	29993	72341
101.3 cfs													64643	55156	44488	35991	30148	64643
80 cfs														55640	44680	36124	30233	55640
60 cfs															45736	36479	30365	45736
40 cfs																36791	30472	36791
30 cfs																	30672	30672

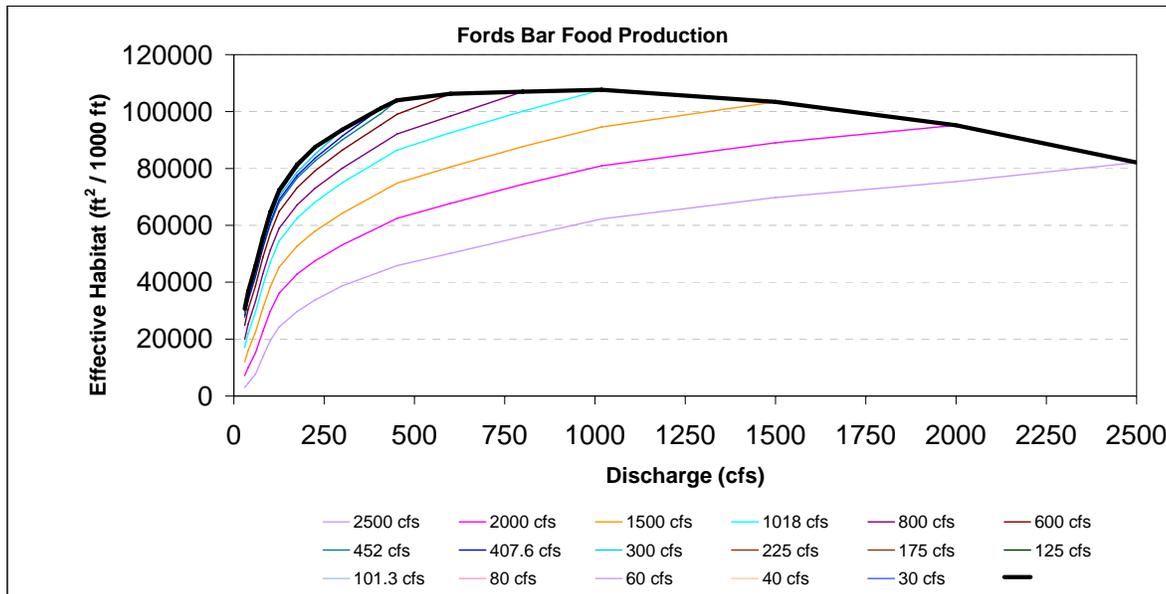
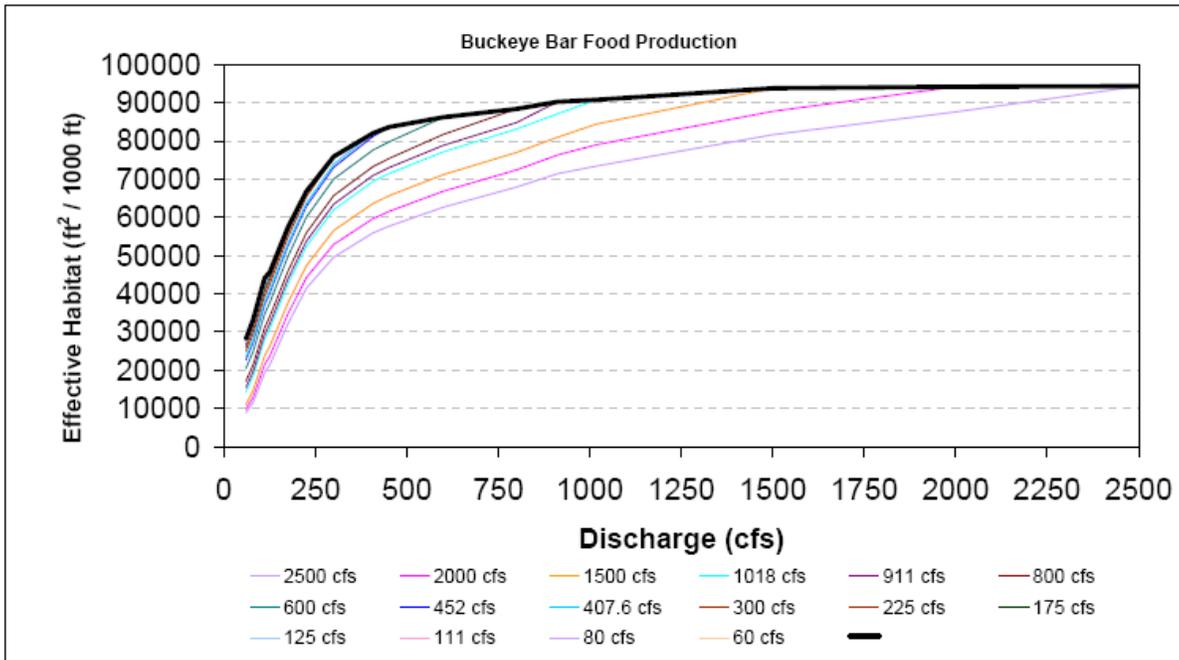
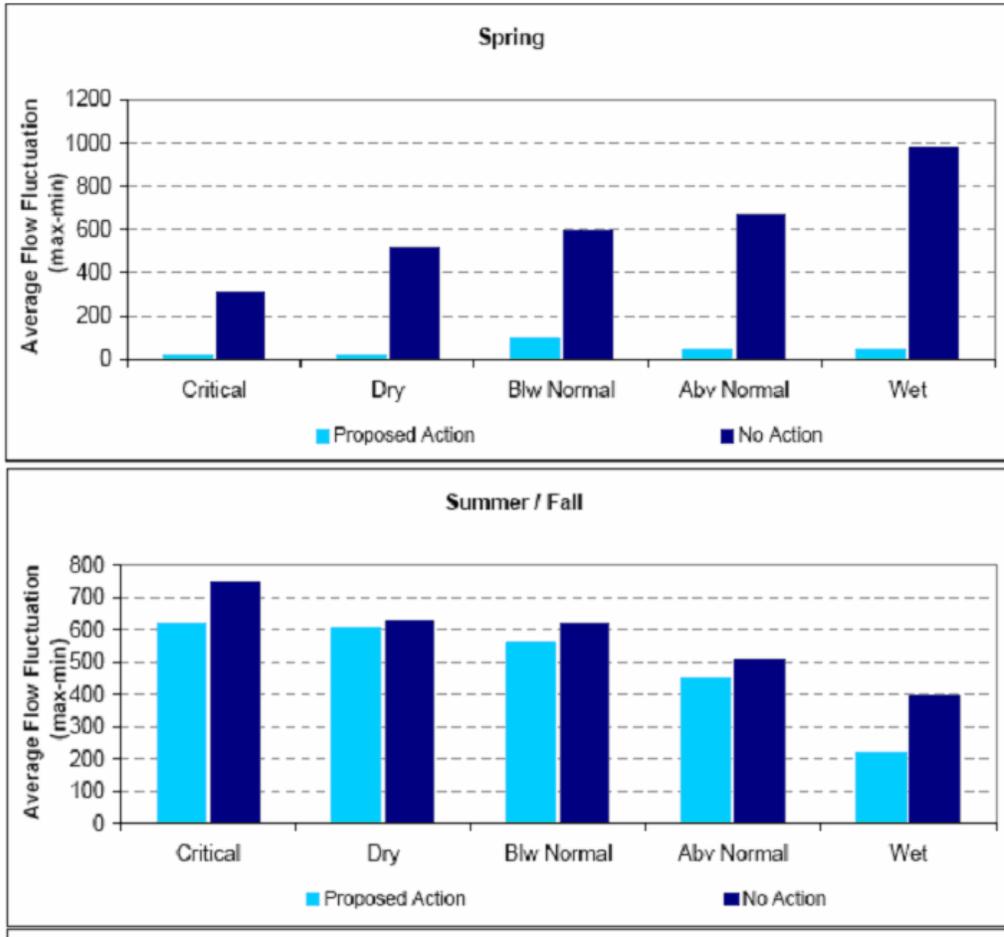


Figure O-24. Middle Fork American River MF4.8 Effective Food Production Habitat Matrix

Starting Discharge (cfs)	Ending Discharge (cfs)															Initial Habitat vs Flow Relationship	
	2500	2000	1500	1018	911	800	600	452	407	300	225	175	125	111	80		60
2500 cfs	94386	87594	81667	73449	71476	67927	62685	57763	55986	49601	41510	32140	21472	19456	11620	8995	9438
2000 cfs		94191	87787	79050	76344	72470	66875	61623	59700	52944	44265	34735	23690	21525	12895	9826	9419
1500 cfs			93796	84480	80996	77039	71228	65705	63660	56565	47363	37634	26276	23856	14712	10992	9379
1018 cfs				90811	87111	83130	77198	71498	69391	62012	52467	42567	30896	28153	18513	14424	9081
911 cfs					90275	84841	78856	73098	70966	63477	53820	43885	32162	29394	19691	15524	9027
800 cfs						88394	81700	75458	73306	65736	55946	45899	34060	31203	21425	17163	8839
600 cfs							86248	79817	77655	70029	60062	49796	37700	34759	24891	20513	8624
452 cfs								83693	81189	73163	62928	52443	40149	37164	27224	22789	8369
407.6 cfs									82057	73954	63667	53158	40829	37845	27882	23422	8205
300 cfs										75891	65434	54858	42480	39480	29494	24976	7589
225 cfs											66817	56008	43621	40616	30625	26093	6681
175 cfs												57403	44664	41506	31412	26772	5740
125 cfs													45641	42223	31998	27235	4564
111 cfs														44190	32091	27313	4419
80 cfs															33184	28109	3318
60 cfs																28269	2826



Appendix D: Figure 8.52a and 8.52b Average Flow Fluctuations in the Peaking Reach for the Proposed Action and No-Action Alternatives



Document Content(s)

FWN Comments on DLA.PDF.....1-51

**Foresthill Residents for respOnsible Growth (FROG)
Comment Letter Dated December 19, 2010;
Filed with FERC December 23, 2010 (20101223-5037)**

Foresthill Residents for respOnsible Growth, Inc.

P. O. Box 568, Foresthill, CA 95631

530-367-4803

December 19, 2010

Via Electronic Submittal

Hon. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N. E.
Washington, DC 20426

Re Comments on Placer County Water Agency's Draft License Application for the Middle Fork American River Project #2079

Dear Secretary Bose:

Foresthill Residents for respOnsible Growth, Inc., aka FROG, submits this letter in response to Placer County Water Agency's submission of its Draft License Application (DLA) for project #2079 on September 27, 2010.

FROG is a non-profit organization whose members are local Foresthill residents. We are concerned about all social, economic and environmental decisions that are made within and around the Middle Fork American River Watershed which could lead to adverse impacts that might ultimately affect the quality of life for local "Hill" residents, the town of Foresthill as well as the pristine beauty of the American River canyons.

1 General Comments

The Middle Fork American River Project with its five hydroelectric powerhouses lies within the Middle Fork American River Watershed and its sub-watersheds. The Foresthill Divide Community Plan area is 109 square miles, includes the town of Foresthill, and has a significantly large portion of privately owned land south of the Foresthill Road within the same watershed (see Exhibit 1a and 1b). The 2000 U. S. Census indicated that the plan area had 2,307 housing units and a population of 5,703. In December, 2008, the Placer County Board of Supervisors approved a Community Plan Amendment substantially increasing the density to 62,948 persons (more than doubling the previous 1981 plan of 28,000).

Foresthill is published in the Federal Register as one of the "urban wildland interface communities in the vicinity of Federal lands that are at high risk from wildfire" because we have

“steep slopes” and a “one way in and...out route”. Additionally CAL FIRE has rated the Foresthill area as a Very High Fire Hazard Severity Zone on their SRA (State Responsibility Area) map. We also understand that twenty-three miles of the Middle Fork American River (which is the Community Plan’s southern boundary and is included in the Middle Fork American River Watershed) are eligible for Wild and Scenic designation under the Wild and Scenic Rivers Act (WSRA) of 1968.

2 Socioeconomics

When Placer County Water Agency (PCWA) established the Technical Working Groups, apparently a Socioeconomic Working Group was not considered by any interested parties nor was it of any urgency at that time for Foresthill residents. Since the approval of the community plan and the possibility of a substantially increased population, traffic congestion, fire danger and jobs-housing imbalance have become primary concerns for the community. If a Socioeconomic Working Group had been established, a much broader discussion could have been included with the Pre-Application Document (PAD) and the DLA about the social and economic condition in the project vicinity...which is Foresthill and the Foresthill Divide Community Plan (FHDCP) area. Foresthill’s general land use patterns (i.e. doubling density), population patterns and sources of employment (i.e. inadequate jobs-housing balance) should have been included in the discussion at some point.

We have noted that there is little discernable information in the PCWA DLA about Foresthill other than the town’s location to the project (4 miles) and its population (1,791). There is no discussion about the remaining 4,000 residents who live within a four to five mile radius of the town. Additionally, the DLA states that “the community of Foresthill is defined as a disadvantaged community with a median household income in 2000 of \$34, 348”.

Our community has a significant jobs-housing imbalance as recognized by Placer County and is discussed in the FHDCP Policy Document. We were a thriving logging community with lumber mills that processed our timber. But since that time, with the closure of the mills due to the changes in the timber industry, Foresthill has become a bedroom community to Auburn and Sacramento with some of our residents traveling many miles to and from work. In the FHDCP Amendment, the County set aside an Industrial Park Zoned District (see Exhibit 2a) with the recommendation that “no other public institutions should be permitted in the area so as to leave as much land as possible for job-generating land uses” (see Exhibit 2b). With the recent purchase (10/30/09) by PCWA of 9.1 acres, they now own more than 50% of the land in the Industrial Park Zoned District (see Exhibit 2c). The property that was purchased consisted of two industrial complex buildings, a 56,624 sq feet structure and a 45,000+/- sq feet structure, as well as a large 11,624 sq feet concrete building (see Exhibit 2d). We understand that PCWA will be moving their operations from another smaller site in town to this much larger site for the necessary daily maintenance and operation of the Middle Fork American River Project. The total full-time employee positions for the Proposed Action will be three...and “they will work out of offices in either Auburn or Foresthill”.

Attached is a statement that was read during the Public Comments portion of a PCWA Board meeting on September 16, 2010, which voiced our concerns over the loss of valuable job-generating land and the lack of references to Foresthill in the Socioeconomic portion of the PAD (see Exhibit 2e).

We request that the socioeconomic portion of the DLA be re-evaluated due to the impact of Foresthill's loss of industrial land to a public entity (PCWA). This land was "to provide opportunities for...job-generating businesses" and is now expected to become part of a much larger on-going, daily operation of the Middle Fork American River Project with little or no benefit to Foresthill.

3 Safety and Flow Recommendations

There's a nexus with PCWA's operation of the five hydroelectric dams in the Middle Fork American River Project that will sell electricity, as well as water, and the amount of water released. We feel that flow releases, which are related to generating electricity and marketing water, should also benefit boaters and anglers...both recreational and commercial. The license to operate the Project is for 50 years and many changes will occur during that time. Therefore, we support a more prudent, long-term vision of water availability, transfers, supply obligations and access to same within the Project. This includes, but is not limited to, real-time flow information, precise flow data throughout the Project, increased storage in Ralston Afterbay, improved recreational campsites and sanitation facilities, current safety informational signs and debris cleanup along streams that pose a health and safety issue.

The increased recreational use of the Middle Fork American River brings with it the additional concern of potentially higher fire risk. There is a significant risk of a devastating wildfire that could destroy the Foresthill's Todd Valley Subdivision (see Exhibit 1b). The Placer County Local Hazard Mitigation Plan suggests that if a fire starts at the Middle Fork American River, it would travel in 15 minutes on the right day to the subdivision in question. There are approximately 750 to 900 homes in that project.

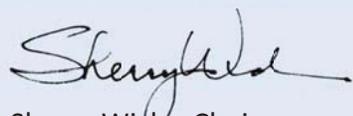
We request that PCWA more fully address the concerns of increased fire protection that would be needed with the increased recreational use of the Middle Fork American River.

4 Conclusion

Our community needs to be included in the decisions made by PCWA's DLA for FERC re-licensing. The decisions about operations, maintenance and future facilities of the Middle Fork American River Project will affect our community in many ways. We are concerned about maintaining a sustainable business community, future increased traffic congestion, potential wildfire threats with limited evacuation routes, viable summer and winter recreational facilities and the stewardship of the forest resource that surrounds us.

We hope that this letter brings the necessary attention required for our community as PCWA moves through the re-licensing process because the decisions made could affect us for many years to come. Thank you for your consideration and if you have any questions, please contact me at sherrywicks@saveforesthill.com or 530-367-4803.

Sincerely,



Sherry Wicks, Chairman
32-year Foresthill Resident

Cc Placer County Board of Supervisors
Placer County Water Agency
Foresthill Forum
Foresthill Public Utility District
Foresthill Chamber of Commerce
Shute, Mihaly & Weinberger LLP
Foothill Water Network
Placer County Planning Department
Foresthill Fire Protection District

Attachments

“Every man holds his property subject to the general right of the community to regulate its use to whatever degree the public welfare may require it.”

Theodore Roosevelt

Outline of Foresthill Divide Community Plan in red.

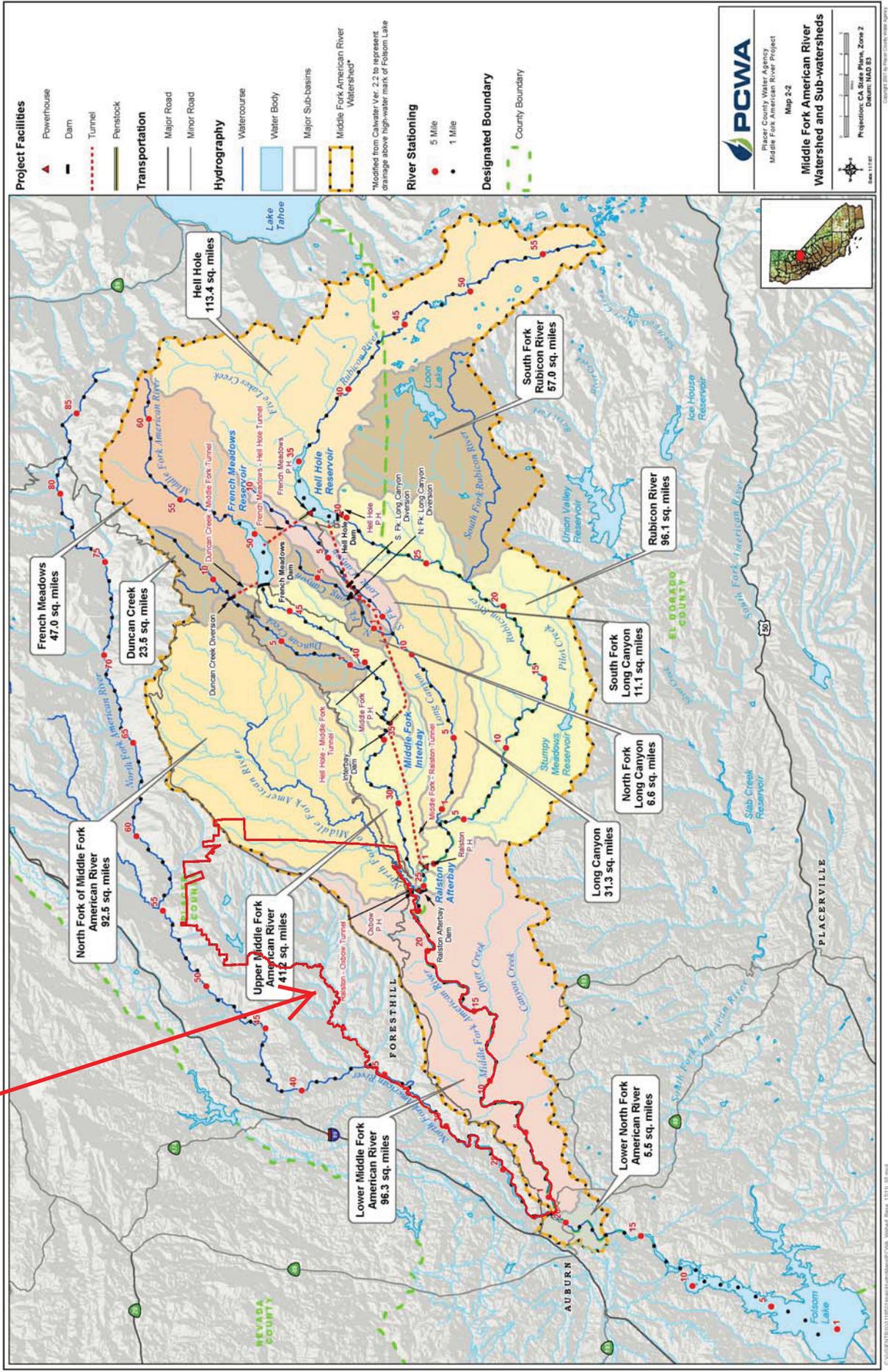
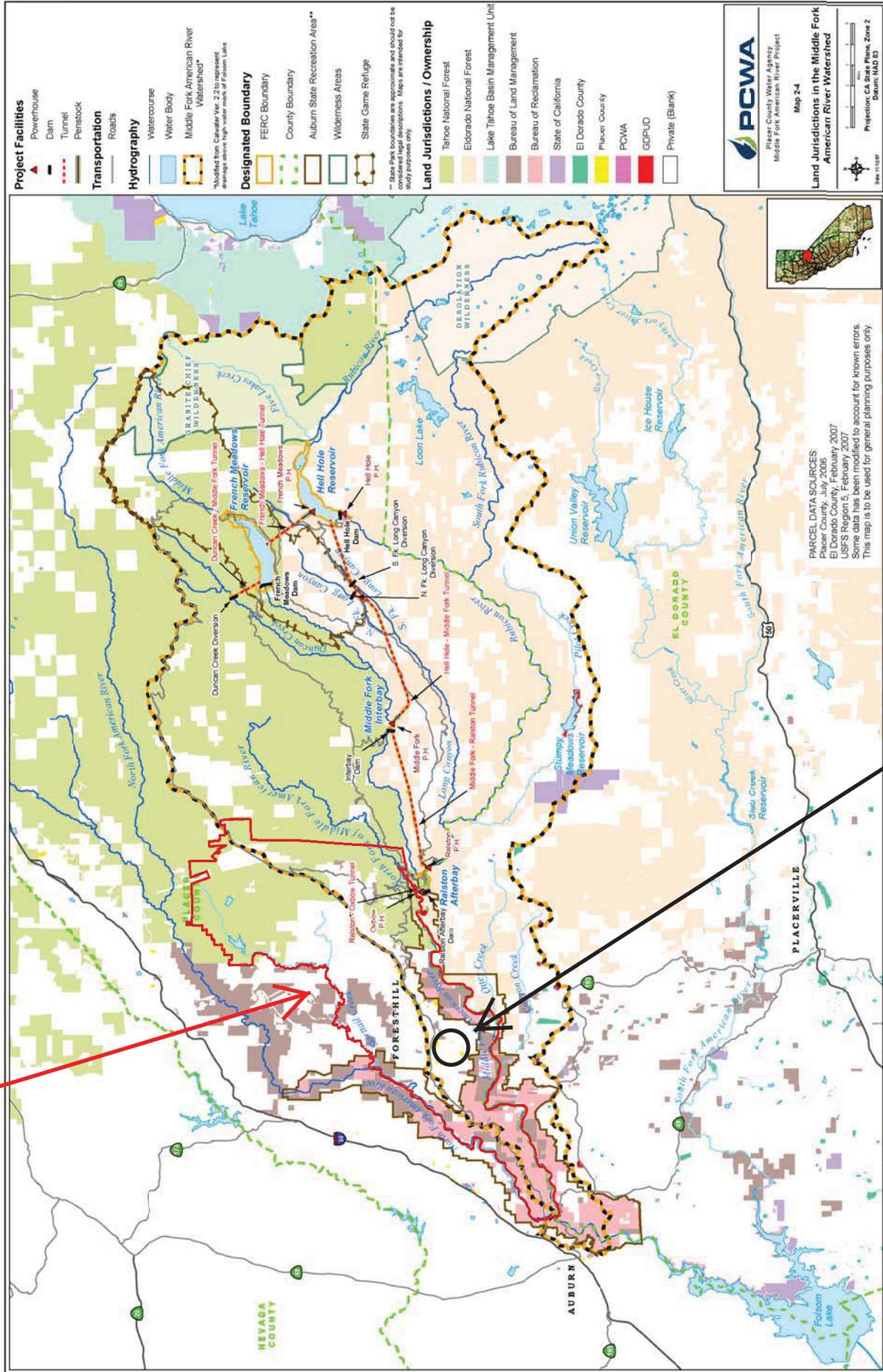


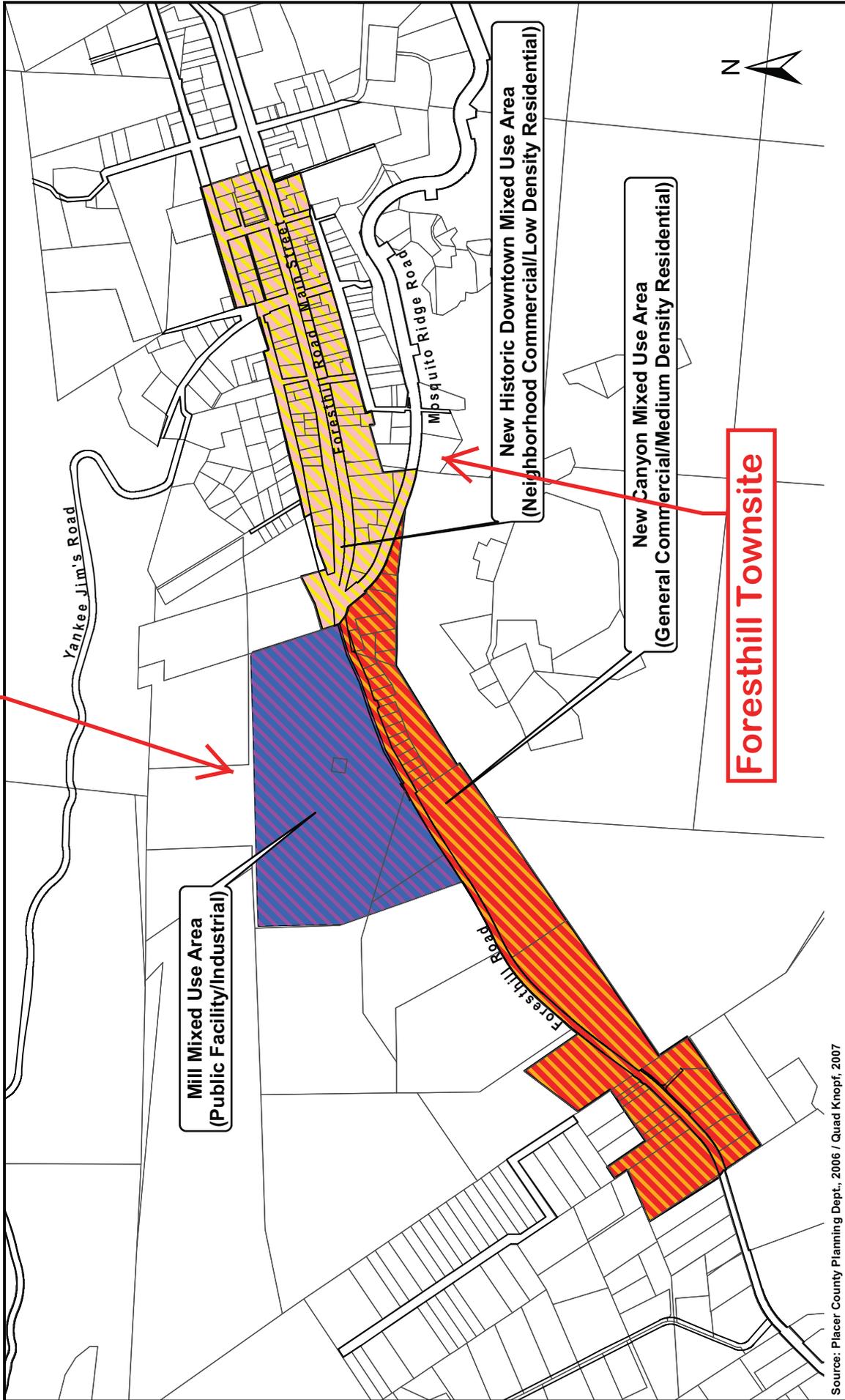
Exhibit 1a

Outline of Foresthill Divide Community Plan area in red.



Location of Todd Valley Subdivision

**57 acres Industrial Park Zoned District
(PCWA has approx 50% ownership.)**



Source: Placer County Planning Dept., 2006 / Quad Knopf, 2007



FORESTHILL DIVIDE COMMUNITY PLAN MIXED USE AREAS

Figure III-3

Job No. 060818

increase its desirability for new development. The unique topography of many of the parcels within this area would be attractive for multi-level commercial and residential uses (such as small crafts shops, artists' studios, etc.) in the future. All new commercial or multi-family development within the area will be analyzed on a case by case basis. The larger parcels in this Mixed-Use area could provide opportunities for transient lodging, restaurants and other facilities to serve the increasing tourist population that frequents the Divide. There may also be opportunities for larger commercial/residential complexes where the commercial uses are constructed at the level of Foresthill Road with apartment units below. In that instance, both levels could take advantage of the views from these properties, and some businesses could have employees very close at hand. Appropriate land uses for this Mixed-Use district would be: offices, retail uses, restaurants, hotels/motels, single and multi-family residences, senior care/assisted living facilities, churches, recreational vehicle parks/campgrounds (in certain areas where the campsites could be located out of sight of Foresthill Road on existing lower "benches" of land). It will be very important to provide pedestrian circulation and trails through this Mixed-Use area from the middle school to historic downtown. Pedestrian open spaces will also serve to attract tourists to stop and move about the area on foot, thereby reducing traffic congestion and enhancing economic viability. Preservation of existing trees within this area should be a high priority, and architectural design guidelines should be established so that the community retains its rustic ambiance. Parking areas should be located to the side or rear of buildings along Foresthill Road, or, if the parking is located between the buildings and Foresthill Road, it must be visually screened from Foresthill Road by a combination of berms and landscaping in order to preserve the unique scenic qualities of this Mixed-Use area. Shared driveways should be encouraged in order to minimize the number of entrances onto Foresthill Road. At the same time, views to the Sierra Nevada Mountains and into the North Fork American River Canyon should be maintained and incorporated into new developments so that the residents of these properties, the patrons of the businesses located on these parcels and the motoring public all share equally in the aesthetic benefits.

3. Mill Mixed-Use Area (Public Facility/Industrial)

SETTING: One of the industrially-designated sites is the Mill Site area located along the north side of Foresthill Road. This area consists of approximately 57 acres of land that was formerly occupied by the Georgia-Pacific lumber mill. Lumber milling operations occupied this site until 1993 when the mill was closed for the last time. Since that time, the site has been cleaned up and several of the old sawmill-related structures have been removed from the property.

The Mill Site area is owned by private interests and still contains some of the original sawmill buildings. Some of these buildings are being utilized for traditional industrial, manufacturing and heavy commercial uses. The current owners are involved with the Placer County Economic Development Department in seeking "Brownfields" grant funding that will help provide site planning and infrastructure to attract new job-generating businesses that will replace the jobs lost when the lumber mill closed. Planning efforts are underway to evaluate circulation and infrastructure needs and to develop a "master plan" for the property.

"no other public institutions...should be permitted in the area so as to leave as much land as possible for job-generating land uses"

ANALYSIS: The Mill Site area is generally characterized by level ground that has been intensively utilized for lumber mill operations and similar industrial uses for many years. Consequently, the site is mostly without vegetative cover. The property has a Pacific Gas & Electric substation located in the central portion of the site, and a large water main that conveys treated domestic water to the western portion of the Foresthill Divide crosses the site. Due to the generally level nature of the land within the area, as well as the availability of utilities, it is ideally positioned to provide land for the establishment of new job-generating businesses.

DEVELOPMENT VISION: With the school site adjacent to the Mill Site area, no other public institutions (schools, churches, public gathering places, etc.) should be permitted in the area so as to leave as much land as possible for job-generating land uses. The Mill Site area should be developed primarily to provide opportunities for such job-generating businesses to locate in the Foresthill community to ensure local jobs lost when the old lumber mill closed are replaced, as well as to stimulate a new, more diversified economy on the Divide. Other appropriate land uses for the Mill Site area are light industrial uses, offices, mini-storage facilities, gyms, public service agencies (corporation yards, public or quasi-public utilities, etc.) and accessory outdoor storage areas adjacent to principal uses (when adequately screened from surrounding properties). Also permitted in the northern portion of the property (away from Foresthill Road and screened from street view by solid fences and landscaping) would be retail equipment, trailer and truck rental establishments, nursery uses, landscaping supplies, building materials stores and storage yards/sales lots. Uses located in the southern portion of the property and along the Foresthill Road frontage should have an attractive appearance consistent with design guidelines found elsewhere in this Plan. The industrial and commercial areas that are located closest to the school site(s) and the existing adjacent residential uses should be compatible from the standpoint of noise, traffic circulation, aesthetics and the presence of potentially hazardous substances.

5. IMPLEMENTATION

1. Review development projects for compliance with the Environmental Review Ordinance and to determine that all feasible mitigation measures have been identified.

Responsible Agency/Department: Land Development Departments
Time Frame: Ongoing
Funding: Application Fees

2. Review development projects for specific compliance with the goals and policies contained in the Land Use section and the entire FDCP.

Responsible Agency/Department: Land Development Departments/Foresthill Forum (MAC)/Planning Commission/Board of Supervisors
Time Frame: Ongoing
Funding: Application Fees

3. Provide consistent zone districts in appropriate locations to meet the intent of the FDCP Land Use Diagram, goals and policies. The Chart in Chapter VI, Implementation, shall be utilized in the implementation of the FDCP.

RF-B-43

PD = 1

MILL MIXED USE (INP-DC) = 57 acres

RM-DL 8

**PCWA
5.0 acres**

**PCWA
14.6 acres**

MILL MIXED USE (INP-DC)

**PCWA
9.1 acres**

Note: PCWA owns approximately 50% of a prime industrial park zoned district within close proximity of Foresthill townsite.

DR

WY

CARPENTERS

SUNSET

BALTIMORE

Agent Detail with Addl Photos Report

Listings as of 12/18/10 at 7:42pm

Withdrawn/Canc. 11/02/09	Listing # 90062288	5825 Sunset Dr Foresthill, CA 95631-9227	Listing Price: \$5
County: Placer	Cross St: Foresthill Dr		Map: 34, D3
	Prop Type	Commercial	Prop Subtype(s) Industrial
	Area	12304	
	Year Built	2002	
	APN	007-030-021-000	Price/Sq Ft \$
			Lot Acres (approx)
Showing Instr. Call Listing Agent			DOM/CDOM 83/83



Directions Take Foresthill exit off I-80 and make a left at Sunset Drive in Foresthill.

Property Description A must-sell 2 bldg. It. industrial complex of +-56,624SF: 5825 Sunset-a +-45,000SF high bay manufacturing bldg w/ attached corporate offices; & 5835 Sunset-a +-11,624SF concrete building w/ 7 large truck doors. These improvements sit on a flat +-9.1 acre lot w/ ample room for add'l parking. Industrial zoning allows for a wide range of uses including mfg, whse, recreation, agriculture, recycling, churches, vehicle, medical, public facilities, & mini-storage. Also for lease at only \$.43/sf net.

Listing Agent Lachlan M Richards (ID:PRICHLAC) Primary:530-470-1740 x1, FAX: 530-470-0989
Listing Office Sperry Van Ness-Highland Comm. (ID:01SVHC) Phone: 530-470-1740, FAX: 530-470-0989
Type Listing **Listing Date** 08/11/09

Comision to Sell Ofc 3 **Var/Dual Rate No**

Service Level	E	Transaction Type	Lease
Zoning	Industrial Park (INP-Dc)	Variable Price	No
Lot Dimensions	9.10 acres	Total Units	2
Air	Other-Rmks	Heat	Other-Rmks
Lease Terms	Other-Rmks	Other Expenses	Other-Rmks
Stories	1 Story		
Lease Terms			
Loading	Loading Dock, Other-Rmks	Door	Truck
Parking	Other-Rmks	Roof Description	Other-Rmks
Exterior	Other-Rmks	Construction	Other-Attch
Floor	Other-Rmks	Location	Other-Rmks
Disclosures/Reports	Other-Rmks	Tenant Pays	Other-Rmks
Miscellaneous	Other-Rmks	Amenities	Other-Rmks
Income	Other-Rmks	REO	No
Existing Financing	Other-Rmks	Terms	Other-Rmks
Showing	Call Listing Agent	Commission Type	Percentage of Sale

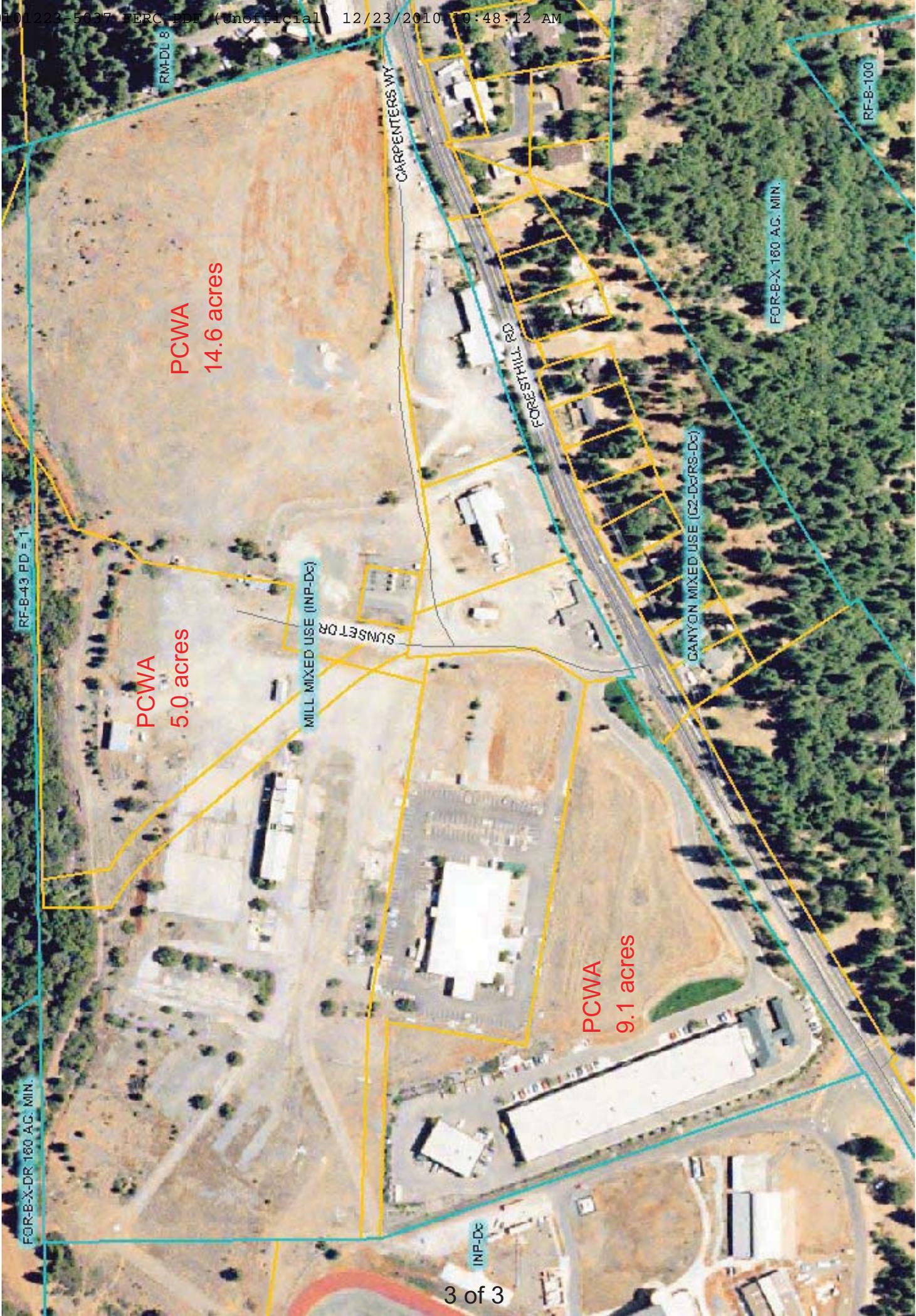
Instructions
Possession

By Agreement

Type Listing

Exclusive Right

All measurements and calculations of area are approximate. Information provided by Seller/Other sources, not verified by Broker.
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U.S. Patent 6,910,045



PCWA
14.6 acres

PCWA
5.0 acres

PCWA
9.1 acres

RF-B-43 PD = 1

FOR-B-X-DR 180 AC. MIN.

RM-DL 8

CARPENTERS WY

FORESTHILL RD

MILL MIXED USE (INP-Dc)

SUNSET DR

CANYON MIXED USE (C2-Dc/RS-Dc)

FOR-B-X 180 AC. MIN.

RF-B-100

INP-Dc

**Note: Statement read at PCWA
Board meeting dated 9/16/10.**

September 16, 2010

Board Members,

My name is Sherry Wicks and I've live in Foresthill for approximately 32 years. I'm here today representing Foresthill Residents for respOnsible Growth, also known as FROG. We are a non-profit organization whose supporters are local Foresthill residents. We are concerned about the social, economic and environmental decisions that are made which affect our quality of life on the "Hill".

As you are aware, the Foresthill Divide Community Plan was approved in December, 2008. In fact, I saw that you had it referenced in the online library at PCWA's Middle Fork American River Project website.

I am here today to bring to your attention to an issue that seems to have been overlooked and could pose a problem for Foresthill's future prosperity. The Community Plan has several land use districts, one of which is called the Mill Mixed-Use Area. This area's land use designation is primarily industrial/commercial. It lends itself to this use because it is the site of the old lumber mill and has had similar industrial uses for many years. Additionally, it is level and currently has a PG&E substation located in the central portion of this site.

This Mill Mixed-Use Area consists of approximately 57 acres. We have learned that PCWA has purchased almost 30 acres in this area which exceeds 50% of this designated land use. The Development Vision statement in the Community Plan policy document suggests that because a school site is adjacent to the Mill Mixed-Use Area "no other public institutions...should be permitted in the area so as to leave as much land as possible for job-generating land uses". As you might also be aware we have a significant problem with jobs/housing imbalance and it becomes more problematic when our community loses the land use in question to public entities where it could have been accessible to private industries that might have employed more Foresthill residents.

You can probably see our predicament. We support PCWA's FERC relicensing and although the property in question may not be directly related to the Integrated Licensing Process, we feel that had there been a Socioeconomic working group, issues of this sort could have been resolved. We understand that the Socioeconomic portion of the PAD just

slightly referenced Foresthill and it probably should have been more inclusive since we are in the “vicinity of the project”.

We will be submitting a letter of comment and/or a statement of interest concerning this matter because we feel there’s a nexus between the Middle Fork Project, land use reduction of the Mill Mixed-Use Area and subsequent impacts to our community. We did, however, want to bring this issue to your attention in advance.

Thank you for your consideration.

Document Content(s)

FROG comments on DLA 2079.PDF.....1-15

**Gibbs, Patricia - Member of the Public
Comment Letter Dated October 27, 2010;
Filed with FERC November 3, 2010 (20101103-5003)**

October 27, 2010
 Kimberly D. Bose, Secretary
 Federal Energy Regulatory Commission
 888 First Street, N.E.
 Washington, DC 20426

ORIGINAL

P-2079

FILED
 SECRETARY OF THE
 COMMISSION

Re: MFP 2079 PCWA Middle Fork American River Project License Comment on Draft License and Due Process

Dear Secretary Bose:

The Draft License Application understates the impacts of the Project's peaking reach flows which bisect the Auburn State Recreation Area (ASRA). The document omits important facts and context regarding changes to management plans that govern the area, current financial situation of the federal agency that administers the area (Bureau of Reclamation), the economic development efforts related to the canyon/river environment, and existing recreation facilities.

The first 50 year license applied a less than vigorous assessment of the river system, specifically the river's recreation values and associated flow related impacts. The short sighted review occurred for a variety of reasons, one of which was the presumption that the area would be flooded by a reservoir created by the Auburn Dam. The specter of the Dam has kept these canyon lands in limbo for far too long. The Recreation Area has been valiantly patched together on a shoestring budget for many, many years by California State Parks. Over the course of this time, minimal improvements have been constructed and the public has had awkward, inefficient and unsafe access to these lands and the river. PCWA's draft license application seems to be based on the convenient, outdated view that the area is still a dam in waiting. The water rights for the Auburn Dam were revoked in 2008. The Draft License Application is inadequate because the licensee, which controls this public resource to generate power and obtain significant income, has made only miniscule commitments to address impacts of their operation.

To mitigate impacts of the flows in Auburn State Recreation, the licensee should provide:

- their 'fair share' of operation, maintenance, public safety, emergency response and fire prevention costs for river related recreation activities in ASRA
- additional recreation facilities to serve flow/ river enhanced recreation in ASRA
- funding and improvements to resolve impacts of their past project (The Pump Station Project) in which trail enthusiasts were ousted by river access improvements and trails had been cut off by river flows in ASRA.

The following is the first list of my concerns related to the Draft License Application's, Volume 3, Exhibit E, Affected Environment and Cumulative Effects Analysis Sections.

- There is no mention of Bureau of Reclamation's reduced funding over the course of several years for operation and maintenance of ASRA. There has been early seasonal closure of the few river access areas that do exist, reduced days of operation overall and most egregiously the loss of Rangers to patrol the area. Further, there is no mention of the fact that USBR funding for ASRA may be cut off entirely after 2012. I believe that is the year the USBR contract with State Parks for ASRA expires. Yet, the licensee concludes, **"It is anticipated that the USBR will continue to maintain the current level of recreational facility development and recreation opportunities within ASRA in the future. Therefore, the Proposed Action in combination with other actions in ASRA will cumulatively enhance recreation in the peaking reach"** (Cumulative Effects Analysis p9-9) No specific citation is given for the statement about current levels of funding etc. There is no description of what constitutes "other actions". The statement and conclusion could charitably be called misleading. Status quo is NOT what we are dealing with here. USBR funding has gone from 9.5 million in 2007 to 1.5 million in 2010.

There is nothing to support this conclusion in the Literature Cited section, p9-12. This Section contains two ASRA references, the USBR 1992 Interim Management Plan and a State Parks letter dated May 11, 2010. The actual content of this letter notifies interested parties that the update for the 1992 General Plan/ Interim Resource Management Plan for ASRA has been "suspended indefinitely at the request of USBR." The letter further indicates USBR is reviewing agreements with the other federal agencies which own land in ASRA and addressing insufficient funding issues. There is no mention of recreational facilities or future conditions in the

letter at all. (State Parks letter, attached) (Note: DLA Section 12, states the update for ASRA General Plan has been put on hold. No additional information about ASRA is added.)

Therefore, the claimed enhancements, formalized flows and additional boating runs in ASRA, will actually not enhance recreation but put an added load on already reduced resources in the area. The DLA conclusions regarding these enhancements are flawed without some clear, measurable mitigation measures to balance these 'enhancements'. This would be akin to handing a swimmer 10 lbs of gold ... yes it's valuable, but given the circumstances, the swimmer will drown if he takes it. The conclusion drawn above will not serve as a basis for accurate future environmental analysis.

- The significant change to the management of ASRA since the first MFP 2079 license was issued is the gradual but steady erosion of the possibility of building the Auburn Dam. While 1960's legislation that created the Dam is still in place (Public Law 89-161), the Dam Project has been cancelled and the water rights revoked in 2008. This next 50 year license must fully address and mitigate the impacts of Project flows on the river system in this Recreation Area. I could find no mention of the loss of water rights for Auburn Dam and the very real possibility, within the next 50 years, the project will be entirely cancelled through Congressional action.
- Over the course of the first 50 year license, the reservoir was never created, yet, costs for flow impacts to the river and Recreation Area were not addressed. The cumulative effects analysis should evaluate the current effects of the lack of appropriate mitigation for the past impacts in Auburn State Recreation Area under the first license.
- Stream based and river enhanced recreation has expanded significantly over time in ASRA. The characterization of stream based recreation should be broader and more descriptive in order to better assess impacts and the value of the claimed enhancements of the Project. The statement regarding commercial whitewater boating being 'the primary public use' on the Middle Fork American River is circular and dated. "Because of minimal non-commercial use levels, use by the commercial sector (e.g., commercial whitewater boating operations) is recognized as the primary public use on the Middle Fork American River (USBR 1992)" (Cumulative Effects Analysis p9-8) Over the course of the last 18 years, many groups have formed to provide volunteer support for the Park and to promote the river environment through festivals, clean up campaigns and swimming and kayaking safety courses. In addition, the opportunity for other types of public use have been limited by failure to add public access facilities as a result of USBR reservoir management restrictions. The current Project enhancements center on improvements to whitewater flows and access particularly at one site, the main commercial raft entrance, Indian Bar. The existing narrow description would tend to make any requests for additional flow or river enhanced recreation facilities appear unneeded.
- With regard to socioeconomic conditions, there is no mention, that tourism as it relates to the vast, internationally known trail system in ASRA and the new potential for river based recreation has been actively pursued for its' economic potential over the last few years. The trails and river system is becoming more and more an economic engine in the area. When the 100 mile endurance Ride and Run events were cancelled due to fires in the North Fork American river, it was estimated the area lost 3 million in revenue. (audience member statement, Auburn State Recreation Area and Lake Clementine public forum 10/26/10)
- The DLA conclusion is flawed with respect to ASRA visitor use, both now and in the future. The population is expected to increase 68% over the next 50 years and the area has close in access along a highway, (hwy 49, known in ASRA as the Confluence area), river recreation and river enhanced recreation will continue to increase as it has in the past 50 years. The DLA conclusion, **"In general, recreation demand and facility utilization is not expected to substantially increase over time, primarily due to shifts in the visitor demographics, and declining participation rates in the types of recreation activities that occur associated with the MFP."** (Affected Environment, p7.9-49) may apply to Project facilities but is not relevant to ASRA.
 - Confluence was undercounted, no visitor surveys occurred after 5PM, this is a busy time in the summer because it is the only paved, close in river access. Note, there are no "developed facilities" at the Confluence. Parking is crammed along wide spots on the edge of the road, there are no permanent

bathrooms. Yet, this area will have to handle more visitors due to the opening of the Confluence to Oregon Bar boating run.

- o Unlike the Project lands/Forest Service survey protocol, in ASRA, the general visitor survey was administered only after the survey tech decided the visitor "used the river resource". Runners, riders, nor bikers were counted even if located along a trail, near the river. Thus, river enhanced recreation was essentially not counted. The general statement in DLA "Survey administration did not focus on intercepting any particular user type." (Affected Environment p 7.9 -42) does not reflect what occurred in ASRA. REC 2 Report does indicate survey effort focused on "stream-based recreation users."

The administration of the Federal Lands in ASRA is in a state of disarray. Nowhere in the Affected Environment nor Cumulative Effects Analysis sections of the DLA is this addressed. It appears to me the licensee could be held to less rigorous mitigation and enhancements for ASRA, *for the next 50 years*, due to the lack of scrutiny of the licensee's obligations for effects of the Project operations in the area.

I have actively participated in this relicensing process, as a member of the public, for the last 3 1/2 years. Frankly, it has been exhausting. Those items that do not have the benefit of State and Federal Agency review need the benefit of independent, objective advocate services. I have additional concerns regarding this relicensing, as it relates to Auburn State Recreation Area, the extent of FERC jurisdiction and the appropriate content of License Applications as they relate to Project conditions. I am actively pursuing more information at this time, however, the time frame for comments is too tight. I ask the Commission to grant an extension of time for comments on the PCWA DLA MFP 2079 and provide an advocate to members of the public reviewing this license application.

Address this response to all the stakeholders and any other interested parties. If you have any questions please contact me, Patricia Gibbs, at quingold@calwisp.net or 916 765-3006.

Thank-you,



Patricia Gibbs
5425 Lake Forest Dr.
Loomis, CA. 95650

cc: City of Auburn
Placer County Board of Supervisor's
U.S. Representative Tom McClintock
U.S. Representative Doris Matsui
U.S. Senator Dianne Feinstein



DEPARTMENT OF PARKS AND RECREATION

Gold Fields District
7806 Folsom Auburn Road
Folsom, CA 95630

Ruth Coleman, Director

May 11, 2010

Dear General Plan/Interim Resource Management Plan Participant,

This letter is to inform you that the planning process to develop a new General Plan and Interim Resource Management Plan for Auburn State Recreation Area (SRA) and the Auburn Dam Project Lands has been suspended indefinitely at the request of the U.S. Bureau of Reclamation (Reclamation).

Auburn SRA and the Auburn Dam Project lands consist of approximately 26,000 acres of primarily federal lands that California State Parks manages through a service contract with Reclamation. These federal lands include Reclamation fee title lands, and lands owned by the Bureau of Land Management, Forest Service and Army Corps of Engineers. Reclamation has administered the non-Reclamation federal lands within the Auburn Dam Project Boundary through various agreements and withdrawals from the other federal agencies. Some of these agreements have expired. As part of renewing these agreements and addressing insufficient funding issues, Reclamation is attempting to clarify the future management for the federal lands within the project area.

Reclamation has indicated that it would not be prudent to proceed with the preparation of the General Plan/Interim Resource Management Plan (GP/IRMP) until the future management is resolved, therefore this GP/IRMP process is suspended indefinitely.

California State Parks and Reclamation initiated the project to develop a new GP/IRMP for Auburn SRA in 2006. Initial public scoping meetings were held in the spring of 2006 and follow-up public meetings to discuss preliminary planning concepts were held in spring 2007. Work on the Plan was halted in December 2008 when Reclamation first began to address these land management issues. At that time it was anticipated that these issues would be resolved quickly and work on the plan would be able to continue, however this has not been the case.

State Parks and Reclamation appreciate your interest in Auburn SRA. Both agencies hope that the land management responsibilities for the various federal lands within the project area will be resolved and the GP/IRMP process can be resumed in the future.

If you have question regarding this notice, please contact Walter Clevenger from the U.S. Bureau of Reclamation at (916) 989-7173 or Jim Micheaels at California State Parks at (916) 988-0513. Thank you.

Sincerely,

Scott Nakaji
District Superintendent

**Gibbs, Patricia - Member of the Public
Comment Letter Dated November 6, 2010;
Filed with FERC November 15, 2010 (20101116-0008)**

November 6, 2010
 Kimberly D. Bose, Secretary
 Federal Energy Regulatory Commission
 888 First St., N.E.
 Washington, D.C. 20426

ORIGINAL

P-2079
 FILED
 SECRETARY OF THE
 COMMISSION

2010 NOV 15 P 1:06

FEDERAL ENERGY
 REGULATORY COMMISSION

Re: MFP 2079 Draft License Application

Dear Secretary Bose,

PCWA's Hydropower Project flows cut off trail connectivity for recreationists on the vast, historical, continuous Western States Trail and its local connector trails in Auburn State Recreation Area. The North Fork and Middle Fork American Rivers, the peaking reach, would be easily crossable by recreationists, in many locations, during the high season of recreation use because natural river flows would be very low (flows approx. 75cfs), river width much narrower and the water temperature substantially warmer.

Under the first MFP 2079 license, the impacts of project flows on public safety and trail connectivity of this premier, trans Sierra trail system in the watershed were not addressed. The main backbone of the system, the Western States Trail, predates the existence of the Project as does the first 100 mile Tevis Ride, a premier endurance event which occurs on this Trail. The Western States Trail connects to the Pioneer Express Trail below the City of Auburn, and connects northeast to the Pacific Crest Trail and the Tahoe Rim trail. There are many connector trails to from the City of Auburn and El Dorado County which serve as access to WST and other areas of the watershed and the river.

Contrary to the licensee's, vague and conditional, assertion; **"In general, implementation of the Proposed Action will maintain crossing opportunities at all of the crossing locations, depending on water year type and season, particularly at the higher crossing threshold."** (8.9-29), the Proposed Action will reduce trail crossing opportunities, for the average trail enthusiast in ASRA during peak recreation season, as a result of typical daily operations of the Middle Fork American River Hydropower Project MFP 2079. Minimum flows for the Proposed Action are several times higher than the current 75cfs minimum, during the peak recreation season in many of the water year types. The data, as presented, doesn't represent the Project effects on the primary recreation season and the use of the higher crossing threshold is inappropriate for analysis of flow effects on this river.

In addition, three general circumstances have contributed to cumulative impacts of PCWA project operations and flows cutting off, interfering with and reducing trail and road connectivity between Placer And El Dorado Counties in the Auburn State Recreation. First, current project operation flows range from 75 cfs to 1000 cfs on a daily basis, particularly during peak recreation season. Flows above 350cfs are generally considered too risky to cross, based on Focus Group input. Thus, during summer and fall days the trail system is cut off in many locations most of the day. Second, in the early days of the Project, a major river crossing was lost when the Greenwood bridge was washed out due to the collapse of Hell Hole Dam during construction in 1964. It has never been replaced. The presumption was the area would be underwater because of the Auburn Dam. This presumption has served to shift many

costs associated with Project flows from the licensee to others over the course of the last fifty years. Third, a highly popular multiuse trail was cut off, recently, when the PCWA/USBR pump station project removed the dry riverbed crossing in the Coffey Dam. The Auburn Dam river diversion tunnel was destroyed and the river channel reconstructed to support the pump intake and create artificial rapids for a kayak play park. This was the only multiuse trail crossing in the area. Other than a feasibility report paid for by the State of California, no effort was made, by PCWA or USBR to mitigate what was identified as a significant impact of the Project.

Requested Mitigation and Enhancement Measures to be considered in the Draft License Application (see attached Map)

Access:

Add vehicle access to the North Fork American river by repurposing an existing Auburn Dam construction road.

- Provide paved road access from Highway 49, El Dorado County near the town of Cool, to Kayak Play Park, north of China Bar Area on the North Fork American river. The road access could be provided by utilizing existing Auburn Dam construction roads in the area, one of which is paved but would have to be repaired and extended. Create a parking area on the existing flat grade which is a result of the PCWA/USBR Pump Station river channel construction project.
 - The addition of the new boating run from the Confluence will add to existing parking and crowding problems that occur in the area. The Confluence is the only river access easily reached by car. Many people swim and cool off here. The visitor survey did not count visitors after 5pm, yet 74% of those surveyed said crowding negatively affected their recreation experience. Families with young children tend to stay on the North Fork, the water is warmer and has minimal velocity during the summer. Young adults tend to spread out up and downstream in the area. The Confluence is a dangerous section of the river, the current is swift, deep and turbulent, the river makes a sharp turn and rapids and boulders are nearby. The low flows that occur much of the day under the existing license, merely expose a different set of dangerous obstacles for swimmers. Stranding and drownings have occurred at this location.
 - Project flows draw swimming and river enhanced recreation, ASRA has never had the needed drivable access points to serve the average family. Particularly, the young, old and non-athletic types. The licensee must provide such access. This location is ideal, there are no rapids, boulders nor debris or vegetative strainers below the play park. The area is downstream of the Wild and Scenic designation. Costs of development would be lower since existing grading and roads would be used with minimal modification. A facility here would put the Dam construction zone to good use and still not interfere with later Dam development if that ever occurred.
 - Residents of El Dorado County would have drivable access, for the first time to the North Fork American river. This access point is near a population center and Highways 49 and 193.
 - Parking fees will help generate income for the management of this Recreation Area.
 - The kayak play park would be vehicle accessible, but in now is 3.7 miles upstream at the Confluence.

- Formalized access will assist with fire suppression and law enforcement access in the canyons of ASRA.
- NOTE: the Birdsall and Oregon Bar river access areas are available by walking only. Parking is approximately 3500' up canyon from the actual river access points. It is not safe to leave young children, older folks or equipment at the river while one hikes to back to the car. In addition river's edge is narrow and difficult to walk on.
- Build a bridge to serve as a trail crossing and State Parks vehicle circulation over the North Fork American River near the kayak play park or anywhere downstream to Oregon Bar.
 - Project flows have interfered with trail connectivity along the river for the past 50 years. Under the Proposed Action, minimum flows will be much higher and result in fewer opportunities to cross the river. A bridge in this location will serve to connect a multiuse trail, (Auburn to Cool, ACT Trail) that was used by many over the last 30 years. Mountain biking has developed since the first hydro license was issued, river crossing is especially difficult carrying a bike, much lower flows are needed to get across the river. Project flows will ramp down very slowly in this section of the river and further limit crossing opportunities.
 - Local economy (Placer and El Dorado Counties) will benefit by new extended mileage mountain bike, ride and run events that can occur over the bridge.
 - A bridge in this location would expedite access to both sides of the river and benefit fire suppression and law enforcement needs.
 - A bridge here would enhance family oriented river access from both Placer and El Dorado Counties.
- Cumulative impact repair lost trails as a result of earlier PCWA/USBR Pump Station project.
 - The upper portion of Cardiac Bypass trail was destroyed due to road improvements for access to the China Bar parking area. Provide an alternate trail around this road.
 - Assure that, should Driver's Flat road be 'improved', an alternate equestrian trail is built to connect the equestrian parking area to the Western States Trail.
 - See Donna Williams letter for more details about the numerous trail impacts that were never addressed in the EIR of the Pump Station Project.
 - Build a bridge over the North Fork American River, the PCWA/USBR Pump Station project characterized the loss of the Auburn to Cool trail as a significant impact, yet neither party decided to mitigate this loss
 - Swimming and boating are flow related activities that have increased over the years in ASRA. The operation and maintenance costs for the increased activities have never been fully addressed under the first license. Licensee should provide some compensation for past underfunding of these costs.
- Provide full fair share of operation and maintenance costs for management of the ASRA
 - Swimming was not included in State Park's O&M proposed recreation cost measures. Swimming is a flow related activity. Costs associated with this activity must be accounted for in State Parks O& M proposed mitigation measures. Project flows, even though colder, maintain generally higher water levels in the river channel and along a greater length of the river than would otherwise occur in the unimpaired condition. More area is available for people, especially young adults, to spread out the length of the channel and cool off at the edge of the river. While the water depth, velocity and rapids

don't lend themselves to swimming laps, many areas, that require some hiking to get to, are available for cooling off, wading and water play. These areas draw recreation. Costs associated with this increase need to be included in the O&M measures.

- The baseline cost of Ranger staffing is too low in State Park's April 2010 O&M proposed recreation cost measures. Ranger staffing should be based on the mid 1980's level of staffing. Ranger staffing for the additional costs of swimming and waterplay must also be added into State Parks O&M cost breakdown. Swimming and waterplay recreation occur up and down the length of the peaking reach in ASRA. Many areas are difficult to access yet still actively visited along the river. Fire danger and crime increase when these areas are not patrolled. More Rangers, then are accounted for in the O&M proposal, are necessary to establish a presence, make public contacts and patrol these isolated and difficult to reach areas. The number of Rangers in ASRA has been reduced substantially since the early 1980's. Vandalism, assaults and other crime has increased in the ASRA. At the Confluence, only 64% of the survey respondents said adequacy of law enforcement personnel was acceptable. This, in spite of the fact that a peace officer is on-site an average of eight hours a day during the summer. On the other hand, at Ruck-A-Chucky, 72% of the survey respondents said adequacy of law enforcement personnel was acceptable. This area has been subject to many dangerous incidents, dog attacks, assaults, vandalism, fires and pot growing. The background of the respondents might account for the satisfaction with the limited amount of law enforcement in the area. Lack of sufficient Ranger Patrol in ASRA has grave consequences not only to public safety in the Recreation Area but also to the canyon top Communities above ASRA.
- Provide funding now to pay fair share of opening China Bar weekdays during the summer
- Licensee, in consultation with emergency responders in the area, should develop a fair share cost for emergency response in ASRA.
- Licensee must create, in consultation with State Parks, white water rescue personnel, and commercial whitewater boaters, marketing materials for ASRA and information brochures describing river safety information so that the real time flow info will have greater meaning to visitors.

River Crossing Threshold Flows:

Licensee has used two flow thresholds to evaluate crossing opportunities that occur as a result of the Project's default minimum flows. The inclusion of the higher of the two flows in analyzing crossing opportunities is flawed. The higher flow is based on a graph developed in 1983 for New Zealand rivers (Mosley, 1983), it represents a first cut at velocity/depth effects on individual body types in a river, it is not ground truthed for conditions encountered in this river. Field crossing studies on the Middle and North Fork American Rivers were not conducted as part of Licensee's Study Plans because, "...conducting studies at flows above 350cfs would impose unacceptable risk to the study participants and horses." (Recreation Technical Working group meeting materials July 2008) The effect of using this higher flow, picked from a graph, gives the appearance that the river is crossable for more hours a day, by the average

recreationist, than is really the case. This, in turn, diminishes the appearance of Project effects on trail crossing opportunities.

Wading, crossing and fishing in a river, and surviving, is dependent on depth, velocity and the interaction of multiple additional physical factors, such as water temperature, length of crossing, and the type of footing encountered in the river. Even the licensee agrees that "In reality, pedestrian wading and crossing is dependent upon a combination of both depth and velocity, and other factors such as substrate." (p14 REC 4 Report) We *are* dealing with reality. Yet, licensee continues to cling to the use of the high flow and dismiss the other factors which would have the effect of reducing any presumed crossing potential of the high flow picked from Mosley's chart. (Portion of Mosley reference attached.) Further, the consequences of failure to negotiate a crossing must be factored into any crossing suitability evaluation intended to analyze a specific river. In this river, a slip can result in a life threatening event. No evidence is presented to justify the use of this high flow. This flow is not based on these additional factors encountered in this river.

The information obtained from individuals that have many, many years of experience with actual river conditions and crossing possibilities, the Trail Focus Group, falls on Mosley's *sub-teen children* (C) curve, licensee's easy to moderate curve (Figure REC 4-4). The use of the high crossing flow is not applicable, it contradicts the Focus Group information and it does not take into account the other physical features encountered in this river that have a direct effect on crossing possibilities for the average recreationist in the area.

Specific Trail Crossings Information:

General information:

Small increases in velocity significantly increase the force of flowing water on a body. Force is roughly proportional to cross sectional area times the *square* of the average water velocity. (website www.grow.arizona.edu)

A safe wading "rule of thumb" is velocity x depth is equal to or less than 10 (1989 Colorado State Study and Mosley 1983 summary)

Characterization of footing at crossings is based on my personal experience and corresponds closely with the REC 4 Report. River crossing temperature, in August 2007, appears to range from approximately 56F to 64F (Map AQ 12-3b Average August temperatures) No temperatures are correlated with crossings in the REC 4 report. The river bottom is generally always visible during the day.

The high flows noted below for each crossing, are too high for the average recreationist in ASRA. In all cases they exceed the Focus Group information. In several cases, they exceed the maximum depth and velocity in the existing literature presented by the licensee. (Table REC 4-5, Pedestrian Stream Crossing Criteria Based on Existing Literature and Focus Group Comments). The Pedestrian criteria is used as a comparison below because the REC 4 Report stated that for analytical purposes, it was assumed that the maximum crossing flow for pedestrians would also be applicable to equestrian crossings.

- Ford's Bar - approximately 200' wide, cobbles and coldest river temp, strainers and a turn in river, within approx 200', rapid 750' downstream, (low flow 275cfs, 1.9' deep, 2.7 fps) **High Flow 550cfs, depth 2.3' velocity 3.8 fps**, this velocity exceeds the maximum velocity on Table REC 4-5, which is 3.0 fps. High variability in velocities across this channel can take people by surprise. A slip at this depth would result in being tumbled, drug and pushed by the high velocity flows. It would be difficult to regain one's balance.
- Ruck-a-Chucky - approximately 180' wide, boulders etc, cold river temp, (low flow 125cfs, 3.2', 1.0fps) **High flow 450 cfs, depth 4.2', velocity 2.1fps**, 4.0' is the maximum depth on Table REC 4-5. distance to first rapid approximately 50', 4.2' is too deep to be considered crossable/wadable. Most people would be swimming at this depth and thus controlled by the current. The 100 mile endurance run target flow is 125cfs/3.1' deep, a cable is in place for crossing at 350cfs, 4'deep, 1.8fps, this event has support crew at all times while runners are in the water at this crossing. The REC 4 report states the event flows are conservative in order to accommodate exhausted runners who have run over 70 miles to reach the river crossing. These flows, even if conservative for elite runners, are too high for the average recreationist who would not be able to run the last 30miles even with a fresh start.
- Poverty Bar - approximately 170' wide, visible drop on river right, smallish cobble, bottom fairly uniform, river temp cold, (low flow 225cfs, 3.1' deep 1.1fps) **High flow 550cfs, 4.1' deep 1.6 fps**, nearest rapid approximately 100', 4.1' exceeds maximum depth on Existing literature/focus group chart of 4.0, too deep to be crossable/wadable most people would be swimming and thus, at the mercy of the current.
- Mammoth Bar - approximately 165' wide, variable size cobbles, difficult footing at 200cfs, water velocity controlled and interfered with foot placement, rapid 100' downstream, (low flow 175 cfs, 1.7' deep, 3.5fps) **High flow 375cfs, 2.3' deep, 4.8fps**. 4.8fps exceeds the maximum velocity on Existing literature/focus group chart which is 3.0fps. The high flow depth x velocity product, 11.04, exceeds the rule of thumb, 10, noted above. A slip at this depth would result in being tumbled, drug and pushed by the high velocity flows. It would be difficult to regain one's balance. Down ramp takes approximately 9 hours. This is a relatively popular area because it is near a multiuse trail and a busy OHV Park on river right and has a small beach on river left.
- Coffey Dam - approximately 150' wide, uniform smaller cobble, river temp cool, rapid 2000' downstream, (low flow 175cfs, 2.2' deep, 2.1fps) **High flow 375 cfs, 3.0 feet, 3.0fps**. REC 4 report noted PCWA crews were able to cross at 370cfs. Unlike the PCWA crews, the average recreationist is not trained in safe river crossing techniques and is also not always accompanied by others for support.

The Draft License Application suggests if the higher crossing threshold flows, appear to be too difficult, then the lower threshold can be used to interpret the report results. How would one determine, absent personal experience, the high flows are too difficult? This equivocation notwithstanding, the Application continually intermixes the two flows when summarizing data and drawing conclusions. The high flow is simply a number found on a graph. It was never developed to be a decision point for this river system

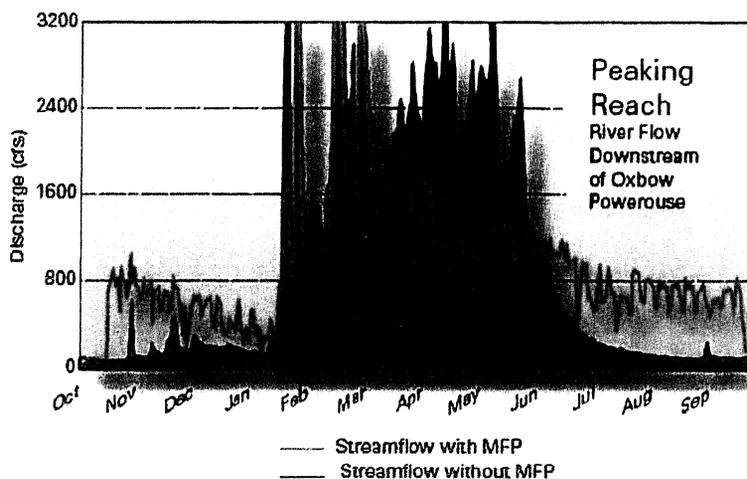
especially when it concerns public safety. There is no support for the use of this flow as a threshold flow upon which to analyze Project affects. The licensee does not define the terms but simply suggests the high flow is a threshold *above which, it would likely be too difficult to cross by most pedestrians or equestrians.* (Figure REC 4-4) So, too, could 900cfs or 1200 cfs be a flow at which most pedestrians and equestrians could not cross. The high flow was never agreed to by Recreation Technical Working Group participants and is not an appropriate parameter to evaluate effects of flow impacts on this river.

The high flow is not appropriate for the analysis of crossing opportunities. However, if it is used, then all data presentation and conclusions must be clearly separated for each flow.

Tabulated and Graphical Data regarding river crossing opportunities:

The generalized figure below depicts the disparity between the wide, daily fluctuations of project flows, during mid June to mid October and the much lower, more consistent flows that would occur if the river was not controlled by the hydropower Project. In some water years, a few crossing *opportunities* occur when winter and spring runoff is held back behind the dams. However, during the peak season, project flows prevent trail crossings on a daily basis. Thus crossings, during the peak season, result not so much as an 'opportunity' of the project but as a default of Project operations when baseline low flows occur.

Figure REC 4-7. Example of Project Modification of Flows in the Peaking Reach (Mean Daily Flows).



When the low baseline flows occur, crossings are simply not completely impeded. The Proposed Action will further reduce and impede trail connectivity during the primary recreation season in ASRA.

All data, for river crossing/wading must be presented as a seasonal breakdown. The use of averages across the winter and spring seasons diminishes the real flow effects that occur during the peak recreation season. Provide a table that compares Summer and Fall (easy/mod) crossing opportunities under the Proposed Action and the No Action Alternative. Segregate out the fall maintenance outages for the Fall season in this table so that the average number of hours per day crossing is possible is based on normal project operations. Include the outage crossing opportunities as a separate item. It appears Tables 8.9-

6a,b include the October maintenance outage in the Fall season. These annual 2-4 week outages do not constitute normal operations. These outages should be shown as a separate figure. Otherwise, this annual, but unique, event is distributed across the whole season and distorts the average number of hours per day that crossing is actually possible. This is of particular concern in the Dry Water Year, Winter season, where the data doesn't trend with the other data. The 2007 outage lasted from October through February 21, 2008, basically 2/3 of the Fall and most all of the Winter season. Could this account for unusually high crossing hours per day for these seasons? In addition, please explain why the Dry Water year is based on 4 years yet both the Fall and Winter seasons only count 3 years.

It is unclear how the crossing opportunities for the Proposed Action were developed. As an example, Ruck-a-chucky, Fall, Wet year Figure 8.9-4b and Table 8.9-6b, indicates 1 hour average per day crossable for the low flow. Low flow for Ruck-a-Chucky is 125cfs, the proposed minimum flow for a wet year Fall is 150cfs, 25cfs higher than the low flow crossing threshold for Ruck-a-Chucky. Please explain. Also, do these figures in the above Tables for the Proposed Action depend on the added storage at Hell Hole?

Please provide an explanation for the changes in crossing opportunities as a result of the Proposed Action.

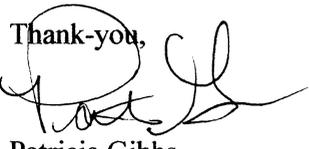
Add a note to REC 4 Tables 4-15 c-d, which depict percentage of crossable *days*, that day was counted if the flow was below the threshold *for 1 hour during the 7A.M. - 7P.M.* time period. For the record, I would like to clarify that I did not "recommend" the 1 hour minimum as stated in the REC 4 Report, p 18. I tossed it out at the Technical Working Group meeting in a desperate attempt to glean more information from the data. I do agree that it is an acceptable base point. In May of this year, it was agreed that additional analyses, regarding this specific issue, would be considered as part of the flow proposal development process. I request that an additional Table be prepared that develops data based on consecutive flows occurring below the threshold for 4 hours during the 7A.M. - 7P.M. time period.

The two crossings farthest from Oxbow Powerhouse, Mammoth Bar and Coffer Dam, are affected by very slow down ramp rates per REC 4 Report. Daily peaking duration can be a few hours to most of the day, (Aquatics 1, p39) It takes 9 hours to ramp down from 900cfs at Mammoth Bar. If the peaking duration occurred most of the day is it possible that both Mammoth Bar and Coffer Dam crossing would not be below threshold flows before the next peaking event occurred? Down ramp effects may be especially slow under the new Proposed lower down ramp rates. How was this accounted for in the average hourly crossing Tables for the Proposed Action and No Action alternatives?

Minimum flows that allow river crossing occur as a default of typical project operations; these flows are not guaranteed. What effect would the flows needed to accommodate pumping water through the PCWA Pump station located near the Coffer Dam site have on the flows needed to allow for trail crossing? My concern is with timing of the minimum flows as they relate to flows needed at these pumps. The Pump Station near the Coffer Dam site can pump up to 100cfs and be up rated to 225cfs if needed in the future. This station pumps water up 200' to a tunnel. The electrical cost of this pumping is very high. If this Station is in use during normal peaking operations, then obviously the crossing opportunities that occur during the base minimum flows would not be affected. However, if the Pump Station is in use during times when electrical costs are at the lowest, which corresponds to base minimum

flows releases, then these flows would be increased at Oxbow to whatever flow was needed at the Pump Station. Thus, crossing opportunities would be significantly reduced. Describe what effect the volume and timing of the flow requirements for the Pump station will have on river crossing opportunities.

If you have any questions, please contact me at quingold@calwisp.net.

Thank-you,


Patricia Gibbs
Member of the Public

Portion of Journal of Hydrology Vol 122, No.2, 1983 Mosley, (New Zealand)

Table 4—Summary of Flow Requirements for Human Instream Use

Activity	Water surface width (W), depth (D), velocity (V) requirements			Preferred Sediment Requirements	Preferred Other Requirements
	Minimum	Maximum	Preferred		
Paddling/wading	W - D - V -	W - D 1.2 V 1.8	W - D 0.4-0.6 V <0.5	Sand and gravel preferred. Algal or silt coating undesirable. No debris, broken glass, etc.	Bacteriological and toxicant water quality standards to be met. Water temperature 15-25 °c preferred. DxV product less than 1.0. Bottom visible. Easy access and sloping beach desirable.
Angling/wading	As above	As above	As above	As above	As above, and/or fish habitat requirements.
Swimming	W 5.0 D 0.8 V -	W - D - V 1.0	W >10.0 D 1.5 V <0.3	As for paddling/wading.	As for paddling/wading. Length of channel usable > 50 m. For diving from bank, D ≥ 2.0 m.
Tubing/drift diving	W 5.0 D 0.3 V -	W - D - V -	W 20.0 D 0.8-1.5 V 1.0-2.0	As for paddling/wading. For "white water" form of sport, as for rafting/canoeing.	No hazards—overhanging/submerged trees, etc. Bacteriological and toxicant water quality standards met. Bottom visible. Water temperature 10-25 °c Access at top and bottom of reach to be travelled. Class II or III on International Scale. (I or II for drift diving). Obstacles can be portaged. Slots between rocks > 1.0 m.
White water rafting/canoeing	W 7.5 D 0.2 V -	W - D - V 4.5	W >20.0 D 0.8-1.5 V 1.0-3.0	Presence of large boulders and bedrock outcrops to provide interest. Sediment on riffles of gravel size and not angular to minimize wear and tear.	As for tubing/drift diving except, Class II to IV on International Scale. Slots between rocks > 2 m.
Tramping* (riverbed routes)	W - D - V -	W - D 1.2 V 1.8	W - D - V -	Gravel bed desirable for easy travel. Algal or silt coating undesirable. Stable boulders, rock outcrops and small waterfalls desirable for interesting travel.	DxV product less than 1.0 on skewed gravel shoals for easy crossing, or footbridges available. River does not impinge on bluffs, to minimise need for river crossings. Floodplain or terrace surfaces present for easy travel. Water temperature > 10 °c. Bottom visible.

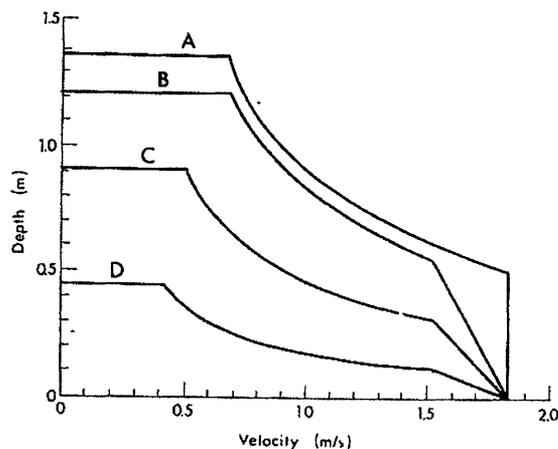


FIG. 3—Depth and velocity limits for safe wading (redrawn from Cortell and Associates, 1977, figure 10). A. Tall, heavy adults. B. Average adults to teenagers. C. Sub-teen children. D. Pre-school children.

draught of a planing jetboat provide good estimates of the minimum water surface width and depth required for those activities, respectively.

Table 4 lists the minimum, maximum and preferred depths, velocities and widths for the contact and non-contact uses listed in Table 3. These are based on criteria proposed by Cortell and Associates (1977), modified by the writer on the basis of his own experience of New Zealand conditions and after consultation with appropriately experienced colleagues. Preferred conditions for substrate and other factors have also been tabulated. Just as there are habitat suitability criteria for each life stage of fish, criteria for human instream uses are also dependent upon age-group, and on the physical characteristics of the individual. This is particularly the case for contact uses, where size and strength are needed to resist the force of flowing water. Although there is a well-known rule of thumb that the depth-velocity product (measured in metres) should not exceed 1.0 for safe wading, this varies with age and body weight; Figure 3 presents more detailed depth-velocity limits for different age and size groups.

Many of the criteria listed in Table 4 can be only approximate, because of the adaptability and diversity of individuals. This applies particularly to the white water sports of rafting, canoeing and jetboating; differences in skill and nerve are great, so that a grade III river on the International Scale ("medium difficulty. Waves are numerous, high and irregular. Passages are clear but narrow and require expertise in manoeuvring") would be terrifying for some people and merely "interesting" (a common canoeist's term) for others.

In addition to the factors included in Table 4, the suitability of a given watercourse for most, if not all, of the contact and non-contact uses is

PLANNING AND DESIGN FOR THE KILLICKS RIVER RECREATION ENHANCEMENT PROJECT

AUBURN STATE RECREATION

Auburn Dam construction zone, construction stoppage, and easement rights revoked 2008

SPRING CANYON

New park constructed as part of Spring Station Project by PCWA. 27 mi.

Western States Salmon Hatchery, Tahoe and beyond

General area for bridge to be constructed by several tribal and many local citizens

PCWA to provide vehicle, river access and parking.

This area graded and reshaped by recent Peano Station Project.

Extend existing paved dam construction road to access proposed parking. Modest reuse of existing roads and grading would not interfere with a future dam.

No public vehicle access allowed at this time in the Olmstead Loop area

PCWA to provide bridge

A bridge is the best trail bifurcation an MFP 2079's high under the new lies cumulative impact

Parking for Birdsall and Oregon Bar

River forecast must take down and drop off equipment and family members, establish or Oregon Bar, drive up to parking lot first hike 3800 feet back down. To leave, the reverse is necessary, a hot long hike up the roads to the parking area, etc.

China Bar gate open limited number of days

Birdsall access turn around

Muckerbocker Creek

Bar vehicle turn around

Express Trail, Auburn to Sacramento

potential permanent bridge sites per S feasibility Study. Loss of the multuse identified as a significant impact of the PCWA/USBR Project. No public vehicle proposed, bridge to serve as connect multuse trail and local agency access

23 24

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23 24

**Gibbs, Patricia - Member of the Public
Comment Letter Dated December 27, 2010;
Filed with FERC December 27, 2010 (20101227-5032)**

December 27, 2010
Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Re MFP 2079 Middle Fork American River Project Draft License Application comments, 3rd of 3

Dear Secretary Bose:

The hydropower Project has complete control of the river flows of the Middle Fork American River which runs the length of the Auburn State Recreation Area (ASRA). This recreation area is at the tipping point of devolving into a crime ridden fire trap. The Bureau of Reclamation (BOR) holds these 42000 acres in public trust and as such must step up and meet not only its' own obligation for dedicated minimum funding, but also assure, through its hydrolicense conditioning authority, the hydropower Project licensee, PCWA and Placer County (PCWA), meets its' obligations for mitigating Project impacts and provide the full share of annual operation and maintenance costs associated with the Middle Fork River Project.

Presently, Bureau of Reclamation funding is so low the Recreation Area is being dealt with as though it is an abandoned warehouse; gates are up, areas closed and security consists of periodic drivebys. Rangers have been laid off *and less attention might be paid to parts of the recreation area that could be more dangerous to Parks staff.* (Auburn Journal 10/14/2010) This abandoned warehouse management style doesn't work when you consider the area receives almost 1 million visitors a year. PCWA had not provided any funding over the course of the first 50 year license for costs associated with increased recreation due to the river flows.

The Bureau must provide annual minimum funding of 2.2 million dollars to State Parks to meet basic health, safety and fire protection of ASRA. The majority of the funds must be dedicated to added law enforcement/Ranger staff of between 8 and 12 Rangers, and fuels management costs. Without law enforcement and fire prevention in place, the high number of river recreation based visitors will only add to the drain on local fire and County law enforcement agencies. Thus, the Bureau has a dual role, meet its' obligation for basic land management and assure that hydropower Project licensee provides mitigation for Project impacts and its' fair share of annual operation and management costs for ASRA. These two revenue streams added together will keep the Park going with the help of local communities and volunteers.

Of the 1 million visitors a year, most participated in trail use and swimming/sunbathing. PCWA's contribution to the proposed river related Operation and Maintenance budget for flow related recreation use does not include the costs State Parks incurs that are associated with swimming/waterplay. It was suggested that the Project's higher and colder flows made swimming less desirable compared to the unimpaired condition. However, the very high number of visitors that come to the area to swim, belie that notion. Swimming is a component

of river recreation that clearly falls into the non-power values to be considered under a new hydropower license. Swimming has been reviewed in other FERC deliberations. Flows during the summer in the unimpaired condition would be barely a trickle, less than 75 cfs. There might be several swimming holes but as the summer progresses this type of 'swimming' actually decreases because the water quality declines. The flows, associated with Project operations clearly draw many more visitors for swimming/waterplay than boaters during the summer. While the high project flows, rapids and cold temperatures are not conducive to lake type swimming, the flows do provide more area throughout the length of the river for people to cool off.

Patrol and maintenance costs associated with the large number of visitors that come to this river in the summer/fall for the purpose of swimming/cooling off must be added to the annual, proportionate share of O&M costs paid to State Parks. This is particularly necessary in the locations accessible by vehicle and/or where there is a beach area such as Cherokee Bar, Drivers Flat, Mammoth Bar, and the Confluence and China Bar.

Of the approximately one million yearly visitors to the Recreation Area, trail use by hikers, joggers/runners, equestrians and mountain bikers is the most participated in activity. Whitewater boating, both commercial and private, on the Tunnel chute and Mammoth Bar runs from 1995 through 2009 totals 270,710 people or approximately 20,000 whitewater boaters per year. Trail use in ASRA, by comparison is, conservatively, ten to fifteen times that amount.

Project flows in the peaking reach completely impact and cut off trail connectivity throughout ASRA on a daily basis. This Middle Fork Watershed Trail system is unique due to the fact it is a historical 1800's trail that is intact today for over 100miles. A multitude of connector trails serve as access to it, in and around the Auburn Recreation Area. Reasonably safe crossing opportunities for hikers, bikers and equestrian recreationists are available during minimum flows or low baseline flows and when the Project is shut down for maintenance outages.

The Stream Based Recreation Study Plan originally called for field review to assess crossing conditions at various flows. However, based on information developed during the Trail focus group session, PCWA proposed developing a stage/discharge relationship for each stream crossing in lieu of actual field review. The rationale proposed by PCWA was as follows: **"The focus group indicated that river crossing is not possible at flows above 350cfs. Therefore, conducting flow studies at flows above 350 cfs would not yield meaningful information. More importantly, conducting studies at flows above 350cfs would impose unacceptable risk to the study participants and horses."** PCWA handout, July 1, 2008 Update on the REC 4-Stream Based Opportunities Technical Study Plan Focus Group Sessions and Refined Flow Study Approaches Surprisingly, the resulting REC4 Report stated flows much higher than 350cfs were deemed crossable. This unilateral change occurred without any further discussion with the Recreation Technical Working Group or the Trail Focus Group. The net effect of this arbitrary change serves to conveniently reduce the appearance of Project impacts on the trail system. No doubt the higher flow is crossable by some individuals, some individuals are also willing to swim and take more chances in order to cross the river, however, this study was

intended to review trail crossing opportunities for the average hiker, biker and equestrian in a recreational setting. Given the licensee's own statements above and the input of people with 30 years of experience on these trails and in this river, the high flow is unsafe for the average trail recreationist on this river. Hikers and bikers particularly need lower flows to get across the river, obviously, without resorting to swimming. Mountain bikers, several participated in the focus group, are a new trail enthusiast since the first Project license was issued, the crossing analysis must take into account all trail users, the high flows don't work for people who must lift a bike and maintain stability in the river. This high flow should not be used in the Project analysis. (See Part 2 of my DLA comments dated November 6, 2010 for individual crossing info)

The following two pages relate to Tables 8.9-6a and b. "Average Number of hours per Day that River Crossing was possible in the peaking reach for the existing impaired condition and the Proposed Action.

My analysis of the impacts to crossing opportunities are contained on those pages. The minimum flows under the Proposed Project are significantly higher than the Existing, No Action condition. Proposed Action results in a decrease in crossing potential during the prime recreation season, Summer and Fall months for the safer crossing flows which are less than 350cfs.

Thank you,

A handwritten signature in black ink, appearing to read 'Patricia Gibbs', with a long horizontal line extending to the right.

Patricia Gibbs

Data from Tables 8.9-6a, b	Moderate Crossable Flow Umimpaired	Moderate Crossable Flow "No Action"	Current minimum flow 75cfs all water years	Moderate Crossable Flow Proposed	Summer Proposed Minimum Flows	Moderate Crossable Flow Umimpaired	Moderate Crossable Flow "No Action"	Moderate Crossable Flow Proposed	Fall Proposed Minimum Flows	Total Summer for all water years unimpaired	Total Summer for all water years impaired	Total Summer for all water years Proposed	Total Fall for all water years unimpaired	Total Fall for all water years impaired	Total Fall for all water years Proposed
	Summer	Summer		Summer		Fall	Fall	Fall							
1995, 1997, 1998, 2006		368 days		368 days			303 Days	303 Days	Sept 1-14						
Wet Water Years									250cfs Sept 15-30	7.6	0.6	0	26.7	12.3	16.7
Fords Bar	275cfs	3.4	0.3	0.0	June	9	4.9	5.3	200cfs	11	6.1	1.9	33.4	15.9	21.1
Ruck a Chucky	125cfs	0	0	0.0	July	2	0.7	1	150cfs	21.3	13.8	5.2	42.7	20.7	30.2
Poverty Bar	225cfs	2.5	0.2	0.0	August	7.8	3.6	5.4	120cfs	30.9	10.5	11.3	42.2	30.3	24.8
Mammoth Bar	175cfs	1.6	0.1	0.0	300 cfs	6.3	2.6	3.9	120cfs	39.5	33	20.8	45	45.3	33.2
Coffer Dam	175cfs	0.1	0	0.0		1.6	0.5	1.1	150cfs						
	7.6	0.6		0.0		26.7	12.3	16.7	200cfs	110.3	64	39.2	190	124.5	126
1993, 1999, 2000, 2005									Sept 1-14	Summer/Fall Unimpaired Total 110.3 + 190= 300.3					
Above Normal Water Years		368 days		368 days			364 days	364 days	200cfs						
Fords Bar	275cfs	4.7	1.6	1.3	June	10.4	5.6	5.9	Sept 15-30						
Ruck a Chucky	125cfs	0	0.9	0.0	250 cfs	2.8	1.9	1.9	150cfs	Summer/Fall Impaired Total 64+ 124.5 = 188.5					
Poverty Bar	225cfs	3.8	1.5	0.6	July	9.3	4.1	6.5	150cfs	Summer/Fall Proposed Total 39.2 + 126= 165.2					
Mammoth Bar	175cfs	2.4	1.4	0.0	250 cfs	8	3.5	4.9	150cfs	When Fall outages are excluded from these figures the decrease in trail crossing will be greater					
Coffer Dam	175cfs	0.1	0.7	0.0	August	2.9	0.8	1.9	150cfs						
	11	6.1		1.9	250cfs	33.4	15.9	21.1							
1989, 2002, 2003, 2004									Sept 1-14						
Below Normal Water Years		368 days		368 days			364 days	364 days	160cfs						
Fords Bar	275cfs	7.4	3.6	2.1	June	10.1	5.8	6.7	Sept 15-30	Note: Impaired and Proposed Fall 'averages' include the Fall maintenance outage. This occurs in October from 2 to 4 weeks. It does not constitute normal operations. These outages should be shown as a separate figure. Since each outage day represents 12hours, distributing this annual but unique event across the whole season and misrepresents 'average daily' crossing potential for the season. The wet year minimum flows for Fall, under the Proposed Action range from 200 cfs to 250cfs. Moderate crossing flows at 4 of the 5 locations are below 225cfs. Yet the data presented indicates crossing potential for anywhere from 1 to 5.4 average hours per day for these crossing locations. Given the minimum flows are higher than the crossing flows, this does not make sense. This occurs elsewhere in the Above Normal years as well.					
Ruck a Chucky	125cfs	0.1	1.2	0.0	200cfs	7.5	2.4	4	120cfs						
Poverty Bar	225cfs	6.6	4.4	3.1	July	9.7	5.6	7.5	October						
Mammoth Bar	175cfs	5.3	4.2	0.0	200cfs	9.1	4.8	7.4	120cfs						
Coffer Dam	175cfs	1.9	0.4	0.0	August	6.3	2.1	4.6	November						
	21.3	13.8		5.2	200cfs	42.7	20.7	30.2	120cfs						
1990, 1991, 2001, 2007									Sept 1-14						
Dry Water Years		368 days		368 days			299 Days	299 Days	120cfs						
Fords Bar	275cfs	8.9	3	2.5	June	10.5	6.6	6	Sept 15-30						
Ruck a Chucky	125cfs	1.8	1.3	0.0	150cfs	8.9	5.6	2.3	90cfs						
Poverty Bar	225cfs	8.2	2.8	4.4	July	9.6	6.7	6.6	October						
Mammoth Bar	175cfs	7.1	2.5	4.4	150cfs	7.6	6.5	5.8	90cfs						
Coffer Dam	175cfs	4.9	0.9	0.0	August	5.6	4.9	4.1	November						
	30.9	10.5		11.3	150cfs	42.2	30.3	24.8	90cfs						
1988, 1992, 1994									Sept 1-14						
Critical Dry Water Years		276 days		276 Days			273 Days	273 Days	75cfs						
Fords Bar	275cfs	10.4	5.9	3.4	June	10.2	9.3	7	Sept 15-30						
Ruck a Chucky	125cfs	3.4	5.7	1.5	100cfs	9.4	7.5	4.7	75cfs						
Poverty Bar	225cfs	9.8	7.9	5.8	July	9.7	10.1	7.6	October						
Mammoth Bar	175cfs	8.9	8.1	7.2	100cfs	9.1	10.1	7.9	75cfs						
Coffer Dam	175cfs	7	5.4	2.9	August	6.6	8.3	6	November						
	39.5	33		20.8	100cfs	45	45.3	33.2	75cfs						

Data from Tables 8.9-6a, b		Moderate Crossable Flow Umimpaired	Moderate Crossable Flow Impaired "No Action"	Current minimum flow 75cfs all water years	Moderate Crossable Flow Proposed	Winter Proposed Minimum Flows												
		Winter	Winter			Winter												
1995, 1997, 1998, 2006																		
Wet Water Years																		
Fords Bar	275cfs	0.2	0		1.4	Dec												
Ruck a Chucky	125cfs	0.2	0		0	Jan												
Poverty Bar	225cfs	0	0		1	Feb												
Mammoth Bar	175cfs	0	0		0.1	200cfs												
Coffer Dam	175cfs	0	0		0													
Total		0.4	0		2.5													
1993, 1999, 2000, 2005																		
Above Normal Water Years																		
Fords Bar	275cfs	2	3.7		3	Dec												
Ruck a Chucky	125cfs	0.9	0		0.2	Jan												
Poverty Bar	225cfs	1.3	2.7		2.8	Feb												
Mammoth Bar	175cfs	0.6	1.5		1.9	150cfs												
Coffer Dam	175cfs	0.1	0		0.2													
		4.9	7.9		8.1													
1989, 2002, 2003, 2004																		
Below Normal Water Years																		
Fords Bar	275cfs	1	2		3	Dec												
Ruck a Chucky	125cfs	0.8	0.8		0	Jan												
Poverty Bar	225cfs	0.8	1.8		2	Feb												
Mammoth Bar	175cfs	0.4	1.6		0.3	120cfs												
Coffer Dam	175cfs	0	0		0													
Total		3	6.2		5.3													
1990, 1991, 2001, 2007			270 Days		270 days													
Dry Water Years																		
Fords Bar	275cfs	5.3	7.5		8.2	Dec												
Ruck a Chucky	125cfs	2.3	6		2.5	Jan												
Poverty Bar	225cfs	3.6	7.1		8	Feb												
Mammoth Bar	175cfs	2.2	6.5		5.1	90cfs												
Coffer Dam	175cfs	1.6	2.6		1.9													
Total		15	29.7		25.7													
1988, 1992, 1994																		
Critical Dry Water Years																		
Fords Bar	275cfs	6.4	3		7.9	Dec												
Ruck a Chucky	125cfs	2.2	0.3		0.3	Jan												
Poverty Bar	225cfs	5.1	2.8		7	Feb												
Mammoth Bar	175cfs	3.1	1.8		5.2	75cfs												
Coffer Dam	175cfs	1.4	0.3		0.2													
Total		18.2	8.2		20.6													

Please explain the surprisingly large increase in total crossing hours between Winter, "No Action" water years, BN (6.2) to Dry (29.7) and the Critical Dry drop to (8.2). This trend also occurs for the Proposed Action. Please explain how all the crossing hours on Table 8.9 -6b were developed for the Proposed Action.

Dry water years were based on four years. There was great variation in terms of total cfs per winter season for each year. Example, Winter, 1990 (Dec 1989 Jan Feb 1990) totalled 35,081 cfs, Winter, 1991 (Dec 1990 Jan Feb 1991) totalled 10,602 cfs, Winter 2001(Dec 2000 Jan Feb 2001) totalled 48,525 and Winter 2007 (Dec 2006, Jan Feb 2007) totalled 75,212 cfs please explain why only three winter seasons were tabulated and which year or months were not counted and why. (These totals from the excell spreadsheet provided by PCWA)

Please explain why some crossing hours exist for those crossings in which the moderate crossing flows are less than the minimum flow.

Document Content(s)

MFP 2079 DLA Comments 3 of 3 PG.PDF.....1-5

**Horseshoe Bar Fish & Game Preserve (HBP)
Comment Letter Dated December 23, 2010;
Filed with FERC December 28, 2010 (20101228-5004)**



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December 23, 2010

VIA ELECTRONIC SUBMITTAL

*Hon. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426*

**RE: COMMENTS ON PLACER COUNTY WATER AGENCY'S
DRAFT LICENSE APPLICATION FOR THE MIDDLE FORK AMERICAN
HYDROELECTRIC PROJECT #2079**

Dear Secretary Bose:

Horseshoe Bar Fish & Game Preserve, Inc. (HBP) submits this letter in response to Placer County Water Agency's September 27, 2010 submission of its Draft License Application for project # 2079. HBP is a member of the Middle Fork American River ("MFA") Working Group; as a member and stakeholder of that group, we have been participated in the MFA relicensing process by representation through the Foothills Water Network ("FWN"), and the Foothills Anglers Coalition (FAC), which has submitted their comments by separate letter.

It is important to note that HBP is fully supportive of all of the FWN and FAC comments, having signed them, and joins in and adopts those comments as a member of the MFA Working Group. Additionally, it has always been the understanding and policy of the MFA Working Group, FWN and FAC that individual members have the option to submit separate comments on any specific issue, while joining in the FWN & FAC comments. This comment letter has been submitted pursuant to that policy. Subsequently, we have submitted in a separate filing the HBP interest statement, which defines HBP interests, intent and purpose in participating as a stakeholder in these proceedings. This same interest statement was filed previously with PCWA.

Before setting out our separate comments on certain issues, the following background and remarks are essential:

Horseshoe Bar Fish and Game Preserve (HBP) is a duly organized and existing California corporation. HBP is located on private property covering thousands of acres for five miles on both sides on the Middle Fork of the American River. It was created to protect the fisheries, aquatic habitat and

resources in the Middle Fork of The American River, and expand the public and private use of the MFA's recreational resources. Over the past years, HBP has expanded its mission statement to support local schools, philanthropic and nonprofit organizations. Below is a list of organizations and events we have chosen to support financially, as well as, through public events at the property.

Philanthropic Organizations: Casting for Recovery (Women recovering from Breast Cancer); Wounded Warriors (Returning Veterans from Iraq & Afghanistan)

Schools: Waldorf Schools of North America, Placer Hills Education Foundation, Franklin Elementary School, Sacramento County Day School, Foresthill Schools

Non-Profit Organizations: Boy Scouts of America, Cub Scouts of America; Numerous Northern California Fly Fishing clubs including, Granite Bay Flycasters, California Fly Fishers Unlimited, San Jose Flycasters, Gold County Fly Fishers, Peninsula Fly Fishers, and Golden Gate Angling & Casting Club.

As set forth above, HBP concurs with, joins in, and adopts FWN's and FAC's comments on the DLA. We do, however, submit our own comments regarding the DLA.

1. MFA RELICENSING PROCESS

The DLA is Not a "Consensus" Document as it Applies to the MFA's Peaking Reach

PCWA's scheduling and management of the public input meetings, collaborative negotiations on the Peaking Reach were significantly abbreviated in comparison to bypass reach negotiations. As a result, meaningful discussions were not conducted and no consensus was ever reached.

Subsequently, continued negotiations with stakeholders and interest groups on peaking reach issues were conducted after the formal negotiation period concluded. However, this follow-on input to PCWA was not reflected in the DLA language concerning the peaking reach. It is HPB's sincere desire that meaningful discussions and negotiations regarding the will continue so that a true consensus can be formed.

2. INITIAL STUDY PROCESS

2.1. Initial Studies Relating to Recreational Angling

The initial recreational studies completely ignored a major recreational use of the MFA. In the FWN and HBP comments there are requests for studies on angler safety, fish stranding, river crossing and numerous other flow-related issues pertaining to angling. At a March 4, 2010 meeting concerning the Angler's interest, PCWA agreed to provide river crossing flow studies with the Anglers Focus Group. Unfortunately PCWA later refused to honor its commitment and there were no river crossing studies done with the anglers focus group. These should have been done in the same manner as they were for the boating interests, and the trail crossing interests.

2.2. Angling Recreational Surveys, Studies and Angler Input

Throughout the process, the angling interest was treated in a manner significantly different than other interests. At the outset of the proceedings, an “angler focus group” meeting was held, from which erroneous, superficial information was drawn. Requests were made repeatedly for additional meetings, studies and surveys but until very late in the process those requests were summarily denied. During the January 2010 REC meeting we requested that the matter of the marginalization of anglers and the failure to address angler’s input be brought before the Plenary Group for a discussion. PCWA’s refused our request out of hand and told us to file a complaint to FERC. Attached are a copy of our complaint letter and the survey of the angler’s recreational use which PCWA refused to participate in conducting.

As a result of our filing the complaint PCWA held a second meeting in March of 2010. The angling interest was well represented at that meeting. It should be noted that was the only evening MFA Recreational stakeholder meeting was held at 7:00 PM and ran late into the evening. All of the other MFA REC meetings were held during the hours of 9:00 AM & 4:00 PM, hours which were exceedingly difficult for most working recreational users and interest groups to attend.

Information that was generated from the Angler’s meeting unfortunately did not find its way into the DLA. We have attached the summary of that meeting as prepared by Entrix, so that it is clear that it is part of the record. The disparate treatment of the angling interest group by PCWA, and paucity of meetings with the angling interest group should be contrasted with the deferential treatment accorded, the numerous meetings that were held with other interest groups, such as the whitewater boating interests. By way of example, in the Final REC-4 Technical Study Report, Exhibit E, there are approximately 806 pages devoted to whitewater interests, while there are only 93 pages devoted to the angling interest.

It is important to note that the California State Parks conducted a comprehensive study and user survey of the Auburn State Recreation Area in 2006. This study showed that 28% of the MFA users surveyed were involved in white water boating. This same study showed that 18% of the users surveyed were anglers. The overwhelming disparate treatment between these two groups throughout the PCWA studies and the DLA is shockingly inappropriate and clearly prejudicial. (Auburn State Recreation Area Survey Report; page 17, Table 19.)

2.3. Aquatic BMI Studies

PCWA’s repetitive avoidance to conduct fish-related and BMI related studies on the Horseshoe Bar Preserve property below the tunnel chute fish barrier despite repeated requests to do so. This in turn renders PCWA’s conclusions regarding fish and BMIs in the peaking reach faulty and incomplete. HBP requests that PCWA conduct reasonable studies within the preserve area below the fish barrier of the Tunnel Chute in the same manner as it did elsewhere on the river, in order to collect more accurate data upon which to base its conclusions.

2.4. Fish Stranding Studies and Associated Fish Stranding incidents

The requests for fish stranding studies were by in large limited and ignored considering the numerous letters and communications PCWA received over the last three years. Additionally information concerning the standing that was observed during the Oct 8th 2008 maintenance period was not entered into the record and included in DLA. Attached is a copy of the e-mail concerning the stranding

sent to PCWA on Oct. 8th 2008. PCWA's failure to address the stranding other than to state that the current license allows them to continue the practice of stranding fish and destruction of the BMI (See attached Letters). These communications show a disregard for the wild native fish and other aquatic life in the river.

2.5. Incomplete Studies

HBP reserves the right to comment on incomplete studies and alter our comments on the Draft License Application. At this time, HBP fully intends to comment on these currently incomplete studies in response to PCWA's Final License Application. These incomplete studies include the Entrainment Study, the Bioenergetics Study and the Reservoir Fish Habitat Study. Additionally, there are also three management plans that are still outstanding. The HBP reserves the right to comment on these outstanding studies and management plans as well as to revise our recommendations for PM&Es as a result of the study outcomes.

3. DLA SPECIFIC COMMENTS

3.1. Reintroduction of Salmonids into the Upper American River: NIMFS filing with FERC

This issue was covered in the Foothills Water Network comment document. HBP wishes to add only one point that was not mentioned because the event had not occurred at the time of filing of those comments: NIMFS has filed its Biological Opinion and Conference Opinion and Draft Recovery Plan for Central Valley Listed Salmonids in the record of these proceedings.

3.2. Flow Impacts on Spawning Rainbow Trout (O. Mykiss)

HBP has repeatedly requested over the last three years that PCWA conduct studies and investigate the O.mykiss reported spawning in the Grey Eagle Bar area of the MFA. PCWA was also asked to investigate the dewatering /destruction of O.mykiss Redds on the MFA. The record is replete with evidence that O.Mykiss is present in the main stem of the river and that they spawn during the maintenance period. PCWA refused to consider this in conducting their studies on the peaking reach. HBP requests that PCWA conduct the necessary studies to determine the nature and extent of the O.mykiss presence in the MFA, and the habits of the O.Mykiss that inhabit the main stem.

3.3. Fall Spawning Rainbow Trout

Additionally, in spite of FWN's formal request, PCWA has not included in the DLA any analysis, comparison, requirements or considerations of the MFA's documented winter-spawning O. mykiss (rainbow trout) populations. PCWA's response was that flow-related analysis/comparisons would not be included in the technical study reports" for any time period other than spring.". HBP requests that further study, analysis and flow-related requirements/considerations of winter-spawning O. mykiss be required of PCWA as part of their license application.

3.4. Annual Maintenance Outage Minimum Flows

The peaking reach's aquatic environment should not have to endure extreme low minimum flows for 30- days or more merely because of maintenance work. We would like to craft license terms and

conditions that require PCWA to reduce the outage flow periods to the absolute minimum. The project's license requirements should meet the needs of the environment, not the reverse.

3.5. Available Alternatives to Address Adverse Impacts Associated With Peaking Flows

In doing its flow analysis, PCWA did not take into account available information relating to a settlement that occurred relative to the Yuba River, on peaking issues. The reason for bringing this to FERC's attention via a comment is that there is no dispute that peaking is harmful to the river and its ecosystem. Dr. Graig Addley who PCWA employed through Entrix repeatedly acknowledged that peaking has a very harmful effect on the entire aquatic life in the river. While clearly minimum flows are of vast importance, the difference between the high and low peaks is also critical. This issue was addressed in the Yuba River settlement and should have been considered by PCWA before producing the DLA.

3.6. PCWA failed to follow and implement the science that Entrix produced for the peaking reach, relating to the effects of peaking on available habitat for trout spawning, young-of-the-year rearing, and benthic macroinvertebrate refuge/habitat.

- 3.6.1. PCWA's studies demonstrate two very significant scientific facts: (i) peaking drastically affects trout spawning habitat, young of the year rearing habitat, and BMI production and refugia habitat; (ii) there is virtually no spawning within the main channel of the Middle Fork below Oxbow dam because of the peaking of the system. These two facts are related, but bear specific separate mention.
- 3.6.2. The trout spawning habitat studies showed that 94% of the effective trout spawning habitat is destroyed by peaking flows at the RM 4.8 study site under current license conditions, and that at the RM 14.1 study site peaking flows destroy 81% of the spawning habitat. The DLA proposal would continue to destroy 88% of the spawning habitat at RM 4.8 and 75% of the spawning habitat at RM 14.1. To suggest that by virtue of this small reduction in adverse impact the DLA would provide "enhancement" to spawning habitat is equivalent to saying that it is ok to destroy 88% of the spawning habitat because previously only 94% was destroyed by PCWA. The numbers specified in this paragraph are drawn from Appendix AQ1, Figures O-18 and 19.
- 3.6.3. This, of course, is the reason that there is no spawning in the main stem of the river. Such spawning as does occur happens in the few tributaries that exist below Oxbow dam. PCWA's sole mitigation for this impact is to propose that gravels be introduced to re-establish spawning habitat. There are a number of problems with this: (i) PCWA proposes to introduce gravels above the tunnel chute. However, any gravel introduced in that area will simple wash into the tunnel, which is 50 feet in depth, and/or into the "lake" area beyond the tunnel, which area is over 70 feet deep. It will remain there until a storm of at least 100 year magnitude occurs to move the gravel out and downstream. HBP requests that PCWA conduct a study to determine feasible areas for gravel introduction below the tunnel chute and lake. Horseshoe Bar Preserve will provide access to PCWA for this purpose if PCWA determines that introduction below the tunnel and lake is a feasible area. (ii) Still, peaking will inevitably and immediately wash introduced gravels (even below the tunnel and lake) to the sides of the river as is currently the situation, so gravel introduction is probably not even a workable solution. HBP requests that in

its geomorphology analyses, PCWA consider this question and produce the necessary science to support a conclusion that gravel introduction will in fact mitigate for loss of spawning habitat caused by peaking. Finally, if spawning gravels are introduced in suitable locations as a mitigation measure, then that should be done regularly to encourage spawning in the side channel at Grey Eagle Bar and other areas.

- 3.6.4. The studies show that there are virtually no small fish in the main stem river, and virtually no young of the year. This is because peaking disturbs their refugia, strands them, and makes them available for easy predation by bigger fish and other terrestrial predators. HBP requests that PCWA produce the necessary science to determine reasonable and feasible mitigation measures designed to provide suitable habitat for small fish.
- 3.6.5. The RM 4.8 study site shows that BMI habitat is reduced to 20% at 75cfs. A similar loss of habitat occurred at the RM 14.1 studies. The DLA proposes a minimum flow of 125 CFS which will reduce the available habitat to 34%. Under the current operating policy PCWA minimum flow have been approximately 200 CFS which will reduce the available habitat to approximately 50%. As a consequence the DLA is actually asking to reduce the BMI habitat by 16% from its current operating policy. The DLA request to increase the destruction of habitat is not an enhancement and should not be allowed. BMI numbers clearly affect the number (few, as shown by the fish population studies) and size (all larger—larger fish eat small fish) of fish in the system. There are too few BMIs to support good populations of small fish. HBP members provided clear anecdotal information to PCWA during the study process that demonstrated that BMIs that did hatch were stranded and preyed upon so that their numbers were reduced nearly to zero. PCWA did not take this evidence into account. HBP requests that PCWA produce the necessary science to determine reasonable and feasible mitigation measures designed to provide suitable habitat for BMIs. The information specified in this paragraph was drawn from Appendix AQ1, Figures O-15 and 24.

3.7. Metric for measuring claimed enhancements

By its own admission, PCWA has not utilized the 75 cfs minimum flow in the peaking reach as its operating standard. Rather, as shown clearly by the operating history presented by PCWA, it has historically operated the system at around 200 cfs as the minimum flow. Yet, in claiming “enhancements” PCWC refers to the minimum flow of 75 cfs required by the existing license. In effect, there is little if any enhancement if the existing condition is used as the metric for measuring claimed enhancements. In fact, PCWA is requesting a license that would be less than its current operating policy. The DLA actually provides less Spawning, incubation, and food production habitat than it currently available under its current operating conditions. PCWA’s suggestion that the DLA is an enhancement to the aquatic life in the MFA would be laughable if it were not so important to the health of the fishery. HBP requests that PCWA provide a discussion of its rationale for using the existing license condition as opposed to the existing operating condition, or at least do a comparative analysis using both metrics.

4. GENERAL COMMENTS

4.1. Lack of Meaningful Spawning Mitigation in the MFA Peaking Reach

The creation of the Project's Oxbow Dam facility functionally severed the upper tributary system (bypass reaches) from access of mainstem (peaking reach) fish populations to historic spawning areas. This barrier was created without significant spawning mitigation measures identified in the original License. Impacts of this lack of spawning habitat are clearly indicated in the aquatic fishery studies. As a general comment, HBP believes that this significant environmental impact should be remedied in the relicensing of the MFA Project. HBP strongly supports the non-flow mitigations for enhancing trout spawning as identified in the FWN's DLA comments.

4.2. Adaptive Management Issues

It is essential that whatever flow regimes are identified under the new license, PCWA would be responsible to evaluate the instream flow impacts on BMI habitat and production. Should licensed flow regimes indicate decreases or adverse trends in BMI populations, then further studies should be conducted in developing and adapting regimes that are more conducive to BMI populations and overall aquatic ecosystem health.

4.3. Retention and modification of fishery management provisions in existing license amendment language.

Although not identified in the DLA, FWN recommends that portions of the existing FERC No.2079 License Amendment language be retained and modified in the new License for fishery management purposes. This new language is referenced to the current 1981 License Amendment; FERC Project No. 2079; ORDER AMENDING LICENSE (MAJOR); (Issued March 18, 1981); Page 5: (E) Article 37: Footnote; 2/ New License language would be modified to read as follows: *"Oxbow Powerplant releases: The scheduled flow releases may be modified for beneficial aquatic and fishery management purposes upon consensus among the Licensee, the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Should consensus be unobtainable, parties will employ appropriate mediation and/or arbitration processes to reach a determination."*

4.4. Water sales

Historically, PCWA has engaged in water transfers and sales. This clearly has an effect on reservoir storage levels, and that effect trickles down in a manner as to affect other issues in the peaking reach, such as the effect on fish and BMI habitat and numbers, of prolonged high flows required to ensure delivery of the water. HBP requests that PCWA conduct the reasonable studies to determine the effect of water sales on fish and BMI habitat and numbers, and on other issues such as water availability for increases in minimum flows and similar issues, and specifically the adverse effects on the angling interest. For example, in 2009, water sales caused unseasonably high flows below Oxbow Reservoir that made angling not only extremely difficult for a significant period of time, but created a dangerous condition for anglers trying to access the river.

Through this water sales process, PCWA has categorically avoided any detailed environmental analysis or compliance with California Environmental Quality Act (CEQA); Water Code section 1729, by implementing large-scale water transfers (typically 10,000 to 20,000 acre feet) as "temporary changes"

to its water rights applications/permits, which is allowed under Water Code sections 1725, et seq.. PCWA's petitions for "temporary changes" are exempt from the requirements from CEQA and other applicable parts of Water Code sections 1725. However, when considering the frequency of PCWA's implementation of large-scale water transfers in 2001, 2004, 2005 and 2009, it is arguable that these numerous transfers should continue to qualify for a CEQA exemption.

4.5. MFA Event Coordination

HBP's annual event for seriously wounded veterans brings together veterans from across the country in an effort to help them adjust and rehabilitate from both physical and mental injuries suffered during their service in the Iraq and Afghanistan wars. The individuals who participate in helping these veterans come from Los Angeles to Reno. They spend five days working with the veterans in teaching them how to fly fish, tie flies and gold pan. These activities have proven to be very beneficial in the effort to help rehabilitate these veterans. HBP also brings together professional counselors to assist veterans in adjusting and learning what programs are available to help them. Attached are articles printed in local newspapers covering the event. PCWA has made provisions in the DLA to cooperate with Tevis Cup and Western States 100 Events. We believe that the HBP Wounded Warrior Event to help rehabilitate returning seriously wounded veterans deserve the same consideration and cooperation so as not to endanger these veterans who have given so much to defend our country.

Thank you for your consideration of these comments submitted on behalf of the Horseshoe Bar Game and Fish Preserve.

Respectfully by:

Tom Bartos, President
Horseshoe Bar Fish and Game Preserve

ATTACHMENT A



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07/09/2009

Placer County Water Agency
Resource Development Department
Mr. Mal Toy
Project Manager
P.O. Box 6570
144 Ferguson Road
Auburn, CA 95604

RE: Request for fish study

Dear Mr. Toy,

On May 21, 2009 I had an opportunity to fish with Bill Carnarrazo a noted guide and board member of the Upper American River Foundation. We happen to fishing below the Tunnel Chute in the wide expanse area above the side channel at Gray Eagle Bar that afternoon. Bill showed me the October caddis and how they moved around on the rocks. This large expanse covers approximately 10 acres and drains into the side channel. The sheer amounts of the October caddis was overwhelming and certainly presents a major source of food for the native rainbow trout.

Several weeks later I returned to the area with a member and tried to show him the October Caddis that had covered the rocks. To my surprise I could not find a single caddis. When I arrived home I went to the river flow website and saw that the peaking flows where the water peaks daily at over 1000 CFS and down to 200 CFS had began. The area above that had been covered with October Caddis had become dry which allowed the birds and other predators to pick clean the caddis. Also the small rainbow fry are also trapped and end up with the same faith. This obviously has an impact on the fishery.

With the determination that the Tunnel Chute is a fish barrier the fish study that was conducted above the Tunnel Chute provides information as to the fish above. The river below the Tunnel Chute is very different in that the river has many wide expanses such as the above that gets flooded and become dry daily. Also, as I explained to you in my correspondence over the last year, the dewatering of the Gray Eagle Bar side channel has a devastating effect on the fall spawning fish in that area. We are very concerned that during the maintenance period this year the fish in the side channel spawning will again be trapped and perish because it is dewatered.

Because there is a dramatic difference in the river topography above and below the fish barrier at the Tunnel Chute we request that a fish study be done to determine the effects of the peaking flows on the fishery. We would also request that PCWA give consideration to the dewatering of the Gray Eagle side channel when it does its maintenance this October. We understand that by the terms of the license you are permitted to reduce the flows to 75 CFS, however the destruction to the fishery and spawning fish could be mitigated by keeping the flows at the 300 CFS to 400 CFS range. Hopefully this should allow the fish and aquatic life in the area to survive.

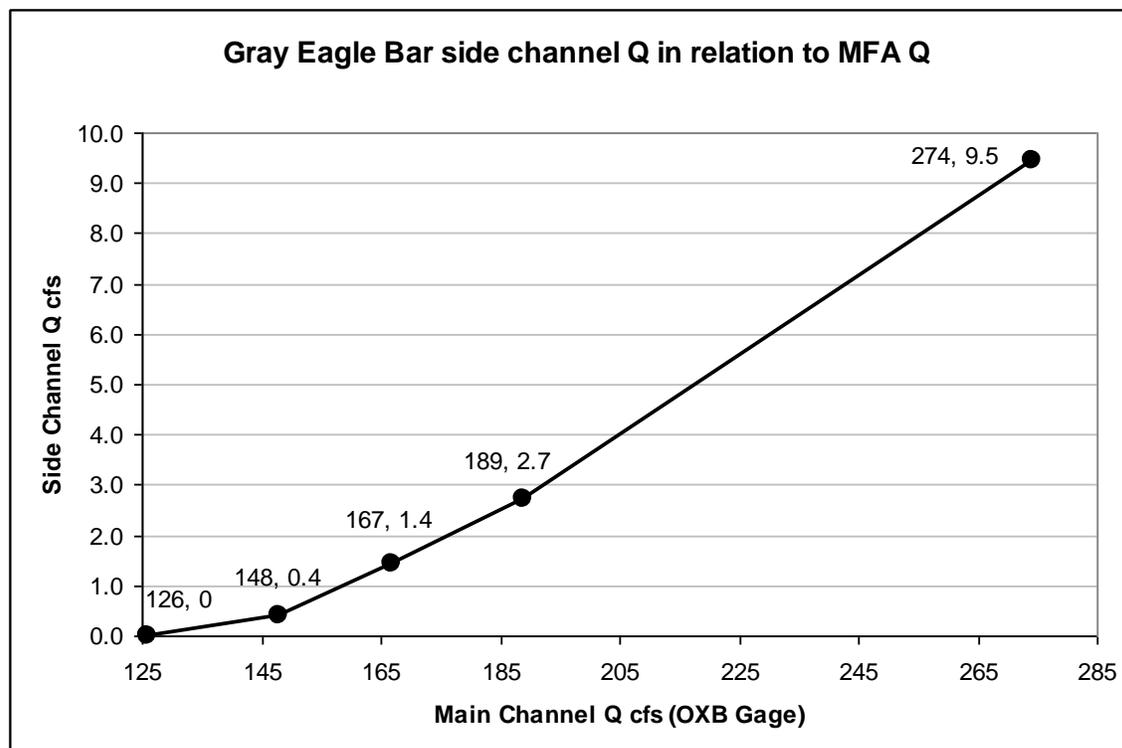
Sincerely,

Thomas G.M. Bartos
President

ATTACHMENT B

GRAY EAGLE BAR SIDE CHANNEL OBSERVATIONS

Flow into the Gray Eagle Bar side channel was observed at five different discharges in the Middle Fork American River. The figure below relates the flow (cfs) measured at the Oxbow Gage (using the CDEC rating table) to the measured¹ discharge (cfs) at the top of side channel.



Main Channel cfs vs Side Channel cfs		
Date	Main (cfs)	Side (cfs)
11/13/2008	274	9.5
11/13/2008	189	2.7
11/14/2008	167	1.4
11/17/2008	148	0.4
11/21/2008 ¹	126	0

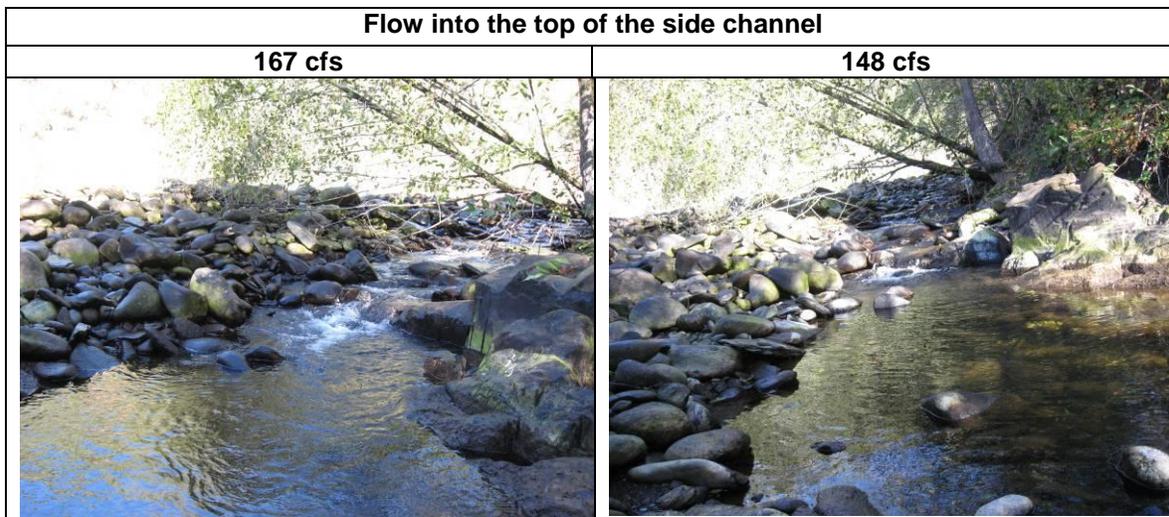
At a discharge of 148 cfs in the main channel some flow (0.4 cfs) remained in the side channel. However, two riffles, one in the midsection of the channel and one at the end of the channel, were dewatered. This resulted in disconnected pool habitat.

At a discharge of 126 cfs in the main channel no flow (or nearly no flow) existed in the side channel. The disconnected pools remained, however surface flow appeared to have ceased.

¹ At the lowest flow observed, discharge in the side channel was not measured. Field observation suggested flow into the side channel was essentially zero cfs.

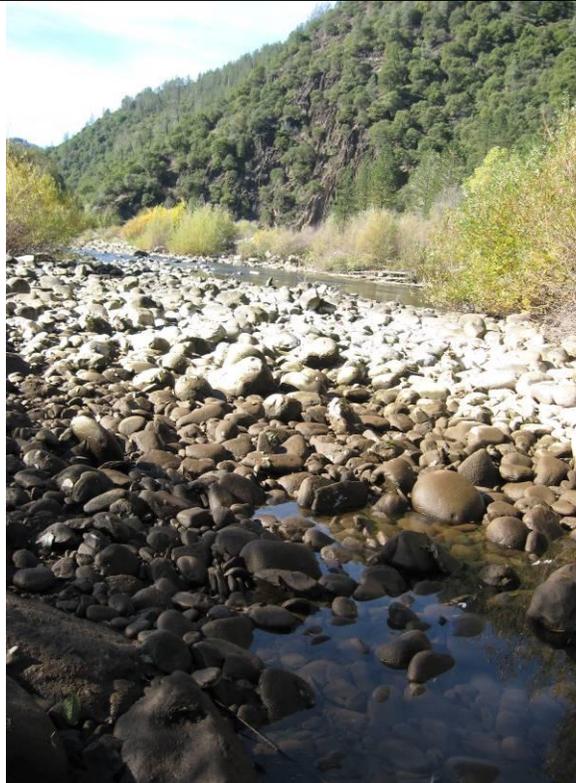
GRAY EAGLE BAR SIDE CHANNEL OBSERVATIONS (CONTINUED)

Below are photos of habitat conditions in the side channel at 167 cfs and 148 cfs (11/17/08 and 11/14/08, respectively) in the MFA main channel.



GRAY EAGLE BAR SIDE CHANNEL OBSERVATIONS (CONTINUED)

Long riffle habitat in the mid-section of the side channel	
167 cfs	148 cfs
	

Looking downstream at the last pool in the side channel disconnected from main channel	
167 cfs	148 cfs
<p>No photo</p>	

GRAY EAGLE BAR SIDE CHANNEL OBSERVATIONS (CONTINUED)

Hydraulic Control in Main Channel and Side Channel	
Main channel at 167 cfs	Side channel at 167 cfs
	

ATTACHMENT C



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03/03/2009

Placer County Water Agency
Resource Development Department
Mr. Mal Toy
Project Manager
P.O. Box 6570
144 Ferguson Road
Auburn, CA 95604

RE: Gray Eagle Channel Dewatering Event; Interim Aquatic Habitat Management Objectives of the Horseshoe Bar Fish and Game Preserve

Dear Mr. Toy,

The following narrative details the interim management objectives of the HBP:

Interim Gray Eagle Bar Flows

The HBP will seek to ensure that the Gray Eagle Bar channel receives sufficient water to function as critical aquatic and spawning habitat, which is vital to the continued health and natural regeneration of the wild trout.

- When the MFAR in stream flow (in the reach below Oxbow Dam) is released at a level below 200-175 cfs, it results in the dewatering of this important channel. This reduction of flows to below 200 CFS dewateres a channel located on our property killing the fish and destroying a majority of the invertebrate and other aquatic life in the channel.
- In the case of the most recent dewatering incident (late November, 2008), not only did the in-stream flow reduction totally negate the existing spawning redds, but also resulted in the stranding of spawning wild trout. These stranded trout represented a viable spawning population, and quickly perished as a result of a lack of cover and escape, and eventual predation.
- The HBP requests that PCWA take whatever actions are necessary to insure that the Gray Eagle Bar channel continues to receive sufficient in-stream flow to prevent these wild and native fish from being stranded and allowed to die.

- The HBP has observed Rainbow trout spawning in this channel during the fall and early-winter months. These fish could be descendents of Coastal Steelhead species which were trapped in the North/Middle Fork when Folsom Dam was built in the 50's. Any loss of this critical spawning habitat would certainly have a dramatic and long lasting negative effect on the fishery, and specifically, on these native Rainbow trout.

Interim HBP Instream Flow Regime Objectives

- The HBP will seek an interim flow prescription that provides for in stream flows that are not lower than a rate of 300 cfs to 400 cfs.

Interim HBP Instream Flow Ramp Rate Objectives

Up-Ramp Flow Rate Targets:

- Target flow up-ramp rates that **generally would not exceed 130 cfs per hour** in the Oxbow Dam peaking reach.

Down-Ramp Rate:

- Target flow down-ramp rates that **generally would not exceed 200 cfs per hour for flows exceeding 1,000 cfs**, except for flow conditions beyond PCWA's control.
- Target flow down-ramp rates that **generally would not exceed 100 cfs per hour for flows less than 1,000 cfs**, except for flow conditions beyond PCWA's control.

Potential Adverse Effects of Current High Impact MFAR Flow Fluctuations:

- Reductions in available habitat
- Reduced access to side channels, upstream habitat, tributaries, and floodplain habitat
- Alteration of benthic macroinvertebrate (BMI) assemblage
- Forced movement or migration of fish
- Stranding of fish or dewatering their redds
- Altered quality of and access to rearing and spawning habitat
- Decreased habitat stability and therefore increased predation

Desired Stable Flow Periods

- The HBP will seek a constant flow during the weekly Tuesday through Friday period that would not be less than a 300 cfs to 400 cfs range throughout the year.

Thomas G.M. Bartos
President

ATTACHMENT D



7430 Morningside Drive
Granite Bay, CA 95746
Ph# 916-205-6073
E-mail: hbp@surewest.net
Website:
<http://horseshoebarpreserve.com/>

11/25/2008

Placer County Water Agency
Resource Development Department
Mal Toy
Director
P.O. Box 6570
144 Ferguson Road
Auburn, CA 95604

RE: Gray Eagle Channel

Dear Mr. Toy,

As I stated in my e-mail today it is our and Walt Stevens, the owner of the property, belief that the channel at Gray Eagle Bar is a genuine lawful channel on the Middle Fork of the American River. I have communicated with Walt Stevens today and he has indicated that this channel has been in documented existence for over 75 years. Mr. Stevens has aerial photos of this channel dating back to 1948. He also has maps that predate these photos that show the side channel as a legitimate channel. Mr Steven also indicated that there was a bridge at one time at the Gray Eagle Bar to allow access vehicles to cross over the Middle Fork and Gray Eagle Bar area.

We believe this channel is vital to the continued health of the native trout that are in the Middle Fork of the American River. Each fall the native Brown and a strain of Rainbow trout spawn in this channel. We believe the Rainbow trout that spawn in this channel during the fall are dependences of the Steelhead that were trapped up stream when Folsom Dam was built in the 50's. To lose this spawning ground would certainly have a dramatic negative effect on the fishery and these native fish.

We therefore ask that PCWA take whatever actions are necessary to insure that this channel continues to receive enough water to prevent the fish from being trapped and allowed to die. It is also imperative that there be sufficient water to allow the fish to spawn as they have for many years.

Sincerely,

Thomas G.M. Bartos
President & Founder

ATTACHMENT E

From: Horseshoe Bar Fish & Game Preserve, Inc. [<mailto:hbp@surewest.net>]
Sent: Monday, October 18, 2010 8:30 AM
To: Goishi, Kevin; Einar Maisch
Cc: Mike Lee; Gray Allen; Andy Fecko
Subject: Stranding of fish and destruction of the macro & micro invertebrates during maintenance

Mr. Kevin Goishi,
Pacific Gas and Electric
&
Mr. Einar Maisch,
Placer County Water Agency

The Foothills Anglers Coalition is a newly-formed California non-profit corporation made up of numerous Northern California Fly Fishing Clubs, Anglers, Fishing Guides and retailers. This Coalition was formed to help promote the protection and enhancement of the fisheries and aquatic environment of the American River Watershed.

As you are aware, over the last three years we have, both orally and in writing, brought up the issue of stranding fish and destruction of the macro and micro invertebrates on the Middle Fork of the American River during the fall maintenance period, caused by PCWA's/PG&E's failure to release adequate water during this period. We have provided pictures and statements from community leaders as to the stranding and destruction of bug life that occurs during this period due to the low flow of 75 cfs. Our requests to prevent this from occurring have largely been ignored and discounted. We have made every effort to work with PG&E and PCWA to resolve this matter.

Initially the concerns we expressed were met with statements from PCWA that the side channel at Gray Eagle Bar was not a legitimate channel. We responded with photographs dating back to the 1940's, together with maps and statements from the property owner that the channel has existed for over 100 years despite numerous floods and the breaking of Hell Hole Reservoir. In the case of the 2009 fish stranding event, I notified PCWA of the low-water fish entrapment that was occurring on Gray Eagle Bar. PCWA responded that they would send down a crew to rescue any stranded fish. The crew arrived three days after the water had been lowered to a point where no water was flowing and even then numerous Sculpins were found in small puddles that had not dried up totally.

As a result of the FERC relicensing process, PCWA has produced a study showing how the lowering of flows below 200 CFS results in the dewatering of this channel and the large areas surrounding Gray Eagle Bar. Fish in this area, as well as other similar areas, become trapped and any bug life is destroyed as the area dries up and predators feast on anything left to die.

As you know, this year we have spoken with each of you regarding the above issue. In those discussions we proposed that the flows not be reduced below 200 CFS. In response, Mr. Goishi stated that PG&E would consider our request if PCWA would agree to our proposal. At a meeting with Einar Maisch, Gray Allen and Ben Ransom, PCWA indicated that they wanted PG&E to put something in writing stating that they would agree with our requests. On October 15th, Mr. Goishi requested that PCWA put something into writing in order to accommodate our requests. PG&E & PCWA place the blame on each other for the destruction that occurs. Both parties also refuse to put anything in

writing that they seem to be willing to agree to verbally. This type of finger pointing is both unprofessional and unproductive.

We believe that the continued stranding of fish and destruction of the macro & micro invertebrates is exceptionally destructive to the health of the Middle Fork American fishery and is unacceptable. We have made every effort possible to work in good faith with both PG&E and PCWA to resolve this matter amicably and avoid having to become adversaries. If PG&E and PCWA remains adamant in allowing the continued stranding of fish and destruction of the vital bug life in the Middle Fork of the American River, then we will have no choice but to take every action we deem necessary to prevent this from occurring including making the general public, the media, and governmental agencies aware of the unnecessary, unreasonable, and preventable stranding and destruction of fish and their essential food source.

Sincerely,

**Thomas G.M. Bartos
President
HBP**

Document Content(s)

HBP Comments_DLA_MFA_Project 2079.PDF.....1-25

**Schweitzer, Hilde - Member of the Public
Comment Letter Dated December 15, 2010;
Filed with FERC December 21, 2010 (20101221-5013)**

Hon. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Dec 15, 2010

RE: COMMENTS ON PLACER COUNTY WATER AGENCY'S
DRAFT LICENSE APPLICATION FOR THE MIDDLE FORK AMERICAN
HYDROELECTRIC PROJECT #2079

Dear Secretary Bose:

My comments are directed primarily at whitewater boating opportunities in the bypass reaches. Historically under impaired conditions the opportunities for boating in the bypass reaches have been almost non-existent due to project diversions and lack of flow information. Hopefully, this FERC process will give whitewater boaters in the bypass reaches a once in a lifetime opportunity to restore balance to the project in terms of opportunity to boat these bypass reaches with predictability through scheduled releases and with accurate information through new gages.

Since some of the sections of the DLA relate to the same issue, some of the comments submitted will be redundant.

I respectfully submit the following comments and observations regarding the Draft License Application Project #2079:

Volume 3-Exhibit E Supporting Document A

Aquatic Resources-Management and Monitoring Plans

FLOW AND RESERVOIR MONITORING PLAN

6.2 Annual Flow and Reservoir Data Reporting

The gage data should to be real time in 15-minute increments (USGS standard) and be accessible online for historical reference with no historical time limits. The data should be on demand and not by request and not be limited to two-week blocks of information. Flows can be extremely erratic during spill making 15-minute flow data necessary to

determine whether it is safe for boating. Historical data are important to predict potential periods when boating is likely to occur.

Table 1 Implementation Table for Instream Flow and Minimum Pool Compliance

The implementation of minimum instream flows should begin sooner than 1-4 years after license issue as proposed in the DLA. Gages are a relatively inexpensive and quick project expense and should be given priority in terms of early completion. The data help inform much of the other project's infrastructure and should be installed in year 1 or 2. Where current gages are in place the timeline for flows should be no later than 1 year after license.

For facilities that are physically able to release flows and that have current gages, all compliance flows should begin in year 1 after license.

Table 2

The proposed gages should be year 1 projects.

Pulse flows proposed should begin no later than year 3 after license, and should include the pulse flows out of Hell Hole since PCWA can physically push up to 400 cfs out of French Meadows into Lower Hell Hole to create a spill in Wet and AN years when the reservoir is near capacity and close to spill.

Attachment A Feasibility Study Hell Hole Dam Low Level Outlet Release Capability

The licensee has stated in a Stakeholder meeting that at approximately 425 there is a cavitation problem associated with opening the low-level outlet valve indicating that the valve has already been tested at this level.

The lengthy protracted process detailed in the Feasibility Study does not address the real problem; the valve is faulty by design and needs to be brought up to current safety code. Please provide engineering studies and cost estimates for the repair of the outlet valve. If the outlet valve were able to operate at design, the proposed pulse flows would be able to be provided. Current dam drawdown standards would also be able to be met. Given the additional storage capacity of 7600 AF with the Betterment project, the valve should be brought up to current dam safety standards or an alternate method of meeting standards should be provided in a more timely manner than proposed in the Feasibility Study.

I am also concerned with the parameters set up in the Feasibility Study. Is it scientifically worthwhile to use 200 cfs for a pulse flow release? Initiation of motion begins in this reach at 2198 cfs at RM 3.5, 678 cfs at RM 20.9 and 500 cfs at RM 25.7 according to the Draft Instream Flow Proposal Resulting Effects Report of March 15th, 2010. Please explain the rationale for the use of flows less than required to initiate motion to create a "pulse" in the DLA.

The statement in the proposal that total volumes of water used for the pulse flow will remain constant from the baseline volume used at 200 cfs if the flows are increased above 200 cfs is not supported. If the pulse flows go up to 600 cfs or more (and 500 cfs is a preliminary minimum for boating) the set water volumes result in a potential for significantly less boating opportunities. The total AF volume set for Wet water years is 15,808 AF and for AN water years is 7081 AF. The down ramp rates should remain the same for both 200 and 600 cfs to protect habitat and species. This bypass run takes 2 days to complete. Using the figure of 600 cfs, one boating day would consume approximately 1200 AF of water and two boating days at this flow would use approximately 2400 of the 7081 proposed AF volume in AN water years. The remaining water does not allow for an acceptable down ramp of approximately 8-9%. This also results in significantly less boating days from the base line impaired conditions. The May start dates would likely not allow enough time for a ramp down rate that would end before May 15th at the higher pulse rates. There is also no pulse flow proposed in BN water years and historically under impaired conditions this has occurred. Please explain the rationale for using the same volume of water in different water year types and different flow volumes and explain how the proposed volume is sufficient to accomplish a beneficial pulse and down ramp schedule in BN, AN, and Wet water year types.

To illustrate the availability of excess water for interests other than power generation and consumption, in 2009, which was year 3 of 3 Dry water years in a row, a water transfer of 20,000 AF was made to San Diego County Water Authority from the project as a result of projected excess stored water. These transfers were requested to occur in the May-October timeframe. If PCWA has this amount of excess water to sell after three Dry water years, it should have the ability to provide more water for beneficial use such as pulse flows and recreational boating flows in the project bypass reaches during the same time frame in BN, AN, and Wet water years. Please provide the rationale explaining why pulse and whitewater boating flows cannot be provided on the bypass reaches in the different water year types. Also please explain why, with the Betterment increase of an additional 7600 AF of water storage, PCWA does not have sufficient water to accomplish pulse flows of greater volume and duration in the bypass reaches than proposed in the DLA.

I believe it is premature to state a minimum boating flow on the Rubicon bypass reach at this time since the test flow study has not been completed. If boating opportunities are to be tied to these pulse flows and spill events, the flows must be of sufficient volume and timing to allow boating to occur. The DLA as written does not necessarily guarantee adequate boating flows for this reach.

This also represents a deviation from current impaired baseline conditions in certain water years. Please provide rationale for using the stated flow numbers as an acceptable boating flow.

Aquatic Resources-Measures INSTREAM FLOW AND RESERVOIR MINIMUM POOL MEASURE

1.2.2 Pulse Flows Large River Bypass Reaches

Rubicon River below Hell Hole Dam

On the large river bypass reach of the Rubicon below Hell Hole dam the proposed pulse flow range of between 200 and 600 is unacceptable for several reasons, many of which have been stated above. In Wet, AN, and BN years this reach has historically under impaired conditions spilled with greater volume and greater duration than the proposal. (See Vol 3 Exhibit E Appendix B1) It is also proposed that the pulse events begin in year 6 after license issue. This potentially changes existing baseline historical events for spill and as such affects the riparian environment and historical flow conditions negatively. It also potentially reduces the number of boatable days during this time.

In Wet and AN water years pulse flows up to 600 could theoretically be provided by releasing 200 from the outlet valve and pushing 400 cfs from French Meadows when the level is near spill to create an artificial spill until the outlet valve is repaired or other means of providing pulse flows are proposed.

Given the priority of "filling storage facilities without spilling" found in Vol. 3-Exhibit E Appendix C3 and given the fact that there will be an increased storage capacity of 7600 AF included in the Hell Hole Betterment proposal, the likelihood of spill in Wet, AN, and BN years is both decreased and delayed from existing impaired conditions, potentially impacting both species and riparian environment and potentially negatively impacting recreational boating on the reach by decreasing the number of boatable days.

Initiation of motion begins in this reach at approximately 2198 cfs at the upper end of the reach and goes down to 500 cfs lower in the reach so flows lower than this would likely not result in any type of movement. Please provide rationale for using flow volumes less than what would initiate motion as a pulse flow base.

Since recreational boating is only being provided as tied to these pulse flows or down ramp of spill events and the optimum range for boating is preliminarily thought to be in the 700-1500 range, the range of 200-600 will likely not accommodate recreational boating. If recreational boating is to be solely tied to pulse flows and spill events then these flows have to be of sufficient volume and duration to support this use. The proposed pulse flows and duration most likely do not provide either pulse benefits or acceptable boating levels on this reach. Please provide the rationale for using the range of 200-600 for boating opportunities and explain whether the proposed flow volumes and duration will accomplish a pulse for geomorphologic benefit.

The Howell Bunger valve on Lower Hell Hole Reservoir has a full pool release capacity of 950 cfs but PCWA has stated in a Stakeholder meeting that cavitation in the system begins at approximately 425 cfs. PCWA has stated that they are potentially comfortable releasing approximately 185 cfs. A valve test was done at 180 cfs in 1966 without the current powerhouse in place. With the powerhouse in place this flow would flood the powerhouse. The minimum flow pipe can pass approximately 70 cfs with the potential to release up to 200 after modification to protect the powerhouse. We have not been shown any engineering proposals or costs that would allow the dam to release it's designed capacity and I would request that these be provided before release levels be set for pulse or boating flows on this reach. Also, please provide evidence from DSOD that the current state of the valve system given the Betterment's increased storage capacity will be sufficient to allow current standards of reservoir drawdown. Does the Betterment project require the dam be brought up to current standards in terms of drawdown and dam safety or can PCWA provide adequate drawdown by an alternate means?

Moreover, the boating test flow study has not yet occurred for this reach to determine a base minimum acceptable boating flow so until that minimum acceptable flow is established the proposed flow numbers should not be used to determine the volume of water to be released as a pulse flow that may be sufficient for boating to occur on this bypass reach.

Middle Fork American River below French Meadows Dam

The single boating flow test study for this run released 252 cfs but the study was aborted due to weather and wood and time constraints. The range of acceptable flows was determined to be a minimum of 200 to a 350 maximum.

In a subsequent attempt (not sponsored by PCWA) putting in lower (RM 42.5) to bypass the wood zone caused by the Starr fire the team had a flow of approximately 215 solely from accretion and this was considered an acceptable level. The previous acceptable flow estimates were deemed too high and revised to be between 175 and 200 cfs.

Using the number of 175-200 cfs as an acceptable boating flow, the proposed pulse flows out of French Meadow would result in approximately 4 boating opportunity days in wet water years, 4 days in AN water years, and none in BN water year types given the proposed pulse flows and ramp down. These numbers represent significantly less boating opportunities than under present impaired conditions. Under impaired conditions, boating days have occurred in Dry, Below Normal, Above Normal, and Wet water years. Please provide the rationale for limiting the pulse flows to two water year types potentially changing baseline impaired conditions. Also, please provide evidence that a flow of 400 cfs will be sufficient to create any pulse or initiation of motion for geomorphologic benefit in this reach.

Middle Fork American below Middle Fork Interbay Dam

The single boating flow test study for this run released 425 cfs and a range of between 400-600 cfs at the takeout was determined to be an acceptable boatable range. Put in acceptable flow was set at between 400-500 cfs. The proposed DLA decreases the flow proposed in the Draft Instream Flow Proposal of March 8, 2010 by 100 cfs. In the Draft Instream Flow Report 550 cfs was stated at that time as a requirement to initiate motion (or create a pulse). The DLA proposal also decreases the total number of days for the pulse from 22 days to 18 days for Wet water year types and decreases the pulse in AN water year types from 16 days to 12 days from the Draft Instream Flow Report of March 8, 2010. This results in a large decrease in volume of water available for boating from the original Draft proposal of March 8th. Please explain the rationale for the reduction in both pulse flow volume and boating days in the DLA from the Draft Instream Flow Report of March 8th, 2010.

The proposed DLA allows for approximately 8 boating opportunity days (range of 400-500 cfs at put in) in Wet water years, 2 opportunities in AN water year types, and none in BN water year types. These numbers represent significantly less boating opportunity than under present impaired conditions. Please explain the rationale for decreasing the

number of boating days. Also, please explain whether a maximum release of 450 cfs is sufficient for initiation of motion for this reach.

Small Stream Bypass Reaches

No boating test studies were done for any of the small bypass reaches but given the proposed in stream gages and the removal of the diversion gates at set times, it appears that opportunities for recreational boating on these stretches can be addressed. This statement also presupposes that the gage information will be on demand 15-minute data instead of hourly only, with historical data available and accessible to the general public in some easily accessible form, and that the gages will be online in year 1 after license.

1.2.3 Down Ramp of Spill Flow

Rubicon River below Hell Hole Dam

Since a minimum acceptable boating flow has not been determined I do not think that 600 cfs is necessarily an acceptable number to use as the number to begin a down ramp. Until the contingency test flow study is completed this number is speculative and should not be used in the FLA. The proposed 6-year timeframe for implementation of control of down ramp of spill events is too lengthy. Please explain the rationale for this timeframe and for the use of the 600 cfs figure.

The run is typically done in two days and the proposed down ramp would only allow for 4 days of boating (or more accurately 3 days to start) on the reach on a spill event (presupposing that 600 is an adequate amount of water to boat the reach).

VOLUME 3 EXHIBIT E SUPPORTING DOCUMENT B

Final Technical Study Reports

Rec 4

Contingency Whitewater Boating Study

3.3

The statement "All study elements from Rec 4-Contingency Whitewater Boating Study have been completed" is not accurate. The flow study on the Rubicon River below Ellicott Bridge on the Rubicon was never completed.

3.4

There is a proposed test flow on a spill event for 2011 on the Rubicon if spill occurs.

6.1

The test flow target range of the Contingency Study was set between 500-800 at Ellicott Bridge and the test was supposed to determine a minimum acceptable flow.

The last paragraph accepts unverified and unsubstantiated guesses at flows from literature and follow-up interviews to determine that 400 is an acceptable minimum when 400 was clearly stated to be an unacceptable level in the reports. Until a real test is done I would request that guesses in terms of minimum flows not be a part of the Final License Application.

Final Rec 4 Stream-Based Recreational Opportunities Technical Study Report June 2010

3.3 Outstanding Study Elements

The bullet paragraph below is not an accurate or complete statement.

“Middle Fork American River – French Meadows Dam to Middle Fork Interbay. PCWA agreed to conduct a single flow study during the spring of 2010, with the target flow range to be determined by the study team. This study was conducted on May 22, 2010. The study flow at the put-in was 252 cfs. The study team was unable to complete the run due to the extensive amount of logs and downed trees in the river.”

It should be noted that the temperature during the flow study was in the 20's and it was snowing which significantly impeded progress. A subsequent unsponsored attempt was made a week later and successfully completed the run (putting in near the river mile where the sponsored group hiked out). A relatively accurate flow level was determined to be 175-200 for the run.

5.4.3

Whitewater Boating Opportunities in the Bypass Reaches

Of the bypass reaches discussed above, only two have verified test flow data available. To determine acceptable flows on conjecture and guessing for the remaining section is unacceptable. Until real verified data is produced it is premature to use the quoted flow ranges as acceptable minimum and maximum flows.

The ranges for the Rubicon include two levels and are based on speculative unverified data, essentially educated guesses. Dates for

actual runs on the Rubicon have been provided to PCWA and these runs should be matched with actual flow data and accretions and used as preliminary minimum and maximum acceptable flows until a flow study can be completed. If the Contingency Study cannot be completed before the FLA is filed, the flow numbers as well as best approximations of accretions from the actual verified dates that the section has been run should be used to determine minimum acceptable flows.

6.4.1

The last paragraph in this section is the primary reason the bypass reaches are not boated. To put the statement last is biased and does not accurately represent why the bypass reaches are not boated regularly. Please move the following paragraph to the first bullet position:

“There are no real-time flow gages on any of the bypass reaches. Accordingly, boaters have to determine whether boatable flows are present by sight, word of mouth, and/or estimate flows based on: (1) flows measured downstream at the Middle Fork American River Gage below Oxbow Powerhouse (USGS Gage No. 11433300); and (2) reservoir storage and/or spill information. The absence of real-time flow information may limit use of the bypass reaches because boaters do not know when boating flows are present.”

Aside from the significant fact that the bypass reaches have been dewatered by diversion, the lack of flow information is the second determining factor that makes the bypass reaches inaccessible for recreational boating. The other reasons given for lack of boating on the bypass reaches are unsubstantiated and have no validity.

The days of boating opportunities cited are based on unsubstantiated acceptable minimum and maximum flows and as such should not be considered as an accurate count. The number of listed boating opportunities under impaired conditions do not take into account the fact that flows can sometimes double and triple between Ellicott Bridge and the take-out near Ralston which could both make the run either too low or too high using the flow range accepted in the DLA when boating opportunities were counted.

Also please note that in follow-up consultation a minimum boatable flow was determined to be 500 cfs but PCWA uses the range from 400-1500 as an acceptable range for boating to determine boating opportunities. Until a test study is done to determine the minimum flow these numbers are speculative and should not be used.

In conclusion, I would like to recognize PCWA's genuine attempt to listen to all stakeholders and to provide access to information and data to inform the public throughout the process. I believe the DLA is a good

start to further discussions regarding balancing the Licensee's consumptive demand, power generation, and the environmental health of the ecosystem with the interests of all Stakeholders.

This project is unique from most relicenses in that the Licensee, in addition to its consumptive water rights and sales, is inheriting the power generational sales of the project with the new license.

I feel that while the DLA represents a good start to reaching a balance, there are many variables and open issues that still need to be addressed and I look forward to continuing discussions on how a more equitable balance can be reached for all stakeholders, particularly recreational boaters in the bypass reaches of the project.

Thank you for your time and consideration,
Hilde Schweitzer,
Private Boater

Document Content(s)

FINAL DLA COMMENTS.DOC.....1-10

**State Water Resources Control Board
Comment Letter Dated December 23, 2010;
Filed with FERC December 23, 2010 (20101223-5101)**



State Water Resources Control Board



Linda S. Adams
Secretary for
Environmental Protection

Division of Water Rights
1001 I Street, 14th Floor ♦ Sacramento, California 95814 ♦ 916.341.5300
P.O. Box 2000 ♦ Sacramento, California 95812-2000 ♦ Fax 916.341.5400
♦ www.waterboards.ca.gov/waterrights ♦

Arnold Schwarzenegger
Governor

DEC 23 2010

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

COMMENTS ON THE DRAFT APPLICATION FOR NEW LICENSE, MIDDLE FORK AMERICAN RIVER PROJECT, FERC #2079

Dear Ms. Bose:

On September 27, 2010, Placer County Water Agency (PCWA) filed a Draft Application for New License (DLA) for the Middle Fork American River Project (FERC #2079) with the Federal Energy Regulatory Commission (Commission). PCWA has filed a DLA instead of a Preliminary License Proposal as allowed in 18 Code of Federal Regulation (CFR) 5.16(c). The current Commission license for the Middle Fork American River Project (Project) expires on March 1, 2013. State Water Resources Control Board (State Water Board) staff has reviewed the DLA to determine conformance with the requirements of 18 CFR section 4.50, and with the requirements for a complete application for Clean Water Act section 401 certification.

Water Quality Certification

Pursuant to the federal Clean Water Act (CWA), section 401 (33 U.S.C. §1341), any applicant for a federal license or permit to conduct an activity that may result in any discharge to navigable waters must obtain certification from the State in which the discharge originates or will originate, that the discharge will comply with the applicable provisions of the CWA. The State Water Board is the certifying agency in California for water quality certification. (Wat. Code, § 13160.) In issuing a water quality certification, the State Water Board certifies that the project will comply with specified provisions of the CWA, including water quality standards that are developed pursuant to state law and in satisfaction of section 303 of the CWA. (33 U.S.C. § 1313.) The State Water Board may condition certification to ensure compliance with CWA requirements and any other appropriate requirement of state law. (33 U.S.C. § 1341, subd. (d).) Conditions of certification become conditions of any federal license or permit for the project.

Under section 303 of the CWA and under the Porter-Cologne Water Quality Control Act, the Central Valley Regional Water Quality Control Board has adopted, and the State Water Board and U.S. Environmental Protection Agency (USEPA) have approved, the *Water Quality Control Plan for the Sacramento and San Joaquin Rivers* (Basin Plan) (Central Valley Regional Water Quality Control Board, 2009). The Basin Plan designates the beneficial uses of waters to be protected along with the water quality objectives necessary to protect those uses. California water quality standards consist of both beneficial uses and the water quality objectives based on those uses. Beneficial uses designated for the Middle Fork American River, source to Folsom Lake, include municipal and domestic supply, irrigation, stock watering, power generation, contact and non-contact recreation, canoeing and rafting, cold freshwater habitat, cold spawning, and wildlife habitat. Warm freshwater habitat is listed as a potential beneficial use.

California Environmental Protection Agency

The water quality objectives set or describe the water quality limits necessary to achieve and protect the beneficial uses. PCWA must demonstrate whether the Project complies with all applicable water quality objectives in the Basin Plan and whether the Project impairs the established beneficial uses of the Middle Fork American River and tributaries. PCWA must evaluate its Project for compliance with all water quality objectives in the Basin Plan, as well as other applicable objectives and criteria such as those included in the California Toxics Rule (CTR), the Department of Health Services' Maximum Contaminant Levels (MCLs), etc. If the Project does not comply with one or more of the water quality objectives or criteria, then PCWA must describe the actions that it will take to bring the Project into compliance with the applicable water quality limits in order to protect and maintain the beneficial uses.

California Environmental Quality Act

The State Water Board must comply with the California Environmental Quality Act (CEQA) before issuing water quality certification. In this case PCWA will be the lead agency for preparation of environmental documents to comply with CEQA. The State Water Board will act as a responsible agency.

General Comments

Studies

The bioenergetics, entrainment contingency, reservoir fish habitat study reports were not included in the DLA. State Water Board staff will comment on these plans as they become available.

Monitoring Plans

The geomorphic, riparian and visual monitoring plans were not included in the DLA. State Water Board staff will comment on these plans when they are available. State Water Board staff appreciates the effort of PCWA to include the monitoring plans in the DLA. Some of the plans may be included directly or by reference into a water quality certification issued for the Project. It is therefore important to include specific time frames and reporting requirements into the plans. Any plans that involve adaptive management or future consultation must specify the agencies with authority to approve changes.

Protection, Mitigation and Enhancement Measures

For clarity and ease of review the recommended Protection, Mitigation and Enhancement (PM&E) measures should be compiled into a single document. The PM&E measures in the DLA are included in the proposed monitoring plans. It is difficult to evaluate all the PM&E measures in the current format. Compilation of the PM&E measures into a single document will make it easier to spot conflicting measures or overlapping measures. In addition, these measures will need to be converted to enforceable conditions that will be included in the water quality certification, 4(e) conditions, and the Commission license. Providing a single document with PM&E measures will help ensure consistency between agencies.

Specific Comments

Exhibit E, Section 3.0

Page 3-1: The No-Action alternative is defined as the continued operation and maintenance of the Project under the terms and conditions of the current Commission license. Under both the National Environmental Policy Act and CEQA the baseline condition must be described. The baseline condition is typically the condition at the time of preparation of the environmental documents. For an existing hydroelectric project, this condition is the operation and maintenance of the project under the current Commission license conditions. This condition is the same as the No-Action alternative in the DLA. While it is difficult to define the No-Action alternative for an existing and on-going project it is reasonable to assume the Commission would not allow a project to operate in perpetuity without a new license. At some point the Commission would need to take action to either issue a new license, open the project to other applicants, or require the project to be decommissioned. The No-Action alternative should be defined in more realistic terms to include likely actions by the Commission.

Exhibit E, Section 8.4

Page 8.4-1: This section includes descriptions of the water quality impacts of the continued operation of the Project, from facility modification, and construction of new facilities. Section 8.4.4 states that potential water quality impacts from construction will be avoided by implementing best management practices (BMP's) and avoidance and protection measures (APM's). In addition, Appendix A of this section lists the permits necessary for construction at each facility. Before the State Water Board can issue water quality certification, construction plans and information about construction methods must be available to determine conditions necessary to protect water quality. State Water Board staff encourages PCWA to further develop this information in the final license application and CEQA environmental review. Methods to avoid, reduce or mitigate any impacts will be necessary for the CEQA process. State Water Board staff prefers to develop a water quality certification for the entire action, rather than separate approvals for the relicensing of the Project and subsequent construction projects.

Page 8.4-3: The DLA states the sources of mercury in the Middle Fork American River Watershed are unknown. State Water Board staff agrees with this conclusion. However, the Project may contribute to the methylation of mercury and the high levels of mercury in fish tissue. At the current time the science to evaluate the sources of mercury and cause of methylation are inadequate or very costly. Consistent with other hydroelectric projects, PCWA may have future obligations to periodically monitor fish tissue, post warning notices, or otherwise assist in protecting the public from consumption of contaminated fish or conduct studies on methylation.

Exhibit E, Section 8.9

The boatable range in the Rubicon River was developed through surveys, not from a controlled boating study (see Exhibit E, Book 9, REC 4). There is uncertainty surrounding the accuracy of the flow ranges. A controlled flow study is needed to determine the minimum acceptable boatable flow in the Rubicon River. State Water Board staff understands that PCWA is committed to completing the flow study. Limitations on the use of the low level outlet valve at Hell Hole Dam (see Instream Flow and Minimum Pool Measure, Attachment A) make it difficult

to release adequate flows for the study. These same valve limitations may require careful and creative solutions to provide whitewater boating flows in the future. This information from the study is essential to inform the development of water quality certification conditions.

Exhibit E, Section 9.0

Page 9-6: In June 2009 the National Marine Fisheries Service issued a Biological Opinion (BO) for the operation of the State Water Project and Central Valley Project. The BO includes reasonable and prudent alternatives from which the Bureau of Reclamation and Department of Water Resources may select to sufficiently reduce stressors to anadromous fish. NMFS (2009) states that:

The most influential baseline stressor to steelhead within the American River Division is the presence of Nimbus and Folsom dams, which block steelhead from all of their historic spawning and rearing habitat. This Opinion concludes that both increased water demands and effects of climate change will lead to further deterioration of suitable habitat conditions, including increased temperatures and decreased flows. Therefore, a passage program to expand the range of the American River steelhead population above Folsom Dam is necessary. If feasible, American River steelhead should be provided access to their full historic range.

RPA Action II.5 is for fish passage at Nimbus and Folsom Dams with the objective to provide access for steelhead to historic cold water habitat above Nimbus and Folsom dams. It is reasonably foreseeable that steelhead will be reintroduced into the American River above Folsom Dam. Reintroduction of anadromous fish listed under the Endangered Species Act could require changes in operation of the Project. This should be evaluated in the final license application and environmental documents.

Page 9-10: This section evaluates the impact of the proposed project on climate change and quantifies the generation greenhouse gases. While not specifically required under the Federal Power Act, this analysis will be necessary for the CEQA environmental review. Significant details on the methodology used to calculate the tons of carbon resulting from the reduction in power in the proposed project are not included.

Exhibit E, SDA, Flow and Reservoir Monitoring Plan

Section 4: PCWA proposes that instream flow releases may be temporarily modified for short periods in response to directives from the Independent System Operator (ISO). Please explain the legal authority the ISO maintains to control operations of the Project.

PCWA also proposes to release minimum flows within five days of the dates specified in the license issued by the Commission. There are certain circumstances where access limitations may warrant such an allowance. PCWA should explain why flows cannot be released on the date specified. Additionally, PCWA wants to average flow compliance over a 24 hour period, with instantaneous flows no less than 90 percent of the required minimum. In certain conditions it may be appropriate to allow an averaging period for flow compliance. However, this makes compliance and enforceability more difficult. Also, it is not necessary or appropriate to apply a 90 percent allowance to all release points. A 10 percent reduction in flow at a 10 cubic foot per second flow requirement is very different from a 10 percent reduction of a 500 cubic foot per second flow requirement. Typically, the higher flows require less deviation from the required

minimum. State Water Board staff recommends that flow compliance be instantaneous except in certain circumstances where facilities cannot be remotely operated or access is difficult.

Exhibit E, SDA, Sediment Management Plan

The Sediment Management Plan (SMP) addresses long-term sediment management and interim sediment management for facilities that will be modified. Both long term and interim sediment management involves the removal of sediment from reservoirs using equipment. This activity is consistent with past operations and PCWA provides background on frequency of past sediment removal projects. The sediment management plan provides information on how the sediment will be removed from the reservoirs but does not include a water quality protection plan. Before the State Water Board can include these activities in any water quality certification that may be issued for the Project, a water quality protection plan for the long term and interim sediment removal projects should be provided. This water quality protection plan will also be required for construction of the modifications at the three small diversions. The SMP includes proposed water turbidity monitoring during sediment removal. This information, in addition to BMP's and APM's, could be combined into a water quality protection plan.

PCWA is proposing to modify the small diversion dams at North and South Long Canyon and Duncan Creeks. The new design will allow sediments to pass over the dam and will allow better flow control. It is likely the design will significantly reduce entrainment of fish into the tunnels (Exhibit E, Book 3, Page 8.5-24). Some level of post construction monitoring should be conducted to monitor the effectiveness of the ability of the facilities to pass sediment. Monitoring of the effectiveness of the new facilities to reduce entrainment should also be conducted.

Exhibit E, Instream Flow and Reservoir Minimum Pool Measure

Flow recommendations in the DLA for the small and large river bypass reaches reflect years of discussion and interim agreement between parties to the relicensing process. Discussions between parties about flows in the peaking reach are on-going and the DLA represents PCWA's best attempt to meet the interests of the parties. However, future discussions may alter the flow recommendations contained in the DLA. PCWA provides a table of minimum pool requirements for French Meadows and Hell Hole Reservoirs. Reservoir pool elevations at Labor Day are necessary to protect the recreational uses of the reservoirs. During certain years PCWA sells water to San Diego County or other jurisdictions. The water transfers require PCWA to leave vacant in the reservoirs a combined storage capacity equal to the amount of the transfer. The DLA does not disclose if there is an impact from this reduction of reservoir elevation. Additional information should be provided on any impacts that result from the water transfers.

Attachment A to this section is a feasibility study on Hell Hole Dam low level outlet release capability. Safety concerns about the use of the low level outlet at Hell Hole Dam restrict the amount of water that can be released. This limitation reduces flows that can be used for geomorphic processes and whitewater boating. State Water Board staff supports the approach proposed by PCWA to establish the maximum amount of water that can be safely released through the valve. Once the study is completed (post license issuance) the maximum flow that can be released will be included in the license. Before the study can be conducted

modifications to the existing outlet are required to prevent damage to the powerhouse. PCWA has committed to completing these modifications prior to license issuance.

Conclusion

Thank you for the opportunity to comment on the DLA. PCWA, Agencies and NGO's have made significant progress on developing mutually agreeable PM&E measures. Additional time is needed to finalize discussions concerning PM&E measures in the peaking reach. There are a number of beneficial uses in the peaking reach, some of which have inherent conflicts that are best resolved through collaboration. State Water Board staff is committed to working toward the collaborative development of PM&E measures. If you have any questions, or would like to discuss these comments, please contact me by phone at (916) 341-5341 or by e-mail at rkanz@waterboards.ca.gov.

Sincerely,



Russ J. Kanz
Staff Environmental Scientist

References:

Central Valley Regional Water Quality Control Board. 2009. The Water Quality Control Plan for the California Regional Water Quality Control Board, Central Valley Region. Fourth Edition, Revised September 2009. Central Valley Regional Water Quality Control Board, Central Valley Region.

NMFS. 2009. Biological Opinion and Conference Opinion on the Long-Term Operation of the Central Valley Project and State Water Project. National Marine Fisheries Service Southwest Region. June 4, 2009

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Document Content(s)

MFAR SWRCB DLA 12-10.PDF.....1-6

**United States Department of Agriculture - Forest Service, et.al.
(resource agencies)
Comment Letter Dated December 20, 2010;
Filed with FERC December 22, 2010 (20101222-5008)**



Ms. Kimberly Bose
 Secretary, Federal Energy Regulatory Commission
 888 First Street, NE
 Washington, DC 20426

December 20, 2010

**SUBJECT: Responses to Draft License Application
 Middle Fork American River Project, FERC No. 2079**

Dear Ms. Bose:

We are writing, pursuant to 18 CFR 5.18(e), in response to Placer County Water Agency’s Draft License Application (DLA) for the Middle Fork American River Project, FERC No. 2079. This response is being submitted on behalf the USDA Forest Service, USDI Bureau of Land Management, USDI National Park Service, USDR Bureau of Reclamation, California State Department of Fish and Game, and California State Parks (resource agencies).

The resource agencies would like to commend Placer County Water Agency on the work that went into their Draft License Application and the collaborative atmosphere that they continue to foster in their relicensing. Although the attached comments are rather lengthy, the resource agencies have tried to provide as much specificity as possible in an effort to assist in reaching a comprehensive collaborative agreement with Placer County Water Agency and other relicensing participants. In some cases, we have provided specific proposed plans that we hope will aid in our discussions.

If you have questions, please contact Beth Paulson at 925-952-4715.



A handwritten signature in black ink, appearing to read 'Ramiro Villalvazo', written in a cursive style.

RAMIRO VILLALVAZO
Forest Supervisor
Eldorado National Forest



TOM QUINN
Forest Supervisor
Tahoe National Forest
USDA Forest Service



WILLIAM HAIGH
Mother Lode Field Manager
USDI Bureau of Land Management

A handwritten signature in black ink that reads "Barbara Rice". The signature is written in a cursive, flowing style.

BARBARA RICE
Program Leader
Hydropower Recreation Assistance, Pacific West Region
USDI National Park Service



Michael R. Finnegan
Area Manager
Central California Area Office
USDI Bureau of Reclamation

A handwritten signature in black ink, appearing to read "Kent Smith". The signature is fluid and cursive, with a large initial "K" and "S".

KENT SMITH
Regional Manager
North Central Region
California Department of Fish and Game



SCOTT NAKAJI
District Superintendent
Gold Fields District
California State Parks

Middle Fork American River Hydroelectric Project Draft License Application Resource Agency Comments

17 December 2010

Introduction

The resource agencies have provided some very specific proposals and ideas in the following comments for discussion with the licensee and other Relicensing Participants in hopes of reaching a comprehensive collaborative agreement. However, the resource agencies note that the following proposals will need to be reviewed for compliance with all appropriate resource agency plans and direction as well as all applicable regulatory requirements, such as the State Historic Preservation Act and the National Environmental Policy Act, prior to finalizing the proposals.

Volume 1, Initial Statement

- Page A-14. The project description does not address needed repairs at Brushy Canyon Adit.
- Pg D-3 addresses the betterment at Hell Hole Reservoir. It is not clear if the cost figures include costs for new road construction.
- Table D-1 shows the transportation system maintenance costs at \$119,000 per year. Please clarify if these costs reflect needed repairs at Brushy Canyon Adit or the proposed new construction and maintenance costs associated with proposed new projects.

Volume 3, Exhibit E, Environmental Effects

No Action Alternative

- Page 3.1.9. This section includes only roads and trails proposed to be “Project Roads and Trails. Please include other roads and trails impacted by Project operations and maintenance activities.
- Page 3.1.10. Please include roads and trails impacted by project recreation activities. The licensee acknowledges the facilities they built or maintain, but impacts to access routes are not discussed.

- Page 3.3. The document acknowledges impacts to roads and trails, but Table 3-9 only lists “Project Roads and Trails” and not facility access routes. The licensee should discuss a proposal for commensurate share maintenance resulting from all project-related activities.
- Page 3.3.10. The licensee discusses current cooperative maintenance agreements. The Transportation System Management Plan (TSMP) and any future agreement should address all roads impacted by the project activities and should include a proposal for responsibilities. These can be addressed via through the appropriate permit with the applicable agency that memorializes the licensee’s commensurate share of road maintenance obligations as well as the need for higher standard roads to provide public access to project recreation facilities. Also, there are currently no agreements with BLM or FS for maintenance of roads accessing Cache Rock, Drivers Flat, Fords Bar, Cherokee Bar, China Bar, or Mammoth Bar that address commensurate share of road maintenance. Also, cables are not an acceptable access control measure on NFS lands or routes.
- Table 3-7 Big Meadow and Middle Meadow Campground water tank routes are roads. The licensee has been provided with the FS road numbers. These roads should be moved to the appropriate Project Roads Table.

Proposed Action

Page 4.2. Please include the footprint of the access road from road 17N02 to the campground. This entire route serves as the campground road just as the interior roads do and should be included in the project boundary.

Botanical and Wildlife Resources

General Comments

The list of FS Sensitive species will change during the life of the license and possibly the list of state and federally listed species. This is not addressed. This section is written to address primarily Stebbins’ phacelia although other Sensitive plants during the life of the license are a concern.

Many non-routine recreation facility projects have potential impacts to Stebbins’ phacelia. These are not addressed. For example, activities around Hell Hole Vista and the boat ramp parking areas that are listed in the resource agency recreation plan have potential impacts. Botanists should be included at the initial stages of developing projects.

For the AP measures in the VIPMP, include language to indicate that the VIPMP has not been finalized and agreed upon. The list of AP measures must come from the approved VIPMP.

The AP measures for the Recreation Plan need to developed (none were found in the RMP). A botanist needs to be included at the outside of project design if sensitive plant species are known to be present or if the project area has not been recently surveyed. This will save money in the long-run. Currently, projects are proposed at Hell Hole in the vicinity or within sensitive plant occurrences (e.g., Vista, boat ramp parking areas).

AP measures for the Transportation System Management Plan (TSMP) should include possibility of Limited Operating Periods to allow for activities that could occur with reduced impacts depending on the phenology of Sensitive plants at the time of activities. The following from TSMP Table 5 should be included to address other special-status plants and not just Stebbins' phacelia:

“If a new special-status plant population that could be affected by routine maintenance of roads or trails, or by non-routine special projects, is detected during required inventory surveys, the Licensee will consult with USDA-FS, USFWS, and CDFG, as appropriate, to determine a site-specific protective buffer around the population considering the special-status plant species, location of the population, and topography of the site.”

It is incorrect to state that “Implementation of these AP measures will avoid impacts to Stebbins' phacelia under the Proposed Action at all but three locations.”

Stebbins' phacelia is an annual species whose population fluctuates through time. Given that, the following statement is not accurate: “In addition, implementation of periodic maintenance at the Rubicon River Gage at Ellicott Bridge Trail (an existing trail that has been added to the MFP) will impact Stebbins' phacelia. Specifically, trail maintenance will result in the removal of *four individual* Stebbins' phacelia that are growing within the footprint of the trail.” There could be any number of plants at the time of maintenance.

Existing Facility Modification and Construction of New Facilities

Activities identified in the resource agency recreation plan could impact Stebbins' phacelia in the Hell Hole area, specifically.

Additional Measures for the Protection of Upland Special Status Plants

Please change the bullet regarding annual consultation to the following:

- Consulting annually with resource agencies to discuss the effectiveness of AP measures to protect special-status plants, to revise or develop new AP measures as needed, and to develop site-specific protective measures for any new special-status plant populations identified during inventory surveys; and

Conclusion - Upland Special-Status Plants

Effects from activities in the recreation plan are not addressed.

PA measures will not enhance Stebbins' phacelia, as stated, but possibly would impact a smaller area and fewer individuals than under the existing condition.

Mitigation is needed to address impacts to Stebbins' phacelia if assumptions regarding effects from changes in Hell Hole elevations are wrong.

Recreation Resources (Whitewater Boating)

The environmental effects of the Draft License Application (DLA) are discussed in Volume 3, Exhibit E, Book 2, Section 8.9. This section includes discussion of the amount of whitewater boating opportunities that would be available in the proposed action or DLA, including tables displaying whitewater boating opportunities by water year type for each of the runs in the peaking reach. These calculations of whitewater boating opportunity days use a number of assumptions, including the minimum acceptable flows for each of the runs identified in the DLA. The resource agencies do not agree that all of these minimum acceptable flows are appropriate. Using different minimum acceptable flows would alter the number of whitewater boating opportunities and perhaps the conclusions in this section that whitewater boating opportunities are maintained or enhanced for all runs in the peaking reach.

Another consideration when analyzing whitewater boating opportunity days is how real the opportunities are for users if there is insufficient information and fore knowledge that the opportunity exists. This is particularly true for commercial whitewater outfitters that need scheduled flows well in advance in order to operate their businesses. While “private” boaters may be more flexible in taking advantage of “opportunistic” flows, this does not provide the same type of access as required scheduled recreation flows which recreationalists can plan on in advance. Dissemination of real-time flow data, as proposed in the DLA, will assist the public in taking advantage of whitewater opportunities, but is not a replacement for a reasonable required schedule of recreation flows for the runs in the peaking reach.

The whitewater boating opportunity analysis in the DLA also includes assumptions on the acceptable timing of flows for the various runs in the peaking reach. This window is from 8am to 2pm for the Tunnel Chute Run and assumes this allows boaters to complete this run by 6pm. The acceptable window for the initiation of boating flows in the DLA is from 8am to 4pm for the Mammoth Bar run and 8am to 5pm for the Confluence Run, both of which assume boaters would complete these runs by 8pm. Some recreational boaters may take advantage of a late afternoon/early evening opportunity (from 4pm or 5pm until 8pm), particularly on weekdays, but this is a far less than ideal recreation opportunity window on weekends.

Aesthetic Resources

General Comments

- In a number of places throughout this section, the writer states that the action will “enhance visual quality”. This is a value statement that may or may not be true but is inappropriate for the analysis. The term should be “meet or exceed the VQO standards and guidelines as described in the (ENFLRMP or TNFLRMP).
- In a number of places throughout this section, the writer states “Therefore, visual quality will be maintained under the Proposed Action.” Once again, we are not making a value statement on the visual quality. The term should state: Therefore, the desired (ENFLRMP or TNFLRMP) VQO’s will be met.”
- There does not appear to be any discussion regarding the new powerhouse and penstock at Hell Hole Reservoir.

Section 8.11.5.2, Small Diversion Modifications: None of the modifications to the small diversions will substantially alter the physical or visual character of the dams or ancillary structures. Accordingly, the visual condition of the diversion dams will be similar under the No-Action Alternative and the Proposed Action. The modifications will result in diversion pools that are slightly shallower and more riverine in nature, consistent with the adjacent landscape. Therefore, visual quality will be maintained under the Proposed Action. The discussion needs to be in terms of what is the current forest plan VQO, does the existing facility meet the desired VQO and will the modification change the existing VQO so that it no longer meets, does not change, or exceeds.

Section 8-11.1: Replace the following sentence: The VQOs are goals that describe how the forest should look in the future (i.e., desired condition) with “The VQOs are goals that describe the degree of alteration measured in terms of visual contrast with the surrounding natural landscape.”

Section 8-11.2: Under the following statement: The maximum operating WSE will remain the same at both reservoirs under both the Proposed Action and No-Action Alternative. Therefore, both reservoirs will be operated within their historic range with minor changes occurring on a seasonal basis, depending upon water year type.” Current operations lower the water late in the recreation season when there are less users. If the timing of operations changes the low water period to earlier in the season, then even though the range is the same for the whole year, the visual bathtub effect would affect more viewers. Please clarify whether the low water levels during normal year will be earlier than under the current operation. Dry and critically dry years don’t matter because there will be a bathtub effect year-round.

Section 8-11.3: The resource agencies agree that implementation will enhance the visual quality of some of the project facilities but the following statement implies that it will enhance all of them: “Therefore, implementation of the Proposed Action will enhance visual quality as it relates to Project facilities.” The French Meadows Powerhouse betterment will decrease the visual quality within the Hell Hole viewshed.

Section 8-11.2: The resource agencies do not necessarily agree with the following statement regarding potential loss of vegetation due to inundation over time: “Furthermore, as discussed in Section 8.6 – Botanical and Wildlife Resources Environmental Effects, the change will not impact vegetation around the reservoir.” If large-scale vegetation is lost, then there will be a negative visual impact due to a greater exposed bathtub effect during the period of high recreation use.

Section 8.11.3.1, Facility Painting: The licensee will periodically paint the Project facilities as paint surfaces deteriorate. Under the Proposed Action, PCWA will consult with the FS on the selection of appropriate colors as specified in the VMP. Selecting paint colors in consultation with the FS will help ensure that the MFAR Project facilities and features blend with the surrounding landscape to the extent possible. This consultation does not occur under the No-

Action Alternative. Therefore, implementation of the Proposed Action will enhance visual quality compared to No-Action Alternative.

Section 8.11.4.2, Recreation Facility Reductions and Conversions: The resource agencies agree with the following statement except for the conversion of McGuire picnic area: “However, reduction and conversion of these facilities will reduce the overall size and scale these facilities, making them more compatible with the characteristics of the surrounding landscape.” The planned improvements and anticipated increased public use associated with the group site will be more noticeable from the reservoir than the existing picnic area which is hardly discernable from the reservoir and use is minimal.

Section 8-11.5: Add: “Modifications to the existing gages will meet the requirements of the VRMP.” after “Modifications to existing gages will occur at existing Project facilities (i.e., dam outlet works, spillways, diversion tunnels, and penstocks) and will not alter the physical or visual character of these features.”

Hell Hole Dam Spillway Crest Gates Control Building and Powerline: This discussion is only referenced from Hell Hole Vista (per the 8.11-2 photo). Shadows change over the course of a day and a season. The building and powerline would likely be visible from the reservoir, boatramp or trail and possibly from the vista when the atmospheric conditions are different from those in the photo. Effects need to be addressed from all viewsheds, not just from KOPs.

Section 8-11.5.1, Temporary Features: Regarding the following statement: “Furthermore, these features are temporary. Therefore, visual quality will be maintained under the Proposed Action.” It does not follow that because the features are temporary that the visual quality will be maintained. It will only be maintained if the features are returned to the same condition as they were prior to the temporary construction. For example, the staging area at the French Meadows spillway is temporary and has had an enormous visual effect that cannot be put back to the original condition without a large investment.

Section 8.11.6, Conclusions: Regarding the following statement: “Overall, implementation of the Proposed Action will enhance or maintain visual quality compared to the No-Action Alternative.” The resource agencies disagree with this conclusion. We agree with the remainder of the paragraph, but the addition of the French Meadows powerhouse and penstock at Hell Hole Reservoir is a negative visual impact. There is also the potential (per forest botanist) for an increase in bathtub ring appearance around the reservoir during the high use season due to the operation of proposed increase in water level over the 50 year license. There is also the increase in size of augmentation areas. There is also the increase in features associated with the small diversion modifications.

Table 8-11.1: There are a number of errors in this table. Any time the Forest Plan VQO is “retention”, the visibility from the viewshed is “seen” and consistent with forest plan is “yes,” there is an error. The facility would have to be “not noticed” in order to meet the VQO of retention by definition.

Cumulative Effects Analysis

Section 9.0: The resource agencies have considered the DLA cumulative effects analysis in light of those impacts that may result from changes in flow and project re-operation. Among our concerns are two most fundamental issues:

- The licensee has based the cumulative effects analysis on a 50-year license term. Assessments made by FERC and other resource management agencies are always conducted on the 30-year time frame, recognizing that the term of any future license has not been determined. Until a new license has been granted, this analysis should be based on the conservative 30-year license term.
- The resource agencies recognize that this analysis is necessary to comply with the National Environmental Policy Act (NEPA) requirements. However, cumulative effects of the flow changes in the project should not be limited to a comparison with the no-action alternative, which is essentially the existing condition. Cumulative project effects of instream flows are, in many cases, more appropriately compared to pre-project hydrologic conditions.

The cumulative effects analysis for terrestrial resources, specifically sensitive plants, is missing.

Economic Analysis

Section 11: The resource agencies have several concerns and questions regarding the approach taken by the licensee in developing the economic analysis for operation of the MFAR Project. These concerns include, but are not limited to the following.

The draft license application (DLA) evaluates project economics assuming a 50-year period of analysis (based on a requested 50-year license term). This is inconsistent with the approach used by the Federal Energy Regulatory Commission for evaluating the economics of hydropower projects, as articulated in the Mead Corporation, Publishing Paper Division decision. As specified in this decision, FERC applies a 30-year period in all economic analyses. The licensee should revise their economic analysis to reflect a 30-year period of analysis.

Additionally, in Tables 11-2 and 11-3 of the DLA, PCWA includes depreciation as a component of the annualized cost of the project. The depreciation value used is about \$10 million for the No-Action and Proposed Action alternatives, which is a substantial component of the approximately \$26,000,000 and \$28,000,000 annual cost of the two project alternatives, respectively. The use of depreciation in the calculation of annualized project costs has not been observed by resource agency staff in the economic analyses prepared for other hydropower projects. In the absence of a reasonable explanation as to why it is appropriate to include depreciation as an element of the annualized cost of project alternatives for the MFAR Project, we believe depreciation should be removed from the annualized cost calculation.

Volume 3, Exhibit E, Proposed Environmental Measures (Supporting Document A)

Flow and Reservoir Monitoring Plan

The DLA states that minimum instream flows and pulse flows must be released within five days of the dates specified in the License unless access to the instream flow release infrastructure is prohibited by weather or hazardous conditions. At this time, the resource agencies do not see the need for a five-day grace period in this condition; it is appropriate for the condition to require that minimum instream flows be met on the date specified in the flow measure, unless access to the instream flow release infrastructure is prohibited by weather or hazardous conditions.

The licensee specifies in the DLA that instantaneous minimum instream flow and pulse flows must at all times be no less than 90 percent of the required flows, and daily average flow must at all times be no less than 90 percent of the required minimum instream flow in order for the licensee to be in compliance. Additionally, the licensee specifies that once set during downramp events, daily average flow must at all times be no less than 80 percent of the required instream flow releases for the first three down ramp events implemented under the new License and for subsequent down ramp events, daily average flow must at all times be no less than 90 percent of the required down ramp of spill flow releases. The resource agencies believe that the minimum instream flows specified in the license should be enforceable conditions; instantaneous flow measurements must not fall below specified minimum limits established in a flow regime.

Additional Flow Information

It would be helpful to the resource agencies to have access to streamflow and reservoir level information during license implementation. Provision of the following is recommended:

- Streamflow information in both daily summary (minimum, maximum, and mean) and 15-minute formats.
- Access to both plotted data (such as on a website) and downloadable data (such as .txt files on an ftp site).
- A plotting tool compatible with the data that allows zooming-in on timeframes and hydrograph components of interest. A plotting tool with the capability to plot other relevant parameters (such as rainfall and stage) on the second axis is preferred.
- Provision of real-time raw data, followed by provision of corrected data (within an agreed-upon timeframe), for each gage.

Fish Population Monitoring Plan

Section 1.0, Introduction: The draft fish population monitoring plan (FPMP) includes a goal to obtain, for comparative purposes, the fish population data collected during the license term. The plan anticipates the comparison of post-licensing data sets with “historic population data collected during 2007, 2008, and 2009...” but fails to express a potential scenario where “historic” baseline data is no longer valid on the Rubicon River if instream flows are changed based on new operational patterns upstream on the Upper American River Project, (FERC No. 2101) (UARP). Interim data collection should be done as needed to adjust stream fish population baseline data if the UARP license is issued and the flow regime affecting the Rubicon River changes prior to issuance of a license for the MFAR Project. The resource agencies look

forward to the addition of an appropriate section in the FPMP that presents commitments to interim data collection, if necessary, to update existing fish population baseline data.

Section 4.2, Sampling Methods: In addition to standard fish population monitoring in the Peaking Reach, a focused effort using sampling techniques appropriate for detection of the juvenile life stage should be particularly emphasized in the first 5 years following license issuance. This focused sampling is requested because data collected during relicensing may not accurately characterize age-class structure and the abundance of smaller sized fish; resource agencies do not know what effect peaking is having on young of the year (YOY) and juvenile life stages of fish. In order to increase the probability of detecting YOY, electrofishing should be conducted where feasible (margins) in the peaking reach, and should be conducted for a minimum of five consecutive years. Details of the focused study should be included as an element of the FPMP in the FLA.

Section 4.3.2, Biomass: The biomass of rainbow and brown trout together and separately will be calculated for each site.

Section 5.0, Reporting: Section 4.3.3 of the FPMP provides the formula for calculation of adult trout condition factor; however, a commitment for analysis and reporting of any change in site-specific condition factor is not included. Documentation of improvements or declines in condition factor at sampling locations on any stream segment where flow conditions are altered under a new flow regime should be included in the FPMP. Section 5.0 should describe the analysis and reporting of age structure and average condition factor over time, and data along with these analyses should be introduced into discussion at annual meetings between the licensee and resource agencies.

Section 4.2, Sampling Methods: Provide radio-tagging studies of hardhead in order to understand their movements and potential impacts by daily, seasonal, and annual operations at Ralston Afterbay, including during the sediment removal period. This study shall continue until their movements are understood to the best that scientific collection techniques will allow.

If in the future anadromous fish species are reintroduced above Nimbus and Folsom dams, the FPMP may need to be modified, in consultation with the Resource Agencies, to monitor those species.

Foothill Yellow-Legged Frog (FYLF) Monitoring Plan

Monitoring Schedule

The frequency of monitoring is somewhat sparse. The resource agencies need to have adequate information to evaluate population changes over the license term in order to determine the effects of the flow regime and address changes if necessary. The resource agencies recommend the following:

- Since there is only one year (2007) of complete survey data for FYLF and 2007 was a dry water year, it would be appropriate to gather some additional “baseline” information on distribution and relative abundance of FYLF in the project area.
- The resource agencies recommend that the licensee collect data in years 1, 2, 3, 4, and 5 with the goal of representing three different categories of water year type at least once, that is, above normal/wet, below normal, dry/critically dry. If these three categories aren’t seen in the first 5 years, then add years until all three categories have been represented.
- During these first 5 years of annual monitoring, both timing of initiation and breeding and upstream distribution surveys would be conducted each year.
- After the first 5 year period, the frequency of surveys may be diminished to the first 2 years (year 1 and 2) and the middle 2 years (years 5 and 6), out of every 10 for the remainder of the license. The caveat here is that if these surveys show signs of population change, more years may be added and instream flows will be evaluated in an adaptive management framework. Near the end of the license period (last 3-5 years), survey frequency would be increased to annual to provide reliable baseline data for the next relicensing.
- Periodically do broad distributional and phenological surveys. Once every 5 years, the entire project area (original 2007 survey sites or a collaboratively agreed upon subset) should be resurveyed to identify changes in FYLF distribution. Initiation of breeding surveys should also be conducted every 5 years.
- Monitoring during outage period in October to see if stage change affects the FYLF and to see if the tadpoles have metamorphosed during the outage for the first few years. Also monitoring should occur after unplanned accidental outages in order to understand the effects of various accidental flow rate changes.

Monitoring Locations

The resource agencies recommend the following:

- Add tributary survey sites in Pilot Creek and Long Canyon Creek
- Add comparison sites in the North Fork American River. The substrate and gradient of North Fork American River has similarities to some of the reaches in the PCWA project with frogs.
- .For upstream distribution surveys use the current known upper elevation limit of FYLF in the Sierra Nevada rather than just extending upstream from current known sites in the project.

Sampling Methods

The resource agencies recommend the following:

- Add an additional survey within each survey year; that is, conduct two surveys during breeding/egg laying, one during tadpole, and one after metamorphosis.
- Add individual identification methods for adults (chin photos or PIT tags) and make tadpoles and young of the year counts more quantitative, with some estimate of counting error (e.g., double observer).

This section needs to be developed further; the current text does not provide enough detail. For example, how will abundance and distribution of FYLF be related to discharge and water temperature and how will the status and trends of FYLF populations be determined? The monitoring results should allow us to address the following questions.

- Is there an increasing, decreasing, or stable trend in relative abundance over time?
- How are the sex, age, and size class distributions changing over time?
- Is the phenology of egg laying, tadpole rearing, and metamorphosis trending earlier or later over time?

Geomorphology Monitoring Plan

This plan has not been developed. The resource agencies reserve the right to comment on the adequacy of a draft GMP, and seek a minimum of 90 days for review of this and any other new materials presented for the project FLA. The resource agencies recommend that it be collaboratively developed and agreed upon.

Riparian Monitoring Plan

This plan has not been developed. The resource agencies reserve the right to comment on the adequacy of a draft RMP, and seek a minimum of 90 days for review of this and any other new materials presented for the project FLA. The resource agencies recommend that it be collaboratively developed and agreed upon.

Sediment Management Plan

The resource agencies participated in the development of the Sediment Management Plan and understand and support the concept of improving sediment transport within the system. However, because all proposed measures have not been developed and agreed upon, the resource agencies provide the following comments that should be addressed either in the SMP or related proposed measures. If conditions or proposed measures are developed that warrant revision of this plan, the resource agencies reserve the right to provide specific comment relative to potential effects of those measures or conditions.

General Comments

Sediment management affects both geomorphology and water quality. The resource agencies provide the following comments to ensure that the SMP addresses or incorporates via reference to other proposed license conditions the following:

- Oxbow Reservoir and Hell Hole Reservoir are both on the 303(d) list for mercury. In light of this, it needs to be considered whether sediment removal from the medium sized reservoirs coupled with depositing the removed material at downstream sites will increase methylmercury in downstream areas. Production of methylmercury can occur under anoxic conditions in reservoirs and can then be mobilized if the material is disturbed. Sediment removal and augmentation activities should be designed and monitored to ensure that methylmercury levels are not increased by project operations.

- Flows needed to mobilize large woody debris should be analyzed and potential for transport of LWD, and likely deposition sites, discussed. Transport of LWD moved downstream should be monitored.

Specific Comments

- The licensee's sediment management activities will likely require a Lake and Streambed Alteration Agreement from DFG. In the draft SMP, PCWA should reference the need for this agreement as well as permits for other pertinent activities - such as a Corps of Engineers 404 permit or permits from FS or BLM.
- On page 17 of the draft SMP regarding sediment pass through (SPT) activities, the licensee states that "If continuous, or real-time turbidity monitoring related to SPT has not been completed prior to issuance of the new license; PCWA will implement turbidity monitoring as described in the Pilot Project for the initial SPT event." The licensee should describe the specific elements of the turbidity monitoring program from the Indian Bar Pilot Project that may be applied to the sediment pass through activities covered by the draft SMP. The resource agencies will review the adequacy of the specific measures to be included, once they are included.
- In Table 5 under the Riparian Measures section of the draft SMP, the licensee states that "Riparian vegetation will not be removed or destroyed during implementation of sediment management activities (with the exception of one-time removal of riparian vegetation for the development of the Junction Bar Sediment Augmentation Area and removal of vegetation at the toe of the slope on Indian Bar)." However, the licensee notes on page 10 for Middle Fork Interbay and on page 14 for Ralston Afterbay that "Vegetation near the toe of the augmentation areas will be removed annually to allow for mobilization of augmentation of material." Table 5 should be updated to reflect the annual vegetation removal near the toe of the Middle Fork Interbay and Ralston Afterbay augmentation areas.
- Section 3.0, Sediment Management; 3.1.1 Interim Sediment Management; and 3.1.3 Contingency Sediment Management: Large woody debris caught in dams and trash racks should be moved downstream in a collaboratively agreed upon location and not simply removed nor burned nor disposed of at an approved disposal area.
- Treatment of vegetation that is removed, for sediment augmentation or any other project purpose, needs to be described or agreement with the land management agency needs to be reached prior to the removal and disposal.
- Section 3.2.2, Sediment Removal: Prior to finalizing plans and a schedule for any sediment removal action at Ralston Afterbay, the Licensee should consult with FS, CDFG and SWRCB staff to determine appropriate fisheries and/or water quality monitoring needs. On a project-specific basis, the Licensee will need to consider fish species, distribution, and age-classes present in Ralston Afterbay, and any risk of impact associated with sediment removal.
- Section 3.2.2, Sediment Augmentation: Junction Bar and Indian Bar shall be surveyed for FYLF prior to implementation, and the licensee will consult with Relicensing Participants as to whether FYLFs shall be relocated.
- Page 19, Table 5: Ralston Afterbay will be surveyed for existing juvenile and adult fish (all species) prior to implementation. Percent of affected fisheries in Ralston Afterbay will be quantified by species and life stage.

Water Temperature Monitoring Plan

The DLA presents a draft water temperature monitoring program that appears to be limited in geographic scope and lacks details to ensure an understanding of cold and warm water habitat changes that may result with modifications to magnitude and timing of flow within MFAR stream reaches. In Section 1.0 of the water temperature monitoring plan, PCWA states that "Water temperature monitoring will focus on river reaches with known populations of foothill yellow-legged frogs (FYLF) (*Rana boylii*) and hardhead (*Mylopharodon conocephalus*), United States Department of Agriculture-Forest Service (USDA-FS) Sensitive Species and California Department of Fish and Game (CDFG) Species of Concern; and rainbow trout." However, then in Section 3.0, PCWA states that "The objective of the WTMP is to collect periodic water temperature data at select sites in bypass reaches associated with the MFP with known populations of FYLF." Monitoring is then only proposed on the Middle Fork American River from Middle Fork Interbay to Ralston Afterbay and Rubicon River from Hell Hole Dam to Ralston Afterbay. The resource agencies look forward to working with the licensee to develop a monitoring plan that will help determine how temperatures in all project-affected reaches are altered by new flow measures or changes to project infrastructure.

Table 1: The North Fork American River and North Fork of the Middle Fork American River should be included as reference reaches to assist with future analyses with FYLF population dynamics for understanding project-related affects versus natural climatic conditions. These two sites would be collected during years of FYLF monitoring.

Recreation Plan

No protection measures for sensitive plants were found here although the Environmental Effects section for Botanical and Wildlife Resources refer to some measures.

Other Monitoring Plans That Should be Included

Water Quality Monitoring Plan

In reviewing the DLA, the resource agencies are unable to locate draft plans for water quality monitoring of water bodies affected by facilities and operation of the MFAR Project. The FLA should include a detailed water quality monitoring plan to track water quality parameters in diverted stream reaches and reservoirs at through the term of the license.

Anticipated changes in stream flow, reservoir surface elevations, recreation access, sediment management, and other factors all have potential to alter water quality and aquatic health and must be monitored to ensure no degradation of the existing condition. An acceptable monitoring plan should include, at a minimum:

- Standard *in-situ* sampling (pH, temperature, DO, turbidity, TDS, and other applicable parameters).

- Water chemistry sampling (metals, hardness, nutrients, petroleum products, herbicides, and other applicable parameters),
- Bacteria sampling (to characterize water quality conditions for contact recreation locations within project waters).
- Documentation of procedures used to meet water-related Best Management Practices.

Details on sampling locations, frequency, field methods, analytical methods, and other items should be developed in consultation with the resource agencies. The resource agencies continue to recognize the expertise and regulatory authorities of the SWRCB and desire consistency with data collection and laboratory methods that will meet the standards required by that agency.

Bioaccumulation Monitoring Plan

The resource agencies propose that the following methylmercury Bioaccumulation Monitoring Plan be included in the FLA.

Background and Rationale for Monitoring

The DLA does not include a monitoring plan for ongoing assessment of mercury uptake by aquatic organisms resident within Project waters. Data collected in screening level study throughout the Project finds fish tissue mercury concentrations that consistently exceed OEHHA screening criteria (AQ 11, Table AQ 11-3). Fifteen of 33 individual fish collected in Hell Hole Reservoir carry body burdens of methylmercury that exceed the USEPA threshold of 0.3 ppm, and pose a risk for human health and wildlife consumption. Reservoirs operated by the licensee have the potential to impound sediments and organic materials that may transport bound metals. Impounded metals have the potential to concentrate, methylate and become bioavailable to aquatic organisms. Metals that are bioaccumulated in the aquatic prey-base may bioconcentrate up through the food chain where elevated levels could become health risks to human and wildlife consumers. Monitoring at 5-year intervals will provide an index of changes in fish body burdens of mercury.

The resource agencies request that a Mercury Bioaccumulation Monitoring Plan be included in the FLA to provide tracking of bioaccumulation trends within the MFP. Resource agencies recommend that the following method and schedule be considered:

Method

Resident fish species from Hell Hole Reservoir, French Meadows Reservoir, Oxbow Reservoir and the MFAR near Otter Creek will be collected and analyzed to determine tissue residue levels of mercury. Target species, numbers of individuals, sampling strategy, and analytical methods used will be consistent with current Surface Water Ambient Monitoring Program needs (SWRCB), and will be defined prior to each sampling event through consultation with FS, CDFG, SWRCB, RWQCB and the state Office of Environmental Health Hazard Assessment. Fish tissue samples will be collected and analyzed for rates of bioaccumulation, and monitoring will continue through the term of the new Project License or as directed by RWQCB Basin Plan or TMDL.

Frequency

Monitoring of Hell Hole Reservoir, French Meadows Reservoir, Oxbow Reservoir and the MFAR near Otter Creek, should occur no less than once every 5 years beginning in year 2 following license issuance.

Benthic Macroinvertebrate Monitoring Plan

In reviewing the DLA, the resource agencies are unable to locate draft plans for monitoring of benthic macroinvertebrates (BMI) within stream channels that will be altered by changes in flow or facility modification and operation of the MFAR Project. BMI population data provides important information on primary production and prey base availability for fish and other aquatic life, and serves as a direct indicator for water quality and aquatic health. The FLA should include a monitoring plan to characterize trends in the benthic macroinvertebrate assemblages in Duncan Creek, South Fork Long Canyon Creek, North Fork Long Canyon Creek, Rubicon River, MFAR below French Meadows Dam, MFAR below Interbay Dam, and the MFAR downstream of Oxbow Dam. The BMI monitoring plans should be designed to track changes in BMI population dynamics in project-affected stream reaches through the term of the license and provide information relevant to stream fish condition factor. A correlation between changes in BMI assemblages and fish condition factor (FPMP, Section 4.3.3) on specific stream reaches would be useful in any reporting effort. Resource agencies look forward to working cooperatively with the Licensee and other relicensing participants, to develop an appropriate plan for assessment of BMI health on diverted stream channels of the MFAR project.

Western Pond Turtle (WPT) Monitoring Plan

The resource agencies propose the following monitoring plan for Western Pond Turtle be included in the FLA.

Background and Rationale for Monitoring

The DLA does not include a species-specific monitoring plan for WPT. Western pond turtles are a Forest Service Sensitive Species and a California State Species of Concern. Western pond turtles are negatively affected by human disturbance, reduced water temperatures, and aseasonal flows. Existing information on WPT within the project area is from “historic” data or incidental sightings during surveys for other aquatic species by PCWA/ENTRIX.

Based on PCWA (2008), Western Pond Turtles were found in the following locations:

RIVER	SITE NAME	DATE	TURTLE NOTES
MF American	MF 4.8	7/2007	1 female, ~6 yrs old
MF American	MF 11.0	9/2007	1 adult in mainstem, upstream of Canyon Crk
MF American	MF 14.1	7/2007	1 female, ~ 7 yrs old
Otter Creek	MF 14.1	6/2007	1 male, ~ 7 yrs old 2 hatchlings
NF American	NF 31.3	10/2007	1 adult (Oct)

			1 subadult (no date) ~ 1 mile downstream of Ponderosa Bridge
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Six of 8 WPT sightings were in the MFAR peaking reach; 3 of these 6 were in the mainstem and the other 3 were in Otter Creek. It is surprising that WPT were not seen in the warmer reaches of the Rubicon, the MFAR above Oxbow Powerhouse, the North Fork of the MFAR, or any of the reservoirs. WPT are easily disturbed and are known to take cover underwater for long periods of time. Based on the information we have from AQ-12 TSR, the agencies recommend that the first step for monitoring is to gather more complete information on the distribution and relative abundance of WPT within the project area. Proposed phases of work are:

Phase I – Distribution Assessment

- A minimum of 2 years of WPT-focused surveys to better document the distribution of the WPT populations in the project area;
- The 2 years must occur as soon as possible after the license is issued but must also represent different water year types;
- Surveys should occur in all project-affected rivers and reservoirs within the appropriate elevation, including a sampling of larger tributaries (especially in the peaking reach);
- To improve detection rates, surveys should involve timed viewing (minimum of 2 hours) of deep pools that have appropriate access to potential upland nesting sites with basking sites in or at the edge of the pool. If pools seem otherwise appropriate, but have few natural basking sites temporary basking platforms may be added to increase detection (see Nevada Irrigation District and Pacific Gas and Electric Company 2010 for an example).

Phase II – Relative Abundance and Age Class Baseline Monitoring

Once a better understanding of WPT distribution is known, baseline population monitoring would be conducted at representative river/reservoir sites with WPT populations that are likely to be affected by changes in flows/water temperatures resulting from the new license. This monitoring should address the following questions:

- What is the relative abundance of WPT?
- What is the sex, size, and age class distribution of WPT?

Some potential methods include: snorkel surveys with multiple visits and multiple observers (which includes capturing turtles), capture-mark-recapture sampling, multiple basking site surveys (though size, sex, and age information will not be as accurate using these methods).

Phase III - License Period Monitoring

Populations where baseline data was collected in Phase II would then be monitored over the period of the license. The frequency of that monitoring should be such that the following questions can be addressed:

- Is there an increasing, decreasing, or stable trend in relative abundance over time?

- How are the sex, age, and size class distributions changing over time?
- River reaches/reservoirs with no WPT detections from 2 year survey would be resurveyed once every 5 years to determine if WPT distributions are changing within the project area.

Also include a section on data analysis and adaptive management.

Comprehensive Evaluation of Monitoring Data

Align locations and timing of other post-license monitoring (e.g., water temperature, discharge, geomorphology) so that it is both temporally and spatially relevant to WPT population monitoring.

References

Nevada Irrigation District and Pacific Gas and Electric Company. 2010. Technical Memorandum 3-14, Western Pond Turtle Basking Study. Yuba-Bear Hydroelectric Project FERC Project No. 2266-096 and Drum-Spaulding Project FERC Project No. 2310-173. 28pp. (September).

Placer County Water Agency. 2008. AQ 12 – Special-Status Amphibian and Aquatic Reptile Technical Study Report – 2007. Placer County Water Agency, Middle Fork American River Project, FERC No. 2079. 268pp. (June).

Mollusk Monitoring Plan

If *Margaritifera falcata* is designated a FS Sensitive species, then a monitoring plan should be developed for this species. This also pertains to any other new TES listing of any species.

Sensitive Plant Monitoring Plan

The plan should address the schedule of implementation. Stebbins' phacelia and periodic monitoring for new occurrences would be included as well as monitoring for infestations of invasive plant species within sensitive plant occurrences. The plan should address any new listings of special status plant species and monitoring for their existence.

Comprehensive Evaluation of Monitoring Data

The resource agencies propose to add the following section to relevant monitoring plans or to an overview monitoring plan document:

Align locations and timing of other post-license monitoring (e.g., water temperature, discharge, geomorphology) so that it is both temporally and spatially relevant to FYLF population monitoring.

Instream Flow and Reservoir Minimum Pool Measures

The resource agencies have reviewed the licensee's Instream Flow and Reservoir Minimum Pool Measure and have attached an alternative proposal for minimum flows that is nearly identical to the licensee's proposal: however, there are some areas of difference as follows:

- The resource agencies have reorganized the water year type and minimum streamflow sections to be easier to read and to provide "license condition" language (except for the Middle Fork American River below Ralston Afterbay Dam).
- The resource agencies have changed the water year type forecasting time periods, and the peaking reach water year type forecasting is the same as the water year type forecasting for other reaches.
- The resource agencies would like further discussion on ramping rates in light of recent information related to foothill yellow-legged frogs.
- The resource agencies do not agree with the maximum flow release (900 cfs) proposed for Oxbow Powerhouse in Dry, Critically Dry, and Extreme Critically Dry water year types.
- The resource agencies would like further discussion on the proposal for forced or unplanned outage flows in the peaking reach.
- The resource agencies have changed the minimum streamflows in the Below Normal water year type in North Fork Long Canyon from 10 cfs to 11.5 cfs in the months of April and May.
- The resource agencies would like further discussion on the streamflow regime for the MFAR below Oxbow Powerhouse and have included priority interest objectives below.
- The resource agencies would like further discussion on the geomorphic flows, especially for the Rubicon River below Hell Hole Reservoir Dam.

The resource agencies' water year type and minimum streamflow language follows:

Minimum Streamflows

The licensee shall, beginning as early as reasonably practicable within 3 months after license issuance, maintain minimum streamflows in Duncan Creek below Duncan Diversion Dam, Middle Fork American River below French Meadows Dam, Middle Fork American River below Interbay Dam, Rubicon River below Hell Hole Dam, North Fork Long Canyon Creek below North Fork Long Canyon Diversion Dam, South Fork Long Canyon Creek below South Fork Long Canyon Dam Middle Fork American River immediately below Ralston Afterbay Dam, Middle Fork American River below Oxbow Powerhouse,. For compliance purposes, the point of measurement for each required minimum streamflow is described in the introduction to the minimum streamflow schedule for that particular stream reach. All specified streamflows are in cubic feet per second (cfs). The schedules specify minimum streamflows, by month and water year type, for each of the specified stream reaches. While the licensee may calculate and report mean daily streamflow values, the instantaneous measurements should never fall below the thresholds specified in the respective minimum streamflow schedules (except as authorized below).

Temporary Minimum Streamflow Modifications

The minimum streamflows specified in the schedules may be temporarily modified if required by equipment malfunction or operating emergencies reasonably beyond the control of the licensee. If the streamflow is so modified, the licensee shall provide Notice to *FERC*, *FS*, *CDFG*, and the *SWRCB* as soon as possible, but no later than 10 days after such incident. The minimum streamflows specified may also be temporarily modified for short periods in non-emergency situations 5 days after Notice to *FERC*, and upon approval of *FS*, *CDFG*, and *SWRCB*.

Facility Modifications

Where facility modification is required to maintain the specified minimum streamflows, the licensee shall complete such modifications as soon as reasonably practicable and no later than 3 years after license issuance. Prior to such required facility modifications, the licensee shall make a good-faith effort to provide the specified minimum streamflows within the capabilities of the existing facilities. In order for the licensee to adjust operations to meet the required minimum streamflows, the licensee shall have a 3-year period after the license is issued or 3 years after completion of necessary facility modifications, whichever is later, in which daily mean streamflows may vary up to 10 percent below the amounts specified in the minimum streamflow schedules, provided that the average monthly streamflow in any given month equals or exceeds the required minimum streamflow for the month. After the applicable period, the licensee shall meet the minimum streamflow requirements specified in the minimum streamflow schedules.

Water Year Types

The minimum streamflow schedules have been separated into six water year types: Wet, Above Normal (AN), Below Normal (BN), Dry, Critically Dry (CD), and Extremely Dry (ED). The licensee shall determine the water year type based on the water year forecast of unimpaired runoff in the American River below Folsom Lake published, near beginning of each month from February through May, in the California Department of Water Resources (DWR) Bulletin 120 “Report of Water Conditions in California.” Specifically, the “American River Below Folsom Lake” forecast is currently shown in the “Water Year Forecast” column of the “Water Year Unimpaired Runoff” table in Bulletin 120. The water year types are defined as follows:

<u>Year Type</u>	<u>American River Water Year Forecast</u>
Wet	greater than or equal to 3,400,000 acre-feet (AF)
AN	greater than or equal to 2,400,000 AF and less than 3,400,000 AF
BN	greater than or equal to 1,500,000 AF and less than 2,400,000 AF
Dry	greater than or equal to 1,000,000 AF and less than 1,500,000 AF
CD	greater than or equal 600,000 AF and less than 1,000,000 AF
ED	less than 600,000 AF

From May 1 to October 31, the licensee shall determine the water year type based on the DWR Bulletin 120 forecast for April and shall operate for those months based on that forecast.

From November 1 to March 14, the licensee shall determine the water year type based on the Department of Water Resources’ Full Natural Flow record for the American River at Folsom (California Data Exchange Center site AMF sensor 65) for the preceding water year, and the

licensee shall operate based on that record beginning November 1 and shall continue until March 14.

From March 15 to April 30, the licensee shall determine the water year type based on the DWR Bulletin 120 forecast for March and shall operate for those months based on that forecast.

The licensee shall provide Notice to FS, *FERC*, *CDFG*, and *SWRCB* of the all water year type determinations throughout the year within 10 days of determining the water year type.

Duncan Creek below Duncan Creek Diversion Dam

The licensee shall maintain the minimum streamflow specified in the following schedule based on month and water year type. Minimum streamflows shall be measured at USGS gage 11427750, Duncan Canyon Creek Below Diversion Dam Near French Meadows CA.

Duncan Creek Below Duncan Diversion Dam						
Month	Minimum Streamflow by Water Year (cfs)					
	ED/CD	DRY	BN	AN	WET	
OCT	4 or NF	8 or NF	8 or NF	8 or NF	8 or NF	
NOV	4 or NF	8 or NF	8 or NF	8 or NF	8 or NF	
DEC	4 or NF	8 or NF	8 or NF	8 or NF	8 or NF	
JAN	4 or NF	8 or NF	8 or NF	8 or NF	8 or NF	
FEB	4 or NF	8 or NF	8 or NF	8 or NF	8 or NF	
MAR 1-14	4 or NF	8 or NF	8 or NF	8 or NF	8 or NF	
MAR 15-31	8.5 or NF	11 or NF	12.5 or NF	16 or NF	16 or NF	
APR	13 or NF	14 or NF	17 or NF	24 or NF	24 or NF	
MAY	13 or NF	14 or NF	17 or NF	24 or NF	24 or NF	
JUNE	13 or NF	7 bor NF	8.5 or NF	12 or NF	12 or NF	
JULY	No Div	No Div	No Div	No Div	No Div	
AUG	No Div	No Div	No Div	No Div	No Div	
SEPT	No Div	No Div	No Div	No Div	No Div	

Middle Fork American River Below French Meadows Reservoir Dam

The licensee shall maintain the Minimum streamflows shall be measured at USGS gage 11427500, Middle Fork American River at French Meadows, CA.

Middle Fork American River Below French Meadows Reservoir Dam						
Month	Minimum Streamflow by Water Year (cfs)					
	ED/CD	DRY	BN	AN	WET	
OCT	8	9	10	11	13	
NOV	8	9	10	11	13	
DEC	8	9	10	11	13	
JAN	8	9	10	11	13	
FEB	8	9	10	11	13	
MAR 1-14	8	9	10	11	13	
MAR 15-31	11	11	11.5	15.5	16.5	
APR	11	13	13	20	20	
MAY	11	13	13	20	20	
JUNE	8	11	11.5	15.5	16.5	
JULY	8	9	10	11	13	
AUG	8	9	10	11	13	
SEPT	8	9	10	11	13	

Middle Fork American River Below Interbay Dam

The licensee shall maintain the minimum streamflow specified in the following schedule based on month and water year type. Minimum streamflow shall be measured at USGS gage 11433085, North Fork Long Canyon Creek Below Diversion Dam, Near Volcanoville, CA.

Middle Fork American River Below Middle Fork Interbay Dam						
Month	Minimum Streamflow by Water Year (cfs)					
	ED/CD	DRY	BN	AN	WET	
OCT	12	24	24	25.5	25.5	
NOV	12	24	24	25.5	25.5	
DEC	12	24	24	25.5	25.5	
JAN	12	24	24	25.5	25.5	
FEB	12	24	24	25.5	25.5	
MAR 1-14	12	24	24	25.5	25.5	
MAR 15-31	16.5	25	32	45	47	
APR	18	27	40	65	65	
MAY	18	27	40	45	65	
JUNE	12	24	24	25.5	47	
JULY	12	18	24	25.5	34	
AUG	12	18	24	25.5	34	
SEPT	12	18	24	25.5	34	

Rubicon River Below Hell Hole Reservoir Dam

The licensee shall maintain the minimum streamflow specified in the following schedule based on month and water year type. Minimum streamflow shall be measured at USGS stream gage 11428800, Rubicon River below Hell Hole Dam, Near Meeks Bay, CA. (Note: Spill flows should continue to be estimated using the reservoir water surface elevation and the spillway rating curve.)

Rubicon River Below Hell Hole Reservoir Dam						
	Month	Minimum Streamflow by Water Year (cfs)				
		ED/CD	DRY	BN	AN	WET
	OCT	15	20	20	25	25
	NOV	15	20	20	25	25
	DEC	15	20	20	25	25
	JAN	15	20	20	25	25
	FEB	15	20	20	25	25
	MAR 1-14	15	20	20	25	25
	MAR 15-31	31	35	42	55	60
	APR	31	35	42	55	60
	MAY	23	35	42	55	60
	JUNE 1-14	19	28	31	50	50
	JUNE 15-30	15	20	20	40	40
	JULY	15	20	20	30	30
	AUG	15	20	20	30	30
	SEPT	15	20	20	30	30

North Fork Long Canyon Creek Below North Fork Long Canyon Diversion Dam

The licensee shall maintain the minimum streamflow specified in the following schedule based on month and water year type. Minimum streamflow shall be measured at USGS gage 11433085, North Fork Long Canyon Creek Below Diversion Dam, Near Volcanoville, CA.

North Fork Long Canyon Creek Below North Fork Long Canyon Diversion Dam						
	Month	Minimum Streamflow by Water Year (cfs)				
		ED/CD	DRY	BN	AN	WET
	OCT	2 or NF	2 or NF	2 or NF	2 or NF	2 or NF
	NOV	2 or NF	2 or NF	2 or NF	2 or NF	2 or NF
	DEC	2 or NF	2 or NF	2 or NF	2 or NF	2 or NF
	JAN	2 or NF	2 or NF	2 or NF	2 or NF	2 or NF
	FEB	2 or NF	2 or NF	2 or NF	2 or NF	2 or NF
	MAR 1-14	2 or NF	2 or NF	2 or NF	2 or NF	2 or NF
	MAR 15-31	6 or NF	10 or NF	7 or NF	7 or NF	7 or NF
	APR	6 or NF	10 or NF	11.5 or NF	11.5 or NF	11.5 or NF
	MAY 1-14	6 or NF	10 or NF	11.5 or NF	11.5 or NF	11.5 or NF
	MAY 15-31	2 or NF	5 or NF	11.5 or NF	11.5 or NF	11.5 or NF
	JUNE	2 or NF	5 or NF	5 or NF	6 or NF	6 or NF
	JULY	No Div	No Div	No Div	No Div	No Div
	AUG	No Div	No Div	No Div	No Div	No Div
	SEPT	No Div	No Div	No Div	No Div	No Div

South Fork Long Canyon Creek Below South Fork Long Canyon Diversion Dam

The licensee shall maintain the minimum streamflow specified in the following schedule based on month and water year type. Minimum streamflow shall be measured at USGS gage 11433065, South Fork Long Canyon Creek Below Diversion Dam, Near Volcanoville, CA.

South Fork Long Canyon Creek Below South Fork Long Canyon Diversion Dam						
	Month	Minimum Streamflow by Water Year (cfs)				
		ED/CD	DRY	BN	AN	WET
	OCT	2.5 or NF	5 or NF	5 or NF	5 or NF	5 or NF
	NOV	2.5 or NF	5 or NF	5 or NF	5 or NF	5 or NF
	DEC	2.5 or NF	5 or NF	5 or NF	5 or NF	5 or NF
	JAN	2.5 or NF	5 or NF	5 or NF	5 or NF	5 or NF
	FEB	2.5 or NF	5 or NF	5 or NF	5 or NF	5 or NF
	MAR 1-14	2.5 or NF	5 or NF	5 or NF	5 or NF	5 or NF
	MAR 15-31	4.5 or NF	8.5 or NF	8.5 or NF	9.5 or NF	9.5 or NF
	APR	6 or NF	12 or NF	12 or NF	14 or NF	14 or NF
	MAY	6 or NF	12 or NF	12 or NF	14 or NF	14 or NF
	JUNE	3 or NF	5 or NF	6 or NF	7 or NF	7 or NF
	JULY	No Div	No Div	No Div	No Div	No Div
	AUG	No Div	No Div	No Div	No Div	No Div
	SEPT	No Div	No Div	No Div	No Div	No Div

Middle Fork American River Immediately Below Ralston Afterbay Dam

The licensee shall maintain the minimum streamflow of 3 cfs year-round immediately below Ralston Afterbay Dam. Minimum streamflow shall be measured with a new USGS gage downstream of the Oxbow Powerhouse and upstream of the North Fork of Middle Fork American River.

Middle Fork American River Below Ralston Afterbay Dam

The resource agencies continue to work with relicensing participants on a flow regime for this reach. The resource agency interests are to:

- Ensure that the flow regime is consistent with the Wild and Scenic River designation for the reach.
- Provide whitewater boating.
- Increase BMI prey base and food production for rainbow trout.
- Provide opportunity for dispersal of foothill yellow-legged frogs among tributaries during the fall maintenance outage.
- Minimize the effects of flow fluctuation during biologically sensitive reproductive periods for rainbow trout.
- Ensure that the Riparian Conservation Objectives in the Sierra Nevada Forest Plan Amendment are met.

Specific interests related to whitewater boating in the peaking reach are:

Tunnel Chute Run

- A key interest of the resource agencies is to maintain the current level of whitewater boating flows that have been provided for the Tunnel Chute run over the past decade or more. These recreation flows of 1,000 cfs, for 3 or 4 hours, between 8 or 9am and noon, for seven days per week from May through September in most water year types. While the DLA does provide whitewater boating flows in Volume 3, Exhibit E, Book 3, the resource agencies believe that in some instances the proposed recreation flows in the DLA may be less than what has actually been provided in the past for all water year types.
- The resource agencies believe that the flow magnitude for whitewater boating flows on the Tunnel Chute Run, should be 1,000 in all water year types. In Volume 3, Exhibit E, Book 2, Environmental Effects of the Proposed Action, the DLA provides information for the acceptable flow ranges for four whitewater boating runs on the peaking reach, including the Tunnel Chute Run, the Mammoth Bar Run, the Murderer's Bar Run and the Confluence Run. These acceptable flow ranges were developed based on the whitewater recreation flow studies. The resource agencies commented on the reports of these flow studies in an October 2009 letter, including specific comments on the identified acceptable flow ranges stated in these reports. The resource agencies have also reviewed the individual survey forms from the whitewater recreation flow studies.
- As previously stated in comments on the recreation flow studies, the resource agencies do not believe that 800-900 cfs is an appropriate minimum acceptable flow for whitewater boating on the Tunnel Chute Run. The resource agencies believe that 1,000 cfs is the minimum acceptable flow to provide for whitewater boating on this run. This Class IV run has steep, rocky technical drops and the 100-200 cfs difference between 800 or 900 cfs and 1,000 cfs is significant. As noted in Appendix Q of the whitewater recreation flow study, at 1,000 cfs the rocks and boulders on the run are covered with water, there are more and better routes through the rapids and safety concerns relative to swims are reduced as compared to the lower flows. Reading the completed survey forms of the participants in the flow study for this run is also revealing. Despite marking on the form that 800 cfs would be an acceptable flow, several of these same respondents go on to note that the "rapids are much safer with more water" or note the problems of boating at 800 cfs including greater potential for wraps, pins and dangerous swims. The CDPR whitewater ranger, with more than 20 years of experience on this river and run, firmly believes that 1,000 cfs is the appropriate minimum acceptable flow. The resource agencies believe that recreation flows provided as part of license requirements should be developed closer to the low end of optimal flows particularly when optimal flows reduce safety concerns.

Mammoth Bar and Confluence Runs

- The resource agencies have a strong interest in the licensee providing adequate recreation flows for the Mammoth Bar and Confluence runs earlier in the day during the summer season, from mid-May through September, than currently occurs. Specifically, the resource agencies are interested in the licensee providing recreation flows of a minimum of 800 cfs at the Confluence by 2pm several days per week (and by noon at least one weekend day) from mid-May through September in most water year types. The travel time for flows down the peaking reach varies depending on the minimum and peak flows. As noted in AQ-1, the Instream Flow Technical Study Report, with a base flow of 200 cfs and a peak flow of 1,000

cfs, the travel time from Oxbow to the Confluence is 9.7 hours. Over the past decade or two, the summer peak flows of approximately 1,000 cfs have not reached the Confluence until 5 or 6pm. For much of this time this wasn't an issue because the river was closed to recreation use below the Confluence due to the danger of the Auburn Dam diversion tunnel, which diverted the entire river through a half mile tunnel at the Auburn Dam site.

- In 2008, PCWA and Reclamation completed the American River Pump Station project which, in addition to constructing a pump station, closed the diversion tunnel and restored the river to its historic channel. The Confluence Run has been available for public use since that time. The China Bar run slowly gained popularity in the first two seasons of use (2008-2009) that this stretch has been available. This Class 2 run, which is accessible to a wide range of boating skill levels, is very close to the City of Auburn and highly accessible via Highway 49. The man-made bypass channel constructed as part of the Pump Station diversion was designed to be attractive to whitewater boaters. This run can serve a variety of recreational boating interests, from casual down river boaters enjoying the scenery, to whitewater play boaters who are attracted to the waves and holes on the run a certain flows. While the vast majority of the use on the Tunnel Chute is provided by commercial whitewater outfitters, the use of the Confluence run is "private" boating use. A whitewater festival was held on this run in 2010 which attracted several hundred participants and spectators. Provided adequate flows are available at appropriate times and sufficient access is provided, the resource agencies expect this run to become very popular in the future.
- The DLA indicates the acceptable minimum boating flows for the Confluence Run are from 350 to 600 cfs. The flow study was based on seven survey participants at the lowest flow of 368 cfs and five participants at flows of 600, 800 and 1,000 cfs. These are not large sample sizes. A number of these participants indicated the minimum acceptable flow was 600 cfs and others made comments that more water would be better and provide greater room to maneuver. Some study participants also noted that even at flows of 800 cfs, the water level was shallow and rocky at the Pump Station Bypass channel. One participant noted that the bypass channel was nearly unnavigable at 368 cfs. It is the resource agencies' understanding that the Pump Station bypass channel was designed to accommodate recreation boating at a range of flows with a minimum flow of 600 to 800 cfs. Understanding the range of flows for which the bypass channel was designed could help inform the acceptable minimum flows for this run. The resource agencies believe that a flow of 800 cfs may provide the best recreation opportunities for a variety of watercraft on the Confluence Run.
- The DLA provides an "early release flow" of 800 cfs only in the Wet and Above Normal water year types. The resource agencies believe there is adequate water volume in the MFAR system in most water years to provide early recreation flows to the Confluence along with the other desired flows, which include whitewater recreation flows for the Tunnel Chute Run and higher minimum streamflows. However, the limited storage capacity of Ralston Afterbay is a key constraint in the MFAR system in meeting the various flow needs and demands in the peaking reach and in retaining the licensee's desired flexibility (daily, weekly, and seasonally) in operating their system and maximizing peak power generation. If there is limited opportunity to increase the storage capacity of Ralston Afterbay, the resource agencies believe some shifting of the timing of power generation in the Middle Fork and Ralston Powerhouses, in order to maintain appropriate reservoir levels at Ralston Afterbay, may be necessary and reasonable in order to meet the various flow demands in the peaking

reach. Such shifting of the timing of generation does not necessarily result in a loss of generation but may reduce the value of generation.

- In addition to providing scheduled recreation flows for the Confluence run during the mid-May through September season, the resource agencies believe there is some interest and demand for off-season boating opportunities on this run. Unlike the Class IV Tunnel Chute Run, the Class II Confluence run is less challenging (not likely to get as wet), easily accessible, and more attractive to boaters in the off season. The resource agencies have an interest in seeing Confluence recreation flows provided in the fall and winter after the October maintenance “outage” period. This interest would be served by providing adequate recreation flows that reach the Confluence during mid-day on weekend days during the November to February time period. The number of days per month that these flows would be provided would depend on the water year type.
- The DLA indicates that the “early release flows” targeted for the Confluence Run would be measured at a new proposed gage above the American River Pump Station. Any required recreation flows targeted for the Confluence Run or minimum streamflows would need to account for diversions that would occur at the American River Pump Station, which is in the middle of the Confluence Run, and provide the additional flow needed to meet both the minimum recreation flow and the amount of flow to be diverted at the American River Pump Station for consumptive use.
- The resource agencies also have an interest in seeing peak recreation flows reach the Mammoth Bar run at a reasonable time of day, between 10am and 1pm depending on the water year type, during the mid-May through September boating season. The put-in for this run is below Ruck-a-Chucky Rapid at the Greenwood river access site. With a base flow of 200 cfs and a peak flow of 1,000 cfs, the water travel time from Oxbow to the Confluence is about 6 hours. At this base flow, if 1,000 cfs is to be provided for recreational boating on the Tunnel Chute Run at 8am or 9am, the peak flows would not reach the Mammoth Bar run until 2-3pm.
- As with the Tunnel Chute and Confluence Runs, the resource agencies do not agree with the DLA that 500-600 cfs is an acceptable minimum flow for the Mammoth Bar Run. Again, these flow studies were based on four or five participant surveys at the two target flows. This is not a large sample size on which to base acceptable minimum flow decisions. Again, in reviewing the four individual survey forms for the 600 cfs target flow, at least one of the four indicated 600cfs was “unacceptable.” All of the participants on the flow studies for the Mammoth Bar Run were using inflatable kayaks or hard shell kayaks; none were in rafts. The resource agencies do not agree that 500-600 cfs is an acceptable minimum flow for this run in all crafts and believe that 800-1,000 cfs is a more appropriate minimum acceptable flow for this run.

Stream Gages

There are currently 28 stream gages located on National Forest lands that are under a special use authorization that expires in 2016. In information provided to the permit administrator by the licensee on December 8, 2010, the licensee has proposed bringing most of these gages into the FERC boundary. There are at least 2 gages (or ancillary feature e.g. cable way) that would continue to provide project information and would need continuing special use authorization. There are five new gages proposed with a location to be determined; the licensee shall obtain

authorization if these, or any other gages are not located in the FERC boundary and on National Forest lands.

Geomorphic Flows

Page 4, Pulse Flows, Section 1.2.2: Ramping rates need to be included.

Pages 6-8. The timing of pulse flows should not be date-specific but should be coincident with conditions that are occurring within the watershed (snowmelt. The timing of the pulse flows should be consistent with snowmelt.

Initiation of Motion Analysis

Page 7.7-6. The methodology used to determine the initial recommended pulse flows (focused on the discharge at which initiation of motion would occur for 25 percent of gravels), appears to be based on calculations for bulk sediment samples, rather than actual measurement of bedload transport. There are multiple factors associated with the initiation of motion calculations that may result in a substantial amount of potential error in the proposed values for initiation of motion. For example:

- Modeling appears to be based on the transport model (a model for mixed sand/gravel sediments) by Wilcock and Crowe (2003); however, how closely the details of the methodology used follow Wilcock and Crowe's method is not entirely clear. It needs to be clarified which elements of the methodology used were adaptations/deviations from the Wilcock and Crowe method.
- In the licensee's study, for the surface layer for bulk samples used in initiation of motion calculations, "surface" was defined as "a depth equal to the maximum particle size. (SD-B, AQ1, p. 22)." It is not clear whether the maximum particle sizes were used to define the "surface" layer at each site. It would seem that large maximum particle sizes could affect the transport estimates by effectively turning a "surface sample" into a bulk sample. Predicting transport from bulk grain size is potentially a problem because "uncontrolled variation in the relevant initial and boundary conditions imposes unpredictable variability in transport rate (Wilcox and Crowe 2003, p. 120)."
- "The discharge at which initiation of motion occurred for 25 percent of the gravel [with gravel being defined as spawning gravel ranging from 0.3-2.5 inches (8-64 mm)] within the portion of the channel wetted at the high flow calibration discharge was used as the initiation of motion threshold (SD-B, AQ1, p. 23)." Target and actual instream flow modeling calibration flows are shown in Table AQ 1-5 (SD-B, AQ1, p. 58). Actual instream calibration flow was, in some instances, considerably lower than the target instream calibration flow. For example: (1) Hell Hole dam, the highest target calibration flow was 315cfs and the actual calibration flow was 77cfs; (2) Middle Fork Interbay, the highest target calibration flow was 374cfs and the actual calibration flow was 188cfs; and (3) for the Rubicon River below SF Rubicon River, the highest target calibration flow was 370cfs and the actual calibration flow was 130-218cfs.
- "Approximately 37 percent of the initiation of motion cross-sections were located in the tailout areas of pool habitat units. The remaining cross-sections were located in other types

of habitats (e.g. runs, low gradient riffles, high gradient riffles, pools) or complicated boulder channels. Some of these other habitat types were not as well-behaved for the hydraulic and sediment transport modeling (e.g. uncertain hydraulics or exhibited extremely high flows for initiation of motion). Problem sites were not included in the analysis (SD-B, AQ1, p. 23).” Please clarify the percentage of sites that were actually included in the analysis and the breakdown (habitat types, individual reaches) of sites that were and were not included.

- Initiation of motion calculations are based on the composition of the existing channel bed. Over time, however, the project may affect the composition of the channel bed due to trapping of sediment at reservoirs, infrastructure modifications, and sediment augmentation activities.

Due to the potential for error in the Initiation of Motion calculations, pulse flows should be based on an adaptive management approach that allows pulse flow magnitude and duration to be adjusted based on geomorphic objectives coupled with field monitoring of sediment transport and channel morphology.

Pulse flows based entirely on Initiation of Motion for spawning gravel do not take into account the full range of channel maintenance objectives. Objectives should include maintenance of all essential attributes of a properly functioning channel, including:

- Maintenance of a long-term sediment balance.
- Maintenance of appropriate riparian vegetation.
- Maintenance of streambank stability.
- Maintenance of functioning floodplains (construction, inundation, nutrient exchange).
- Prevention of in-channel vegetation encroachment;7) Maintenance of complex channel morphology.

Rubicon River Below Hell Hole Reservoir Dam

For the Rubicon River below Hell Hole, basing the final pulse flow on only what the valve is capable of achieving (based on a valve testing program over a period of several years) offers no guarantees in terms of geomorphic flows. A 200cfs pulse flow is not likely to meet geomorphic objectives for the following reasons:

- Based on information provided in Table 7.7-5, the draft license indicates that flow required to initiate motion of 25 percent of the gravel substrate within the high calibration flow wetted channel in the Rubicon River below Hell Hole Dam is expected to be 500cfs at R25.7, 678cfs at R20.9, and 2198cfs at R3.5 – values well above a 200 cfs pulse. Additionally, as mentioned in prior comments, the highest target calibration flows in the Rubicon River were low – 77cfs below Hell Hole Dam, and 130-218cfs for the Rubicon River below SF Rubicon River.
- As mentioned in previous comments, there are multiple factors associated with the initiation of motion calculations that may result in a substantial amount of potential error in the estimated discharges needed for initiation of motion provided in Table 7.7-5. Due to potential error in the estimates, it is possible that the actual discharges needed to initiate

motion of 25 percent of the gravel substrate may be significantly different than the estimates provided in Table 7.7-5.

- As mentioned in previous comments, setting pulse flow magnitudes based entirely on initiation of motion for 25 percent of spawning gravels does not take into account the full range of channel maintenance objectives.

Even if the desired pulse were achievable with the valve, the draft license states that "If the magnitude of the pulse flow changes, then the volume of the pulse will remain the same, but the duration and down ramp will be modified (Attachment A)." This appears to say that even if the pulse flow magnitude needed to meet geomorphic objectives were achievable with the valve, the licensee would shorten the duration and downramp of the pulse - the overall effect of which would likely be undesirable. Magnitude, duration, and ramping rate all need to be sufficient to achieve pulse flow objectives.

The resource agencies have an interest in further discussing geomorphic flows in this reach for the following reasons:

- The majority of the bypass reaches associated with the MFP are confined within narrow, fluviually dissected V-shaped valleys. However, the upper Rubicon River (from Hell Hole Dam downstream approximately 5 miles, is located within a wider, glacier formed u-shaped valley (page 7.7-2 of the Geomorphology Report).
- The resource agencies are interested in eliminating or reducing the continuous line of vegetation within the channel downstream of dam failure.
- The resource agencies are interested in improving stream and riparian habitat, especially since some of this was lost due to the dam failure.

Downramping

Basing downramping of flows (for either pulse flows or spills) on reduction to a minimum flow on a specified date or day, actually offers no guarantee of an appropriate downramp. For example, if the licensee released a 700 cfs pulse in the MFAR below French Meadows Reservoir Dam on May 2, held it at 700 cfs through May 18, and then dropped immediately to 16.5 cfs on May 22, specification of minimum flows on specified dates does not prevent this from happening. Ramping rates should be set based on acceptable change in water level in the stream/river for a specified flow range (as done in other licenses).

In addition, the resource agencies would like to discuss ramping rates with the licensees and other relicensing participants in light of recent information developed related to foothill yellow-legged frog ramping rate needs.

Timing of Pulse Flows

The resource agencies believe that pulse flows should be timed to coincide with conditions within the watershed (for example, snowmelt) rather than set dates in order to synchronize pulses with those that occur naturally in other parts of the watershed to the extent possible.

For the small diversion bypass reaches, basing the pulse flow on specified dates with a minimum release or inflow, whichever is less, does not guarantee pulse flows either. Essentially, unless natural pulses occur during the exact timeframe specified no pulse would be required. Pulse flows should be guaranteed.

Reservoir Minimum Pools

The reservoir minimum pool analysis does not address the issue of access to the upper portion of Hell Hole or the shallow water depths at the upper end of the French Meadows Reservoirs. Nor does the analysis address obstacles (e.g. tree stumps) at French Meadows Reservoir, and the related affect on recreational use at the reservoirs (REC-3 TSR (2010)). The TSR provides information regarding limitations on accessing the upper portion of the Hell Hole reservoir at various water surface elevations; it does not address obstacles at French Meadows. Provide an analysis regarding the effects of implementing an action. Additionally the minimum pool analysis should provide information regarding water surface elevation, as well as water volume and the effects to recreationists.

Limitations on Flow Releases

Setting limits on unseasonably high release flows should be considered in any areas where they have the potential to degrade the channel or disrupt the growth and establishment of riparian species.

Transportation System Management Plan

General Comments

Best Management Practices

According to the FS document *Water Quality Management for Forest System Lands in California – Best Management Practices* (2000), best management practices (BMPs) are intended to lead to the development of detailed protection measures to be applied during project development and onsite implementation. The intent is for an interdisciplinary team to identify the methods and techniques for applying BMPs for specific sites following onsite evaluation of the project area, in order to custom-fit the BMPs to the specific environment and project activity.

For example, BMP 2-7 “Control of Road Drainage” dictates that roads will be correctly drained to disperse water runoff to minimize the erosive effects of concentrated water flow. Some methods and techniques for draining a road are: outslope the road prism, install water bars, or inslope the road to a ditch line and install culverts. It is during the onsite evaluation of a specific road project that the appropriate method or combination of methods – to correctly drain the road – are identified. The methods are thereby custom-fitted to the physical or biological environment of the project area. (USFS 2000, pp 16-17).”

BMPs are referenced throughout the DLA; however, the manner in which they are used is often not sufficiently site- or activity-specific. Additionally, a revised Water Quality Management

Plan (BMPs) is currently under development and is expected to be completed in early 2011. For these reasons, additional analysis is needed with regard to development of site-specific BMPs in the project area. This comment is not limited to the Transportation System Management Plan, but is applicable to inclusion of BMPs in other portions of the document as well (including, but not necessarily limited to, Sediment Management Plan, Vegetation and Integrated Pest Management Plan, and Construction Projects).

Other General Comments

- All installed signage must meet current (Manual of Uniform Traffic Control Devices (MUTCD)) standards including a maintenance and replacement plan.
- Tables should reflect the need for periodic heavy maintenance and repair and surfacing of roads and parking areas.
- At 5-year intervals to coincide with other reviews, the licensee should plan to do vehicle count and characterization studies to ensure adequate roadway standards are in effect.
- Hell Hole boat ramp reconstruction addresses a turnaround, but it is not clear if this is an additional turnaround. Final design would include FS consultation. Please clarify when this work will be completed.
- Roads within Hell Hole Campground and French Meadows area need drainage work.
- Project trails located on National Forest lands need to meet FS trail maintenance standards.
- Licensee shall enter into a Road Use and Maintenance Agree with the Forest Service whereby the Licensee and the Forest Service determine the commensurate shares of road maintenance responsibilities and the methods for accomplishment of that work. Those commensurate shares are to include attributable recreation use as well as licensee's access to the project facilities.

Specific Comments

- Page 3.2. Cables are not an acceptable form of preventing access on National Forest lands.
- Page 4, Section 3.2, first paragraph. The first sentence should read that roads that are open to the public and maintained for passenger car access are managed at a higher level and use the range of Maintenance Level (ML)-3 to ML-5.
- Page 4, Section 3.2, first paragraph. The maintenance level of Duncan Diversion Road will not be changed from ML-2 to ML-3.
- Page 6, Section 5.2. This should be corrected to say that most paved roads in developed recreation sites are ML-5. Some of the native surface dispersed site are ML-2 and the aggregate surface sites are ML-3.
- Page 6, Section 6.0, Bullets referencing routine maintenance should include deferred maintenance of those roads and trails.
- Page 6.1. Special projects will require additional funding specific to the accomplishment of that project.
- Page 6.2.1. Maintenance activities will extend to the original construction limits (clearing limits for vegetation management) or beyond if damage is occurring.
- Page 6.2.2. The same comment apply this comment wherever the proposed limit is just the road surface.

- Page 6.4. This section should discuss the Brushy Canyon Adit road repairs, road repair for the Tunnel Rollout section (14N16A), and proposed work at the sediment layout area at road 14N25K.
- Page 6.5. The licensee should consult with the appropriate resource agency between consultation meetings to undertake immediate repairs if roads are found to be causing or are likely to cause environmental damage prior to the next scheduled consultation meeting.
- Maps. All road and trail identification tags should include the FS route number for reference. These are what the FS uses to identify roads and trails in its inventory system and are the “official” designation and coincide with FS published maps. PCWA identifiers are a good reference and crosscheck. It is unclear whether proposed new gages will require road or trail access during construction and subsequent operations and maintenance activities. If these gages will require and use trails, then they should be listed on the tables.
- Map D8. This is on the TNF and should be included in that section.
- Map D9. This map should be repeated in both sections as it shows routes on ENF and TNF.
- Map D10. Big Meadow Campground water supply access is on NFSR 14N43A. Roads 14N43A and 14N43B are mislabeled. The initial section of road 14N43 from FR2 to the “Project” section should be included in “Project Roads” and the project boundary adjusted. This section serves as campground access just as the listed section does.
- Map D13. Middle Meadow water supply is on NFSR 14N28A, not a trail. Please move this to the appropriate table.
- Please move road 14N16A to the project roads table and adjust the boundary accordingly. This route is closed to public motor vehicle access and should be listed as “Project.”
- Page 27, Table 3, Make the following corrections to the maintenance level of the following roads in these recreation facilities:
 - French Meadow Campground are ML-5 roads.
 - Lewis Campground are ML-5 roads.
 - Poppy Campground is ML-5.
 - Gates Campground are ML-5.
 - French Meadows Boat Ramp and Picnic are ML-5.
 - Maguire Boat Ramp is ML-5.
 - Coyote Campground are ML-4.
 - Maguire group are ML-5.
 - French Meadows Dump Station is ML-5.

Fire Prevention and Suppression Plan

Section 3.0, Responsibilities. Please add Cal-Fire and other Emergency Services.

Section 3.1, PCWA, fourth bullet. Please remove: “Actions that may endanger employee safety should not be taken. Project personnel should not attempt to suppress fires that cannot be safely contained.” Please add (from Attachment A of the FPSP): “Generally, the most fire knowledgeable person onsite shall assume responsibility for the initial attack on the fire. This person shall direct fire suppression activities until the fire is controlled or a USDA-FS person arrives and assumes responsibility for fire suppression activities.”

Section 3.1, PCWA, second set of bullet statements, first bullet. Please change to: “Direct fire-related activities for the Project, including fire suppression, until relieved by qualified fire suppression personnel.”

Section 3.1, PCWA, last bullet. Please add “..the first call is 911.”

Section 3.2.1, Chief Inspector, last bullet. Please change to “Stay onsite for one hour after power-driven machinery, welding, or blasting activity shutdown to conduct a visual survey of the operational area unless modified by project specific permits or plans or the Project Activity Level. If a fire results from these activities, the CI will attempt to put out the fire, or follow the procedures outlined in Section 7.0 for contacting assistance.”

Section 3.3.1 ENF and TNF and RDs. Please change “Project Fire Control Officer to “authorized District Ranger representative.”

Section 3.3.3. Please change “Project Fire Control Officer to “authorized District Ranger representative.” Please remove the third bullet; the Forest Service will not train PCWA or contract crews in fire suppression. Please remove the sixth and seventh bullets.

Section 4.0, Project Activity Levels. Please add “for the American River Ranger District (530) 367-2224” after “information line” For PAL information on the Georgetown Ranger District call 530-644-6048 and follow the instructions.

Section 6.3, Fire Equipment Requirements. Please add “as a minimum, comply with California State Public Resource Codes.”

Section 7.1, Wildland Fire Suppression. Please revise the two paragraphs so that 911 is the first call with follow up calls to PCWA and the TNF Emergency Command Center at (530) 477-7237 and the ENF Emergency Command Center at (530) 642-5170. Please change to: “Once qualified fire suppression personnel arrive onsite, they will assume command for wildland fire suppression activities and PCWA employees or contractor(s) will assist only as requested. A qualified Fire Investigation will commence as soon as possible to determine the cause of the fire.”

Section 7.2, Structure Suppression. Please change to: “In the event of a structural fire, call 911.” Please remove: “the USDA FS is not responsible for suppression or protection of Project facilities. However, the FS can assist qualified structural firefighters to prevent the spread of fire to wildland.”

Attachment A, PCWA Fire Suppression Action Plan. Please change to: “Generally, the most fire knowledgeable person onsite shall assume responsibility for the initial attack on the fire. This person shall direct fire suppression activities until the fire is controlled or qualified fire suppression personnel arrives and assumes responsibility for fire suppression activities. Please add that the first call is 911. Please change to: “Provide the Dispatcher with information as to the location, size of the fire, if help is required, and what action has been taken. Keep Dispatcher informed of changes in fire conditions and when qualified fire suppression personnel arrive and assume responsibility for fire suppression activities.”

Recreation Plan

The resource agencies have reviewed the Recreation Plan contained in the DLA. The resource agencies offer the following recreation plan to assist continued collaboration to develop a mutually agreeable final recreation plan. The resource agencies have not commented in detail on the environmental effects analysis associated with the licensee's proposed Recreation Plan since the environmental effects do not consider the resource agencies proposal as well. The primary areas of disagreement are as follows

- The Recreation Plan proposed by the licensee does not address all of the recreation opportunities and recreation facilities associated with the MFAR Project and Project operations. In particular, many of the facility needs and recreation visitor management needs within the peaking reach and along the bypass reaches are not addressed. The resource agencies proposed Recreation Plan also includes recreation facilities around the Project reservoirs that are not addressed in the licensee's proposal.
- The licensee's proposed Recreation Plan does not address certain information needs to adequately manage recreation use and to provide recreation opportunities throughout the life of the license.
- The licensee's resource protection measures are limited to measures needed during construction activities. The resource agencies' proposed Recreation Plan also addresses resource protection measures needed to manage for ongoing recreation use and impacts from recreation visitation.
- The resource agencies' proposed Recreation Plan builds on the licensee's proposal in regards to public information needs and needed improvements or modifications to existing recreation facilities within the MFAR Project.

Licensee's level of responsibility for funding of fish stocking program in French Meadows and Hell Hole Reservoirs.

Recreation Survey

The licensee shall conduct a Recreational Survey and Recreation Demand Assessment, and prepare a Report on Recreational Resources that is approved by FS, BLM, and/or Reclamation (as applicable) every 6 years from the date of license issuance. The Recreational Survey shall include, but not be limited to, changes in kinds of use and use patterns, levels of use, user survey as to preferences in recreation activities, kinds and sizes of recreational vehicles, preference for day use versus overnight use, carrying capacity information sufficient to indicate changes in capacity, and recreation user trends within the project area. The Recreation Demand Assessment shall include, but not be limited to, use information and occupancy rates at each of the recreation facilities identified in the Review of Recreation Developments Section below. The Report on Recreational Resources shall comply with FERC's regulations at 18 CF Section 4.51(f) (1996), or as amended, and address the elements identified above that are to be included in the Recreation Survey and Recreation Demand Assessment. The Report on Recreational Resources shall be provided to FS, BLM, and/or Reclamation (as applicable) for review and comment prior to being filed with FERC. Within 1 year of submission of the Report on Recreation Resources,

FS, BLM, and/or Reclamation will meet to discuss the results of the Report and make recommendations to address the findings. FS, BLM, and/or Reclamation reserves the authority to require changes in the Project and its operation to accomplish protection and utilization of National Forest System, Bureau of Land Management, or Bureau of Reclamation resources identified as a result of these surveys.

Forest Service Liaison

The licensee shall provide an individual for liaison with FS, whenever planning or construction of recreation facilities, other major Project improvements, and maintenance activities are taking place within the National Forest. The licensee agrees to cooperate with FS through this individual in contract review and work inspection.

BLM Liaison

The licensee shall provide an individual for liaison with BLM, whenever planning or construction of recreation facilities, other major Project improvements, and maintenance activities are taking place within the Bureau of Land Management. The licensee agrees to cooperate with BLM through this individual in contract review and work inspection.

Reclamation Liaison

The licensee shall provide an individual for liaison with Reclamation, whenever planning or construction of recreation facilities, other major Project improvements, and maintenance activities are taking place within the Bureau of Reclamation. The licensee agrees to cooperate with Reclamation through this individual in contract review and work inspection.

Review of Recreation Developments

The licensee shall schedule a meeting with FS, BLM, and/or Reclamation (as applicable) at least every 6 years to review all Project-related recreation facilities described below and to agree upon necessary maintenance, rehabilitation, construction, and reconstruction work needed and its timing, as described below. Because the standard life of recreation facilities ranges from 20 to 30 years, it is anticipated that during the life of the license, facilities that are currently in good condition may need to be redesigned and reconstructed to standards applicable at that time. The criteria for project selection will depend on the amount and type of use, current recreation facility policy, condition of facilities, effects on surrounding areas, and other factors. Following the review, the licensee shall develop a 6-year schedule for maintenance, rehabilitation, and reconstruction, which shall be approved by FS, BLM, and/or Reclamation (as applicable) prior to being filed with FERC.

The following recreation facilities, which are associated with the Project, shall be reviewed in fulfilling the requirements of this Section. As new facilities are constructed under the terms of this Recreation Plan, they shall be included in the following list.

French Meadows Recreation Area

French Meadows Boat Ramp Picnic Area
French Meadows Boat Ramp
French Meadows RV Dump
McGuire Picnic Area
Poppy Campground Trailhead Parking and McGuire Boat Ramp Parking Areas
Poppy Campground
French Meadows Campground
Lewis Campground
McGuire Boat Ramp
Ahart Campground
Coyote Group Campground
French Meadows Reservoir Trail

Duncan Creek Diversion Area

Duncan Creek Primitive Camping Area

Hell Hole Recreation Area

Hell Hole Campground
Big Meadows Campground
Hell Hole boat Ramp and Associated Parking Areas
Hell Hole Vista and Associated Parking Area
Hell Hole Administrative Station
Hell Hole Reservoir Trail

Long Canyon Recreation Area

Middle Meadows Campground

Rubicon River Recreation Area

Ellicott's Bridge River Access Area

Ralston Afterbay Recreation Area

Ralston Afterbay Sediment Removal Access Point Area
Ralston Picnic Area

Middle Fork American River Peaking Reach Recreation Area

Indian Bar River Access Area
Cache Rock River Access Area
Dardanelles Creek River Use Area
San Francisco Bar River Use Area

Fords Bar (Upper and Lower) River Use Area
Canyon Creek River Access Area
Cherokee Bar River Use Area
Poverty Bar River Use Area
Mammoth Bar River Access Area
Murderer's Bar River Use Area
Confluence River Access Area
Quarry Trailhead and River Access Area
China Bar River Access Area

Recreation Implementation Plan

A recreation implementation plan shall be developed by the licensee in coordination with FS, BLM, Reclamation, and CDPR within 6 months of license issuance. The implementation plan shall include a construction schedule for the recreation facilities specified below, as well as other details related to recreation resources, including, but not limited to, signing and sign placement, public information dissemination, and a schedule for design of facilities to be reconstructed. The implementation plan shall be maintained and updated in conjunction with the review of recreation developments required below.

Specific Recreation Measures

The following list of initial recreation projects identified at time of license issuance, including construction, reconstruction, and restoration, shall be completed by the licensee at the sites listed below. The licensee will be responsible for the following items requiring FS, BLM, and/or Reclamation (as applicable) approval: survey; design; contract preparation and administration; environmental analysis and documentation necessary for construction of proposed facilities, including any permits; preparation of "as-built" drawings, and funding for any necessary agency reviews. The licensee will be responsible for funding the actual capital costs of the below-listed measures. All improvements will become property of FS, BLM, and/or Reclamation (as applicable) upon completion, final inspection, and acceptance by FS, BLM, and/or Reclamation (as applicable).

Whenever a facility or feature is replaced or removed it shall be properly disposed of according to current laws and regulations.

Hell Hole Reservoir Area

Hell Hole Campground

Within 3 years of license issuance, the licensee shall in consultation with the FS redesign and reconstruct elements of the campground to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

- Construct a loop access road and parking area for better trailer access and boat trailer parking.

- Design, furnish and install new campground site information signage.
- Construct a native surface foot/bicycle trail from the Hell Hole Campground to the Hell Hole Vista site. This trail shall meet all current FS standards, including design for accessibility. The trail use will be monitored by the Forest Service following construction, as described in below to determine if there is a need for paving or extension of the trail to other facilities in the Hell Hole area.
- Determine if a well and tank is needed to provide adequate drinking water to the campground.
- Thin trees within 150 feet of the campground.

Within 10 years of license issuance, the licensee shall survey campers in a manner approved by the FS in order to provide the basis for a determination of whether to convert the campground to a Group Campground consisting of one 25-PAOT site or to maintain it as a family campground. Based on a determination by the Forest Service, utilizing the results of the survey and other pertinent information, the licensee shall within 13 years of license issuance redesign and reconstruct the campground in consultation with the FS to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

If it is determined that a group campground should be constructed, provide the following:

- Construct a level kitchen area with five picnic tables, two serving tables, two group pedestal grills, one group fire ring, and two large bear resistant food lockers.
- Construct five level campsites of approximately 1,200 square feet each. Furnish and install one picnic table, one fire ring, and one bear-resistant food storage container in each. Existing picnic tables, food storage containers, and fire rings that meet current FS accessibility and condition standards may be refurbished and re-installed.
- Abandon existing faucets and construct three faucet units and sumps to facilitate group campground design.
- Construct compacted aggregate base walkways to meet current FS accessibility standards between parking, campsites and kitchen area.
- Construct a level information area near parking with appropriate signage.
- Re-install bear resistant garbage containers at locations to facilitate group campground design.
- Remove all existing facilities that are not utilized in the design of the group campground.
- Rehabilitate abandoned areas as needed.
- Install barriers on southeast boundary of the campground to protect nearby sensitive resources.

If it is determined that a family campground should be maintained, provide the following:

- Remove all campsite facilities at units # 4, #5 and #6 and rehabilitate areas as needed.
- Level and remove protrusions from remaining campsites.
- Replace non-accessible tables, refurbish and reset existing accessible tables, fire rings, and bear resistant food storage lockers.

- Reconstruct compacted aggregate base walkway to meet current FS accessibility standards between parking, campsites and information area.
- Reconstruct information area near new parking area.
- Abandon existing faucet units and construct three faucet units with sumps to facilitate new campground layout.
- Re-install bear resistant garbage containers along walkway.
- Install barriers on southeast boundary of the campground to protect nearby sensitive resources.

Big Meadows Campground

Within 3 years of license issuance, the licensee shall in consultation with the FS redesign and reconstruct the campground to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

- Construct an interpretive and informational kiosk with benches and signs.
- Level, remove protrusions and enlarge to 1200 s.f. minimum all campsites except those previously reconstructed (4, 6, 12, 14, 29, 30, 32, 34, 38, 39, 40).
- Replace tables, grills and fire rings in all campsites except those listed above. Tables, grills, fire rings and food storage lockers which meet current FS accessibility and good condition standards may be re-furbished and reset.

Within 7 years of license issuance, the licensee shall in consultation with the FS:

- Construct a native surface foot/bicycle trail from the Big Meadows Campground to the Hell Hole Vista site. This trail shall meet all current FS standards, including design for accessibility. The trail use will be monitored by the Forest Service following construction to determine if there is a need for paving or extension of the trail to other facilities in the Hell Hole area.

Upper Hell Hole Campground

Within 2 years of licensee issuance, the licensee shall remove all of the campsites and associated amenities at the Upper Hell Hole Campground. The following describes the specific elements of this condition:

- Remove all tables, fire rings, masonry stoves, and user-created fire rings from campsites 1–13.
- Remove pit toilets 1, 2, 3, and 4.
- Remove existing signage, information boards, and frames.
- Remove masonry steps between campground levels.
- Construct drainage control measures (such as waterbars and low rolling dips) along trails and other disturbed areas.
- Restore paths, barren and/or compacted areas through means agreed to by the FS to return the site to natural conditions.

Hell Hole Boat Ramp and Associated Parking Areas

Within 2 years of licensee issuance, the licensee shall complete the following specific elements of this condition:

- Obliterate and restore a portion of the upper parking area.
- Chipseal remaining parking area and roadway.
- Paint traffic markings.
- Reconstruct steps and path and clear adjacent vegetation.
- Replace chain link fence with black plastisol fencing.

Within 10 years of licensee issuance, the licensee shall complete the following specific elements of this condition:

- Provide potable water at the Hell Hole Boat Ramp.

During the first year following license issuance that the reservoir water surface elevation is drawn down to below 4,485 feet in elevation, the licensee shall in consultation with the FS and CDFG complete the specific elements of this condition (it may not be possible to extend the boat ramp to an elevation of 4,485 due to currently unknown factors. In this case, the licensee will extend the boat ramp as far as feasible):

- Extend the concrete boat ramp up to approximately 250 feet in length.

Hell Hole Vista and Associated Parking Area

Within 5 years of licensee issuance, the licensee shall complete the following specific elements of this condition:

- Reconstruct steps, path and viewing area to current FS design standards.
- Construct level area, free of protrusions, around picnic table and replace picnic table.

Hell Hole Administrative Station

Within 5 years of licensee issuance, the licensee shall reconstruct and rehabilitate the Hell Hole Administrative Station to be used as a shared administrative facility for staff, necessary storage and work space, and as a recreation rental to serve the visiting public that are looking for a recreation opportunity other than camping in proximity to Hell Hole Reservoir. Fees collected from the recreation rental will be used to operate and administer the recreation rental. The following describes the specific elements of this condition:

- Reconstruct and rehabilitate the facility as needed;
- Replace the water lines as needed.
- Reconstruct, re-align, and resurface with asphalt concrete, the parking area and landscaping to meet the needs of administrative and recreational users.
- Construct and install informational signboards.

Hell Hole Reservoir Trail

Within 5 years of licensee issuance, the licensee shall reconstruct and rehabilitate the Hell Hole Reservoir Trail (Forest Trail 14E02) to FS design standards from the Hell Hole Reservoir Dam extending 7.5 miles to its terminus at FR 14N09A (now identified as Forest Trail 14E03). In addition, the licensee will develop, install, and maintain signage identifying the Upper Hell Hole Trail to replace the existing signage. One sign will be placed near the west end of Hell Hole Dam and the other sign will be located at the east end of Hell Hole Dam. The information contained on these signs, mounting methods and specific mounting locations will be determined in consultation with the FS.

French Meadows Recreation Area

Within 5 years of license issuance, the licensee shall replace the entire French Meadows Campground South Shore Water Supply infrastructure including drains, valves, pipe, and other items; and bring the access road/trail up to current Forest Service standards.

Within 5 years of license issuance, the licensee shall replace the entire Dolly Creek (French Meadows North Shore) Water Supply infrastructure including drains, valves, pipe, and other items and bring the access road/trail up to current Forest Service standards

Develop, install, sign and maintain a non-motorized bicycle trail between French Meadows Campground and LL Anderson Dam to provide recreation opportunities at French Meadows Reservoir

Ahart Campground

Within 5 years of license issuance, the licensee shall redesign and reconstruct the 12-unit campground to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition

- Abandon site 9, treat compacted and restore barren and/or compacted areas in a manner that is approved by the FS
- Replace all tables with accessible ones.
- Replace all fire rings with accessible ones.
- Reset food storage lockers after sites have been graded to meet accessibility standards.
- Replace two double-unit vault toilets with two single unit pre-fabricated concrete vault accessible toilets.
- Grade walkways and add compacted aggregate base between camp units and spurs/roadway for accessibility.
- Grade FR 96-91 and interior campground road and surface with compacted aggregate base.
- Reconstruct and surface, with compacted aggregate base, all spurs to meet current accessibility standards. Reset rock barriers to allow for access from spurs to units.

- Provide potable water with one hand pump. The licensee shall consult with FS to determine if an alternative measure is feasible if potable water source is not found at or near the campground.
- Level and remove protrusions and compact campsites to a minimum of 1,200 square feet.
- Construct drainage diversion around sites #1 and #8.
- Replace all wood barriers with rock barriers.
- Place additional barrier rock at sites #1 and #2. Grade Entrance Road 96-91 and all interior campground roads and surface with compacted aggregate base.
- Repair and pave Forest Road 96 from the end of the pavement near the 42 road intersection past campsite 10 in the Ahart campground.
- Remove hazard trees and unacceptable fuel loads, and thin trees within 150 feet of the campground. Fuel loads will be approved by FS.
- Repair/install information board and provide applicable signage.

French Meadows Campground

Within 5 years of license issuance, the licensee shall redesign and reconstruct the 75-unit campground to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

- Construct trash bin pads with paved approaches, and purchase or retrofit refuse containers for accessibility and bear resistance.
- Replace all fee station signage.
- Replace all non-accessible tables with accessible ones. Existing tables meeting current accessibility standards may be refurbished and re-installed.
- Replace all non-accessible fire rings with accessible ones. Existing fire rings meeting current accessibility standards may be refurbished and re-installed.
- Replace two double-unit vault toilets with 4 single-unit vault toilets and the four double-unit flush toilets in kind with pre-fabricated concrete accessible units. Relocate toilets close to roads and construct accessible turnout at each location. Construct accessible walkways from turnouts/roads to the toilets. Replace septic system.
- Install holding tanks at two campground host units' sites # 3 and 32.
- Grade walkways between camp units and spurs for accessibility. Construct wood steps where walkways are over 5 percent. Replace existing wood steps where needed.
- Slurry seal access and all interior campground roads; mark with directional information.
- Reconstruct and pave all spurs to meet current accessibility standards. Reset barriers to allow for access from spurs to units.
- Replace/and or relocate fifteen faucet units with sumps and provide level paved pads at front and side of the faucet units to provide for accessibility.
- Level, remove protrusions and compact campsites to a minimum of 1,200 square feet.
- Widen or lengthen spurs in consultation with FS. Sites other than these may be widened or lengthened, the following are considered the minimum sites to be enhanced to meet accessibility standards:
 - Convert sites 61 and 62; 33 and 2; and sites 19 and 20 to become pull through double sites sized to be a minimum of 2400 sq.ft. each.

- Enlarge living areas at sites 24, 34, 66, sized to be a minimum of 1200 sq.ft. each.
- Relocate sites 6, 11, 43, and 71 to the end of the spur.
- Move site 8 away from the road.
- Remove sites 16, 55, 65, 69, 72 and restore barren and/or compacted areas through means agreed to by the FS to return the sites to natural conditions.
- Remove hazard trees and unacceptable fuel loads, and thin trees within 150 feet of the campground. Fuel loads will be approved by FS.
- Replace message boards and information boards.
- Reconstruct interior campground road; replace or repair culverts and other drainage structures.
- Move the entry gate to between site 1 and the intersection for the east loop road.
- Furnish and install one accessible single unit toilet between sites 59 and 61.
- Replace bear resistant food lockers at sites 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28 with larger bear resistant food lockers with a minimum of 30 cubic feet storage space.

Lewis Campground

Within 7 years of license issuance, the licensee shall redesign and reconstruct the 40-unit campground to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

- Construct trash bin pads with paved approaches, and purchase or retrofit refuse containers for accessibility and bear resistance.
- Replace all non-accessible tables with accessible tables. Existing tables meeting current accessibility standards may be refurbished and re-installed.
- Replace non-accessible fire rings with accessible ones. Existing fire rings meeting current accessibility standards may be refurbished and re-installed.
- For accessibility reset food storage lockers after sites have been graded.
- Replace two double-unit vault and two double-unit flush toilets in kind with pre-fabricated concrete accessible units. Relocate toilets close to road and construct an accessible turnout at each location. Construct accessible walkways from turnouts/roads to the toilets. Replace septic system.
- Grade walkways between camp units and spurs/roadway for accessibility.
- Slurry seal access and all interior campground roads.
- Reconstruct and pave all spurs to meet current accessibility standards. Reset barriers to allow for access from spurs to units.
- Replace and/or relocate eleven faucet units with sumps, and provide level paved pads at front and sides of the faucet units for accessibility.
- Level and remove protrusions and compact campsites to a minimum of 1,200 square feet.
- Widen or lengthen spurs in consultation with the Forest Service. Sites other than these may be widened or lengthened, the following are considered the minimum sites to be enhanced to meet accessibility standards:
 - Convert sites 27 and 29 to become pull through double sites sized to be a minimum of 2400 square feet.
 - Enlarge living area in sites 5 and 20 to be a minimum of 1200 square feet in size each.

- Widen site 37 to 16 feet.
- Widen sites 21, 38 and 39 to 20 feet.
- Lengthen spur for site 13 to 50 feet and move the site.
- Move the spur into sites 25, 38.
- Move sites and spurs for 19, 26, 28
- Move site 17 to the northern side.
- Remove sites 7 and 36 and restore barren and/or compacted areas through means agreed to by the FS to return the sites to natural conditions.
- Install holding tank at the campground host site # 1.
- Remove hazard trees and unacceptable fuel loads, and thin trees within 150 feet of the campground. Fuel loads will be approved by FS.
- Replace message and information boards.
- Perform maintenance or minor reconstruction on interior campground roads.

Poppy Campground

Within 5 years of license issuance, the licensee shall redesign and reconstruct the 12-unit campground to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

- Abandon units 6, 9, 11 and 12. Remove all improvements and restore barren and/or compacted areas through means agreed to by the FS to return the sites to natural conditions.
- Replace two single unit toilets with one accessible single unit toilet. Type of toilet will be determined at the time of construction and approved by the FS based on advances in technology which deals with low/no maintenance issues.
- Replace all signs and bulletin boards.
- Replace all tables with accessible ones.
- Replace all fire rings with accessible ones.
- Remove hazard trees and unacceptable fuel loads, and thin trees within 150 feet of the campground. Fuel loads will be approved by FS.
- Reconstruct the access trail from Poppy campground to its terminus at the lower McGuire parking area to meet FS design standards.
- Level, remove protrusions and compact the remaining campsites to a minimum of 1,200 square feet.
- Place a Poppy Campground sign at maximum water surface elevation to be seen from the reservoir.
- Place sign from Poppy Campground on the Western States Trail (16E10) directing traffic to the trailhead at Poppy/McGuire Parking and to Red Star Ridge (to the southwest).
- Install bear lockers at each site

Coyote Group Campground

Within 10 years of license issuance, the licensee shall redesign and reconstruct the four group campsites to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

Little Wolf Group Site (25 PAOT):

- Refurbish and reinstall serving tables, and reset pedestal grill, benches, and food storage lockers.
- Reconstruct the existing four RV spurs to meet current accessibility standards and paint traffic markings after reconstruction.
- Replace two faucet units and sumps.
- Level and remove protrusions and compact kitchen area and tent area to accommodate twelve 2-person tents. Replace picnic tables and group fire ring.
- Repave walkway to campsite to meet current accessibility standards.
- Remove hazard trees and unacceptable fuel loads, and thin trees within 150' of the campground. Fuel loads will be approved by FS.

Brush Wolf Group Site (25 PAOT):

- Replace picnic tables, benches, and group fire ring.
- Refurbish and reinstall serving tables; reset pedestal grill and food storage lockers.
- Remove hazard trees and unacceptable fuel loads, and thin trees within 150 feet of the campground. Fuel loads will be approved by FS.
- Level and remove protrusions and compact kitchen area and tent area to accommodate twelve 2-person tents.
- Grade and surface walkway to campsite with compacted aggregate base to meet current accessibility standards.
- Reconstruct the existing four RV spurs to meet current accessibility standards and paint traffic markings after reconstruction.
- Replace barrier posts with barrier rocks.

Prairie Wolf Group Site (25 PAOT):

- Remove faucet units and sumps in kitchen area.
- Replace picnic tables, benches, grill, and fire ring.
- Refurbish and re-install serving tables.
- Replace 2-unit vault toilet with 2-unit pre-cast concrete accessible toilet.
- Reconstruct the existing six RV spurs to meet current accessibility standards and paint traffic markings after reconstruction.
- Grade and surface walkway to campsite with compacted aggregate base to meet current accessibility standards.
- Remove hazard trees and unacceptable fuel loads, and thin trees within 150 feet of the campground. Fuel loads will be approved by FS.

Black Bear Group Site (50 PAOT):

- Replace picnic tables, non-accessible benches, and fire ring.
- Refurbish and re-install serving tables and accessible benches, reset food storage lockers.
- Level and remove protrusions and compact kitchen area and tent area to accommodate 25 2-person tents.
- Reconstruct the existing seven RV spurs to meet current accessibility standards and paint after reconstruction.

- Replace two faucet units and sumps.
- Remove hazard trees and unacceptable fuel loads, and thin trees within 150 feet of the campground. Fuel loads will be approved by FS.

Gates Group Campground

- Within 5 years of license issuance, the licensee shall redesign and reconstruct the 3-group campsites, to meet all current FS standards including design for accessibility.
- Construct and sign a trail (or 2) from the group camps to the Middle Fork American River that can be accessed by all Gates group visitors. Close, restore or rehabilitate user created trails that are causing resource damage (eroding) or impacting sensitive resources.

Ponderosa Group Site (75 PAOT):

- Remove concrete stoves and replace with group pedestal grills.
- Replace picnic tables, heavy wood benches, and group fire ring.
- Refurbish and re-install existing serving tables and benches.
- Grade and surface walkway to campsite with compacted aggregate base to meet current accessibility standards.
- Install all bear proof food lockers onto concrete pads for accessibility
- Reconstruct the existing twelve RV spurs to meet current accessibility standards and paint traffic markings after reconstruction.
- Remove one and replace two faucet units and sumps within kitchen area. Replace one faucet unit and sump near each toilet.
- Remove protrusions (e.g. stumps, rocks) from campsites.
- Remove hazard trees and unacceptable fuel loads, and thin trees within 150 feet of the campground. Fuel loads will be approved by FS.

Aspen Group Site (25 PAOT):

- Remove concrete stoves and replace with group pedestal grills.
- Replace picnic tables and group fire ring.
- Refurbish and re-install existing serving tables and benches.
- Grade and surface walkway to campsite with compacted aggregate base to meet current accessibility standards.
- Install all bear proof food lockers onto concrete pads for accessibility
- Reconstruct the existing four RV spurs to meet current accessibility standards and paint traffic markings after reconstruction.
- Replace three faucet units with sumps.
- Remove protrusions (i.e. stumps, rocks) from campsite.
- Remove hazard trees and unacceptable fuel loads, and thin trees within 150 feet of the campground. Fuel loads will be approved by FS.

Lodgepole Group Site (25 PAOT):

- Remove concrete stoves and replace with group pedestal grills.
- Replace picnic tables and group fire ring.
- Refurbish and re-install existing serving tables and benches.

- Install all bear proof food lockers onto concrete pads for accessibility
- Add barrier rocks.
- Grade and surface walkway to campsite with compacted aggregate base to meet current accessibility standards.
- Reconstruct the existing four RV spurs to meet current accessibility standards and paint traffic markings after reconstruction.
- Replace three faucet units with sumps.
- Remove protrusions (e.g. stumps, rocks) from campsite.
- Remove hazard trees and unacceptable fuel loads, and thin trees within 150 feet of the campground. Fuel loads will be approved by FS.

French Meadows Boat Ramp

Within 3 years of license issuance, the licensee shall upgrade the facilities to meet the current FS design standards including design for accessibility. The following describes the specific elements of this condition:

- Reconstruct the drainage ditch.
- Replace Signs – No camping, boat ramp parking.
- Replace bulletin board.
- Replace all regulatory signs.
- Install two accessible picnic tables and fire rings south of the boat ramp parking across from existing toilets.
- Construct accessible walk ways to the picnic tables and fire rings.
- Construct accessible walkways between parking, toilets, and faucet units.
- Replace and relocate faucet unit with sump to accessible location if current location can't be made accessible.
- Replace flush toilet with accessible double unit pre-cast vault concrete toilet.
- Re-establish entry road clearing limits.
- Asphalt overlay entry road.
- Replace boat ramp concrete.
- Extend boat ramp to water level for critically dry year for fire suppression (timing to be opportunistic if possible – during a CD year).
- Paint traffic markings in temporary parking area to meet current accessibility standards.
- Replace wood parking barriers with barrier rock.
- Replace metal post and cable barriers with barrier rock.
- Thin trees adjacent to all parking areas, picnic areas, buildings, roads and trails to 150 feet from the facility.

French Meadows Boat Ramp Picnic Area

Within 3 years of license issuance, the licensee shall relocate some of the improvements from this picnic area and restore barren and/or compacted areas in a manner that is approved by the FS.

French Meadows RV Dump

Within 3 years of license issuance, the licensee shall upgrade the facilities to meet the current FS design standards including design for accessibility. The following describes the specific elements of this condition:

- Remove unused concrete pad.
- Stripe parking lot.
- Replace faucet unit and sump. Reconstruct route to faucet unit to meet current FS accessibility standards.

McGuire Boat Ramp

Within 5 years of license issuance, the licensee shall upgrade the facilities to meet the current FS design standards including design for accessibility. The following describes the specific elements of this condition:

- Replace signage.
- Repair and reseal boat ramp.
- Repair concrete turn around at top of the boat ramp.

McGuire Boat Ramp and Associated Parking Areas (Including Poppy Campground Trailhead Parking Area)

Within 2 years of license issuance, the licensee shall upgrade the facilities to meet the current FS design standards including design for accessibility. The following describes the specific elements of this condition:

- Remove Poppy Campground Trailhead access road and parking area and restore barren and/or compacted areas through means agreed to by the FS to return the sites to natural conditions.
- Remove post and cable barriers.
- Install barrier rock along road and at the entrance to Poppy Campground Trailhead parking area to prohibit motorized vehicle entry.
- Prepare the surface of the access road and parking area to allow for re-vegetation.
- Remove the flush toilet building and faucet and drains and the fire hydrant in or near the Poppy Campground Trailhead Parking Area.
- Remove the existing vault toilet building.
- Develop the Southeast McGuire Parking to include parking for Poppy Campground Trailhead:
 - Pave the closest six parking spaces to the North Shore Road, paint traffic markings and sign as reserved for Poppy Campground Trailhead Parking Only.
 - In a centralized place between the Poppy Campground Parking, Poppy Trailhead sign, and near the North Shore road:
 - Construct trash bin pads with paved approaches, and purchase or retrofit one double refuse container and 1 recycling container for accessibility and bear resistance.

- Furnish and install fee station and information boards.
- Furnish and install pre-cast double unit toilet
- Construct one accessible faucet unit with sump near toilet and trash container.
- Provide accessible walkways between facilities (toilet, trash, faucet units, parking, and information board.
- Extend the Poppy Trail to the new Trailhead location
- Install signage between the trailhead and Poppy Campground.
- Install barrier rock around the perimeter of the entire Southeast McGuire Parking lot.
- Sign the remainder of the Southeast McGuire Parking lot for boat ramp parking.
- Provide an accessible walkway between the boat ramp parking and the boat ramp/shoreline with appropriate signage.
- Referencing Map REC 1-17 “McGuire Boat Ramp, Picnic Area and Beach and Associated Parking Areas” near the Recreation Road Reference Point F: Remove the southern loop of the Parking NE Lot parking lot access road . Widen “E” to accommodate two way traffic. Restore barren and/or compacted areas through means agreed to by the FS to return the sites to natural conditions.
- Monitor boat ramp use for safety issues and serviceability in order to determine when the boat ramp needs to be replaced.

McGuire Picnic Area

Within 4 years of license issuance, the licensee shall redesign and convert the picnic area into one 25 PAOT and one 50 PAOT group campsite which meets all current FS standards including design for accessibility. The following describes the specific elements of this condition:

- Remove all existing facilities associated with the picnic and beach area.
- Asphalt overlay entry road.
- Asphalt overlay parking lot.
- Paint traffic markings and sign for accessibility.
- Delineate the parking areas between the group campsites with barrier rock.
- Provide pathways to facilities to meet accessibility standards

For Group Site #1 (50 PAOT):

- Construct trash bin pads with paved approaches, and purchase or retrofit 4 double refuse containers and 2 recycling containers for accessibility and bear resistance.
- Furnish and install information signs.
- Furnish and install the following furnishings.
 - Four serving tables.
 - Eight picnic tables.
 - Four group grills.
 - One group fire ring.
 - Twelve benches.
 - Four group bear-resistant food lockers.
 - Three faucet units with sumps.
- Furnish and install two flush pre-cast double unit concrete toilets.

- Level tent area to accommodate 25 two-person tents

For Group Site #2 (25 PAOT):

- Construct trash bin pads with paved approaches, and purchase or retrofit two double refuse containers and two recycling containers for accessibility and bear resistance.
- Furnish and install information signs.
- Furnish and install the following furnishings.
 - Two serving tables.
 - Two group grills.
 - One group fire ring.
 - Six benches.
 - Two group bear-resistant food lockers.
 - Two faucet units with sumps.
- Furnish and install one flush pre-cast double unit concrete toilets.
- Level tent area to accommodate twelve two-person tents.

Duncan Creek Diversion Area

Within 3 years of license issuance, the licensee shall make the following improvements that would continue to maintain the rustic semi primitive setting with opportunity to camp overnight. The following describes the specific elements of this condition:

- Install a single unit pre-cast vault toilet.
- Install one 2-bin bear-resistant garbage container
- Install barrier rocks around the perimeter of the dispersed concentrated use area to delineate the area and prohibit motorized access outside of the use area (to be delineated on the ground by FS and the licensee).

Construct and install an information board.]Remove hazards including hazard trees. Reduce fuel build ups within 150 feet of the delineated area.

Long Canyon Recreation Area, Middle Meadows Group Campground

Within 10 years of licensee issuance, or at such time when the occupancy rate at the two existing Middle Meadows Group Campgrounds exceed the triggers identified below, the licensee shall design and construct one additional 50 PAOT group camp site to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

- Install one pre-cast double unit concrete toilet.
- Construct access road, parking area and associated barrier rocks with sufficient capacity for 50 PAOT site.
- Furnish and install the following furnishings:
 - Four serving tables.
 - Four group grills.
 - One group fire ring

- Twelve benches
- Four group bear-resistant food lockers
- Three faucet units with sumps
- Level tent area to accommodate 25 two-person tents
- Construct trash bin pads with paved approaches, and purchase or retrofit refuse containers for accessibility and bear resistance.
- Construct accessible walkways from the camp unit to the toilet and parking area.
- Install bulletin boards and other necessary signage throughout the camp unit.

In addition, within 10 years of license issuance, the licensee shall install a photovoltaic solar power source and a backup generator providing power for potable water.

Rubicon River Recreation Area, Ellicott’s Bridge River Access Area

Within 5 years of licensee issuance, the licensee shall design and construct a 6-vehicle river access parking area along Forest Road 14N08 at the Ellicott’s Bridge crossing of the Rubicon River. This river access parking area shall be designed and constructed to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

- Install one pre-cast concrete toilet and construct accessible walkway from parking area to toilet.
- Harden the parking area surface and install barrier rocks to restrict vehicle access beyond the parking area.
- Install an informational bulletin board.

Middle Fork Interbay Area

- Provide and maintain sanitation facilities for recreationists at Interbay.

Within 1 year of license issuance and in consultation with the Forest Service, determine non-motorized public access routes upstream of the powerhouse that would provide security for PCWA’s operation and maintenance of the project.

Ralston Afterbay Sediment Removal Access Point Area

Within 2 years of license issuance, the licensee shall upgrade facilities to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

- Delineate the boat ramp and parking area with barrier rock.
- Grade the ramp to remove large cobbles and rocks.
- Install signage and barriers to limit parking.
- Install signage directing visitors to the Ralston Picnic Area for facilities and parking.

Ralston Picnic Area

Within 2 years of license issuance, the licensee shall upgrade facilities to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

- Remove all improvements at site #1 and #5 and restore barren and/or compacted areas through means agreed to by the FS to return the sites to natural conditions.
- Repave the parking area and paint traffic markings.
- Install day use only and no overnight camping signs
- Install signs directing recreationists to the afterbay access point.
- Provide accessible walkways between picnic sites, toilet, information board, and garbage facilities.
- Level, remove protrusions and increase living area size to 400 s.f. minimum at remaining three picnic sites.
- Replace tables and pedestal grills at three picnic sites.
- Provide, maintain, and sign a non-motorized access trail upstream of the Ralston Picnic Area as far as the MFAR temperature gage and if feasible continue the trail for another 0.5 to 1 mile upstream.
- Install an information board.

Middle Fork American River Peaking Reach Recreation Area

The following recreation sites in the peaking reach are on NFS lands:

- Indian Bar
- Cache Rock

The following recreation sites on the peaking reach are on BLM lands:

- Dardanelles Creek
- San Francisco Bar
- Fords Bar (both Upper and Lower)
- Canyon Creek
- Ruck-a-Chucky/Greenwood

The following recreation sites on the peaking reach are on Reclamation lands:

- Cherokee Bar
- Poverty Bar
- Mammoth Bar
- Murderer's Bar
- The Confluence
- Quarry Trailhead and River Access
- China Bar (includes Birdsall and Oregon Bar river access points)

All recreation improvements in the peaking reach must be consistent with the Wild and Scenic River classification for the Middle Fork American River.

Indian Bar River Access Area

Within 3 years of license issuance, the licensee shall upgrade the facilities to meet the current FS design standards including design for accessibility. The following describes the specific elements of this condition:

- Install a raft slide ramp.
- Install additional accessible pre-cast vault toilets or modify the existing toilets to accommodate peak use.
- Install ventilation systems to the existing toilet facilities (build in a monitoring system to determine the need for this after some measures are implemented in 2011).
- Develop and maintain a trail from the parking area and restrooms to the beach area. Provide signage and an information board.
- In collaboration with the FS and their cooperators, determine if seasonal sanitation facilities are necessary immediately adjacent to the beach area.
- Provide and install signage, including the appropriate regulation so that citation is possible, that notifies the public that the area is closed to mineral withdrawal.
- Provide signage that permits overnight camping at the designated parking area from October through March.
- Provide signage that prohibits overnight camping at the designated parking area from April through September.
- Depending upon the future configuration of the sediment pile (the designated parking area is reduced 50 percent or more from the 2010 footprint) provide 2 accessible picnic tables with shade ramadas on the area designated the overflow parking area on Map REC 1-23. Install a changing pavilion (minimum of 2-sided, gender assigned)
- Install or replace information boards

Cache Rock River Access Area

Within 10 years of licensee issuance, or at such time after 10 years when the Forest Service acquires public motor vehicle access to the Cache Rock River Access Area, the licensee shall design and construct a 10-vehicle river access parking area along Forest Road 14N35A at Cache Rock along the Rubicon River. This river access parking area shall be designed and constructed to meet all current FS standards including design for accessibility. The following describes the specific elements of this condition:

- Install one single unit pre-cast concrete toilet and construct accessible walkway from parking area to toilet.
- Reconstruct the Four-Wheel Drive access road to a level which addresses drainage needs but need not provide for passenger vehicle access. Grade the parking area and install barrier rocks to restrict vehicle access beyond the parking area.
- Install an informational bulletin board.
- Construct an access trail from the parking area to the Middle Fork American River.

Dardanelles Creek

Within 5 years of license issuance, the licensee shall upgrade the facilities to meet the current BLM design standards including design for accessibility. The following describes the specific elements of this condition:

- A composting toilet including concrete foundation, building and composting unit.
- An interpretive panel regarding the historic resources to enhance the visitor experience.

San Francisco Bar

Within 5 years of license issuance, the licensee shall upgrade the facilities to meet the current BLM design standards including design for accessibility. The following describes the specific elements of this condition:

- A composting toilet including concrete foundation, building and composting unit.
- An interpretive sign/kiosk or panel.

Canyon Creek

Within 5 years of license issuance, the licensee shall upgrade the facilities to meet the current BLM design standards including design for accessibility. The following describes the specific elements of this condition:

- A formal trail constructed from the river landing to the composting toilet location.
- An interpretive panel/kiosk at this site to enhance the visitor experience.

Ruck-a-Chucky/Greenwood

Within 5 years of license issuance, the licensee shall upgrade the facilities to meet the current BLM design standards including design for accessibility. The following describes the specific elements of this condition:

- An information/interpretive sign kiosk.
- Provide additional parking capacity, approximately 20-30 vehicle spaces (including at the Francisco Flat site). This may require some access road improvement to parking area to be improved.
- Annual grading and repair of road.
- Improve the Ruck-a-Chucky Rapid portage trail and access points to the trail.

Cherokee Bar

Within 5 years of license issuance, the licensee shall upgrade the facilities to meet the current Reclamation design standards including design for accessibility. The following describes the specific elements of this condition:

- Within 10 years of license issuance, the licensee shall install a pre-cast concrete vault toilet at this site.
- An information/interpretive sign kiosk.

Mammoth Bar

Within 5 years of license issuance, the licensee shall make improvements to the river access (boating take-out/put-in) and parking. These improvements specifically include:

- Re-grading the parking area and expanding the river access and parking area.
- An information/interpretive sign kiosk.

Poverty Bar

Monitor the use of this site and based on use levels, install a composting toilet at this location to address potential human waste issues.

Confluence

Within 5 years of license issuance the licensee will make the following improvements at this site:

- Install a double pre-cast concrete vault toilet;
- Develop improved parking (paved and striped) where possible;
- an information/interpretive sign kiosk;
- Construct a concrete river access trail for boat launching,

This new river access trail would be built to provide access below the Highway 49 rapid which is problematic for inexperienced boaters. The trail would be built on the outside bend of the turn just below the Confluence. The trail would be built to accessible standards across some challenging terrain. The trail would be constructed with concrete to withstand winter floods.

Murderer's Bar

Monitor use of the Murderer's Bar run and develop a portage trail around the Class V-VI rapid as use of the run warrants.

Quarry Trailhead and River Access

Within 5 years of license issuance the licensee will install a pre-cast concrete vault toilet at this site.

China Bar

Within 10 years of license issuance, develop and implement a plan for additional river access facilities for the China Bar area. These new facilities may include additional vehicle access and

parking in the China Bar area. The likely location for these additional facilities is on the south side of the river at the large flat across from the Birdsall access and the American River Pump Station. Access to the river would be via existing roads from Cool. The planning of these facilities would be done in collaboration with and subject to the approval of Reclamation, the federal land owner, and the managing agency, which is currently CDPR.

The specific future facilities for this site may include:

- Improvement of the access road from Salt Creek down to the flat above the North Fork of the American River. This may include installation or replacement of culverts, grading and installation of crushed rock.
- Installation of poles gates across roads and trails which intersect the primary access road to the river.
- Fencing along the access road in several locations (.5 to 1 mile of fencing) to deter off road vehicle access.
- Grading of the large flat to accommodate 100-200 vehicles.
- Installation of large rock barriers (and gates as needed) around the parking area to delineate and contain vehicles.
- Development of a river access and boating equipment pick up spot at river level opposite the Birdsall access. This would involve grading the road from the parking area to the river and delineating a turn around and temporary parking area.
- Installation of a double pre-cast concrete vault toilet.
- Installation of shade ramadas and picnic tables adjacent to the parking area.
- Information signs, self service fee station and animal proof trash containers.

Within 3 years of license issuance, the licensee will conduct an assessment the Pump Station Bypass Channel to determine if it can be modified to better serve recreational boaters, including both casual downriver boaters and whitewater play boaters, at the range of flows the occurs during the summer season, from 200-1000 cfs. If a feasible plan can be developed, the modification would be implemented within 5 years of license issuance.

One specific heavy maintenance item is the relationship of the sediment management activities at Ralston Afterbay and the river access parking area at Indian Bar:

- Ensure that sediment management activities at Indian Bar are designed and constructed to ensure adequate public parking is maintained at the Indian Bar River Access Area.

Heavy Maintenance

The licensee will be responsible for the cost of the necessary maintenance, rehabilitation, and reconstruction, including the costs of design, administration and agency reviews, as determined through the Review of Recreation Developments (as described above) for the Project recreation facilities. Heavy maintenance and rehabilitation are defined as work that is necessary to keep existing facilities in serviceable condition to meet FS, BLM, or Reclamation (as applicable) standards and includes components of recreation facilities such as water systems, traffic control barriers, roads, spurs, and associated drainage structures, grills and fire rings, picnic tables,

toilets, and signboards. The licensee shall use each respective agency's standards for the frequency of heavy maintenance as a guideline, but not a prescription, for licensee's performance of its heavy maintenance responsibilities. As determined through the Review of Recreation Developments described above, heavy maintenance projects may be deferred that would otherwise be timely under each respective agency's frequency standards, if FS, BLM, and/or Reclamation (as applicable) determines that actual conditions indicate that the project is not yet necessary.

More specifically, heavy maintenance may include, but is not limited to, the following items over the term of the license:

- Repairing, re-surfacing and re-striping paved areas.
- Re-grading gravel parking lots and installing additional crushed rock.
- Replacing culverts, drainage repairs and other heavy maintenance along access roads.
- Grading, repaving, patching, dust control and repairing access roads and road shoulders as needed.
- Re-roofing and painting buildings.
- Replacing picnic tables and other accessory structures.
- Replacing the composting unit on the composting toilets.
- Replacing vault toilets every 20-25 years.
- Replacing information kiosks, signs, gates and trash containers.
- Painting pre-cast concrete vault toilets and other buildings every 3-5 years.

Recreation Operation, Maintenance, and Administration

Forest Service

Beginning the first full year after license issuance, the licensee shall annually pay to FS \$535,000 (year 2010 cost basis) The cost shall be escalated annually based on the U.S. Gross Domestic Product – Implicit Price Deflator (GDP-IDP) in accordance with a collection agreement with the FS, and may be reduced by the amount of fees collected by the Forest Service that are available for operation and maintenance of the facilities listed above. These funds are for FS to provide for operation, maintenance, and administration of those developed recreation sites, facilities, or uses that are adjacent to or in the vicinity of Project reservoirs and facilities listed above (either developed as part of the original/amended license or affected by operations). This will include, but not be limited to, managing use within and immediately adjacent to the Project boundary, and performing both regular and annual maintenance. In addition, this will fund the special use permit administration required for facilities developed as part of the original/amended license and operated by a concessionaire. Work to be completed within these areas is to consist of conducting patrols, picking up litter, providing public information, enforcing rules and regulations, rehabilitating impacted areas, addressing sanitation, maintaining day use sites (such as concentrated use areas), maintaining trails, information signs, and regulatory signs, responding to fires and other emergencies, assisting in search and rescue, addressing resource impacts, and area condition monitoring.

Bureau of Land Management

Beginning the first full year after license issuance, the licensee shall annually pay to BLM \$254,537.72 (year 2010 cost basis) The cost shall be escalated annually based on the U.S. Gross Domestic Product – Implicit Price Deflator (GDP-IDP) in accordance with a collection agreement with the BLM. These funds are for BLM to provide for operation, maintenance, and administration of those developed recreation sites, facilities, or uses that are adjacent to or in the affected footprint downstream of Project reservoirs and facilities listed in ADD (either developed as part of the original/amended license or affected by operations). This will include, but not be limited to, managing use within and immediately adjacent to the Project boundary and within the affected footprint downstream of the project, and performing both regular and annual maintenance. In addition, this will fund the special use permit administration required for facilities developed as part of the original/amended license and operated by a concessionaire. Work to be completed within these areas is to consist of conducting patrols, picking up litter, providing public information, enforcing rules and regulations, rehabilitating impacted areas, addressing sanitation, maintaining day use sites (such as concentrated use areas), maintaining trails, information signs, and regulatory signs, responding to fires and other emergencies, assisting in search and rescue, addressing resource impacts, and area condition monitoring.

Bureau of Reclamation

Beginning the first full year after license issuance, the licensee shall annually pay to Reclamation \$181,906.72 (year 2010 cost basis) The cost shall be escalated annually based on the U.S. Gross Domestic Product – Implicit Price Deflator (GDP-IDP) in accordance with a collection agreement with the Reclamation. These funds are for Reclamation to provide for operation, maintenance, and administration of those developed recreation sites, facilities, or uses that are adjacent to or in the vicinity of Project reservoirs and facilities listed in ADD (either developed as part of the original/amended license or affected by operations). This will include, but not be limited to, managing use within and immediately adjacent to the Project boundary, and performing both regular and annual maintenance. In addition, this will fund the special use permit administration required for facilities developed as part of the original/amended license and operated by a concessionaire. Work to be completed within these areas is to consist of conducting patrols, picking up litter, providing public information, enforcing rules and regulations, rehabilitating impacted areas, addressing sanitation, maintaining day use sites (such as concentrated use areas), maintaining trails, information signs, and regulatory signs, responding to fires and other emergencies, assisting in search and rescue, addressing resource impacts, and area condition monitoring.

Public Information Services

Dissemination of Real-Time Flow Information

The licensee will provide real-time flow information as follows:

- Rubicon River Gage above Ralston Powerhouse (United States Geological Survey [USGS] Gage No. 11433200);
- South Fork Long Canyon Creek Gage below Diversion Dam (SFLCC);

- North Fork Long Canyon Creek Gage below Diversion Dam (NFLCC);
- Duncan Creek Gage and Weir below Diversion Dam (USGS Gage and Weir No. 11427750);
- Middle Fork American River Gage and Weir below French Meadows Dam (USGS Gage and Weir No. 11427500);
- Middle Fork American River Gage above Middle Fork Powerhouse (USGS Gage No. 11427760);
- Middle Fork American River Gage below Interbay Dam (MFARIB);
- Middle Fork American River Gage near Foresthill (USGS Gage No. 11433300) also known as Middle Fork American River Gage below Oxbow Powerhouse and referred to by the California Data Exchange Center (CDEC) as OXB; and
- North Fork American River Gage above American River Pump Station (NFARPS).

The licensee will provide real-time (15-minute) flow data for each of these sites on licensee’s website. The licensee will also make the data available to CDEC but cannot guarantee that CDEC will post the data. Real-time flow data for one of the above gages, USGS Gage No. 1143300, is already collected and provided to the public via the internet by CDEC. At a minimum, the flow data on the licensee’s webpage will show the most recent 14 days of flow information. It is important to note that this data will not have been checked for accuracy by the licensee or the USGS before posting. Therefore, the data may be subject to change. All streamflow values may be rounded to the nearest cubic feet per second (cfs), and any plots or tables showing these data may be labeled with the following or similar language: “These provisional stream flow data have not been reviewed or edited for accuracy and may be subject to significant change.”

In addition to providing flow information, the licensee will provide the following information on the website:

- Notification that one (or more) of the Project reservoirs is spilling or that a spill event is eminent (if projectable);
- Notification of a special release, for example pulse flows released for channel and riparian maintenance purposes as far in advance as feasible;
- A matrix showing when pulse flows released from Oxbow Powerhouse will arrive downstream at the following specific locations in the peaking reach: Tunnel Chute, Cache Rock, Fords Bar, Ruck-a-Chucky Recreation Area, Mammoth Bar, Poverty Bar, the Confluence, Birdsall Access, and Oregon Bar Access Point. The matrix will be developed using travel time information developed as part of the MFP relicensing studies. An example travel time matrix is shown on REC Plan Table 6. This example matrix was developed using a travel time of 2.5 miles per hour, a base flow of 200 cfs, and a peak flow of 1,000 cfs. The new matrix will be adjusted based on the flow regime specified in PCWA’s new license.
- Links to pertinent websites, for example, the CDEC, USGS, and USDA-FS websites.

Dissemination of Reservoir Water Surface elevation (WSE) Information

The license will provide weekly (at a minimum)WSE information at French Meadows and Hell Hole reservoirs to the public on a licensee website. The information provided on the internet will be based on data collected at the following two gages:

- French Meadows Reservoir Gage (USGS Gage No. 11427400); and
- Hell Hole Reservoir Gage (USGS Gage No. 11428700).

Currently, WSE information is collected several times weekly by licensee's staff. Weekly WSE information will be provided to the public by the licensee via the internet. The WSE data on the licensee's webpage will show the most recent six months of weekly information. In addition to providing WSE information, the licensee will provide the following information on the website:

- Example photographs or other appropriate technology showing the reservoir conditions at various WSEs; and
- Information about whether the boat ramps are functional based on the current WSE. This information will be provided until the boat ramps are extended, at which point PCWA will discontinue posting this information because it will no longer be relevant.
- Links to pertinent websites, for example, the FS websites.

Recreation Opportunity Maps and Brochures

The licensee will develop informational maps and brochures regarding recreation opportunities available in the vicinity of the Project in consultation with FS, BLM, and Reclamation. These materials will include: (1) maps showing the locations of the developed Project recreation facilities and the access roads and trails in the vicinity of the Project; and (2) information brochures as specified in the following subsections.

Maps

The licensee has developed a color map showing the locations of developed Project recreation facilities and the access roads and trails in the vicinity of the Project. In addition, the licensee has developed maps that graphically depict the layout of each of the developed Project recreation facilities on an orthophothographic background. Following approval by the appropriate land management agencies, the licensee will provide electronic copies of these maps to the following organizations for posting on web:

- FS (Eldorado National Forest and Tahoe National Forest).
- BLM .
- Reclamation.
- Auburn Chamber of Commerce.
- Foresthill Divide Chamber of Commerce.
- Georgetown Divide Chamber of Commerce.
- CDPR.

In addition, these maps will be posted on a licensee website, under a link titled "Recreation Opportunities in the Vicinity of the MFP."

Trail Map

The licensee will develop a map showing the locations of the primary trails in the vicinity of the Project. This map will be developed in consultation with the FS, BLM, and Reclamation. Upon approval by the FS, BLM, and Reclamation, the map will be laminated and posted on existing information kiosks located at the developed Project recreation facilities. In addition, the licensee will provide electronic copies of these maps to the FS, BLM and Reclamation for posting on their respective websites.

Brochure

The licensee will create a color brochure highlighting the recreation resources in the vicinity of the Project, including travel routes and information about the Project facilities and resource protection concerns. The brochure will be developed in consultation FS, BLM, Reclamation, Auburn Chamber of Commerce, the Foresthill Divide Chamber of Commerce, and the Georgetown Divide Chamber of Commerce and will be approved by FS, BLM, and Reclamation. The licensee will provide electronic copies of the brochure to the FS, BLM, Reclamation, and to each of the Chambers listed above for posting on their information web sites. In addition, each year, the licensee will provide paper copies of the brochure to the FS, BLM, Reclamation, and to each of the Chambers for distribution to the public through their local offices, in the following quantities.

- ENF Supervisor's Office – 100 copies.
- ENF Georgetown Ranger District Office –150 copies.
- TNF American River Ranger District Office – 250 copies.
- Auburn Chamber of Commerce – 250 copies.
- Foresthill Divide Chamber of Commerce – 250 copies.
- Georgetown Divide Chamber of Commerce – 100 copies.
- California Welcome Center in Auburn – 100 copies.
- Reclamation Central CA Area Office – 250 copies
- CPDR Auburn Sector Office – 500 copies

The licensee will provide the paper copies of the brochures to each entity by May 1 of each year so that the brochures are available to the public by the beginning of the peak recreation season. Before printing, the licensee will consult with the FS, BLM, Reclamation and the Chambers to determine whether the quantity of brochures being supplied is appropriate based on the previous year's distribution. The number of copies produced and supplied to the FS, BLM, Reclamation and the Chambers may be adjusted based on this consultation. Project recreation brochures will be provided to other entities upon request.

Fish Stocking

The licensee will fund the stocking of fish in Hell Hole and French Meadows reservoirs on an annual basis during the term of the new license. The fish stocking program will be supported at a rate equivalent to 100 percent of CDFG's annual management target in Hell Hole and French Meadows or 100 percent of the historical average stocking into these reservoirs (2001-2009), whichever is less. Fish species and size class stocking targets shall be determined by CDFG.

The average annual number of fish stocked in Hell Hole and French Meadows reservoirs from 2001 through 2009 is shown on REC Plan Table 6 and REC Plan Table 7, respectively and summarized in the following:

Hell Hole Reservoir

- Brown Trout – During the 2001–2009 period, an average of approximately 5,500 catchable brown trout were stocked.
- Kokanee salmon – During the 2001–2009 period, an average of approximately 24,600 fingerling Kokanee salmon were stocked.

French Meadows Reservoir

- Rainbow Trout - During the 2001 - 2009 period, approximately 10,500 catchable rainbow trout were stocked.

At the licensee’s discretion, the licensee will either: (1) acquire the fish directly from private fish hatcheries approved by CDFG or (2) reimburse CDFG for the cost of the stocking program in Hell Hole and French Meadows reservoir based on the criteria described above. The licensee will consult with the CDFG annually to obtain fish stocking targets, fish species, discuss fish acquisition, and verify the completion of the previous year’s stocking commitment.

Future Project Recreation Facility Enhancements

There may be a need to reduce, expand, or convert an existing Project recreation facility or to construct new facilities, based on changing recreation use levels or needs over the term of the license. These types of changes will be determined in consultation with the FS, BLM and Reclamation, based on the use data collected annually by the respective agency. The need for future Project recreation facility enhancements will be determined based on “triggers” and will not be implemented until the appropriate environmental review is completed, as discussed in the following.

Triggers for Enhancement Actions

Use data collected and facility capacity information will be used to determine whether any of the existing facilities are at or approaching capacity and whether facility enhancements are necessary in the future. In addition, the following types of information will be considered:

- Current demographic data.
- Current, locally pertinent, published trends information regarding recreation use patterns and needs.
- Data collected through site-specific visitor surveys, when necessary.

If the use monitoring data indicates that the seasonal occupancy rate of any of the developed Project recreation facilities listed above has reached 75 percent capacity on weekends from Memorial Day through Labor Day (inclusive), the licensee will collect additional use data at that

facility the following year. If the use data indicates that capacity of that facility has reached 75% during the second year, PCWA will collect a third year of data at that facility. This effort may be combined with site-specific visitor surveys if additional information is needed regarding visitor needs and the types of improvements that may be necessary.

When the seasonal occupancy rate on weekends from Memorial Day weekend through Labor Day weekend (inclusive) reaches 75 percent for three consecutive years, or if the seasonal occupancy rate in the third year does not exceed 75 percent but is above 50 percent and there is a clear reason for the lower occupancy rate, the licensee will enter into discussions with the appropriate land management agency about the appropriate improvements to expand facility capacity. Capacity could be increased by expanding the capacity of the facility in question, by converting a nearby under-utilized facility, or by constructing a new facility. Agreed upon actions will be documented in an amendment to this Recreation Plan, and after approval by the appropriate agency (FS, BLM, Reclamation), will be filed with the FERC for approval. The licensee will be responsible for the design and construction of any facility enhancements that are called for in meeting the terms of this Section.

Visual Resource Management Plan

The DLA does not include a Visual Resource Management Plan (VRMP). The resource agencies have developed the following VRMP in an attempt to provide information to assist in reaching agreement on a VRMP. The proposed VRMP follows.

The purpose of the VRMP is to address the existing Project facilities and features, and any new construction or maintenance of facilities that have the potential to affect the visual resources of National Forest System Lands. The Plan shall provide a proposed mitigation and implementation schedule to bring the Project facilities affecting visual resources on National Forest System lands in to compliance with the Forest's visual resource standards and guidelines. The Plan is also to include the following items:

Eldorado National Forest

- Within 3 years after license issuance, paint the Hell Hole - Middle Fork Tunnel Gatehouse at Hell Hole Reservoir a dark gray (color to be approved by the Forest Service).
- Within 3 years after license issuance, paint the caretakers cottage and shop at Hell Hole reservoir a dark color (to be approved by FS).
- Within 3 years after license issuance, paint all of the yellow components associated with the facility at South Fork Long Canyon Creek Diversion Dam matte black.
- Within 3 years after license issuance, paint all of the white components associated with the Ralston Powerhouse the same dark green color that is currently on the powerhouse gates.
- Within 3 years after license issuance, remove or store out of sight, all un-consolidated items from the Middle Fork-Ralston Tunnel surge shaft, tank and storage building enclosure located adjacent to 14N25. Replace galvanized fencing with black plastisol fencing. Paint metal components (other than tank) matte black. Paint storage building doors a dark brown color that complements the brick color.

- Within 3 years after license issuance, re-locate or paint the passive microwave reflector above Ralston Afterbay which is visible from 14N25 in a manner to blend with the surrounding vegetation.
- Within 3 years after license issuance, paint the Ralston Powerhouse Butterfly Valve House a dark color which blends with the surrounding vegetation (color to be approved by FS).
- When next painted, paint the French Meadows Powerhouse and penstock a color approved by FS. When the French Meadows Powerhouse betterment project occurs, paint both the old and new penstocks identical colors and the two powerhouses identical colors, all to be approved by the Forest Service.
- During the course of normal maintenance, replace the roof at the Hell Hole dormitory with one that is dark in color (to be approved by FS).
- If over the course of the license, materials other than soil are stored at the Ralston Ridge Sediment Disposal Area, they will be stored in a neat, consolidated manner and placed as out of site as possible when viewed from 14N25.

Tahoe National Forest

- Within 1 year after license issuance, develop a Landscape Rehabilitation Plan for the French Meadows Dam Staging Area. The plan would address restoration of the spoil-pile character of this ancillary facility and help to reduce undesirable visual impacts. The Rehabilitation Plan will address re-grading portions of the site to natural contours and introducing vegetation to reduce scale and contrast of the staging area when viewed from the Mosquito Ridge Road. Implement the plan within 5 years of license issuance.

The current spillway widening project addresses rehabilitation at project completion (est. 2012) but further landscape rehabilitation will be needed to move this area to a more visually desirable condition.

- Within 5 years after license issuance, paint the French Meadows-Hell Hole Tunnel Gatehouse which is visible from French Meadows Reservoir in a manner to blend with the surrounding vegetation.
- When next painted, paint the French Meadows Dam Generator Building, Ralston Dam Generator building and Storage Building at Middle Fork-Ralston Tunnel a color that blends with their respective surrounding landscapes. Color to be approved by the Forest Service.

Visual Resource Protection Plans

During the term of the new FERC license, changes to Project area conditions may necessitate additional actions to protect, enhance, or mitigate existing visual resources. As such, the licensee will file a visual resource protection plan with FERC for any potential licensee-induced change (e.g., new facility construction (including those identified as betterments under the new license), significant renovations, etc.) to the existing Project area visual environment that is planned during the term of the new license. In general, a visual resource protection plan will be required for any new, relocated, or significantly modified Project facility or other disturbance that has been determined by the licensee and/or the FS to affect the overall visual quality of the Project area.

The plan shall address clearings, spoil piles, and Project facilities like diversion structures, penstocks, pipes, ditches, powerhouses, other buildings, transmission lines, corridors, and access roads. The plan shall address facility configurations, alignments, building materials, colors, landscaping, and screening. The plan shall provide a proposed mitigation and implementation schedule to bring the Project facilities affecting visual resources on National Forest System lands into compliance with visual resource standards and guidelines in the Eldorado National Forest Land and Resource Management Plan and the Tahoe National Forest Land and Resource Management Plan. The licensee shall implement the plan upon approval by FS.

Mitigation measures identified for either the visual resource plan for new construction or the measures identified for existing facilities shall include, but are not limited to: (1) surface treatments with FS-approved colors and natural appearing materials that will be in harmony with the surrounding landscape, (2) use of non-specular conductors for the transmission lines, (3) use of native plant species to screen facilities from view, (4) reshaping and re-vegetating disturbed areas to blend with surrounding visual characteristics, and, (5) locating transmission facilities to minimize visual impacts.

At a minimum, the visual resource protection plan will include:

- A description of planned modifications to the existing visual environment;
- Appropriate PM&E measures that will be implemented related to the modifications;
- A schedule for implementation of appropriate measures; and
- A record of consultation with the FS regarding the modification and appropriate visual measures.

For Project area modifications that may result in changes to the visual environment, the process by which a visual resource protection plan would be developed is as follows (this process assumes a plan/design for any potential modification has already been developed):

- Notify the FS of planned facility modifications and identify any potential impacts to the existing visual environment of the Project area;
- If determined by the FS that a visual resource protection plan is required, develop a draft visual resource protection plan that identifies the actions that will be taken to protect, enhance, and/or mitigate the visual resources impacted by the planned modification;
- Provide a draft visual resource protection plan to the FS for review (a minimum of 30 days will be provided to the FS for their review);
- Revise and finalize the visual resource protection plan, based on FS review comments;
- Submit final visual resource protection plan to the FS for approval
- File a final visual resource protection plan with FERC. A copy of the final plan will also be provided to the FS after being finalized.

For Project facility modifications that the FS has deemed not substantial enough to warrant the development of a visual resource protection plan, the following process shall be followed:

- Provide a narrative, drawings and/or photographs of the planned modifications to the FS.

Acquire documented approval of modifications by the FS.

Licensee Roles and Responsibilities

- Implement the VRMP following FERC approval.
- Coordinate VRMP implementation actions with other Project resource management plans or actions.
- Review potential visual resource changes over time.
- Ensure that PCWA facility operations and maintenance staff are aware of the requirements of the VRMP so that they can help implement applicable actions.
- Perform periodic visual inspections on Project facilities every 2 - 5 years and touch-up, re-paint facilities or perform routine maintenance as necessary to maintain the facilities described above in good condition.

FS Roles and Responsibilities

- Provide review and feedback on the Draft VRMP and any future updates, if needed, prior to submittal to FERC for approval.
- Provide review and feedback on VRMP implementation actions including approval of visual resource protection plans.
- Participate in periodic VRMP review meetings, if needed.

Vegetation and Integrated Pest Management Plans

The resource agencies have participated in efforts to develop an appropriate Vegetation and Integrated Pest Management Plan; however, we continue to have similar concerns to those we have expressed throughout the time the plan has been being developed.

- It is very difficult to develop a long-term plan that is specific enough to analyze the effects of treatments, including herbicides, for noxious weeds for an entire license period. For example, in the existing plan, the licensee proposes to treat 27 acres, but it is not clear where these 27 acres are located. Additionally, noxious weed locations will change over the life of the license, and treatment methods will change over the life of the license. The resource agencies believe a framework could be developed for vegetation and integrated pest management, but specific projects would need to be evaluated and approved every few years based on current information.
- The resource agencies recommend that the licensee treat the entire 100 acres for the priority species, as treating only 27 acres per year will allow species to expand while treatments are not occurring. Treatments of invasive plant species should not be phased, especially given the relatively small area of infestations and the rate of spread.
- The resource agencies recommend that the treatments continue until the weeds are gone instead of for a maximum of 3 years as stated in the DLA.
- The resource agencies recommend that monitoring of treated areas occur for at least 3 years after the weeds are absent. Where treatment areas include or are adjacent to sensitive plant occurrences, monitoring of the sensitive plant populations needs to occur during the year of

the treatment and for at least 2 subsequent years. Occurrences of invasive species that would be treated should be monitored until 3 consecutive years have negative findings. Treatments should not stop at the end of three years of treatments. Invasive monitoring is distinct from inventory surveys but should also include size and infestation level.

- Project roads should be included in treatment areas.
- The resource agencies still believe that there is a need to agree on appropriate buffers for treatments.
- The plan includes an appendix that references an agreement between the State Water Resources Control Board and the FS that provides a waiver for certain activities on National Forest System lands as long as best management practices are implemented. The plan states that the MFAR project falls under this agreement. This is incorrect. The FS does not have a waiver for such activities and even if they did, the licensee would not be a part of the waiver. This should be removed from the plan. Additional design criteria to address FS BMPs should still be added, however.
- The protection measures referenced for wildlife and heritage resources are not addressed in the BEMP and HPMP.
- Monitoring for invasive species should occur wherever management actions cause ground disturbance, introduce imported materials, etc.
- If treatments do not seem to be effective, treatment should be adapted, not terminated.
- BMPs are general. Specific BMPs for projects need to be developed with Forest personnel such as hydrologist.
- Table 2 – Provide Application Rate in lbs ai or ae/acre.
- Table 3 – *Carduus pycnocephalus* should be priority level 2.
- Table 8 – When treating near Stebbins’ phacelia per Avoidance and Protection Measures, use a limited operating period (manual and chemical). This can be less stringent when population is upslope of treatment in the case of drift.
- Table 9 – still need concurrence. Why are there no buffers for surfactants and fungicides? Footnote one for special aquatic features should be meadows, seeps, springs, fens, ponds, and seasonal wetlands but need to confirm with hydrologist and aquatic biologist.
- Figure 1. The figure does not include new occurrences and includes a phased approach.
- The Water Quality Monitoring section is not agreed upon. Need to establish treatments and then develop the appropriate monitoring methods, timing, frequency, duration, etc. Monitoring should occur after treatment and for as many years as treatments occur.

Bald Eagle Management Plan

The resource agencies participated in the development of this management plan and have no comments specific to the plan at this time. However, the resource agencies would like to discuss whether there are potential project effects that warrant the need to prepare an Avian Collision and Electrocution Plan that addresses raptors other than bald eagle.

Volume 3, Exhibit E, Final Technical Study Reports (Supporting Document B)

Visual Quality Assessment (REC 5)

The resource agencies have reviewed the final visual technical report (REC 5) and have the following comments:

Section 5.2.1, paragraph 1. EVC is another component of the USDA-FS VMS that is independent of VQOs. A brief explanation of EVC and associated definitions is included in Appendix A for reference. In general, the EVC methodology uses a five point system to rate the existing visual conditions of a Forest. EVC ratings range from EVC Type I (ecological changes only), to EVC Type V (landscape changes are strong and obvious). During a meeting conducted on June 15, 2009 the ENF and TNF indicated that none of the Project facilities are classified as EVC Type V. As a result of this clarification, facilities that had been rated EVC Type V were changed to EVC Type IV.

Section 6.2.1, Pg. 18, paragraph 3, MFAR Viewshed. Include in this section, a reference to the section of the river from Oxbow Reservoir and Auburn that is eligible under the Wild and Scenic Rivers Act.

Section 6.2.1, Page 22, paragraph 1. The Passive Microwave Reflector Station above Ralston Afterbay is visible from Blacksmith Flat Rd. and meets an EVC or Type III.

Section 6.2.1, Page 23, paragraph 2: Include in this section, a reference to the section of the river from Oxbow Reservoir and Auburn that is eligible under the Wild and Scenic Rivers Act.

Page 15 under Table 5-4 (see following) change II to III

Table REC 5-4. EVC Assessment of MFP Facilities or Features that are Visible from USDA-FS Managed Viewsheds.

Passive Microwave Reflector Station above Ralston Afterbay	Microwave Reflector	Not Noticed	R	II	Trail and microwave not noticeable from the road.

Volume 3, Draft Biological Assessment/Biological Evaluation (Supporting Document C)

The resource agencies did not participate in the development of this document and do not necessarily agree with the adequacy of protection measures or the conclusions regarding impacts that are contained within the document. A biological evaluation that analyzes and discloses the effects needs to be approved by the FS and BLM once proposed measures are developed.

The BA/BE needs to address the special-status plants and wildlife that have potential habitat within the project area even if they have not been identified.

The BA/BE needs to address that the current list of special-status plant species will change during the life of the license.

Under Section 2 (Consultation), the BA/BE states that specific topic areas pertinent to this BA/BE that were developed include Vegetation and Integrated Pest Management Plan (VIPMP). This topic area is still being developed. The effects of a plan that has not been developed cannot be properly analyzed.

Volume 5, Draft Historic Properties Management Plan (Supporting Document E)

Cultural Resources

There are four National Register eligible Native American sites located within the APE of the MFP. All of these sites are located within or near Project Recreation facilities on federal public lands administered by the Eldorado National Forest. The DLA and the HPMP list a variety of activities that have the potential to adversely affect these Historic Properties ranging from routine and heavy maintenance to removal, reduction and consolidated of the recreation facilities. However, other than identifying avoidance measures such as design and the use of buffers, there is nothing included within the DLA or the HPMP that arrays the process if adverse effects are unavoidable. For example, reduction Hell Hole Campground is identified as a measure in part to protect environmental and cultural resources and the only measures identified for cultural resources is avoidance. However, due to the fact that that a NRHP eligible Historic Property, predominately subsurface, is overlain by the campground. Therefore, it is likely that the reduction activities may have the potential to adversely affect a Historic Property, that would trigger consultation with agencies and interested parties per 36 CFR 800.5 in order to assess adverse effects and if so, resolve adverse effects per 36 CFR 800.6.

In addition, the Eldorado National Forest has reviewed HPMP Appendix C – Activities Exempt from Further Review. The HPMP identifies these activities as exempt from further evaluation. The ENF strongly disagrees with the inclusion of several of these activities due to the above concerns, including, but not limited to, the construction of new project facilities and non-routine recreation facility activities.

It is unclear as to how Section 106 obligations are incorporated in the DLA, as the development on an HPMP is a standard component of FERC's two party Programmatic Agreements (PA) in consultation with SHPO. The execution of the PA and its subsequent implementation satisfies FERC responsibilities per the Section 106 of the National Preservation Act, as amended for all actions carried out under the license. However, the DLA does not make mention of an anticipated PA or include a discussion of compliance under the full 36 CFR 800 process, only the process up to 36 CFR 800. 4.

Additionally, it is unclear if SHPO received the DLA (not on the distribution list) or the draft HPMP for their review and comment. At present, the DLA and HPMP appear to be incomplete in relation to fulfilling obligations under the NHPA, specifically Section 106.

Tribal

Both the DLA and HPMP addresses Tribal resources and issues related to cultural resources. However, it is unclear if non-cultural resource issues have been raised or what processes will be undertaken to consult with Tribes outside of cultural resource sites. Of particular concern is Traditional Gathering. As it appears not to be addressed in the DLF Tribal Resources section or HPMP, it is unknown if this is an issue. However, it is one such activity or practice that a consultation process should be established. At present it is not. Compounding this issue is the fact that, at present, herbicides and pesticides are included as 'Activities Exempt from Further Evaluation' in the HPMP.

Attachment 1

Rationale Report for

Middle Fork American River Project

Recreation Plan

20 December 2010

Rationale for Recreation Survey

As part of managing the recreation resources within or affected by the Middle Fork American River (MFAR) project, understanding the dynamic changes in recreation over the life of the license is critical. It is widely recognized that substantial changes in recreation use, activities, motivations, and other related items can happen in a short span of time. These trends are important to recognize and track so that adjustments in management strategies can be made in order to prevent the degradation of either resource conditions or recreation experiences. As an example, the Outdoor Recreation Resources Review Commission, which was largely responsible for developing use, activity, and motivation data starting in 1960, recommended completing recreation surveys on a 5-year interval (USDA 2005). The change over time of visitor attitudes, preferences, use patterns, experience, and capacity may require modifications to the management of recreation within the Project area. This form of information gathering is aimed at fully using recreation sites while mitigating Project-related impacts within and adjacent to Project-affected areas and the downstream footprint area of the project... The timing of this measure (6 years) was developed to ensure changes in recreation could be identified with sufficient time for management programs to react and to correspond with reporting requirements for recreation that FERC requires. This measure will provide the licensee, FS, BLM, Reclamation, and C DPR the ability to react to changes and provide the quality recreation opportunities in the Project area required to meet the Forest Plan, and other applicable management standards.

Rationale for FS, BLM, and Reclamation Liaisons

To ensure projects on, adjacent to, or affecting National Forest System lands comply with the respective Forest Land and Resource Management Plans as amended, and Region 5 design standards including design for accessibility; projects on, adjacent to, or affecting BLM lands comply with the Sierra Resource Management Plan, and the Americans With Disabilities Act; and projects on or affecting Reclamation lands comply with the 1992 Auburn State Recreation Area Interim Resource Management Plan, it is critical that the licensee identify a single liaison to meet these objectives. Cooperation during all phases of the Projects will ensure early and upfront clarity to achieve this goal of compliance with applicable standards. This measure is not intended to require specific staffing on the part of the licensees, but rather is intended to provide efficient and effective planning and communication among the FS, BLM, C DPR, and licensees.

Rationale for Review of Recreation Developments

It is the desire of the FS, BLM, Reclamation, and CDPR, along with other interested parties to continue a level of coordination and adjustment for the Project. By having specific coordination meetings, results of surveys, and other input from prior years can be reviewed. These reviews will allow for the determination of necessary maintenance, rehabilitation, construction, and reconstruction work needed, based on facility condition and other factors at the time. Data from ongoing monitoring will assist in making any needed changes in the schedule of work, and for future planning.

This condition also identifies the recreation facilities associated with the Project, and identifies those facilities which shall remain inside the Project boundary.

Recreation Implementation Plan

It is the desire of the FS, BLM, Reclamation, and CDPR, along with other interested parties, to continue a level of coordination and adjustment for the Project and implementation of the Recreation Plan. Meetings every six years to review the results of surveys and other data will assist in determining necessary maintenance, rehabilitation, construction, and reconstruction work needed based on facility condition and other factors at the time. Data from ongoing monitoring will assist in making any needed changes in the schedule of work and for future planning.

Rationale for Specific Recreation Measures

The licensee has been, and continues to be, the substantial force in recreation development within the MFAR project area. The licensee's role in facility and infrastructure development has been pervasive over the last 50 years.

Recreation facilities were planned by the licensee during the same period that initial project development occurred. In as early as the 1960's, the licensee acquired funds to build recreation facilities at Hell Hole and French Meadows Reservoirs, in the vicinity of the Duncan Creek and Long Canyon Diversions, and at Ralston Afterbay. These funds, received through Davis-Grunsky Act Recreation Grants, required a feasibility report that described the need for the various recreation facilities (Leeds, Hill and Jewett, 1964). The original Agreement between the licensee and the FS for the Administration, Operation and Maintenance of Recreation Facilities on the Middle Fork American River Project on the Eldorado and Tahoe National Forests (1965) recognized that the construction by PCWA of French Meadows and Hell Hole Reservoirs, Duncan Creek and Long Canyon Diversions, and Ralston Afterbay created mountain lakes having great potential recreational use by the public and that the Agency had a responsibility to provide such facilities as roads, parking areas, water and sanitary facilities, campgrounds, picnic areas and boat ramps and housing and support facilities.

Through the development of the MFAR reservoirs, the accompanying infrastructure development improvements to access roads, and the recreation facility development, the licensee has been and is the greatest influence within the MFAR Project area. In order for visitors to experience quality recreation opportunities and be able to fully utilize recreation sites within the

Project area, it is necessary to ensure that the appropriate infrastructure is in place, in good condition, and that the appropriate level of accessibility is provided through design standards. Ongoing maintenance and improvement efforts coordinated between the FS and PCWA have provided for accessibility at some of the recreation facilities; however other accessibility needs have been identified in PCWA's REC-1 Technical Study Report (2010). FERC regulations at 18 CFR 2.8 require the licensee to "develop suitable public recreational facilities upon project lands and waters and to make provisions for adequate public access to such project facilities and waters and to include therein consideration of the needs of physically handicapped individuals in the design and construction of such project facilities and access." FS policy (USDA 1998a and USDA 2000) is to provide 100 percent barrier-free access where possible, consistent with the intent of the Region 5 (R5) "Universal Access Strategy."

User surveys conducted by the licensee indicate how important the reservoirs are to the visitors themselves. The three most popular activities for visitors to the MFAR Project are camping at developed sites, fishing and reservoir recreation. For example, 83 percent of visitors surveyed at French Meadows Reservoir indicated they intended to camp at a developed site, 48 percent said they would engage in reservoir recreation and 37 percent indicated they intend to fish. 17 to 34 percent of visitors to Hell Hole and French Meadows Reservoirs indicated they had brought a boat trailer with them (PCWA REC-2 TSR, 2010)). In addition, visitors to the MFAR Project have identified that hiking trails are important to very important as a part of their recreation visit (PCWA REC-2 TSR, 2010). This is consistent with Statewide and Regional studies of the types of recreation activities visitors participate in and desired opportunities. Although 60 percent of visitors said that hiking trails are very important or important to choosing the area to recreate at, only 34 percent of visitors said that they had or will hike or walk during their visit (PCWA REC-2 TSR, 2010). This discrepancy demonstrates the need for and demand for walking and hiking opportunities within the MFAR Project.

The licensee has, through collection agreements, funded parts of the recreation operations at some of the recreation facilities within the MFAR Project. Numerous other funding sources, including Appropriated, Recreation Enhancement Funds, Granger-Thye Act fee offset¹, and others have been used to supplement licensee funds. Even with these funds, there is still a substantial amount of deferred maintenance at the recreation facilities within the MFAR Project (PCWA REC-1 TSR, 2010).

There are a number of amenity upgrades and improvements in the specific recreation conditions. These have largely been developed through the analysis of the licensee's visitor survey results (REC-2 Technical Study Report, 2010), the recreation site condition survey results (REC-1 TSR, 2010), the reservoir recreation studies (REC-3 TSR, 2010), the stream-based recreation studies (REC-4 TSR, 2010), and FS knowledge of uses, trends and needs within and adjacent to the project area. These information sources highlighted needs identified by visitors for new facilities and upgrades to existing amenities at licensee-constructed facilities.

Additional specific rationale sections accompany each of the following reservoirs or areas:

¹ Under the authority of the Granger-Thye Act, campground concessionaires operating government facilities (campgrounds) renovate, recondition, improve and maintain the facilities in lieu of fee due to the government. This heavy maintenance work is referred to as "fee offset".

Hell Hole Recreation Area

Hell Hole Campground

This campground is located 1.3 miles from the Hell Hole Reservoir boat ramp and yet trailers are not recommended due to limited parking space. Visitor surveys indicate that 37 percent participate in reservoir recreation and 26% fish. Drainage from the parking area is leading to erosion of the access path to the toilet and some camp sites (PCWA, REC-1 TSR, 2010). Three campsites within this campground are located within an area of sensitive resources.

The most common response of campground visitors regarding the activities they intend to participate in was camping in developed sites (56 percent), followed by reservoir fishing (19 percent). The most frequent secondary activity visitors identified was hiking/walking (44 percent) (PCWA, REC-1 TSR, 2010).

The specific measures identified are to address drainage problems associated with the parking area, to provide for access for boat trailers and larger vehicles, provide desired hiking and walking opportunities, and to protect sensitive resources in the vicinity of the campground. By eliminating some of the campsites there is a need to reconfigure the facility. As a part of reconfiguring the campground, there is an opportunity to improve utilization of the campground and better meet public need.

There are limited hiking opportunities in the vicinity of the Hell Hole Reservoir recreation facilities, and there are no trails directly linking the recreation facilities. This trail will provide a means for campers at Hell Hole Campground to utilize the Hell Hole Vista without having to drive to the parking area. Current accessibility standards for trails outside of developed recreation sites are different from the standards for walkways within developed sites. (USFS, 2006a, USFS, 2006b), and allow for departures from the guidelines when application of a technical provision would cause a change in the trail's setting or the purpose or function for which the trail is designed., An example of the difference in standards is the current standard for maximum grade of a walkway within a developed site is 5 percent, whereas the maximum grade for a trail is up to 10 percent for limited stretches.

Big Meadows Campground

Portions of this campground have been reconstructed and improved over the last several years. However some of the camp units still do not meet current accessibility standards and have other deficiencies. Additionally, the campground is near an area suitable for interpretation regarding the rich cultural resources.

The most common response of campground visitors regarding the primary activities they intend to participate in was camping in developed sites (37 percent), followed by reservoir fishing (32 percent). One of the frequent secondary activities visitors identified was hiking/walking (35 percent) (PCWA, REC-1 TSR, 2010).

There are limited hiking opportunities in the vicinity of the Hell Hole Reservoir recreation facilities, and there are no trails directly linking the recreation facilities. This trail will provide a

means for campers at Big Meadows Campground to utilize the Hell Hole Vista without having to drive to the parking area. Current accessibility standards for trails outside of developed recreation sites are different from the standards for walkways within developed sites. (USFS, 2006a, USFS, 2006b), and allow for departures from the guidelines when application of a technical provision would cause a change in the trail's setting or the purpose or function for which the trail is designed., An example of the difference in standards is the current standard for maximum grade of a walkway within a developed site is 5 percent, whereas the maximum grade for a trail is up to 10 percent for limited stretches.

Upper Hell Hole Campground

Upper Hell Hole Campground is located on the southeast shore of Hell Hole Reservoir, about four miles from Hell Hole Boat Ramp. This site is accessed by boat and by foot travel, via the Hell Hole Trail (FS Trail 14E02). There are sensitive resources located within or adjacent to the campground which warrants the need to remove the improvements at the campground and allow for dispersed use at the site. Future site monitoring and clean-up of the site is incorporated into the ongoing operations and maintenance. Information from future recreation surveys, along with information from monitoring of the site and assessment of impacts to sensitive resources will be used to determine whether future enhancements are needed, such as establishment of a boat-in/walk-in campground within the Upper Hell Hole area.

Hell Hole Boat Ramp and Associated Parking Areas

The Hell Hole Boat Ramp extends to an elevation of 4,530 feet. (PCWA REC-3 TSR, 2010). The REC-3 TSR recognizes that the reservoir water level has dropped below this elevation during the recreation use season during dry and critically dry years. Future operations will likely continue to cause reservoir levels to drop below the bottom of the boat ramp during the recreation use season in the future.

REC-1 TSR identifies that the pavement in the upper parking area is generally in good condition, but that some segments are in poor condition and that the stripping is no longer visible (traffic markings and parking space stripping was completed in Summer 2010, however there is a need for regular repainting). The existing chain link fence is visually inappropriate at this site and needs to be replaced with fencing that meets PCWA's needs while still maintaining the visual quality at the site.

There is a need for potable water at the Hell Hole Boat Ramp. The Feasibility Report for the MFAR Project completed to accompany the application for Davis Grunsky Funds for construction of the MFAR recreation facilities described PCWAs commitment to provide water at camping, picnicking and **boating** areas where facilities are constructed by the Agency (Leeds, Hill and Jewett, 1964). 60 percent of visitors surveyed at Hell Hole Reservoir, as reported in PCWA's REC-2 TSR (2010), identified that drinking water is important to very important.

Hell Hole Vista and Associated Parking Area

PCWA's REC-1 TSR (2010) identifies the Hell Hole Vista Parking Area as being in poor condition and lacks an accessible parking space. These conditions were recently addressed. The

REC-1 TSR goes on to identify that the Vista site is not accessible due to obstacles, level changes and the presence of stairs. In addition, the access trail from the parking area to the Vista and the picnic table along the trail are in poor condition and not accessible. The measures proposed for the Hell Hole Vista would address these deficiencies.

Hell Hole Administrative Station

The Hell Hole Administrative Station is in disrepair and in need of upgrading to better meet current administrative need, including adequate workspace and storage for operation and maintenance of the Hell Hole recreation facilities. This facility was identified in the 1965 MOU between the FS and PCWA to serve as a housing and support facility to be provided by PCWA. The facility was subsequently constructed under the Davis Grunsky funding to provide the needed administrative site for better managing and operating the campgrounds and facilities. This condition proposes to modify this facility to provide the space needed at this time for administrative workspace and storage along with providing a recreation rental to serve the visiting public that are looking for a recreation opportunity other than camping, but still in proximity to Hell Hole Reservoir. The FS has found that other recreation rentals on the Eldorado National Forest are in high demand and have high occupancy rates, indicating that there is a need for this type of recreation opportunity.

Hell Hole Reservoir Trail

As stated above, there is a substantial demand from recreation visitors to the MFAR Project area and campgrounds for hiking and walking opportunities and a lack of these opportunities. This conclusion is reflected in the discrepancy between the number of visitors that reported hiking and walking as important to very important to their visit, in comparison to the percentage of visitors that reported participating in this activity. The feasibility report for the MFAR (Leeds, Hill and Jewett, 1964) identified the intent to provide a foot trail all the way around the reservoir and addressed the need to move the trail on the south side of the reservoir due to the project (also see the 9/18/1967 MOU between the FS and PCWA). The Exhibit R map (dated 3/1967) shows the trail along the south side of Hell Hole Reservoir as “relocated” and shows the trail extending to the east and along a portion of the north side of the reservoir, connecting with the Hell Hole 4WD Trail. Further, PCWA obtained an easement from PG&E for the right to “construct, maintain and use trails suitable for both pedestrian and for equestrian use for the eventual use of public recreational purposes in connection with PCWA’s Hell Hole Reservoir project (Grant Deed dated 2/18/1966). Additionally, Upper Hell Hole Campground is repeatedly referred to in the Recreation Feasibility Report and in the Exhibit R maps as a “Trail Camp” with both boat and trail access. There is continued visitor interest in trail access to the reservoir as identified in REC-2 TSR (2010) This TSR lists the most frequent responses for secondary reasons for visiting the area as “access to lake/reservoir”, identified that 66 percent of visitors said hiking trails are very important or important, and that nearly 66 percent of visitors said that fishing access trails are very important or important. In contrast, only 34 percent of visitors said that they had or will hike or walk during their visit (PCWA REC-2 TSR, 2010). This discrepancy demonstrates the need for and demands for walking and hiking opportunities within the MFAR Project.

French Meadows Recreation Area

The water systems for the French Meadows area were installed in the 1960's and is showing signs of age by frequently breaking and becoming unreliable. This affects customer service when water is not available for visitor use; repair costs are increasing; and when there is a leak or a break water quality is typically compromised. Per PCWA, REC-1 Table 1-12 the access routes to water system facilities has rills and the remarks indicate that the erosion control structures are not effective. The road/trail shall be brought up to current FS standards to mitigate resource impacts.

Use occurs in the French Meadows area all year long. The reservoir is accessed in winter and spring/early summer by vehicles such as snowmobiles, or occasionally by 4-wheel drive enthusiasts who participate in snow-play-driving to get to French Meadows reservoir to go fishing. There have been occasions when snowmobiles pull boats to the reservoir (pers.com. Ed Moore, 2010). Most recently this was evidenced in May of 2010 when Forest Road 22 was plowed to the Hell Hole turn off and tracks through the snow on the 22 road through 12 or more inches of snow gained access to French Meadows reservoir where Kiewit Pacific Corporation was initiating modification to the LL Anderson Spillway (via plowing and closure of the Mosquito Ridge Road). Several fishermen said that fishing was great at French Meadows reservoir during the spring snow melt (Pers. Comm, Mo Tebbe, 2010). Once the area is accessible in the spring the concessionaire prepares to open the campgrounds including turning on the water system and obtaining water tests to determine potability. Snow drives out those that recreate in the area in late autumn though the concessionaire typically chooses to close most of the campgrounds and winterize the water system in mid September when use sharply declines. Provide barrier-free access where possible, consistent with the intent of the most current Region (USDA FS) policy by:

- Replacing, resetting, or retrofitting site infrastructure (i.e. tables, fire rings, or barriers etc.)
- Moving infrastructure to be accessible (i.e. moving food storage lockers, faucets and sumps, providing approaches to facilities consistent with the campground or use area's surface, relocating toilets closer to a road and providing a turn out on the road for the toilet).
- Grading or compact walking surfaces, in some areas steps may be necessary.
- Leveling the site and removing protrusions
- Providing a minimum of 1200 square feet per single site or 2400 square feet per double site, etc.
- Reconstructing spurs to meet accessibility standards which may include resetting barriers to allow access from spurs to the unit.

There is a substantial demand from visitors to the MF project area and campgrounds for hiking and walking opportunities, and a corresponding lack of these opportunities. This conclusion is reflected in the discrepancy between the number of visitors that reported hiking and walking as important to very important to their visit, in comparison to the percentage of visitors that reported participating in this activity. The feasibility report for the MFAR (Leeds, Hill and Jewett, 1964) identified the intent to provide a foot trail all the way around the reservoir.

Current accessibility standards for trails outside of developed recreation sites are different from the standards for walkways within developed sites. (USFS, 2006a, USFS, 2006b), and allow for

departures from the guidelines when application of a technical provision would cause a change in the trail's setting or the purpose or function for which the trail is designed., An example of the difference in standards is the current standard for maximum grade of a walkway within a developed site is 5 percent, whereas the maximum grade for a trail is up to 10 percent for limited stretches.

There is continued visitor interest in trail access to the reservoir as identified in REC-2 TSR (2010). This TSR lists the most frequent responses for secondary reasons for visiting the area as "access to lake/reservoir", identified that 66 percent of visitors said hiking trails are very important or important, and that nearly 66 percent of visitors said that fishing access trails are very important or important. In contrast, only 34 percent of visitors said that they had or will hike or walk during their visit (PCWA REC-2 TSR, 2010). This discrepancy demonstrates the need for and demands for walking and hiking opportunities within the MFAR Project.

This trail will provide a means for visitors to access French Meadows reservoir. Sixty-seven percent of the visitors surveyed at French Meadows Campground said that fishing trail access is very important or important. There are several existing, now vegetated old roads in the vicinity of the French Meadows campground that could be improved to provide hiking and bicycling opportunities. The FS proposes opening some of these old roads, specifically between French Meadow Campground and the French Meadow Boat Ramp and monitoring use to determine if this network of old roads can be utilized to provide additional recreational opportunities.

When a recreation facility, (i.e. campground) is brought up to accessibility standards, replace, repair, or reconstruct the interior campground roads and spurs, and associated features (i.e. culverts) to remedy the issues identified in PCWA REC-1 TSR Tables REC 1-11 and REC 1-12. When flush toilets are replaced the septic and leach systems would be evaluated for replacement.

Ahart Campground

This campground is unique in that it is the only developed project campground located on a river (Middle Fork American River upstream of French Meadows Reservoir). Ahart and the western loop of French Meadows campgrounds are the only campgrounds in this recreation area that are open to use after the concessionaire, who operates and maintains the recreation facilities under a 10-year term special use permit, has left the area in the autumn (typically mid-September). Occupancy in the autumn is a normal occurrence (personal communication from Ed Moore) The closest potable water is available at Lewis Campground (approximately 1 mile) when the concessionaire is in the area and before the water systems are winterized. No potable water is available once the water system is winterized.

Ahart Campground is approximately 3.5 miles from the nearest boat ramp (McGuire). Visitor surveys indicate that 18 percent participate in reservoir recreation, 32 percent fish, and 12 percent participate in streamside day use. The most common response of campground visitors regarding the activities they participated in was camping in developed sites (55 percent). The most frequent secondary activity visitors identified was relaxing (42 percent) and hiking/walking (38 percent).

Upon review of the campground in 2010, the FS proposes reconstruction of the campground road and spurs and surfacing with compacted aggregate in lieu of pavement (PCWA DLA Recreation Plan, 2010). Construct drainage diversions around sites 1 and 8 to prevent erosion through the sites.

The Feasibility Report for the MFAR Project completed to accompany the application for Davis Grunsky Funds for construction of the MFAR recreation facilities described PCWAs commitment to provide water at camping, picnicking and boating areas where facilities are constructed by the Agency (*Leeds, Hill and Jewett, 1964*). Fifty-nine percent of the people responding to the 2007 visitor survey said that drinking water was very important to important to them.

Specific measures for routine heavy maintenance items or removal/reduction of a facility are:

- Repair and pave Forest Road 96 from the end of the pavement near the 42 road intersection past campsite 10 in the Ahart campground to provide visitors with a more enjoyable opportunity through dust reduction.

- Provide a potable water source, operated by hand pump, at this campground so that water is available, on site, whenever the area is accessible.
- Replace the double unit vault bathrooms that were installed in the 1960s, that do not meet current accessibility standards and show signs of rot.
- Upon FS facility assessment in 2010 campsite 9 appeared to have no use; and in conversation with retired Recreation Officer Ed Moore, this site seldom was used. Campsite 9 is recommended for abandonment and restoration.
- Place additional barrier rock between sites 1 and 2 to limit motorized use to the spur.

French Meadows Campground

This campground is located on the south shore of the French Meadows Reservoir and is approximately 0.5 mile from the French Meadows Boat Ramp and approximately 4 miles from the McGuire Boat Ramp.

The western loop (sites 32-75) of French Meadows campground and Ahart are the only campgrounds in this recreation area that are open to use after the concessionaire, who operates and maintains the recreation facilities under a 10-year term special use permit, has left the area in the autumn (typically mid-September). Occupancy in the autumn is a normal occurrence when the concessionaire is in the area and before the water systems are winterized (personal communication Ed Moore). No potable water is available once the water system is winterized.

The most common response of campground visitors regarding the activities they engaged in was camping in developed sites (62 percent), followed by reservoir fishing (23 percent). The most frequent secondary activity visitors identified was oriented with water play (54 percent). (PCWA, REC-1 TSR, 2010).

Specific measures for routine heavy maintenance items or enhancement, enlargement, removal, reduction of a facility are:

- Replace toilets to meet current accessibility standard as well as address deferred maintenance which includes rot in most of the buildings (FS review, 2010). Relocate toilets to meet accessibility standards: locating the toilet closer to roads, construct adjacent accessible turnouts and walkways. Furnish and install one additional single unit toilet in the west loop.
- A grant from the National Forest Foundation provided funding in 2002 for animal resistant food lockers. This was the first time that these lockers had been installed on the Tahoe National Forest, little was known about them. One season of use showed the FS that the smaller lockers were not large enough to accommodate the size of cooler typically brought by visitors.
- Campground hosts have nearly full-time presence on site from before opening to after closing the campgrounds. The special use permit has a term of 5 years with the ability to extend to 10 years. Sites 3 and 32 are dedicated hosts sites. By providing an on site holding tank the host would not need to leave the site to go to the dump station. this would provide more time for facility operation and maintenance and customer service and provide incentive for host retention and management continuity.

- Some area visitors tend to bring vehicles that fill up the entire spur space, indicating a need for larger sites. Whereas other visitors bring and maneuver trailers or motorhomes into site spaces that are not designed to meet this type of recreational vehicle. It is noted in PCWA REC-1 TSR Appendix J-1 in the remarks column notes that many spurs are narrow. Given the topography of this campground, and to meet demand for wider and/or longer spurs a few sites can be converted to accommodate larger/more vehicles and better meet accessibility standards. As a minimum the following sites would be converted to pull through sites (61 and 62, 33 and 2, and 19 and 20), or enlarged (24, 34, 66) and in one case enlarged for a larger RV (25).
- Sites 16, 55, 65, 69 and 72 do not receive much use and would be abandoned and rehabilitated.
- Sites 6, 11, 43, 71 and 8 would be reconfigured to better optimize the area by moving site infrastructure to end of the spur (6-71) or away from the road (site 8).
- Reconstruct interior campground roads to meet accessibility standards above, to widen, and to repair or replace road infrastructure issues such culverts in poor condition, buried or clogged, rusted or crushed (PCWA, REC-1 Tables 11 and 12).

Lewis Campground

This campground is located on the south shore of the French Meadows Reservoir and is approximately 3.5 miles from the French Meadows boat ramp and less than a mile from the McGuire Boat Ramp.

This campground is on the north shore water system which is typically winterized first, right after the Labor Day weekend. No potable water is available once the water system is winterized.

The most common response of campground visitors regarding the activities they engaged in was camping in developed sites (62 percent), followed by reservoir fishing (23 percent). The most frequent secondary activity visitors identified was oriented with water play (54 percent). (PCWA, REC-1 TSR, 2010).

Specific measures for routine heavy maintenance items or enhancement, enlargement, removal, reduction of a facility are:

- Replace toilets to meet current accessibility standard as well as address deferred maintenance which includes rot in most of the buildings (FS review, 2010). Relocate toilets to meet accessibility standards: locating the toilet closer to roads, construct adjacent accessible turnouts and walkways. Furnish and install one additional single unit toilet in the west loop.
- Campground hosts have nearly full-time presence on site from before opening to after closing the campgrounds. The special use permit has a term of 5 years with the ability to extend to 10 years. Site 1 is a dedicated host site. By providing an on site holding tank the host would not need to leave the site to go to the dump station. This would provide more time for facility operation and maintenance and customer service and provide incentive for host retention and management continuity.
- Some area visitors tend to bring vehicles that fill up the entire spur space, indicating a need for larger sites. Whereas other visitors bring and maneuver trailers or motorhomes into site

spaces that are not designed to meet this type of recreational vehicle. To meet these demands several sites would be converted to pull through sites (27 and 29).

- The following are considered the minimum sites that can be enhanced to meet accessibility standards. Sites other than these listed here may be widened or lengthened: widen to 16 feet (site 37); widened to 20 feet (sites 21, 38, 39); the spur lengthened to 50 feet (site 13).
- Enlarge the living area of sites 5 and 20 to a minimum of 1200 sq.ft.
- Reconstruct interior campground roads to meet accessibility standards above, to widen, and to repair or replace road infrastructure issues such culverts in poor condition, buried or clogged, rusted or crushed (PCWA, REC-1 Tables 11 and 12).

Poppy Campground

This campground is located on the north shore of French Meadows Reservoir and is accessible by either boat or the Western States Trail.

The most common response of campground visitors regarding the activities they engaged in was camping in developed sites (67 percent). The most frequent secondary activity visitors identified was non-motorized reservoir boating, relaxing, and reservoir oriented water play or sun bathing (100 percent). (PCWA, REC-1 TSR, 2010). Since this is a boat or hike in campground, one could deduce from the primary and secondary activities that all persons arrived at Poppy via boat. This could be quite a challenge for some people since the reservoir is typically very windy.

Specific measures for routine heavy maintenance items or enhancement, enlargement, removal, reduction of a facility are similar to PCWAs DLA Recreation Plan Table 3 with minor revisions:

- Sites 6, 9, 11 and 12 have historically been under-used. To reduce maintenance costs remove these sites and rehabilitate/revegetate the site
- Remove and replace the two single unit toilets with one accessible single unit toilet. The type of toilet will be determined at the time of construction and approved by the FS based on advances in technology which deals with low or no maintenance issues.
- Remove obstacles and level camp sites 1-5, 7, 8 and 10, where feasible and compact sites to a minimum of 1,200 square feet.
- Under Poppy Campground Trailhead the trailhead would be moved, and a connector trail created, see below.
- The Western States Trail is the hiking/bicycle trail used to access Poppy Campground. The WST is maintained by the FS and Western States Foundation and provides trail opportunities on the north side of the reservoir. Direction signing needs to be placed on the WST (16E10) from each trailhead (Red Star Ridge and new trailhead).

Coyote Group Campground

This Group campground consists of four group sites and is located on the east side of the French Meadows Reservoir.

While daily data has not been collected by concessionaires, there was a record of reservations kept by the previous concessionaire American Land and Leisure. It is common that each group

site is reserved every weekend during the summer (pers.con. Ed Moore, USFS). These group campgrounds are typically open for use from snow melt or Memorial Day (which ever occurs first) through the Labor Day weekend. The gates to the sites are closed when there is no reserved use; however these sites can be used if vacant without a reservation.

The most common response of campground visitors regarding the activities they engaged in was camping in developed sites (44 percent). The most frequent secondary activity visitors identified was reservoir fishing (56 percent) and relaxing and water play in the reservoir/sun bathing (45 percent). (PCWA, REC-1 TSR, 2010).

In review of PCWA REC-1 TSR 2010 there appears to be a greater diversity of cultures utilizing the group campgrounds than the family campgrounds or other project recreation areas.

All four group sites: The majority recreation plan elements bring these sites up to current accessibility standard or specific routine heavy maintenance items.

There are some circumstances where the campsite can neither be leveled nor protrusions removed in order to make the site accessible due to excessive rock. Alternation of the site would adversely change the character of the setting.

Gates Group Campground

This Group campground consists of three group sites and is located on the east of the French Meadows Reservoir adjacent to the Middle Fork American River.

While daily data has not been collected by concessionaires, there was a record of reservations kept by the previous concessionaire American Land and Leisure. It is common that each group site is reserved every weekend during the summer (pers.con. Ed Moore, USFS). These group campgrounds are typically open for use from snow melt or Memorial Day (whichever occurs first) through the Labor Day weekend. The gates to the sites are closed when there is no reserved use; however these sites can be used if vacant without a reservation.

The most common response of campground visitors regarding the activities they engaged in was camping in developed sites (70 percent) followed by stream based water play/sunbathing. The most frequent secondary activity visitors identified was both hiking/walking and stream based water play/sunbathing (59 percent) and relaxing (44 percent). (PCWA, REC-1 TSR, 2010).

In review of PCWA REC-1 TSR 2010 there appears to be a greater diversity of cultures utilizing the group campgrounds than the family campgrounds. For the Gates Group in particular even though only 43 people responded to the survey question there was representation from the widest range of counties (7) in California in this group camp than anywhere else in the French Meadows area.

Like Coyote Group sites the majority recreation plan elements bring these sites up to current accessibility standard.

There are some circumstances where the campsite can neither be leveled nor protrusions removed in order to make the site accessible due to excessive rock. Alternation of the site would adversely change the character of the setting.

Many Gates group visitors participate in stream based recreation creating a network of user created trails. Formalizing one or two trails that can be accessed by any visitor to the Gates group and signing the trail would provide management of river access. User created trails that are impacting resources would be closed and rehabilitated/revegetated.

French Meadows Boat Ramp

This boat ramp is located on the south shore of the French Meadows Reservoir and encompasses the French Meadows Picnic Area and associated parking areas. The previous concessionaire, American Land and Leisure did not conduct any counts at these facilities. The current concessionaire, California Land Management will be collecting fees at the boat ramp via a FS purchased and installed fee tube and in theory would be able to supply information regarding the number of paying visitors.

The boat ramp is used whenever snow does not prohibit its use as evidenced by FS personnel visit. As previously mentioned the concessionaire is typically on site from snow melt or just prior to Memorial Day weekend, whichever occurs first, until mid September.

As would be anticipated the most common response given by visitors to the area about the primary activity they were engaged in was reservoir fishing (58 percent) followed by camping in a developed site (17 percent). The secondary activity identified by visitors was hiking/walking and reservoir swimming/water play/sunbathing (21 percent each).

Specific measures for routine heavy maintenance items or enhancement, enlargement, removal, reduction of this area is:

- Based on the lack of disturbance of vegetation around picnic tables and grills (several years of patrol pers.com. Ed Moore, USFS) it appears that the French Meadows Picnic Area is used very infrequently and would probably be used more frequently if the opportunity were located closer to toilet, water and garbage facilities. Relocate facilities from two of the picnic sites to the vegetated area southwest of the bathroom facility adjacent to the parking area on the French Meadows Boat Ramp Road. Paint traffic markings in the parking area to identify parking for the picnic sites. The remainder of the facilities in the French Meadows picnic area including waterlines, bathroom, signs, trail, etc. would be removed and the area restored, rehabilitated/revegetated. The Picnic Area parking could be left as is.
- Sign the location of the new picnic area and provide information on website and pamphlets.
- Replace the flush toilets (the buildings are displaying signs of rot) with accessible vault toilets to provide sanitation whenever the boat ramp is accessible and to lower operating costs. Construct the accessible water faucet and sump near the toilets.
- Replacing wooden barriers with suitably sized rock decreases maintenance and provides a substantial barrier to keep traffic where it is intended to be. Cable and post barriers do not

comply with FS policy and present a hazard; replace post and cable with suitably sized barrier rock.

- Drainage work is needed to direct snowmelt and rainwater through reconstruction of drainage ditches.
- This boat ramp is the more frequently used boat ramp at the reservoir and as stated in PCWA REC-1 TSR, 2010 is functional but contains cracking and spalling concrete with vegetation growing in the cracks. In years when the end of the boat ramp is out of the water, there is a sharp drop-off that prohibits vehicles from continued use of the boat ramp, instead boat towing vehicles drive onto the reservoir bed to access the water. Importantly for the FS this boat ramp is also frequently used for fire suppression activities. Water trucks (including nursetankers and fire engines) can not navigate the drop off and cannot easily or quickly negotiate obstacles on the reservoir bed or take the risk of becoming stuck on the reservoir bed. The boat ramp would be extended to meet needs in the critically dry water years. And the concrete would be replaced.
- More effective signing and barriers along the boat ramp would keep people from driving on the reservoir bed when the water surface is dropping.
- Reestablish road clearing limits to provide line of site for motor vehicles.

French Meadows RV Dump

The remains of the visitor center present a safety hazard and is visually unattractive and must be completely removed. This area would then be surfaced and utilized as part of the facility. Provide painted markings to direct traffic including parking spaces. Bring the site up to current FS accessibility standards.

McGuire Boat Ramp and Associated Parking Areas Including Poppy Trailhead

This trailhead and boat ramp is located on the north shore of French Meadows Reservoir and encompasses a total of three parking areas. The previous concessionaire, American Land and Leisure did not conduct any counts at these facilities. The current concessionaire, California Land Management will be collecting fees at the boat ramp via a FS purchased and installed fee tube.

As previously mentioned the concessionaire is typically on site from snow melt or just prior to Memorial Day weekend, whichever occurs first, until mid September although north shore facilities are winterized before south shore facilities.

As would be anticipated the most common response given by visitors to the area about the primary activity they were engaged in was reservoir fishing (33 percent) followed by camping in a developed site (28 percent). The secondary activity identified by visitors was reservoir swimming, water play/sunbathing (53 percent each) followed by relaxing and reservoir fishing both (42 percent). Given that there is a greater response for the second primary activity of developed camping than at the French Meadows Boat Ramp, it could be deduced that more of the users of this boat ramp camp within the French Meadows area.

Specific measures for routine heavy maintenance items or enhancement, enlargement, removal, reduction of this area include removing the current Poppy Campground Trailhead Parking Area, road, and facilities; then restoring and revegetating the area while blocking off vehicular traffic and consolidating the facilities into one area.

- Remove post and cable barriers from the previous Poppy Trailhead parking area to facilitate restoration activities.
- There are two toilet facilities in the vicinity of the Poppy Trailhead, a 2-unit flush and 1-unit vault. The use of the area does not warrant this level of development. Remove all toilets and associated plumbing including faucets, drains, sumps and the fire hydrant and restore the area.
- Consolidate trailhead/boat ramp parking and facilities into one area at the McGuire Boat Ramp Parking SE Lot Area near the access road. To facilitate accessibility for visitors to this area pave and designate and sign six parking spaces nearest the toilet, water, garbage, fee station and information walkway.
- Construct and sign an extension trail from the new parking area to the Poppy Trail (16E10; Western States Trail).
- Sign the remainder of the McGuire SE Parking Lot as parking for boaters.
- Providing barrier rock around the McGuire Parking Lots will keep motorized traffic on existing compacted/hardened surfaces.
- The 2 access roads to the McGuire NE Parking Lot are an un-necessary impact to resources; one of these access roads can be removed and restored/revegetated.

McGuire Picnic Area and Beach

Located on the northshore of the reservoir this area contained a manmade beach. The picnic area and beach was combined with the McGuire Boat Ramp and associated parking area for visitor survey and thus the use at this location can not be differentiated from the boat ramp. However, based on frequent patrols and administration of the area the FS acknowledges that the area is not frequently used.

The previous concessionaire, American Land and Leisure, reported that the group campgrounds tended to be reserved each weekend between Memorial Day and Labor Day weekends; given this areas lack of use, and proximity to the reservoir and present infrastructure the FS proposes to develop the area into a group campground with two sites, one 25 PAOT and one 50 PAOT.

In addition to PCWA's REC-1 Table 4 current FS accessibility standards shall be applied to this site utilizing as many of the existing features and facilities that are in good condition as possible (reusing bear proof food lockers, existing roads and trails, etc.)

Duncan Creek Diversion Area

Much of the area to the north and east of the diversion pool is utilized for dispersed recreation when snow does not limit access. The FS agrees with PCWA REC -1 TSR and adds that the heaviest use is in the fall until the end of October, or deer hunting season.

The visitor use survey had a limited response (5 individuals) when analyzed in whole acknowledged tent camping (4 answered the length of stay question with an average 2.8 nights) was a primary activity. There seems to be a tendency towards stream based recreation as well (PCWA REC-2 TSR).

The FS agrees with PCWA's proposal (REC-1 Table 4 to install sanitation facilities and barrier the perimeter of the DCUA as well as to define camping sites. This area is in a wildland setting. As such continuing the rustic semi-primitive setting is appropriate for this area. An information board would be constructed and installed on which to post pertinent information (fire restrictions, etc).

Long Canyon Recreation Area, Middle Meadows Campground

Middle Meadows Group Campground consists of two group sites which are heavily used during the summer period, particularly during weekends, as shown in REC-1 TSR (2010). The Recreation Plan calls for developing an additional group camping site at this facility at such time when the use exceeds the trigger presented in the section describing the Future Project Recreation Facility Enhancements.

In addition, there is a need to upgrade the generator used to provide power for the well at this campground in order to reduce the production of greenhouse gases. A solar power source for this generator will reduce the use of petroleum products at this site and reduce the overall environmental footprint.

Rubicon River Recreation Area, Ellicott's Bridge River Access Area

The Ellicott's Bridge River Access site provides the primary access to the Rubicon River between Hell Hole Reservoir and Ralston Afterbay. This site is used by anglers and other water-based recreationists using this bypass reach of the Rubicon River. The Ellicott's Bridge River Access Area also serves as a trailhead for the Hunter Trail, which provides access along this segment of the Rubicon River for anglers (Carnazzo, 2010a) This site is regularly used, based on observations by FS staff, in the comments submitted by representatives at the Angler Focus Group Meeting (Carnazzo, 2010), and as reported in REC-4 TSR, (2010). At this time, the FS provides clean-up and visitor management at this site. The use at this site is a result of the licensee's recreation developments in the Hell Hole and French Meadows area, improved access to the area, and from project flows which have increased fish populations and improved angling opportunities through higher summer flows and colder summer water temperatures. There is a need for improved parking, sanitation facilities and access at this river access site for anglers, whitewater boaters and other water-based recreationists, as described in REC-4 TSR (2010), the

comments from Foothills Angler Group (2010), comments from the Foothills Water Network (2009, as presented in REC-4 TSR), and FS staff observations.

Middle Fork Interbay Reservoir Area

By agreement with the relicensing participants, including the FS, no surveys were conducted in the Interbay Reservoir Area. However, since the beginning of the relicensing effort the FS has heard stakeholders report that the Middle Fork American River Interbay area is favored by anglers as a unique stream based recreational activity.

Upon visiting the Middle Fork Powerhouse area in October 2010, the FS found evidence that sanitation facilities are necessary and that upstream access is prohibited by fencing. As such the FS urges PCWA to meet with interested stakeholders to develop a way to access the upstream area while PCWA meet their security needs.

Ralston Afterbay Sediment Removal Access Point Area

This site is identified as an access point for boaters to the afterbay and is open to the public, although it is not considered a developed recreation facility. In particular, this site serves as a launch area for trailered boats, since it is accessible from Forest Road 23, is not as steep as the Ralston Picnic Area Car Top Boat Ramp, and is not blocked by large rocks (PCWA REC-3 TSR, 2010). In order to provide reasonable access for trailered boats, this site will be improved to a limited extent. The improvements will clearly indicate the launch and limit the potential for widening or expansion of the launch from uncontrolled use.

Ralston Picnic Area and Cartop Boat Ramp

This facility is located on the Middle Fork American River just upstream of Ralston Afterbay.

The FS operates and maintains this area through funding from PCWA under the current license.

The primary activity that visitors participate in is reservoir or stream fishing. The secondary activity is reservoir swimming/waterplay/sun bathing (31 percent) or stream swimming/waterplay/sun bathing (33 percent).

Sites 1 and 5 are seldom utilized as evidenced by herbaceous vegetation that is around the site and by weekly maintenance staff and could be removed to reduce maintenance costs.

The car top boat launch has several large boulders prohibiting access to the river; this was done several years ago when wheeled motorized vehicles were entering the river. A better, multi-craft entry to the afterbay is available at the sediment removal access point less than a 0.25 mile to the southeast. There is available parking for vehicles with boat trailers at the picnic area.

There is a user-created trail, along an historic ditch, that travels upstream of the picnic area. This trail has a number of user-created sub trails accessing the MFAR. This trail also accesses a water temperature gage (designated as MF 26.0) that is under special use permit to PCWA.

Developing this trail to a standard that meets FS specification would provide protection of adjacent resources.

Middle Fork American River (Peaking Reach) Recreation Area

Auburn State Recreation Area (SRA) is comprised of approximately 30,000 acres of primarily federal lands that were originally acquired or withdrawn for the purpose of the Auburn Dam Project. These lands include USDI Bureau of Reclamation (BOR) fee title lands, USDA National Forest System lands (FS) (Tahoe and Eldorado National Forests) and USDI Bureau of Land Management (BLM) lands. California Department of Parks and Recreation (CDPR) has managed these lands since 1977 through various agreements with the Reclamation and other federal agencies. The CDPR Commission designated the area as a State Recreation Area in 1979.

Auburn SRA includes approximately 45 miles of the river canyons of the Middle and North Forks of the American River.

Project Nexus

CDPR manages Auburn SRA, which includes lands along the MFAR from just below the Oxbow Powerhouse down to Folsom Lake SRA. The MFAR and the North Fork of the American River below the Confluence are the peaking reach for the MFAR Project. Recreation use within Auburn SRA along the peaking reach includes river- and flow-related recreation use such as whitewater rafting and kayaking, canoeing, angling, and other river recreation use. The altered flow regime on the peaking reach resulting from the MFAR Project affects river recreation use and the cost of managing this use and the facilities that are necessary to support this use.

These recreation sites in the peaking reach are located federal lands managed by the U.S. FS, the Bureau of Land Management and the Bureau of Reclamation (Reclamation) and are identified as such in the discussion below. Since State Parks has served as the primary manager of whitewater and river recreation uses along the peaking reach, State Parks has documented the costs of managing flow related recreation use on the peaking reach. At least one of these sites, Indian Bar, is within the Middle Fork FERC Project Boundary. The purpose of this document is to identify the flow dependent recreation uses and facilities and the cost of operating, maintaining and managing these uses within the peaking reach. The manner in which these sites and costs are addressed in the new FERC license or other non-FERC agreements may vary depending upon location and ownership.

Flow-Related Recreation Use on the Peaking Reach

Flow-dependent recreation activities along the peaking reach within Auburn SRA include canoeing, kayaking, and whitewater rafting and fishing. The project results in higher flows during the summer and fall, which would not occur in the unimpaired condition. These higher flows have attracted the flow-dependent whitewater recreation use. Similarly, the project results in higher flows and colder water temperatures during the summer and fall than the unimpaired

condition which sustains a cold water fishery which has attracted angling use along the peaking reach.

The discussions below regarding flow-related recreation use, facilities and costs in the peaking reach are focused on whitewater boating (rafting, kayaking, and canoeing) and angling.

Between 1999 and 2008 the total estimated average attendance for all of Auburn SRA was 829,973 visitors annually. Attendance figures for Auburn SRA are derived from vehicle counts of parking lots throughout the SRA to which several factors are applied to account for number of people per vehicle and turnover of parking spaces. The recreation sites and parking areas at Auburn SRA serve a variety of types of recreation uses. In some areas, the parking areas primarily serve trail uses, including locations such as the Foresthill Loop Trail, Cool Staging Area and Auburn Staging Area. At Mammoth Bar much of the use is OHV use. Some locations, such as the Confluence, serve a mix of uses. There are several recreation sites which primarily serve flow-dependent recreation uses such as whitewater boating and fishing. These areas include Indian Bar, Ruck-a-Chucky and China Bar.

Ruck-a-Chucky is the primary take-out for the Class IV Tunnel Chute Run and the put-in for the Class II Mammoth Bar run. Other uses of this site include 5 campsites, and general recreation access including anglers. Most of the trail use utilizes the parking area at the top of Driver's Flat Road – which is accounted for as a separate site in the attendance counts. China Bar is a new river access point which includes an entrance station, parking area and boat drop-off/pick-up areas.

There are three primary whitewater runs on the peaking reach of the Middle Fork Project. This includes the 15 mile Class IV "Tunnel Chute Run" from Indian Bar (Oxbow Powerhouse) to Ruck-a-Chucky/Greenwood, the 7-mile Class II "Mammoth Bar Run" from Ruck-a-Chucky/Greenwood to Mammoth Bar and the 4-mile Class II "China Bar Run" from the Confluence to the Birdsell or Oregon Bar access points. Additionally, the 2-mile "Murderer's Bar Run" from Mammoth Bar to the Confluence is a short reach of river that is generally Class II-III with the Class V-VI Murderer's Bar rapid in the middle of the run that is normally portaged. With the opening of the Confluence run (see below) the Murderer's Bar run could become more popular in the future, particularly if a portage trail were provided around Murderer's Bar rapid.

The China Bar run was opened to public use in January 2008 with the closure of the Auburn Dam diversion tunnel and the development of the PCWA American River Pump Station which included returning the river to its historic channel and providing a whitewater bypass channel of the pump station. The Pump Station project included providing some river access facilities to accommodate the river use that would occur once the tunnel was closed and the river returned to its channel. These facilities included an entrance station off of Maidu Drive, a 50-car parking lot and restroom and two equipment drop-off/pick-up parking areas and turnarounds. Other enhancements included improvements to the access roads to the river, barriers along the roads, gates and a pedestrian access trail from turn around to parking area. State Parks is only able to afford staffing the China Bar entrance station on weekends during the summer season.

The Tunnel Chute run is a popular commercial whitewater run due to the controlled flows released by the Middle Fork Project throughout the summer season. Currently PG&E and PCWA coordinate annually with State Parks and commercial whitewater representatives to voluntarily schedule flow releases which enhance whitewater recreation, but do not compromise power production needs. The Mammoth Bar run is also used by commercial whitewater outfitters, but to a much less extent. California State Parks manages commercial whitewater boating on these two runs through concession contracts with approximately 20 to 25 whitewater outfitters in any given year.

Through these concession contracts State Parks has reliable use information regarding commercial whitewater use. From 2000 through 2009 an average of 19,311 commercial whitewater boating clients and crew used the Tunnel Chute run. During this same period (for the years data is available), an average of 690 commercial whitewater clients and crew used the Mammoth Bar run.

Private (non-commercial) whitewater use is “self-reported” on these runs through sign-in sheet boxes at the put-ins. This is not a particularly reliable method of generating use data. State Parks estimates about 15 percent of private use is actually reported on these sign in sheets. From 2000 through 2009 (for the years data is available) an average of 330 private users on the Tunnel Chute run reported their use via the sign-in sheets. Using a 15 percent estimated reporting factor the private use on this run is estimated to be 2200 users annually. For the period from 1996 through 2006, there are 5 years for which there is private use data for the Mammoth Bar run. During these years an average of 87 private boaters reported use of the Mammoth Bar run. Using the 15 percent estimated reporting factor the private use on this run is estimated to be 580 users annually.

The China Bar run slowly gained popularity in the first two seasons of use (2008-2009) that this stretch has been available. This Class 2 run is very close to the City of Auburn and highly accessible via Highway 49. The man-made bypass channel at the Pump Station was designed to be attractive to whitewater boaters and provides an interesting wave/hole hydraulic play feature for whitewater boaters at certain flows. State Parks expects this run to become very popular in the future. State Parks estimates 3056 visitors used the China Bar area in 2008 and 9,332 visitors used the area during 2009. Recreation uses of this site include whitewater boating, trail use and fishing. Not all of the visitors to China Bar engaged in flow dependent recreation. State Parks estimates that approximately sixty percent of the current use in the area is whitewater boating, fishing or other flow dependent recreation.

Below are all of the specific recreation sites on the peaking reach which serve flow related recreation uses.

Indian Bar River Access Area

Located on Tahoe National Forest this area is a popular white water boating launch area as well as day use area. PCWA REC-1 TSR (2010) survey indicates that the primary use of this area was whitewater boating (43 percent) with secondary activities being picnicking, fishing, and stream based water play or sunbathing (29 percent each).

Facilities were constructed with California State Department of Boating and Waterways grant funding obtained by the FS. For many years California State Parks has operated and maintained these facilities.

The raft launch is down a steep earthen slope to an eddy that has little space. A slide ramp would enhance the ability to launch water craft. Use figures gathered by State Parks for 2010 indicates that there were 17,262 commercial clients that put in at this launch facility. This was lower use year than five years ago when the reported usage was nearly 30,000 people. Typically the majority of commercial boating is conducted over a five-month period from May to September; the majority of this use occurs in a small time frame after arriving on site and prior to launching. Toilet facilities are overwhelmed. Modifying the existing toilets, to meet peak use will prevent sanitation issues from continuing to arise. There are issues with the toilets venting, this may be because of their location in proximity to shade. If shade is not determined to be the issue, installation of ventilation systems would improve the facility.

This area is within the FERC boundary, and the lands within the FERC boundary were determined by BLM on April 8, 2005 to be within a Federal Power Project withdrawn area. This, in simplified terms, means that the lands cannot be entered, selected, or located for mineral entry. Yet the public frequently mines in the area often leading PCWA Power Division managers to ask the FS to take action. Posting the area with appropriate regulation to notify the public that the area is not available for mining would educate the public and provide the FS the tools necessary to take enforcement action if it were necessary.

Parking and commercial rafting transportation drop-off for the site is on a sediment augmentation pile. This sediment is meant to be released downstream during high flow events. Camping tends to interfere with commercial rafting transportation and so is not tolerated during the height of rafting season. Signs need to be installed saying no overnight camping April through September. However the area is available for camping (not to exceed 14 days maximum by TNF Forest Order) October through March, and signage should represent this recreation opportunity.

There is an opportunity to utilize the Ralston Afterbay Overflow Parking area as a unique day use area and for parking. Providing shade armadas over two picnic tables would provide year round comfort on this rather hot area that overlooks the river.

Cache Rock River Access Area

This site is located on National Forest System lands (ENF). There are no facilities at this site at present, although there are 10 designated primitive camping areas. The area is used as a lunch stop by whitewater boaters (PCWA REC-1 TSR, 2010) and by individuals accessing the river via the 4WD access road (Forest Road 14N35A) to fish and participate in other water-based recreation activities. At this time, there is no public right of way across the private land located south of the Cache Rock River Access Area; however the FS is currently working with the private landowner to acquire public access. The measures identified provide for reasonable public access, sanitation and necessary resource protection.

Dardanelles Creek

This site is used as a lunch stop by whitewater boaters on the Tunnel Chute run, including commercial whitewater outfitter trips. Repeated use of this site by large groups of rafters can lead to problems with human waste. To address this problem and past concerns regarding the environmental impact of human waste associated with whitewater use, CDPR has installed composting toilets at several sites along the Middle Fork of the American River. Currently there are composting toilets at Upper and Lower Fords Bar and Canyon Creek. Installing a composting toilet at this site, Dardanelles Creek, would help reduce impacts from human waste by whitewater boaters. The facility would need to be located, designed and constructed to be consistent with the ORVs identified in the Wild and Scenic River Eligibility Study and determination for this section of river.

There are historic mining resources located at this site and interpretive signing would serve to protect these resources and enhance the visitor experience.

San Francisco Bar

This site is used as a lunch stop and occasionally as an overnight camping stop by whitewater boaters on the Tunnel Chute Run, including commercial whitewater outfitter trips. Repeated use of this site by large groups of rafters can lead to problems with human waste. To address this problem and past concerns regarding the environmental impact of human waste associated with whitewater use, CDPR has installed composting toilets at several sites along the Middle Fork of the American River. Currently there are composting toilets at Upper and Lower Fords Bar and Canyon Creek. Installing a composting toilet at this site, San Francisco Bar, would help reduce impacts from human waste by whitewater boaters. The facility would need to be located, designed and constructed to be consistent with the ORVs identified in the Wild and Scenic River Eligibility Study and determination for this section of river.

Information and interpretive signing at this site would serve to help protect natural and cultural resources at the site and enhance the visitor experience.

Fords Bar (Upper and Lower Fords Bar)

These sites are used as a lunch stop or overnight camping (by permit) location by whitewater users. There is no public vehicle access to the site. Existing facilities include Facilities include two double composting toilets. The composting toilets were installed specifically to address past human waste issues at this site as a result of whitewater boating use. No additional improvements are proposed for this site at this time.

Canyon Creek

Whitewater boaters use this site as a stop on the Tunnel Chute Run. Until just recently there was a composting toilet at this site specifically installed to serve whitewater boating use. In August 2010 the composting toilet was destroyed in a wildfire. CDPR and BLM intend to replace this

composting toilet through funding from the California Department of Boating and Waterways. If this funding source does not materialize to replace this composting toilet, the agencies would like the licensee to replace this facility which almost exclusively serves flow related recreation use and helps prevent human waste problems from this use. The facility would need to be located, designed and constructed to be consistent with the ORVs identified in the Wild and Scenic River Eligibility Study and determination for this section of river.

A simple constructed trail is needed from the river beach/landing area to the restroom in order to prevent multiple user created trails from developing.

Information and interpretive signing at this site would serve to help protect natural and cultural resources at the site and enhance the visitor experience.

Ruck-a-Chucky/Greenwood

Parking is limited at this location and the available parking areas at this site fill to capacity during some peak use periods. There are constraints on the amount of additional parking that can be provided, however creating some additional parking is possible and would benefit flow related recreation use, including fishing and whitewater boating. Information and interpretive signing at this site would serve to help protect natural and cultural resources at the site and enhance the visitor experience. Additionally there are repairs and improvements that need to be made to the existing portage trail around Ruck-a-Chucky rapid. These new facilities would need to be located, designed and constructed to be consistent with the ORVs identified in the Wild and Scenic River Eligibility Study and determination for this section of river.

Cherokee Bar

This site is accessible by vehicle and is primarily used for day use including flow-related uses such as fishing. The area is available for overnight camping by whitewater boaters by permit. A precast concrete vault toilet would help prevent human waste problems associated with this use.

Poverty Bar

This site is used occasionally as an overnight camping location by whitewater boaters (by permit). If use of this site increases, a composting toilet may be a necessary improvement at this location in the future to address potential human waste issues.

Mammoth Bar

The majority of the use at Mammoth Bar is off highway vehicle use. However the area is used as a river access point and the take out for the Mammoth Bar run. There is an existing rough and undeveloped parking area near the river bar that serves whitewater boating use. Improving and expanding this existing parking area would help to better serve whitewater boaters and anglers. Information and interpretive signing at this site would serve to help protect natural and cultural resources at the site, provide a venue to communicate about changing river levels and flows and enhance the visitor experience.

Murderer's Bar

This is the site of a Class V-VI rapid that is portaged by most users. Currently there is no constructed portage trail, only user created trails. Depending on the use of this run in the future, a portage trail may be a desired future improvement.

Confluence

The Confluence of the MFAR and North Fork American River is the most heavily used recreation site within Auburn SRA. The most popular activities include swimming and sunbathing, and the site serves as the put-in for the China Bar run. The area also serves trail users, anglers, and other types of recreation use. During the primary recreation season (April-September) CDPR estimates 60-70 percent of the use at this site is river-related recreation. During the off season this figure is 30-40 percent. Existing facilities at the site includes a new double precast concrete vault toilet installed in the Fall of 2010 and informal parking along Old Foresthill Road.

A second double precast concrete vault toilet is needed at the site to serve the amount of use that occurs at the site and to help prevent human waste problems associated with this use.

Formalizing and improving the roadside parking, to the extent feasible, would better serve the existing use at the site and could make the site safer for pedestrian traffic along and crossing the roadway.

Information and interpretive signing at this site would serve to help protect natural and cultural resources at the site, provide a venue to communicate about changing river levels and flows and enhance the visitor experience.

A designated access trail for boaters is needed at this site for several reasons. As noted elsewhere in this document, including below, CDPR anticipates that the China Bar run could become a very popular river boating opportunity due to the ease of road access from Highway 49 and the Class II rapids which will attract a wide range of boaters. Providing a designated trail for river boating access will help prevent conflicts with the large amount of swimming and sunbathing use which dominates the river gravel bar during the peak season. This new river access trail would be built to provide access to the river below the Highway 49 rapid which can be problematic for inexperienced boaters.

Quarry Trailhead and River Access

This location provides trail access to the Quarry Trail but also provides river access for anglers, swimmers, and sunbathers to Murderer's Bar and beyond. CDPR estimates 25 percent of the use at this location is river-related. Facilities include a dirt/gravel parking lot for 20-25 vehicles, portable chemical toilet, interpretive panels, picnic tables and trash containers.

China Bar

The China Bar run was opened to public use in January 2008 with the closure of the Auburn Dam diversion tunnel and the development of the PCWA American River Pump Station which included returning the river to its historic channel and providing a whitewater bypass channel of the pump station. The China Bar run slowly gained popularity in the first two seasons of use (2008-2009) that this stretch has been available. This Class 2 run is very close to the City of Auburn and highly accessible via Highway 49. CDPR expects this run to become very popular in the future. Recreation uses of this site include whitewater boating, trail use and fishing. CDPR estimates that approximately sixty percent of the current use in the area is whitewater boating, fishing or other flow dependent recreation.

The existing facilities in this area include an entrance station off Maidu Drive, a fifty-vehicle paved parking lot, a precast concrete vault toilet, two turn-around river access points for equipment drop off and pick up, gates, signs and trash containers. The configuration of these facilities makes river access somewhat difficult as the parking area is approximately 1/3 of a mile from the two river access turn-around areas. Whitewater boaters must hike this distance from the river to retrieve vehicles. Also, this river run has the potential to become popular in the future and use would exceed the available parking.

Developing additional river access facilities at this site, as described in the agency recreation plan, would better serve existing users and accommodate future increased use. The best physical location for additional and expanded facilities is on the inside bend of the river (the south or El Dorado County side of the river) which has a large flat that was filled and graded as part of the American River Pump Station Project. Existing roads, currently not available to public use, already connect this flat to Highway 49 near the town of Cool.

The bypass channel for the American river Pump Station was designed to be navigated by and attractive to whitewater boaters. It is CDPR understanding that the channel was designed to be optimal for whitewater use at flows between 800 cfs and 2500 cfs. As noted by participants surveys in the whitewater recreation flow studies, this channel in particular was rocky and difficult at the lower study flows (368 and 600 cfs). If it is possible to modify the channel, or a portion of the channel, to make it more attractive to both whitewater play boaters and casual down river users at lower flows this would better serve the users at the range of flows most likely to be experienced in the primary summer use season.

Rationale for Heavy Maintenance

Heavy maintenance and rehabilitation are necessary to keep existing FS, BLM, Reclamation, and CDPR facilities in serviceable condition to meet health and safety requirements and other public needs. Heavy maintenance and rehabilitation include components of recreation facilities such as water systems, traffic control barriers, roads, spurs, and associated drainage structures, grills and fire rings, picnic tables, toilets, and signboards. Long-term and heavy maintenance includes: but is not limited to, repairing, re-surfacing and re-striping paved areas, replacing culverts and other heavy maintenance along access roads, re-roofing and painting buildings, replacing picnic tables and other accessory structures, and replacing the composting unit on the composting toilets. As described in the Review of Recreation Developments section above, the necessary maintenance, rehabilitation, and reconstruction will be determined through a periodic review of the facilities

the resource agencies and licensees. These reviews will determine the necessary work, based on facility condition and other factors at the time. Data from ongoing monitoring will assist in making needed changes in the work schedule and in future planning.

Rationale for Recreation Operation, Maintenance, and Administration Measures

Within the MFAR Project, the licensee’s role in facility and infrastructure development has substantially modified the visitation within the area. As described in the Rationale for Specific Recreation Measures, below, the licensee is responsible for most of the recreation development within the MFAR Project Area or for providing the instream flows that have created or augmented the recreation opportunities. As such, providing for the operation and maintenance on these facilities and areas is a critical aspect of their recreation program.

As previously described in the Rationale for Specific Recreation Measures, the developed recreation facilities are either operated by a concessionaire under a permit, or directly by the FS, BLM, Reclamation or CDPR. There are numerous reasons for this management strategy, some of which include: (a) there are operational flexibilities attained by both the concessionaire and the respective agency by operating the facilities under the current strategy; (b) the diversity in operational flexibilities attained by both the concessionaire and the FS by operating the facilities under the current strategy; (b) the diversity in managing authority allows for better reactions to changing budgets, personnel, and regulations; (c) the smaller facilities often cost more to operate than the revenues that can be developed at the site, making them unattractive to concessionaires (conversely, the largest facilities are operated by concessionaires because they have highest revenue earning opportunities); (d) the Service Contract Act (2004) precludes concessionaires from operating sites where fees are not charged (and there are a number of facilities in the MFAR Project area that are deemed to be important as either free and/or low fee sites); and (e) having uniformed FS presence would be required for public contact and visitor management, regardless of the number of concession operated facilities.

Actual operation and maintenance of the various licensee developed sites is generally conducted by seasonal staff. In addition, individual facilities and adjacent use areas are “lumped” into discrete geographic areas that serve as individual “patrol” units. This provides the most efficient means of managing the recreation at and between recreation facilities along the reservoirs and river reaches. The following section has been organized to follow this management strategy, and each individual “unit” is separately described. The total annual cost associated with the operation and maintenance of the MFAR Project related recreation is \$ 801,695.27. The Forest Service costs are summarized by site in the table below. BLM and Reclamation annual operation and maintenances costs are summarized in a table on page 56 of this document.

Summary of FS O&M and Administration Cost Spreadsheet (MFAR Relicensing)	
Area	Total
French Meadows Area	\$62,286.17

Hell Hole Area	\$159,436.20
Long Canyon Area	\$47,827.29
Duncan Canyon Area	\$14,094.12
Ralston Afterbay and Indian Bar Areas	\$72,375.09
Cache Rock Area	\$4,719.54
Rubicon River Area	\$4,512.48
<i>Subtotal</i>	<i>\$365,250.83</i>
Administration	\$169,649.97
Total (rounded):	\$535,000.00

Hell Hole Recreation Area

The Hell Hole recreation facilities are operated and managed by the FS. The facilities were originally constructed by the licensee with no funds provided for operation and maintenance of these facilities. More recently, the licensee has been providing funding for necessary operation and maintenance of the recreation facilities (PCWA, 2006). The operation, maintenance, and administration costs are directly a result of the licensee's recreation development. On-site operations and maintenance by seasonal and permanent FS staff is required to meet health and safety standards, maintenance standards, and to ensure recreation visitors are having a quality experience and not impacting resources.

Cost: The costs are to manage for the recreation use at the recreation facilities around Hell Hole Reservoir and generally within ¼ mile of the reservoir. For this area, these funds would be utilized to conduct patrols, pick up litter, provide public information, enforce rules and regulations, rehabilitate impacted areas, address sanitation, maintain day use sites (such as concentrated use areas), respond to fires and other emergencies, assist in search and rescue, conduct facility maintenance at those recreation facilities not operated by the concessionaire, and maintain the access trails to various recreation sites in order to meet existing maintenance standards. Campground Host services are needed to provide visitor information and better visitor management. The campground host will be located at Big Meadows campground, although this host may be utilized at other campgrounds around Hell Hole Reservoir or at the facilities around French Meadows Reservoir during the post-Labor Day season. The method of providing for this service (direct employment, service contract, etc.) will be determined in consultation with the licensee. There are regular costs associated with the maintenance of these

facilities, as identified in the “fixed cost” portion of the spreadsheet below. In addition to the facility maintenance, there will be shoreline cleanup and resource protection measures within and immediately adjacent to the reservoirs. The following estimate shows the cost to manage for these visitors and the impacts from their visits.

O + M Cost Spreadsheet (MFAR Relicensing)

Area: Hell Hole Area

Personnel:	Days	CTG*/Day	Total
Recreation Technician (GS-5)	120	\$162.00	\$19,440.00
Recreation Technician (GS-5)	120	\$162.00	\$19,440.00
Recreation Technician (GS-4)	62	\$150.00	\$9,300.00
Recreation Technician (GS-5)	64	\$162.00	\$10,368.00
Recreation Technician (GS-5) (public contact, cour	60	\$162.00	\$9,720.00
Maintenance Technician (GS-7)	40	\$193.00	\$7,720.00
Recreation Manager (GS-9)	80	\$240.00	\$19,200.00
Resource Officer (GS-11)	0	\$350.00	\$0.00
Resource Business Manager (GS-7)	5	\$193.00	\$965.00
Resource Specialists (GS-9)(Heritage @5 days, Botany @ 2 days, Interp @6 days)	13	\$240.00	\$3,120.00
Resource Specialist (GS-11)(Wildlife@2 days)	2	\$350.00	\$700.00
Campground Host	Season		xxx
<i>Subtotal</i>			\$99,973.00
Vehicles:	Months	miles	Total
Recreation Patrol (2848)	8	12,000	\$9,640.00
Maintenance Technician (0707)	3	6,000	\$3,456.00
Recreation Manager (5554)	3	3,000	\$2,685.00
Recreation Officer (3780)	1	1,000	\$602.00
Resource Specialists (1592)	3	1,000	\$1,224.00
<i>Subtotal</i>			\$17,607.00
Note: Fleet Vehicles require 12 months FOR (some vehicles are split between several projects/areas).			
Boat replacement @\$28,000 over 10 years (not included in total costs)			\$2,800.00
Project Supplies, Materials and Contracts:			Total
Paint, supplies, cleaning supplies, tools, materials			\$4,500.00
Signs, posts, etc			\$1,000.00
uniforms			\$500.00
garbage			\$3,000.00
toilet pumping			\$2,500.00
water permits			\$1,200.00
water testing (\$18/sample 10 samples/season)			\$200.00
Equipment maintenance (power washer, generator, etc.			\$1,000.00
Boat maintenance and fuel			\$2,500.00
<i>Subtotal</i>			\$16,400.00
Sub-Total:			\$133,980.00
Overhead (19%):			\$25,456.20
Total:			\$159,436.20

CTG = Cost to Government (2010 costs)

Fre

nch Meadows Recreation Area

The French Meadows recreation facilities are managed by the FS, although direct operation and maintenance of most of the facilities are conducted by a concessionaire. The facilities were originally constructed by the licensee with no funds provided for operation and maintenance of these facilities. More recently, the licensee has been providing funding for administration of the concessionaire permit and other necessary operation and maintenance of the recreation facilities (PCWA, 2006). The operation, maintenance, and administration costs are directly a result of the licensee's recreation development. For the facilities not operated under a concession permit, onsite operations and maintenance by seasonal and permanent FS staff is required to meet health and safety standards, maintenance standards, and to ensure recreation visitors are having a quality experience and not impacting resources.

Cost: The costs are to manage for the recreation use at the recreation facilities around French Meadows Reservoir and generally within ¼ mile of the reservoir. For this area, these funds would be utilized to conduct patrols, pick up litter, provide public information, enforce rules and regulations, rehabilitate impacted areas, address sanitation, maintain day use sites (such as concentrated use areas), respond to fires and other emergencies, assist in search and rescue, administer the concessionaire special use permit, install signs, fall hazard trees, reduce fuels buildups, fire prevention, and repair or assist in repairs of waterlines, , and conduct facility maintenance at those recreation facilities not operated by the concessionaire to meet existing maintenance standards. There are regular costs associated with the maintenance of these facilities, as identified in the "fixed cost" portion of the spreadsheet below. In addition to the facility maintenance, there will be shoreline cleanup and resource protection measures within and immediately adjacent to the reservoirs. The following estimate shows the cost to manage for these visitors and the impacts from their visits.

O + M Cost Spreadsheet (MFAR Relicensing)

Area: French Meadows Area

Personnel:	Days	CTG*/Day	Total
Recreation Technician (GS-5)	20	\$150.00	\$3,000.00
Maintenance Technician (GS-9)	20	\$300.00	\$6,000.00
Recreation Officer (GS-9)	30	\$300.00	\$9,000.00
Resource Officer (GS-11)	5	\$340.00	\$1,700.00
Fire Prev Tech/Patrol (GS-7)(fire season)	14	\$314.38	\$4,401.32
Resource Specialists (GS-9)(Heritage @5 days, Botany @ 2 days, Interp @6 days)	13	\$280.00	\$3,640.00
Resource Specialist (GS-11)(Wildlife@2 days)	2	\$350.00	\$700.00
Resource Improvement Crew (i.e. maintain fuel breaks around rec a	10	\$1,500.00	\$15,000.00
<i>Subtotal</i>			\$43,441.32
Vehicles:	Months	miles	Total
<i>Subtotal</i>			\$0.00
Note: Fleet Vehicles require 12 months FOR (some vehicles are split between several projects/areas).			
All vehicles use and FOR addressed in Admin			
Project Supplies, Materials and Contracts:			Total
bulletin boards, posters, plumbing, etc.			\$4,000.00
Signs, posts, etc			\$1,000.00
Equipment maintenance (generator for water systems)			\$1,800.00
Propane for water system generators			\$1,600.00
Concessionaire use of storage bay at Admin Site see below:			
Equipment maintenance (generator for power)			\$500.00
<i>Subtotal</i>			\$8,900.00
Sub-Total:			\$52,341.32
Overhead (19%):			\$9,944.85
Total:			\$62,286.17
CTG = Cost to Government (2010 costs)			

Duncan Canyon Concentrated Dispersed Use Area

This concentrated dispersed use areas is accessed by a project road that leads to a project facility at the Duncan Diversion Dam and has been managed by the FS. More recently, the licensee has been providing funding for necessary operation and maintenance of the recreation facilities (PCWA, 2006). The operation, maintenance, and administration costs are directly a result of the licensee's project development. On-site operations and maintenance by seasonal and permanent FS staff is required to meet health and safety standards, maintenance standards, and to ensure recreation visitors are having a quality experience and not impacting resources.

Cost: The costs are to manage for the recreation use at the recreation facilities in the Duncan Diversion Dam area. For this area, these funds would be utilized to conduct patrols, pick up litter, provide public information, conduct facility maintenance, enforce rules and regulations, rehabilitate impacted areas, address sanitation, maintain use areas, respond to visitor-caused fires and other emergencies, remove hazards, and assist in search and rescue. The following estimate shows the cost to manage for these visitors and the impacts from their visits.

O + M Cost Spreadsheet (MFAR Relicensing)			
Area: <u>Duncan Canyon</u>			
Personnel:	Days	CTG*/Day	Total
Fire Prev Tech/Patol (GS-7)	10	\$314.38	\$3,143.80
Recreation Officer (GS-9)fill in as needed, supervision of GS5	10	\$300.00	\$3,000.00
Recreation Technician (GS-5)(mid May-late Oct) <i>est Duncan open-no snow-24 weeks/year</i>	20	\$150.00	\$3,000.00
<i>Subtotal</i>			\$9,143.80
Vehicles:	Months	miles	Total
Note: Fleet Vehicles require 12 months FOR (some vehicles are split between several projects/areas). All vehicles use and FOR addressed in Admin			
Project Supplies, Materials and Contracts:			Total
bulletin boards, posters, cleaning supplies, etc.			\$1,000.00
Signs, posts, etc			\$300.00
garbage*			
toilet pumping			\$1,200.00
equipment maintenance (power washer, etc)			\$200.00
garbage* cost is lumped with Ralston and Indian Bar			
<i>Subtotal</i>			\$2,700.00
Sub-Total:			\$11,843.80
Overhead (19%):			\$2,250.32
Total:			\$14,094.12
CTG = Cost to Government (2010 costs)			

Long Canyon Recreation Area

The Long Canyon recreation facilities are operated and managed by the FS. These facilities consist of the Middle Meadows Group Campground and various concentrated use areas adjacent to or accessed by project roads and facilities. The facilities were originally constructed by the licensee with no funds provided for operation and maintenance of these facilities. More recently, the licensee has been providing funding for necessary operation and maintenance of the

recreation facilities (PCWA, 2006). The operation, maintenance, and administration costs are directly a result of the licensee's recreation development and project development. On-site operations and maintenance by seasonal and permanent FS staff is required to meet health and safety standards, maintenance standards, and to ensure recreation visitors are having a quality experience and not impacting resources.

Cost: The costs are to manage for the recreation use at the recreation facilities in the Long Canyon Recreation area. For this area, these funds would be utilized to conduct patrols, pick up litter, provide public information, conduct facility maintenance, enforce rules and regulations, rehabilitate impacted areas, address sanitation, maintain day use sites (such as concentrated use areas), respond to visitor-caused fires and other emergencies, and assist in search and rescue. The following estimate shows the cost to manage for these visitors and the impacts from their visits.

O + M Cost Spreadsheet (MFAR Relicensing)			
Area: Long Canyon Area (including Middle Meadow CG)			
Personnel:	Days	CTG*/Day	Total
Recreation Technician (GS-5) (public contact, CG maint, patrols)	100	\$162.00	\$16,200.00
Recreation Technician (GS-4)	6	\$150.00	\$900.00
Recreation Technician (GS-5)	2	\$162.00	\$324.00
Maintenance Technician (GS-7)	20	\$193.00	\$3,860.00
Recreation Manager (GS-9)	20	\$240.00	\$4,800.00
Resource Officer (GS-11)	0	\$350.00	\$0.00
<i>Subtotal</i>			<i>\$26,084.00</i>
Vehicles:	Months	miles	Total
Recreation Patrol (2848)	0	0	\$0.00
Maintenance Technician (0707)	5	9,000	\$5,310.00
Recreation Manager (5554)	1	1,000	\$895.00
Recreation Officer (3780)	1	1,000	\$602.00
Resource Specialists (1592)	0	0	\$0.00
<i>Subtotal</i>			<i>\$6,807.00</i>
Note: Fleet Vehicles require 12 months FOR (some vehicles are split between several projects/areas).			
Project Supplies, Materials and Contracts:			Total
Paint, supplies, cleaning supplies, tools, materials			\$2,000.00
Signs, posts, etc			\$300.00
uniforms			\$200.00
garbage			\$2,000.00
toilet pumping			\$1,000.00
water permits			\$1,200.00
water testing (\$18/sample 10 samples/season)			\$200.00
Equipment maintenance (power washer, generator, etc.			\$400.00
<i>Subtotal</i>			<i>\$7,300.00</i>
Sub-Total:			\$40,191.00
Overhead (19%):			\$7,636.29
Total:			\$47,827.29
CTG = Cost to Government (2010 costs)			

Rubicon River Recreation Area

The Rubicon River recreation area does not include any developed recreation facilities at this time, although there is public use at this time (based on observations by FS staff and comments from the public (PCWA REC-4 TSR, 2010). The Ellicott’s Bridge River Access site provides the primary access to the Rubicon River between Hell Hole Reservoir and Ralston Afterbay. This site is used by anglers and other water-based recreationists using this bypass reach of the Rubicon River. At this time, the FS provides clean-up and visitor management at the concentrated use areas within the Rubicon River area. The operation, maintenance, and administration costs are a result of the licensee’s recreation developments in the Hell Hole and French Meadows area as well as improved access to the area. In addition, the project flows have increased fish population and improved angling opportunities through higher summer flows and colder summer water temperatures, An appropriate level of on-site operations and maintenance by seasonal and permanent FS staff is required to meet health and safety standards, maintenance standards, and to ensure recreation visitors are having a quality experience and not impacting resources.

Cost: The costs are to manage for the recreation use within the concentrated use area at the Ellicott’s Bridge river access point in the Rubicon River Recreation area. For this area, these funds would be utilized to conduct weekly patrols, pick up litter, provide public information, enforce rules and regulations, rehabilitate impacted areas, address sanitation, respond to visitor-caused fires and other emergencies, and assist in search and rescue. Following construction of the Ellicott’s Bridge River Access facility, there will be a need to adjust the operation and maintenance costs to include the cost for toilet pumping, toilet cleaning, signboard maintenance, and other associated costs. The following estimate shows the cost to manage for these visitors and the impacts from their visits.

O + M Cost Spreadsheet (MFAR Relicensing)			
Area: Rubicon Area (including Ellicott's)			
Personnel:	Days	CTG*/Day	Total
Recreation Technician (GS-5) (public contact, site maintenance, patrols)	16	\$162.00	\$2,592.00
Recreation Manager (GS-9) fill in and respond to needs	5	\$240.00	\$1,200.00
<i>Subtotal</i>			\$3,792.00
Vehicles:	Months	miles	Total
Vehicle costs incidental to vehicle costs for Hell Hole and Long Canyon Areas			

Subtotal \$0.00

Note: Fleet Vehicles require 12 months FOR (some vehicles are split between several projects/areas).

Project Supplies, Materials and Contracts:	Total
<i>Subtotal</i>	\$0.00
Sub-Total:	\$3,792.00
Overhead (19%):	\$720.48
Total:	\$4,512.48

CTG = Cost to Government (2010 costs)

Ralston Picnic Area and Car Top Boat Ramp

This picnic area is located on the Middle Fork American River near the junction of the Ralston Afterbay, close to the Ralston Afterbay sediment Removal Access Point. The area is accessed by Forest Roads that also access other Project facilities and recreation areas. The licensee provides funding to the FS to operate and maintain the recreation facilities. The operation, maintenance, and administration costs are directly a result of the licensee’s project development. On-site operations and maintenance by seasonal and permanent FS staff is required to meet health and safety standards, maintenance standards, and to ensure recreation visitors are having a quality experience and not impacting resources.

Cost: Funds provided by the are, and would continue to be utilized to conduct patrols, pick up litter, provide public information, conduct facility maintenance, reduce fuels, enforce rules and regulations, rehabilitate impacted areas, address sanitation, maintain use areas, fire prevention, respond to visitor-caused fires and other emergencies, remove hazards, and assist in search and rescue. The estimate shows the cost to manage for these visitors and the impacts from their visits.

<u>Operation and Maintenance Cost Spreadsheet (MFP Relicensing)</u>			
Area: Ralston and Indian Bar Areas			
Personnel:	Days	CTG*/Day	Total
Fire PrevTech/Patrol (GS-7)	30	\$314.38	\$9,431.40
Recreation Officer (GS-9) off season and patrol	30	\$300.00	\$9,000.00
Recreation Technician (GS-5)(mid April to mid May)	4	\$150.00	\$600.00
<i>Ralston serviced at same time as Duncan for 20 wk/yr</i>			
<i>Days for Ralston are in addition to those for Duncan before access</i>			
State Park Aides (Jim Micheaels input)	160	\$137.00	\$21,920.00

<i>Subtotal</i>				\$40,951.40
	Vehicles:	Months	miles	Total
	FS Rec Officer/tech mileage (30 x 34days at .45/mi)			\$510.00
	State Park Ranger/LE Patrol (40miles x60 trips 2400 mi at .50/mi)			\$1,200.00
	Maintenance (30mi x 200 trips = 6000)			\$3,000.00
	FPT mileage (30x30 days at .62/mi)			558
	<i>Subtotal</i>			\$5,268.00
Note: Fleet Vehicles require 12 months FOR (some vehicles are split between several projects/areas). All vehicles use and FOR addressed in Admin				
	Project Supplies, Materials and Contracts:			Total
	pump Ralston and Indian Bar Toilets (6 total)			\$6,000.00
	garbage* cost is lumped with Duncan - dumpster rental			\$1,500.00
	bulletin boards, posters, cleaning supplies, etc.			\$3,000.00
	Signs, posts, etc			\$500.00
	equipment maintenance (power washer, etc)			\$200.00
	develop written MOU with State Parks and BLM GS-11 10 days			\$3,400.00
	<i>Subtotal</i>			\$14,600.00
	Sub-Total:			\$60,819.40
	Overhead (19%):			\$11,555.69
	Total:			\$72,375.09

CTG = Cost to Government (2010 costs)

Administration

The recreational use and demand within the MFAR Project area and generated by the MFAR project facilities and operations, as described above, has also lead to the need for the various land management agencies to provide administrative oversight of the public recreation services being provided. These oversight duties include, but are not limited to such tasks as program development and oversight, planning and budgeting, hiring and supervision, relevant correspondence, prospectus development, concessionaire permit administration, coordination and review of reservation system input, review and coordination of recreation use monitoring efforts and results, reporting and record keeping, fee collection oversight and audits, coordination with FERC and PCWA, etc, The following estimate shows the cost to provide for the administrative oversight associated with management of the recreation use.

Administration Cost Spreadsheet (MFAR Relicensing)			
Eldorado National Forest			
Personnel:	Days	CTG*/Day	Total
Resource Officer (GS-11)	60	\$350.00	\$21,000.00
Recreation Manager (GS-9)	40	\$240.00	\$9,600.00

District Admin Support	10	\$240.00	\$2,400.00
Forest Recreation Officer (GS-12)	20	\$436.00	\$8,720.00
Landscape Architect	20	\$413.00	\$8,260.00
Admin Assistant	10	\$320.00	\$3,200.00
<i>Subtotal</i>			\$53,180.00

Vehicles:	Months	miles	Total
Recreation Patrol (2848)	0	0	\$0.00
Maintenance Technician (0707)	0	0	\$0.00
Recreation Manager (5554)			\$0.00
Recreation Officer (3780)	3	3,000	\$1,806.00
Landscape Architect (2094)	1	2,000	\$908.00
<i>Subtotal</i>			\$2,714.00

Note: Fleet Vehicles require 12 months FOR (some vehicles are split between several projects/areas).

Project Supplies, Materials and Contracts:	Total
Testing	\$500.00
Lump Sum Payments (seasonals)	\$2,400.00
uniforms	\$300.00
TOS (\$30,000/6 yrs)	\$5,000.00
OWCP	\$0.00
Unemployment (\$2,300/seasonal; 6 seasonals)	\$13,800.00
<i>Subtotal</i>	\$22,000.00
Sub-Total:	\$77,894.00
Overhead (19%):	\$14,799.86
Total:	\$92,693.86

Administration Cost Spreadsheet (MFAR Relicensing) Tahoe National Forest

Personnel:	Days	CTG*/Day	Total
Resource Officer (GS-11)	25	\$340.00	\$8,500.00
Recreation Officer (GS-9)	45	\$300.00	\$13,500.00
District Admin Support (GS-7)	30	\$252.00	\$7,560.00
Forest Recreation Officer (GS-12)	10	\$436.00	\$4,360.00
Landscape Architect/Facility Engineer/COR	10	\$413.00	\$4,130.00
Admin Assistant (GS-5)(public service @ FHRS)	30	\$215.00	\$6,450.00

Law Enforcement Officer (GS-9)	20	\$320.00	\$6,400.00
<i>Subtotal</i>			<i>\$50,900.00</i>
Vehicles:	Months	miles	Total
Recreation Patrol (FPT)	1	2,000	\$1,515.00
Recreation Officer (1401)	5	8,000	\$4,900.00
Rec Tech (0866)	2	3,000	\$1,854.00
<i>Subtotal</i>			<i>\$8,269.00</i>

Note: Fleet Vehicles require 12 months FOR (some vehicles are split between several projects/areas).

Project Supplies, Materials and Contracts:	Total
uniforms	\$500.00
Transfer Station for new staff proj associated (\$30,000/6 yrs)	\$5,000.00
<i>Subtotal</i>	<i>\$5,500.00</i>
Sub-Total:	\$64,669.00
Overhead (19%):	\$12,287.11
Total:	\$76,956.11

The Tahoe National Forest is requesting 20 days of funding for a uniformed Forest Service Law Enforcement Officer (LEO). In addition to the technical training and skills required for a LEO, by FS policy all violation notices and incident reports written by a Forest Protection Officer (FPO) must be processed by a LEO within 10 days. FPOs do the majority of patrol on National Forest lands.

The Final LAND-3 (March 2010) Table E-4 (Summary of 2006 and 2007 USDA-FS TNF Emergency Incident Responses at MFP Facilities, in the Vicinity of the MFP, or in the Vicinity of the Peaking Reach) indicates 21 law enforcement responses. Table E-5 (Summary of 2006 and 2007 USDA-FS TNF Emergency Incident Responses) indicates 37 law enforcement responses. Each response requires an incident report. Table E-6 indicates a total of 3 accidents. Regardless of who responds to the accident, if it occurred on National Forest lands it requires interagency cooperation, an accident investigation conducted by the FS (most likely a LEO) and an incident report. Other tables in LAND 3 (Tables E-7 and E-8) indicate Placer County Sherriff actions regarding Missing Persons, Search and Rescue, Agency Assist (in likely hood to the FS), Like accident these also require interagency interaction, sometimes investigation, and always an incident report. Many violation notices written by FPOs end with a court appearance to assist the US Attorney and substantiate the public's case. This requires LEO interaction as well.

Middle Fork American River (Peaking Reach) Recreation Area

The annual operation and maintenance costs associated with the facilities which support flow related recreation along the peaking reach of the MFAR Project are detailed site by site below. This ongoing annual program of maintenance, operation and administration is required to meet

agency standards for facilities and visitor use and to safely manage these areas for the whitewater recreation and other flow related use that occurs along the peaking reach largely as a result of the altered flows produced by the MFAR Project.

Indian Bar River Access

This site is on FS land (Tahoe NF), however CDPR largely operates and maintains these facilities, including pumping the vault toilets, while the FS patrols and responds to uses at the beach area below the Ralston Afterbay Dam as well as ‘off-season’ uses in the area. This site serves as the put-in for the Tunnel Chutes whitewater run. While whitewater boating is the primary use of this site, a beach area that is along the channel (3 cfs) from the dam to the confluence with the channel from the powerhouse is also attractive to swimmers and sunbathers. Since the release down this channel is controlled by the Project and is very low, this is an instance where swimming and sunbathing are a flow-dependent recreation activity.

Existing improvements and facilities at this site include:

- 5 pre-cast concrete vault toilets;
- 2 parking lots (approximately 50 vehicles)
- ramp/path to river
- signs
- 3 information kiosks
- trash containers

During the primary whitewater boating season, from April through September, seasonal park aides are on site at Indian Bar six hours per day (including travel) six days per week. Park aides are monitoring commercial boating activity, maintaining the restrooms and other facilities and managing the parking and traffic. CDPR pumps the vault toilets at Indian Bar two times during the season which involves six days of park maintenance worker time. In addition to routine cleaning and maintenance, there is extra time involved in addressing illegal campfires and vandalism. The operation and maintenance cost of Indian Bar is contained in the Ralston and Indian Bar Area table under Ralston Picnic Area and Car Top Boat Ramp.

Cache Rock River Access

The Cache Rock River Access area does not include any developed recreation facilities at this time, although there are 10 designated primitive camping areas. The area is used as a lunch stop by whitewater boaters (PCWA REC-1 TSR, 2010) and by individuals accessing the river via the 4WD access road (Forest Road 14N35A) to fish and participate in other water-based recreation activities (based on observations by FS staff and comments from the public (PCWA REC-4 TSR, 2010). At this time, there is no public right of way across the private land located south of the Cache Rock River Access Area; however the FS is currently working with the private landowner to acquire public access. At this time, the FS provides clean-up and visitor management at the Cache Rock River Access Area. The operation, maintenance, and administration costs are a result of the licensee’s project operations and serve recreational use of project flows. An appropriate level of on-site operations and maintenance by seasonal and permanent FS staff is

required to meet health and safety standards, maintenance standards, and to ensure recreation visitors are having a quality experience and not impacting resources.

Cost: The costs are to manage for the recreation use within the concentrated use area at the Cache Rock river access point. For this area, these funds would be utilized to conduct patrols, pick up litter, provide public information, enforce rules and regulations, rehabilitate impacted areas, address sanitation, respond to visitor-caused fires and other emergencies, and assist in search and rescue. The following estimate shows the cost to manage for these visitors and the impacts from their visits. At such time that the additional improvements are constructed at this site, including the parking area, toilet, etc., the operation and maintenance costs will be modified to reflect the additional costs.

Operation and Maintenance Spreadsheet (MFP Relicensing)			
Area: Cache Rock CG Area			
Personnel:	Days	CTG*/Day	Total
Recreation Technician (GS-5) (public contact, CG maint, trash pick-up, patrols)	8	\$162.00	\$1,296.00
Recreation Technician (GS-4)	4	\$150.00	\$600.00
Recreation Manager (GS-9)	2	\$240.00	\$480.00
<i>Subtotal</i>			<i>\$2,376.00</i>
Vehicles:	Months	miles	Total
Recreation Patrol (2848)	0	0	\$0.00
Maintenance Technician (0707)	0	200	\$90.00
Recreation Manager (5554)			\$0.00
Recreation Officer (3780)			\$0.00
Resource Specialists (1592)			\$0.00
<i>Subtotal</i>			<i>\$90.00</i>
Note: Fleet Vehicles require 12 months FOR (some vehicles are split between several projects/areas).			
Project Supplies, Materials and Contracts:			Total
Paint, supplies, cleaning supplies, tools, materials			\$0.00
Annual Road Maintenance			\$0.00
uniforms and safety equipment			\$1,500.00
garbage			\$0.00
toilet pumping			\$0.00
water permits			\$0.00
water testing (\$18/sample 10 samples/season)			\$0.00
Equipment maintenance (power washer, generator, etc.)			\$0.00
<i>Subtotal</i>			<i>\$1,500.00</i>
Sub-Total:			\$3,966.00
Overhead (19%):			\$753.54
Total:			\$4,719.54

CTG = Cost to Government (2010 costs)

Fords Bar River Access (Upper Ford Bar & Lower Fords Bar)

These sites are used as a lunch stop or overnight camping (by permit) location by whitewater users. There is no public vehicle access to the site. Facilities include:

- Two double composting toilets (1 Upper Fords Bar, 1 Lower Fords Bar);
- Approximately 2 miles of dirt road within ASRA used by State Parks staff to maintain the facilities.
- Steel gates and signs

The composting toilets were installed specifically to address past human waste issues at this site as a result of whitewater boating use. The facilities almost exclusively serve whitewater boaters. During the April through September time period, CDPR does cleaning and maintenance (seasonal park aides) on the composting toilets six days per week. The access road (not a public road) to Fords Bar requires annual maintenance in order retain access to service the composting toilet facilities. This involves maintenance of approximately 2 miles of road (there are two forks of the road within Auburn SRA). This annual road maintenance requires three days of heavy equipment operator (an assistant) time.

The total cost of annual operation and maintenance of this site is \$29,272.00, 100 percent of which is attributable to flow related recreation.

O+M Cost Spreadsheet - PCWA Relicensing			
Area: Fords Bar (Upper and Lower) - BLM			
Personnel:	Days	Daily Rate	Total
State Park Ranger (patrol)	20	\$370.00	\$7,400.00
Heavy Equipment Operator (annual road maintenance)	3	\$352.00	\$1,056.00
Seasonal Park Aides (servicing and cleaning composting toilets)	95	\$137.00	\$13,015.00
Vehicles:	Miles	Cost/Mi	Total
Ranger/LE Patrol (30 miles X 40 trips)	1200	\$0.50	\$600.00
Maintenance (30 miles X 180 trips)	5400	\$0.50	\$2,700.00
	Hours	Cost/Hr	
Heavy Equipment (grader, dozer, water truck, etc)	24	\$35.00	\$840.00
Project Supplies & Materials:			Total
Misc. Supplies, signs, etc.			\$1,000.00
Sub-Total:			\$26,611.00
Overhead (10%):			\$2,661.10
Total:			\$29,272.10

100% of use and cost attributable to flow related recreation	1	\$29,272.10
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Canyon Creek River Access

Located on the north side of the Middle Fork, opposite Canyon Creek, this site is located on BLM lands. Facilities include:

- 1 double composting toilet
- approximately 1.5 miles of dirt access road within ASRA.
- steel gates and signs

The composting toilet was installed specifically to address human waste issues at this site as a result of whitewater boating use. The facility almost exclusively serves whitewater boaters. During the April through September time period, CDPH does cleaning and maintenance (seasonal park aides) on the composting toilet 3-4 days per week. The 1.5 mile of access road from Greenwood Ruck-a-Chucky to Canyon Creek requires annual maintenance which involves five days of heavy equipment operator (and assistant) time.

The total cost of annual operation and maintenance of this site is \$16,423.00, 100 percent of which is attributable to flow related recreation.

O+M Cost Spreadsheet - PCWA Relicensing			
Area: Canyon Creek - BLM			
Personnel:	Days	Daily Rate	Total
State Park Ranger (patrol)	10	\$370.00	\$3,700.00
Heavy Equipment Operator (grading access road)	5	\$352.00	\$1,760.00
Seasonal Park Aides (maintenance of composting toilet)	50	\$137.00	\$6,850.00
Vehicles:	Miles	Cost/Mi	Total
Ranger/LE Patrol (2 miles X 100 trips)	200	\$0.50	\$100.00
Maintenance (2 miles X 120 trips)	240	\$0.50	\$120.00
	Hours	Cost/Hr	
Heavy Equipment (grader, dozer, water truck, etc)	40	\$35.00	\$1,400.00
Project Supplies & Materials:			Total
Misc. Supplies, signs, etc...			\$1,000.00
Sub-Total:			\$14,930.00
Overhead (10%):			\$1,493.00
Total:			\$16,423.00
100% of use and cost attributable to flow related recreation		1	\$16,423.00

Ruck-a-Chucky/Greenwood River Put-In

This is the put-in location for the Mammoth Bar run and the take-out for the Tunnel Chute run. Facilities include:

- Five campsites with picnic table and fire rings.
- Three parking areas with parking for approximately 40 vehicles total.
- Three pre-cast concrete vault toilets.
- Approximately 3 miles of Drivers Flat Road (dirt) from Foresthill Road to the Greenwood Ruck-a-Chucky site all within Auburn SRA.
- CDPR staff also regularly uses the McKeon-Ponderosa service road to access Greenwood/Ruck-a-Chucky. Approximately 3-4 miles of dirt road.
- Two gravel ramp/paths for landing/launching rafts.
- Constructed portage trail around Ruck-a-Chucky Rapid.
- Trash containers.
- Signs.
- Steel gates.

During the primary whitewater boating season, April through September, seasonal park aides conduct cleaning and maintenance on the facilities at this location seven days per week. During the off-season, this maintenance is 2-3 days per week. A CDPR ranger patrols this location every day during the primary use season. CDPR staff pumps the vault toilets at this location three times annually, which involves three days of Park Maintenance Assistant time. Drivers Flat Road, which provides public access to Greenwood/Ruck-a-Chucky (3-4 miles), requires annual maintenance, including grading and brushing, which involves 6 days of heavy equipment operator (and assistant) time. CDPR also does some annual grading and installing of additional rock at the parking areas and access ramps at this site. Additionally, the McKeon-Ponderosa service road (approximately 4 miles) provides access to this location as well and also requires annual maintenance involving 3-5 days of heavy equipment operator time. Additionally CDPR performs emergency repairs (larger slides from storm events) on these roads approximately every 3 years. The portage trail around Ruck-a-Chucky Rapid requires annual maintenance to repair high water impacts.

The total cost of annual operation and maintenance of this site is \$78,794.10. The cost attributable to flow related recreation is \$66,974.99.

O+M Cost Spreadsheet - PCWA Relicensing			
Area: Greenwood/Ruck-a-Chucky - BLM			
Personnel:	Days	Daily Rate	Total
State Park Ranger (patrol)	70	\$370.00	\$25,900.00
Heavy Equipment Operator (grade access roads)	10	\$352.00	\$3,520.00
Park Maintenance Assistant (pump vault toilets)	3	\$242.00	\$726.00
Seasonal Park Aides (maintenance, visitor services)	185	\$137.00	\$25,345.00

Vehicles:	Miles	Cost/Mi	Total
Ranger/LE Patrol (280 trips X 20 mi)	6000	\$0.50	\$3,000.00
Maintenance (280 trips X 20 mi)	5400	\$0.50	\$2,700.00
	Hours	Cost/Hr	
Heavy Equipment (grader, dozer, water truck, etc)	80	\$35.00	\$2,800.00
Pumper Truck	24	\$35.00	\$840.00
Disposal Fees			
	Gallons	Cost/gal	
Sewage Disposal Fees (300 gallon vault each toilet)	5400	\$0.20	\$1,080.00
	Yards	Cost/yard	
Garbage disposal fees (approx. 2 yards capacity X 30)	60	\$12.00	\$720.00
Project Supplies & Materials:			Total
Supplies, replacement signs, tables, paint, etc.			\$5,000.00
Sub-Total:			\$71,631.00
Overhead (10%):			\$7,163.10
Total:			\$78,794.10
85% of use and cost attributable to flow related recreation		0.85	\$66,974.99

Cherokee Bar

This site is located on the south side of the MFAR and is on Reclamation land, with BLM land downstream. This site formerly housed primitive campsites along the river. The area is now primarily used for day use including fishing, swimming and sunbathing. The area is available for overnight camping by whitewater river users by permit. Facilities include:

- Approximately 4 miles of the dirt Sliger Mine Road is on Auburn SRA property, which provides access to the river.
- Steel gates and signs.

While there are no facilities at this location, the site remains popular for day use river recreation including fishing, swimming and sunbathing. Whitewater boaters can camp at this location by permit. CDPR seasonal park aides conduct trash/litter pick up at this site approximately once per week during the primary season (April – September). A CDPR Ranger patrols the area once per week as well. Sliger Mine Road (approximately 4 miles within Auburn SRA) requires annual maintenance which involves three days of heavy equipment operator time.

The total cost of annual operation and maintenance of this site is \$16,264.60. The cost attributable to flow related recreation is \$1,626.46.

O+M Cost Spreadsheet - PCWA Relicensing			
Area: Cherokee Bar - Reclamation			
Personnel:	Days	Daily Rate	Total
State Park Ranger (patrol)	25	\$370.00	\$9250.00
Heavy Equipment Operator (grade access road)	3	\$352.00	\$1,056.00
Seasonal Park Aide (maintenance)	20	\$137.00	\$2,740.00
Vehicles:	Miles	Cost/Mi	Total
Ranger/LE Patrol (40 trips X 10 mi)	400	\$0.50	\$200.00
Maintenance (40 trips X 10 mi)	400	\$0.50	\$200.00
	Hours	Cost/Hr	
Heavy Equipment (grader, dozer, water truck, etc)	24	\$35.00	\$840.00
Project Supplies & Materials:			Total
Supplies, replacement signs & locks, etc			\$500.00
Sub-Total:			\$14,786.00
Overhead (10%):			\$1,478.60
Total:			\$16,264.60
10% of use and cost attributable to flow related recreation		0.1	\$1,626.46

Poverty Bar

This site is used occasionally as an overnight camping location by whitewater boaters (by permit). This location is also one of the river crossing locations for the 100-mile Tevis Cup ride, an annual special event.

Mammoth Bar

This site is located on the north side of the MFAR and is primarily on Reclamation land with BLM land just upstream. The majority of the recreation use at Mammoth Bar is off-road vehicle use. Nonetheless the facilities at this site are used by river-related recreation users, including whitewater boaters. CDPR staff clean the restrooms daily during the primary use season and pump the toilets at this location two times per week.

- portable chemical toilets
- gates
- signs
- gravel river access parking for approximately 20 or more vehicles.

The total cost of annual operation and maintenance of this site, excluding costs directly tied to OHV use, is \$251,080.50. The cost attributable to flow related recreation is \$7,532.42.

O+M Cost Spreadsheet - PCWA Relicensing
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Area: Mammoth Bar* - Reclamation			
*These costs do not include operation or facility maintenance costs directly tied to OHV use, such as grooming the track.			
Personnel:	Days	Daily Rate	Total
State Park Ranger (patrol)	250	\$370.00	\$92,500.00
Park Maintenance Assistant (pump toilets)	30	\$242.00	\$7,260.00
Seasonal Park Aides (maintenance, visitor services)	825	\$137.00	\$113,025.00
Vehicles:	Miles	Cost/Mo	Total
Ranger/LE Patrol (10 mi X 300 trips)	3000	\$0.50	\$1,500.00
Maintenance (10 mi X 350 trips)	3500	\$0.50	\$1,750.00
Visitor Services Park Aides (10mi x 300 trips)	3000	\$0.50	\$1,500.00
Disposal Fees			
	Hours	Cost/Hr	
Pumper Truck	200	\$35.00	\$7,000.00
	Gallons	Cost/gal	
Sewage Disposal Fees (chemical toilets have 75 gallon vaults)	10,000	\$0.20	\$2,000.00
	Yards	Cost/yard	
Garbage disposal fees (approx. 2 yards capacity X 30)	60	\$12.00	\$720.00
Project Supplies & Materials:			Total
Supplies, replacement signs, etc			\$1,000.00
Sub-Total:			\$228,255.00
Overhead (10%):			\$22,825.50
Total:			\$251,080.50
3% of use and cost attributable to flow related recreation		0.03	\$7,532.42

Murderer's Bar

This is the site of a Class V-VI rapid that is portaged by most users. Currently there are no facilities at this site. As noted above, depending on the use of this run in the future, a portage trail may be a desired future improvement.

Confluence River Access/China Bar Put-In

The Confluence of the MFAR and North Fork American River is the most heavily used recreation site within Auburn SRA. The most popular activities include swimming and sunbathing, and the site serves as the put-in for the China Bar run. The area also serves trail users, anglers, and other types of recreation use. During the primary recreation season (April-September) CDPR estimates 60-70 percent of the use at this site is river-related recreation. During the off season this figure is 30-40 percent. Facilities include:

- Two vault toilets (portable chemical toilets and a new pre-cast concrete double vault toilet installed in November 2010).
- Information/interpretive sign kiosk.
- Trash containers.
- Gates.
- Signs.
- Free personal flotation device (pfd) station.
- Roadside parking for approximately 300 vehicles.

During the primary recreation season, April through September, CDPR seasonal staff is on site cleaning and maintaining facilities and managing recreation use and parking seven days per week. CDPR pumps each of the toilets at this site six times per year. During the primary recreation season CDPR peace officers patrol this location daily and on average, there is a ranger on site 8 hours per day during the summer making public contacts, resolving disputes and addressing illegal and appropriate behavior. CDPR volunteers (the Canyon Keepers) are on site providing information and education every weekend day during the primary recreation season.

The total cost of annual operation and maintenance of this site is \$161,227.00. The cost attributable to flow related recreation is \$16,122.70.

O+M Cost Spreadsheet - PCWA Relicensing			
Area: Confluence - Reclamation			
Personnel:	Days	Daily Rate	Total
State Park Ranger (patrol)	280	\$370.00	\$103,600.00
Park Maintenance Assistant (pump toilets)	20	\$242.00	\$4,840.00
Seasonal Park Aides (maintenance, visitor services)	200	\$137.00	\$27,400.00
Vehicles:	Miles	Cost/Mi	Total
Ranger/LE Patrol (700 trips X 2 mi)	1400	\$0.50	\$700.00
Maintenance (350 trips X 2 mi)	700	\$0.50	\$350.00
	Hours	Cost/Hr	
Pumper Truck	96	\$35.00	\$3,360.00
Disposal Fees			
	Gallons	Cost/gal	
Sewage Disposal Fees (these portable toilets are installed on 700 gallon vaults)	8,000	\$0.20	\$1,600.00
	Yards	Cost/yard	
Garbage disposal fees (approx. 2 yards capacity X 30)	60	\$12.00	\$720.00
Project Supplies & Materials:			Total
Supplies, replacement signs, etc.			\$4,000.00

Sub-Total:		\$146,570.00
Overhead (10%):		\$14,657.00
Total:		\$161,227.00
10% of use and cost attributable to flow related recreation	0.1	\$16,122.70

Quarry Trailhead and River Access

This location provides trail access to the Quarry Trail but also provides river access for anglers, swimmers, and sunbathers to Murderer’s Bar and beyond. CDPR estimates 25 percent of the use at this location is river-related. Facilities include:

- Dirt/gravel parking lot for 20-25 vehicles.
- Four portable chemical toilets (1 @ parking area, 3 along river access trail).
- Interpretive panels.
- Picnic tables.
- Trash containers.
- Gate.
- Signs.

CDPR seasonal park aides perform maintenance and fee collection at this site daily during the primary recreation season. A CDPR peace officer patrols the site daily throughout the year. The lower part of the Quarry Trail is used as a service road and this road requires annual maintenance that involves 3 days of heavy equipment operator time. The toilets at this location are pumped once a week during the primary recreation season by CDPR.

The total cost of annual operation and maintenance of this site is \$55,138.60. The cost attributable to flow related recreation is \$5,513.86.

O+M Cost Spreadsheet - PCWA Relicensing			
Area: Quarry Trailhead and River Access - Reclamation			
Personnel:	Days	Daily Rate	Total
State Park Ranger (patrol)	60	\$370.00	\$22,200.00
Park Maintenance Assistant (pump vault toilets)	15	\$242.00	\$3,630.00
Heavy Equipment Operator (grade road/parking area)	3	\$352.00	\$1,056.00
Seasonal Park Aides (maintenance, visitor services)	120	\$137.00	\$16,440.00
Vehicles:	Miles	Cost/Mi	Total
Ranger/LE Patrol (300 trips X 2mi)	600	\$0.50	\$300.00
Maintenance (200 trips X 2mi)	400	\$0.50	\$200.00
Park Aide - Visitor services (200 trips X 2mi)	400	\$0.50	\$200.00
	Hours	Cost/Hr	
Heavy Equipment (grader, dozer, water truck, etc)	24	\$35.00	\$840.00

Pumper Truck	40	\$35.00	\$1,400.00
Disposal Fees			
	Gallons	Cost/gal	
Sewage Disposal Fees (75 gallon vault each toilet)	10,000	\$0.20	\$2,000.00
	Yards	Cost/yard	
Garbage disposal fees (approx. 1 yard capacity X 30)	30	\$12.00	\$360.00
Project Supplies & Materials:			Total
Supplies, replacement signs, etc			\$1,500.00
Sub-Total:			\$50,126.00
Overhead (10%):			\$5,012.60
Total:			\$55,138.60
10% of use and cost attributable to flow related recreation		0.1	\$5,513.86

China Bar, Birdsall/Oregon Bar River Access

These sites are located on the north side of the MFAR and are on Reclamation land. There is BLM land along the Confluence to China Bar run. These river access facilities were constructed as part of the American River Pump Station project for which the licensee and Reclamation were the lead agencies. The facilities were built as part of the project in recognition that the project, which included closing the Auburn Dam diversion tunnel and restoring the de-watered section of river to its historic channel, would result in whitewater boating use on this stretch of river from the Confluence to Oregon Bar (or Rattlesnake Bar on Folsom Lake). Until a new General Plan/Resource Management Plan is prepared for Auburn SRA, CDPR committed to staffing the entrance station to this site to control the amount of vehicle access to these two river access points.

Over the past two seasons, use of this stretch of river has been light to moderate. However, the whitewater bypass channel at the pump station diversion is recognized as a popular river play feature. Given the proximity to Auburn and the Sacramento metropolitan area, the easy access off Interstate 80 and Highway 49 and the relatively easy Class 2-3 whitewater, CDPR anticipates that this run will eventually become an extremely popular recreation river opportunity used by rafters, beginning kayakers, all skill levels of play boaters, canoes, rafts, and inner tubes. The run has the potential to approach the popularity of the Lower American River in Sacramento, the Truckee River, or the Coloma to Lotus run on the South Fork of the American. Facilities at this location include:

- Entrance station.
- Fifty-vehicle parking lot at the old concrete batch plant.
- 8-10 vehicle parking lot at Birdsall access.
- One double pre-cast concrete vault toilet.
- Four portable chemical toilets.

- Two turn-around areas for equipment pick up and drop off, this includes river access trail/ramp.
- Approximately 2 miles of access road (1 mile paved, 1 mile dirt) between Maidu Drive, the main parking area (old concrete batch plant) and the two turn-around locations.
- Steel gates.
- Signs.
- Trash containers.

Currently, CDPR funding limitations only permit the entrance station to be staffed 2 days per week during the primary recreation season. Currently a CDPR peace officer patrols the site an average of 1 hour per day during the season. CDPR has heard from various users and groups that they would like this river access open year-round and more days per week. The roads to the Birdsall and Oregon Bar turn around locations require annual maintenance in order to provide continued access. This work includes grading, replacing base rock and brushing and involves 4 days of heavy equipment operator (an assistant) time. Additionally the river access ramp/trail at the Birdsall site requires annual maintenance to repair winter wash outs.

The total cost of annual operation and maintenance of this site is \$42,155.30. The cost attributable to flow related recreation is \$25,293.18.

O+M Cost Spreadsheet - PCWA Relicensing			
Area: China Bar (Birdsall & Oregon Bar) – Minimal Access Version (Existing condition, 2 days/week during summer season) – Reclamation			
Personnel:	Days	Daily Rate	Total
State Park Ranger (open/close gates & patrol)	25	\$370.00	\$9,250.00
Heavy Equipment Operator (road grading)	4	\$352.00	\$1,408.00
Seasonal Park Aides (maintenance, visitor services)	125	\$137.00	\$17,125.00
Vehicles:	Miles	Cost/Mi	Total
Ranger/LE Patrol (100 trips X 10mi)	1000	\$0.50	\$500.00
Maintenance (200 trips X 10 mi)	2000	\$0.50	\$1,000.00
Park Aide Visitor Services (60 trips X 10 mi)	600	\$0.50	\$300.00
	Hours	Cost/Hr	
Heavy Equipment (grader, dozer, water truck, etc)	32	\$35.00	\$1,120.00
Pumper Truck	40	\$35.00	\$1,400.00
Disposal Fees			
	Gallons	Cost/gal	
Sewage Disposal Fees (double CXT has 600 gallon vault, portables have 75 gallon vaults)	10,000	\$0.20	\$2,000.00
	Yards	Cost/yard	
Garbage disposal fees (approx. 2 yards capacity X 30)	60	\$12.00	\$720.00

Project Supplies & Materials:	Total
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As noted above, the costs in the table above only cover the current public access of 2 days per week during the summer season. CDPR believes this stretch of river has the potential to be a very popular public resource. An ideal level of public access would allow vehicle access to the China Bar area 7 days per week during the primary recreation season and 4 days per week during the off season. The annual operation and maintenance costs for this more optimal level of public access is \$184, 927.60. The cost attributable to flow-related recreation is \$110,956.56.

O+M Cost Spreadsheet - PCWA Relicensing			
Area: China Bar (Birdsall & Oregon Bar) - Optimal Access Version (7 days/week April - Oct, 4 days/week Nov - March) – Reclamation			
Personnel:	Days	Daily Rate	Total
State Park Ranger (open/close gates & patrol)	100	\$370.00	\$37,000.00
Heavy Equipment Operator (road grading)	4	\$352.00	\$1,408.00
Seasonal Park Aides (maintenance, visitor services)	804	\$137.00	\$110,148.00
Vehicles:	Miles	Cost/Mi	Total
Ranger/LE Patrol (300 trips X 10mi)	3000	\$0.50	\$1,500.00
Maintenance (300 trips X 10 mi)	3000	\$0.50	\$1,500.00
Park Aide Visitor Services (300 trips X 10 mi)	3000	\$0.50	\$1,500.00
	Hours	Cost/Hr	
Heavy Equipment (grader, dozer, water truck, etc)	32	\$35.00	\$1,120.00
Pumper Truck	100	\$35.00	\$3,500.00
Disposal Fees	Gallons	Cost/gal	
Sewage Disposal Fees (double CXT has 600 gallon vault, portables have 75 gallon vaults)	20,000	\$0.20	\$4,000.00
	Yards	Cost/yard	
Garbage disposal fees (approx. 2 yards capacity X 30)	120	\$12.00	\$1,440.00
Project Supplies & Materials:			Total
Aggregate for road/access ramp maint., supplies, replacement signs, etc			\$5,000.00
Sub-Total:			\$168,116.00
Overhead (10%):			\$16,811.60
Total:			\$184,927.60
60% of use and cost attributable to flow related recreation		0.6	\$110,956.56

Whitewater Management and River Patrol Program

These river patrol, management and administrative costs are separate and in addition to the facility management operation and maintenance costs identified for each of the specific sites above.

In addition to the specific site operation and facility maintenance costs identified above by location, CDPR also administers the commercial whitewater outfitter use on the MFAR through concession contracts. Each year there are approximately 22-25 commercial outfitters that operate on the MFAR within Auburn SRA.

The amount of commercial whitewater use is limited during peak use periods. Both the group size (number of rafts per group) and the total amount of use per day (number of rafts and people) is limited during these peak use times. CDPR allocates the number of trip starts to each outfitter annually based on recent historic use. The outfitters pay fees to CDPR based on the amount of use. CDPR develops and prepares the concession contracts for each outfitter annually, develops the system for allocating use during peak use periods annually, keeps records of reported outfitter use, monitors outfitter use at put-ins, take-outs and various locations along the river and conducts periodic counts of outfitter use.

CDPR has operation costs associated with the management of the commercial whitewater concession contracts within the peaking reach. This work also includes river patrol, river patrol and monitoring, outfitter management and administration and concession contract administration. CDPR regularly patrols the whitewater runs on the MFAR and the North Fork American River below the Confluence. This river program management is carried out by a CDPR Ranger, with administrative support from an Office Technician and seasonal park aides. In addition to the work associated with commercial whitewater use, the river management program also administers and monitors river camping permits issued to private boaters, monitors private boating use and provides other types of law enforcement (such as fishing license compliance) on river patrols.

The annual river program management costs for the peaking reach are \$183,304.00.

O+M Cost Spreadsheet PCWA Relicensing			
Area: Middle Fork River Patrol and Management, Program Administration			
Personnel:	Days	Daily Rate	Total
State Park Superintendent II (develop/manage river concession contracts, river program oversight)	5	\$553.00	\$2,765.00
Supervising State Park Ranger (supervision of rangers and park aids)	5	\$459.00	\$2,295.00
State Park Ranger (manage river program, river patrol, outfitter management)	160	\$370.00	\$59,200.00
Office Technician (process and track outfitter permits and fees)	140	\$256.00	\$35,840.00
Seasonal Park Aides (visitor services, maintenance)	340	\$137.00	\$46,580.00
Seasonal Park Aide (office)	80	\$137.00	\$10,960.00

Vehicles:	Miles	Cost/Mi	Total
State Park Ranger (5,000 miles per year)	5,000	\$0.50	\$2,500.00
Park Aides (7,000 miles per year)	7,000	\$0.50	\$3,500.00
Project Supplies & Materials:			Total
Materials, Equipment, Supplies, etc.			\$3,000.00
Sub-Total:			\$166,640.00
Overhead (10%):			\$16,664.00
Total:			\$183,304.00

Summary of Peaking Reach Recreation Operation, Maintenance and Administration Costs for BLM and Reclamation

The total cost of this annual recreation operation, maintenance and administration for State CDPR-managed facilities and programs directly tied to the flow related use on the MFAR, including the river management and patrol, is \$295,974.09 for BLM owned sites and \$141,752.00 for Reclamation owned sites. This latter cost assumes operation of the China Bar area at optimal level of public access at China Bar.

One type of costs that are not necessarily factored into the above costs is the incident specific costs CDPR incurs for emergency response along the Middle Fork. The level of emergency response incidents has been documented in the LAND technical studies.

Unimpaired versus Impaired Flows

The unimpaired hydrograph for the peaking reach indicates that in most water type years there is insufficient flow to support the primary whitewater recreation that occurs on this reach, the rafting on the Class IV-V Tunnel Chute run, from approximately mid-June to late November or early December. This run requires a minimum of 900 to 1,000 cfs in order to provide an acceptable recreation experience. The unimpaired hydrograph indicates that flows would drop below this level from sometime between early June to early July, depending upon water year type, and flows would not again reach this volume until late November or early December.

Whitewater use data, both private (actual reported amount) and commercial use on the Tunnel Chute and Mammoth Bar runs, from 1995 through 2009 totals 270,710 people. Of this total, 231,961 people used the river during the period from mid-June through the end of November. Therefore 86 percent of the flow related recreation use in the peaking reach within Auburn SRA occurs within the period from mid-June through mid-November. Therefore the impaired flows from the PCWA project result in 86 percent of the flow dependent use within the peaking reach.

Determination of Licensee's Proportionate Share

Eighty-six percent of the flow-dependent recreation use within the peaking reach that occurs as a result of the project altered flows is a reasonable proxy for the percentage of the cost of operating, maintaining, and managing the use in this reach that is attributable to the Project. The

total current cost of operating, maintaining and managing the flow dependent recreation use in the peaking reach is \$295, 974.09 for the BLM and 141,752.00 for BOR. Eighty-six percent of these totals is **\$254,537.72** for BLM and \$121,906.72 for BOR.

Reclamation Administration and Environmental Documentation Costs

For the sites in the peaking reach that occur on Reclamation lands, Reclamation has additional administrative costs associated with the operation, maintenance and management of these sites. These sites include Cherokee Bar, Mammoth Bar, Confluence, Quarry Trailhead and China Bar. These costs include Reclamation oversight responsibilities for the flow related recreation use and the environmental review costs associated with improvements and maintenance activities. This additional cost for the operation, maintenance and management of flow related recreation on Reclamation lands is \$60,000. Adding this additional cost to the Reclamation amount identified above results in total cost of **\$181,906.72** for Reclamation sites.

These costs are summarized in the table below:

O+M Cost Spreadsheet - MFAR Relicensing		
Peaking Reach Recreation Sites and Costs for BLM and BOR		
Site	Agency Ownership	Flow-Related Recreation Management Costs
ANNUAL OPERATION & MAINTENANCE		
Fords Bar (Upper and Lower)	BLM	\$29,272.10
Canyon Creek	BLM	\$16,423.00
Ruck-a-Chucky/Greenwood	BLM	\$66,974.99
Whitewater Patrol, Management and Administration	BLM	\$183,304.00
BLM Subtotal		\$295,974.09
PCWA Fair Share = X .86		\$254,537.72
Cherokee Bar	Reclamation	\$1,626.46
Mammoth Bar	Reclamation	\$7,532.42
Confluence	Reclamation	\$16,122.70
Quarry Trailhead & River Access	Reclamation	\$5,513.86
China Bar (optimal access)	Reclamation	\$110,956.56
Reclamation Subtotal		\$141,752.00
PCWA Fair Share = X .86		\$121,906.72
Reclamation Administration and Environmental Documentation		\$60,000.00
Reclamation Total		\$181,906.72

Rationale for Public Information Services

The need for and benefits of providing public streamflow information, reservoir level information, and other recreation information were identified in the Application for License

submitted by the licensee, along with the Recreation Plan and surveys of recreation visitors as presented in REC-2 TSR (PCWA, 2010). Publicly accessible streamflow information will improve the opportunity to use both natural spill events and managed flows for all recreationists. Public safety and educational information provided to recreationists will assist in minimizing resource impacts from recreation visitors and improve the visitor's experience. Information as to recreation opportunities, including maps and brochures, will aid visitors in utilizing the opportunities in the vicinity of the project, assist in minimizing resource impacts, and inform the public of alternative recreation opportunities.

Rationale For Fish Stocking Program

Project facilities and operation have a direct affect on the movement of fish within habitat of the MFAR watershed, causing isolation to those populations supported by impounded waters upstream of Project dams. The licensee is responsible for providing reservoir based recreation, including angling opportunities. It is reasonable to expect that the licensee will fund 100 percent of future fish stocking costs at two of the three large impoundments as enhanced recreation and mitigation for impacts to the historic fishery. The fish stocking program for French Meadows and Hell Hole Reservoirs should be fully funded through a new MFP license.

Rationale for Future Project Recreation Facility Enhancements

It is recognized that changes over time in visitor attitudes, preferences, use patterns, experience, and capacity may require modifications to the facilities within the Project area. This measure will provide the licensee, FS, BLM, Reclamation, and CDPR the ability to react to changes and provide the quality recreation opportunities in the Project area required to meet the Forest Plan, and other applicable management standards.

References

Carnazzo, B., 2010a, Angler Focus Group Meeting, March 4, 2010, Joint cCommetsns of Anglers Experienced on the Bypass Reaches (Bill Carnazzo, Bill Templin, Monte Hendricks, Ed Wahl), document written by Bill Carnazzo, 12 p

Carnazzo, B., 2010b, Foothills Angler Group Facilities Project List for Recreation Plan, Bypass Reaches, April 15, 2010, 5 p.

PCWA, 2006, Project Description (Draft), June 2006.

USFS, 2006a, FS Trail Accessibility Guidelines (FSTAG), May 22, 2006, 86 p.

USFS, 2006b, FS Outdoor Recreation Accessibility Guidelines (FSORAG), May 22, 2006, 77 p.

**United States Department of Commerce, National Oceanic and Atmospheric
Administration, National Marine Fisheries Service
Comment Letter Dated December 17, 2010;
Filed with FERC December 20, 2010 (20101220-5100)
access file at:
http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20101220-5100**



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
777 Sonoma Ave., Room 325
Santa Rosa, California 95404-4731

December 17, 2010

In response, refer to:
FERC P-2079

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: Filing of Biological Opinion and Conference Opinion and Draft Recovery Plan for Central Valley Listed Salmonids to the Administrative Record of the Middle Fork American River Hydroelectric Project, Federal Energy Regulatory Commission Project No. P-2079, Middle Fork American River, California

Dear Secretary Bose:

NOAA's National Marine Fisheries Service (NMFS) is filing electronically NMFS' *"Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and California State Water Project"* (OCAP Biological Opinion), dated June 4, 2009, and NMFS' *"Public Draft Recovery Plan for Central Valley Winter-run and Spring-run Chinook Salmon and Steelhead"* (Draft Recovery Plan), dated October 7, 2009, with the Federal Energy Regulatory Commission (FERC or Commission) as information to be considered during the relicensing proceedings for the Middle Fork American River Hydroelectric Project, FERC Project No. P-2079, Middle Fork American River, California.

If you have questions regarding these documents, please contact Mr. William Foster (916-930-3617) or Mr. Larry Thompson (916-930-3613) of my staff.

Sincerely,

A handwritten signature in black ink, appearing to read "RLW for".

Richard L. Wantuck
Hydropower Program Supervisor
Habitat Conservation Division

Enclosures

cc: Steve Edmondson, NMFS, Santa Rosa, CA
Maria Rea, NMFS, Sacramento, CA
Howard Brown, NMFS, Sacramento, CA
U.S. Bureau of Reclamation
P-2079 Service List



**United States Department of Commerce, National Oceanic and Atmospheric
Administration, National Marine Fisheries Service
Comment Letter Dated December 21, 2010;
Filed with FERC December 22, 2010 (20101222-5007)**



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
SOUTHWEST REGION
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404-4731

December 21, 2010

In response, refer to:
FERC P-2079

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: Comments on Draft License Application for Middle Fork American River Hydroelectric Project, Federal Energy Regulatory Commission No. 2079, Middle Fork American River, California

Dear Secretary Bose:

The U.S. Department of Commerce, National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) is filing our comments in Enclosure A and our "*Resource Management Goals and Objectives*" in Enclosure B pertaining to the Draft License Application (DLA) of Placer County Water Agency (Applicant), for the Middle Fork American River Hydroelectric Project, Federal Energy Regulatory Commission (FERC or Commission) Project No. 2079 (Project), Middle Fork American River, California.

NMFS also incorporates by reference, to FERC Docket ZZ09-5-000, NMFS' "*Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and California State Water Project*" (OCAP BiOP), dated June 4, 2009. NMFS recently filed the OCAP BiOP under Docket ZZ09-05-000 with the Commission for consideration as a comprehensive plan under section 10(a)(2)(A) of the Federal Power Act. NMFS is also electronically filing the OCAP BiOP and NMFS' "*Public Draft Recovery Plan for Central Valley Winter-run and Spring-run Chinook Salmon and Steelhead*" (Draft Recovery Plan), dated October 7, 2009, with the Commission, under separate cover, as information to consider in the P-2079 proceeding.

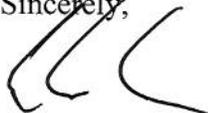
NMFS emphasizes that future reintroduction of migratory anadromous fishes to areas of the American River upstream of the U.S. Bureau of Reclamation's (USBR) Nimbus and Folsom dams should be considered in the design, planning, implementation, and operations of the Project. The Central Valley steelhead (*Oncorhynchus mykiss*) distinct population segment was listed as threatened under the Endangered Species Act (January 5, 2006, 71 FR 834). NMFS' OCAP BiOP contains a "Reasonable and Prudent Alternative" (RPA), which includes the development of a Fish Passage Program to reintroduce Central Valley steelhead over the



USBR's dams and into the upper watersheds of the American River. The OCAP BiOP was prepared in accordance with the information, goals, and guidance presented in the Draft Recovery Plan. As the USBR will implement actions and RPAs within the American River watershed in order to avoid jeopardy in accordance with with the OCAP BiOP, steelhead are reasonably likely to occur downstream, within, or upstream of the Project in the near future.

If you have questions regarding these documents, please contact Larry Thompson (916-930-3613) or William E. Foster (916-930-3617) of my staff.

Sincerely,

Handwritten signature of Richard L. Wantuck, consisting of stylized initials and the word "for" written in cursive.

Richard L. Wantuck
Hydropower Program Supervisor
Habitat Conservation Division

Enclosures

cc: Steve Edmondson, NMFS, Santa Rosa, CA
Howard Brown, NMFS, Sacramento, CA
U.S. Bureau of Reclamation (electronically delivered)
U.S. Fish and Wildlife Service (electronically delivered)
FERC Service List for P-2079

Enclosure A

**NOAA's NATIONAL MARINE FISHERIES SERVICE'S
COMMENTS ON THE DRAFT LICENSE APPLICATION**

**UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

Placer County Water Agency)	Project No. P-2079
Middle Fork American River Hydroelectric Project)	
<hr style="border-top: 1px solid black;"/>)	

1.0 Introduction

The United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) herein files its Federal Power Act (FPA) comments with the Federal Energy Regulatory Commission (FERC or Commission) regarding the Draft License Application (DLA) of Placer County Water Agency (Applicant), for the Middle Fork American River Hydroelectric Project, FERC Project No. 2079 (Project), Middle Fork American River, California.

NMFS is a federal agency with jurisdiction over anadromous fish resources affected by the licensing, operation, and maintenance of hydroelectric projects. See Reorganization Plan No. 4 of 1970, 84 Stat. 2090, as amended; the FPA at 16 U.S.C. § 803(j) and 811; the Fish and Wildlife Coordination Act (FWCA) at 16 U.S.C. § 661 and 662; the Magnuson-Stevens Fishery Conservation and Management Act (MSA), 16 U.S.C. §1801 *et seq.*; and the Endangered Species Act (ESA), 16 U.S.C. §1531 *et seq.* The potential effects of the Project on passage and flow conditions, habitat, water quality, and other effects on anadromous fish resources directly concern NMFS under the statutory authorities listed above.

NMFS listed the Central Valley (CV) steelhead (*Oncorhynchus mykiss*) distinct population segment (DPS) (71 Fed. Reg. 834, January 5, 2006) (steelhead) as “threatened” under the ESA. Steelhead occur in the American River downstream of the U.S. Bureau of Reclamation’s (USBR) Folsom and Nimbus dams. NMFS issued a final rule to designate critical habitat under

the ESA for steelhead on September 2, 2005 (70 Fed. Reg. 52488); the designation included the American River downstream of Nimbus Dam. In addition, NMFS' recently filed a Biological Opinion with the Commission, under Docket ZZ09-05-000, *Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and California State Water Project*, dated June 4, 2009 (OCAP BiOP) (NMFS 2009a). NMFS' OCAP BiOP contains a "Reasonable and Prudent Alternative" (RPA), which includes the development of a Fish Passage Program to reintroduce steelhead over the USBR's dams on the American River and into the upper watersheds of the American River. The OCAP BiOP was prepared in accordance with the information, goals, and guidance presented in the Draft Recovery Plan (NMFS 2009b). Under section 7(a)(2) of the Endangered Species Act, the USBR's operations must avoid jeopardy to the listed steelhead. Accordingly, when anadromous fish passage is made available into the reaches of the American River upstream of the USBR's dams, pursuant to the RPA in the OCAP BiOP, NMFS will develop recommendations for additional protection, mitigation, and enhancement measures for these migratory fishes under its statutory authorities listed above, on which recommendations the Commission must base its relicensing conditions.

Pursuant to the above-mentioned authorities, NMFS has a federal statutory responsibility for protection, mitigation, and enhancement of anadromous fish resources that may be directly affected by the proposed Project. The FPA, FWCA, MSA, and ESA confer upon NMFS a specific right to participate in this proceeding. The interests of NMFS as a regulatory agency with jurisdictional responsibility for the protection, mitigation, and enhancement of anadromous fish resources are not adequately represented by any other party in this proceeding. By carrying out its statutory responsibilities under the ESA, FPA, FWCA, and MSA NMFS acts in the public interest. Upon the Commission's solicitation of interventions following the filing of the License Application, NMFS will intervene in this proceeding. In addition, NMFS is obligated to satisfy its tribal trust responsibilities in the exercise of its statutory authorities affecting tribal interests and tribal treaty obligations.

2.0 Comments on the Draft License Application

2.1 - The Applicants should plan to have the Project's operations and any existing or planned facilities meet or exceed NMFS' Resource Management Objectives (Enclosure B) for FERC projects in the American River watershed (upstream of USBR's Folsom Dam), and consider the

following categories: Flows, Water Quality, Water Availability, Fish Passage, River Channel Maintenance, Fish Hatchery Operations, Predation, Riparian Habitat, Flow Ramping, and Coordination.

2.2 - The Project should be operated so that ongoing and future listed salmonid restoration and recovery actions can be effectively implemented, due to the following:

- a) NMFS released its Public Draft Recovery Plan for the evolutionarily significant units of Sacramento River winter-run and CV spring-run Chinook salmon (*O. tshawytscha*) and the DPS of CV steelhead on October 7, 2009 (<http://swr.nmfs.noaa.gov/recovery/centralvalleyplan.htm>). The Plan contains specific treatment of the American River watershed (NMFS 2009b).
- b) NMFS issued a Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project (OCAP BiOP), dated June 4, 2009, (<http://swr.nmfs.noaa.gov/ocap.htm>) that includes “reasonable and prudent alternatives” to be implemented in the American River to avoid jeopardy to the CV steelhead (NMFS 2009a).

2.3 - NMFS has preliminarily identified the following concerns regarding the Project:

The Project should not interfere with the efficient and timely implementation and operation of upstream and/or downstream anadromous fish passage at any Project dams, should the USBR determine that passage actions are required in the vicinity of the Project to meet the requirements of the 2009 OCAP BiOP. Future anadromous fish passage facilities may include passive or active structures or devices to provide upstream and/or downstream passage. Passage within or beyond the Project boundaries may include modifications to Project facilities, reservoirs, and operations so as to ensure the safe, timely, and effective passage of anadromous fishes.

Therefore, the Applicant should consult with the Fish Passage Steering Committee organized by the USBR regarding anadromous fish passage in the American River. NMFS is represented on the Committee and stands ready to assist the Applicant. The Committee will likely need to evaluate the areas near Project facilities in the American River watershed as potential sites for volitional upstream and downstream fishways, or for the collection of upstream migrating adult fishes for non-volitional transport upstream. Upstream migrating fishes are often attracted to turbulent flows such as those that would be created by a powerhouse outflow, so the siting of either a fishway entrance or a collection facility is an issue closely “coupled” with Project operations or the siting of any future powerhouse. In addition, the space or footprint required for fishway or collection facilities is an issue coupled with the Project’s facilities (current or

planned). Close coordination with the Committee will be required, and fish passage issues could greatly affect the scope of how the Applicant operates the Project.

Enclosure B

**NOAA's NATIONAL MARINE FISHERIES SERVICE'S
RESOURCE MANAGEMENT GOALS AND OBJECTIVES
FOR THE PROJECT**

**UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

Placer County Water Agency)	Project No. P-2079
Middle Fork American River Hydroelectric Project)	
<hr style="border: 1px solid black;"/>)	

1.0 Introduction

The U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) herein provides our Resource Management Goals and Objectives that apply to the American River watershed, upstream of the U.S. Bureau of Reclamation's (USBR) Nimbus & Folsom dams, and are applicable to the Draft License Application (DLA) of Placer County Water Agency (Applicant), for the Middle Fork American River Hydroelectric Project, Federal Energy Regulatory Commission (FERC or Commission) Project No. 2079 (Project), Middle Fork American River, California.

NMFS' Resource Management Goals and Objectives were prepared in accordance with our "Public Draft Recovery Plan for Central Valley Winter-run and Spring-run Chinook Salmon and Steelhead" (Draft Recovery Plan), (<http://swr.nmfs.noaa.gov/recovery/centralvalleyplan.htm>), dated October 7, 2009, (NMFS 2009b) and our "Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and California State Water Project" (OCAP BiOP), dated June 4, 2009, (NMFS 2009a) for the evolutionarily significant units of Sacramento River winter-run and Central Valley (CV) spring-run Chinook salmon (*Oncorhynchus tshawytscha*) and the distinct population segment (DPS) of CV steelhead (*Oncorhynchus mykiss*).

Subject to certain exceptions, the Federal Power Act (FPA) Section 10(j) states that,

“in order to adequately and equitably protect, mitigate damages to, and enhance, fish and wildlife (including related spawning grounds and habitat) affected by the development, operation, and management of the project, each license issued under this subchapter shall include conditions for such protection, mitigation, and enhancement... based on recommendations received pursuant to the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) from the National Marine Fisheries Service, the United States Fish and Wildlife Service, and State fish and wildlife agencies.” [16 U.S.C. § 803(j)]

The Commission’s licensing regulations likewise request that resource agencies list their resource management goals and objectives to serve as the basis for study recommendations and subsequent prescriptions and recommendations for a project's protection, mitigation, and enhancement measures to be incorporated into a new license. See, *e.g.*, 18 CFR §5.9(b) (2) and 18 CFR §5.26(b). NMFS articulates its Resource Management Goals and Objectives broadly in connection with these responsibilities, and consistently with the guidelines for determining the scope of a licensing action.

The National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 *et seq.*), together with its implementing regulations, require the Commission to analyze the direct and indirect environmental effects and cumulative impacts of a project's alternatives and connected actions. The Council on Environmental Quality regulations under 40 CFR 1508.8 (b) defines indirect effects as:

“[effects]...which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include human population growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.”

Cumulative impacts, in turn, are those combined effects on quality of the human environment that result from:

“[... the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what Federal or non-Federal agency or person undertakes such other actions...” (40 CFR 1508.7, 1508.25(a), and 1508.25(c)).

Therefore, NMFS’ Resource Management Goal and Objectives for the Project, as well as our comments, study proposals, and information requests, seek, in part, information relating not

simply to the direct and immediate effects of the Project, but also the indirect and cumulative effects.

In the context of the foregoing authorities, NMFS' Resource Management Goal and Objectives apply with respect to species listed under the Endangered Species Act (ESA) (16 U.S.C. §1531 *et seq.*) and Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. §1801 *et seq.*), as well as anadromous species that are not currently listed but are affected by continuing operations of the Project or may require listing in the future. Thus, our Resource Goals and Objectives, listed in Sections 3.0 and 4.0 below, serve to link our study proposals and information requests with information needed to inform our various decisions that we will make during these proceedings:

- (A) Information to inform how we may exercise our FPA Section 18 authority, to either reserve our fish passage prescriptive authority or, in the future, to stipulate fish passage prescriptions;
- (B) Information to inform the contents of our proposed FPA Sections 10(j) and 10(a) protection, mitigation, and enhancement measures;
- (C) Information to inform what we recommend as Essential Fish Habitat designations, pursuant to the MSA; and
- (D) Information to inform our needs so that we may recommend Critical Habitat and conduct an adequate Section 7 consultation on listed species, pursuant to the ESA.

Based on the expected reintroduction of anadromous fish and potential passage issues in the project area, and comments from NMFS regarding its resource management goals and recovery actions, the Commission may determine that insufficient information has been developed regarding potential project effects to conduct a proper environmental analysis . NMFS suggests that the Applicant carefully consider the information needs expressed above in preparing its Final License Application.

2.0 Current State of Anadromous Fishes: NMFS is concerned with ESA-listed fishes and critical habitat designated under the ESA that are currently in the American River watershed downstream of USBR's dams. NMFS is also primarily concerned with the USBR's and the Fish

Passage Steering Committee's reintroduction of listed steelhead above the USBR's dams into the Upper American River watersheds as the USBR seeks to satisfy the RPAs in NMFS OCAP BiOp and avoid jeopardy on listed steelhead.

2.1 Central Valley Steelhead: CV steelhead are present in the American River watershed, downstream of USBR's dams, and the CV steelhead DPS is currently listed as threatened under the ESA (January 5, 2006, 71 FR 834; NMFS 2006a). Critical Habitat has also been designated for CV steelhead in this area of the American River (September 2, 2005, 70 FR 52488; NMFS 2005c). NMFS' recovery planning efforts involve maintaining and enhancing existing CV steelhead populations, as well as their re-establishment in the upper American River.

Based in part on the foregoing facts, NMFS finds that future consultation will likely be necessary under the ESA and the MSA for the effects of the Project on CV steelhead noted above.

3.0 Resource Goals

3.1 - Protect, conserve, enhance, and recover native anadromous fishes and their habitats by providing access to suitable habitats and by restoring fully functioning habitat conditions for related spawning, rearing, migration, and adjoining riparian habitats.

3.2 - Identify and implement measures to protect, mitigate or minimize direct, indirect, and cumulative impacts to, and enhance native anadromous fish resources, including related spawning, rearing, and migration habitats and adjoining riparian habitats.

4.0 Resource Objectives

4.1 Flows - Implement scheduled flows in the American River to the benefit of native anadromous fishes and their habitats. A range or schedule of flows is necessary to:

- (A) Optimize suitable habitat, including the distribution of holding and spawning habitat;
- (B) Stabilize flows during spawning and incubation of in-gravel forms;
- (C) Maintain flows necessary to facilitate the efficient migration of spawning adults, the safe and timely emigration of smolts and kelts, and movement of rearing juveniles between feeding and sheltering areas;
- (D) Maintain flows necessary to ensure redd placement in viable areas; and

- (E) Maintain flows necessary for channel forming processes, riparian habitat protection, and maintenance movement of forage communities.

In addition, scheduled flows should mitigate for impacts of flood control, irrigation or other Project structures or operations that act to displace individuals or their forage or destabilizes, scours, or degrades physical, chemical, or biological quality of habitat.

4.2 Water Quality - Modify Project structures or operations necessary to mitigate direct, indirect, or cumulative water temperature and quality impacts associated with Projects' structures and operations or enhance water temperature and quality conditions in salmonid habitat. This includes water temperature management necessary to ensure the optimal survival and distribution of all life stages of anadromous fishes within and downstream of the FERC-delineated physical project boundaries.

4.3 Water Availability - Coordinate operations with other projects, programs, or initiatives and/or use water transfers, water exchanges, water purchases, or other forms of agreements to maximize potential benefits to anadromous fishes from limited water supplies.

4.4 Fish Passage - Passage to suitable spawning, rearing, and migration habitats within and beyond the physical Project boundaries as necessary for anadromous fish to complete their life cycles and utilize seasonal habitats necessary to contribute to the recovery of CV steelhead.

For each individual species of concern, our decision to exercise our Section 18 authority, by either reserving our fish passage prescriptive authority or stipulating a fish passage prescription, depends on an understanding of many factors affecting the aquatic environment. These factors include:

- (A) Man-made, in-stream facilities, their interrelated operations, and their direct, indirect, and cumulative effects on fish and other aquatic organisms;
- (B) Life history adaptations and biological requirements of affected anadromous fish species;
- (C) Natural and project-impaired river hydrology and geomorphology;
- (D) Seasonal habitat conditions; and
- (E) Ecologically sustainable river characteristics.

Our studies and information requests submitted for the Projects seek to describe and understand the species of concern and the many factors that affect the species' aquatic environment.

4.5 Channel Maintenance - Implement flow regimes and non-flow related measures necessary to mitigate and minimize direct, indirect, and cumulative impacts of Project facilities and operations on sediment movement and deposition, river geometry, and channel characteristics. This includes impacts on stream competence, capacity, flood plain conductivity, bank stability and extent, duration, and repetition of high flow events. In addition, this includes impacts to habitat diversity and complexity such as pool riffle sequencing and instream cover.

4.6 Hatchery Operations - Minimize and mitigate the impacts of hatchery facilities and/or operations on native, wild anadromous salmonids. These include the direct, indirect, and cumulative impacts of hatchery product on anadromous salmonids and the direct, indirect, and cumulative impacts of hatchery facilities and operations on anadromous salmonids and their habitats.

4.7 Predation - Minimize and mitigate the impact of Project structures or operations that either have in the past or continue to introduce predators, create suitable habitat for predators, harbor predators, or are conducive to the predation of native anadromous salmonids.

4.8 Riparian Habitat - Protect, mitigate or minimize direct, indirect, and cumulative impacts to, and enhance riparian habitat and habitat functions necessary to mitigate and minimize direct, indirect, and cumulative impacts of Project facilities and operations.

4.9 Flow Ramping - Modify Project structures or operations necessary to minimize impacts of flow fluctuations associated with increases or decreases in Project discharges.

4.10 Coordination - In developing alternatives for relicensing, include a full range of alternatives for modifying Project and non-Project structures and operations to the benefit of anadromous fishes, including anadromous salmonids and their habitats, while minimizing conflicts with operational requirements and other beneficial uses. This includes developing alternatives for greater coordination with other stakeholders and water development projects to ensure that, at a minimum, Project structures and operations are consistent with and can potentially enhance on-going and future restoration efforts.

Enclosure C**REFERENCES**

- National Marine Fisheries Service (NMFS). 1998a. Federal Register Notice, 63 Fed. Reg. 11482, March 9, 1998. Endangered and Threatened Species: Proposed Endangered Status for Two Chinook Salmon Evolutionarily Significant Units (ESUs) and Proposed Threatened Status for Five Chinook Salmon ESUs; Proposed Redefinition, Threatened Status, and Revision of Critical Habitat for One Chinook Salmon ESU; Proposed Designation of Chinook Salmon Critical Habitat in California, Oregon, Washington, Idaho. Proposed Rule.
- NMFS. 1998b. Federal Register Notice, 63 Fed. Reg. 13347, March 19, 1998. Endangered and Threatened Species: Threatened Status for Two Evolutionarily Significant Units of Steelhead in Washington, Oregon, and California. Final Rule.
- NMFS. 1999. Federal Register Notice, 64 Fed. Reg. 50394, September 16, 1999. Endangered and Threatened Species: Threatened Status for Two Chinook Salmon Evolutionarily Significant Units in California. Final Rule.
- NMFS. 2004a. Federal Register Notice, 69 Fed. Reg. 19975, April 15, 2004. Endangered and Threatened Species; Establishment of Species of Concern List, Addition of Species to Species of Concern List, Description of Factors for Identifying Species of Concern, and Revision of Candidate Species List Under the Endangered Species Act. Final Rule.
- NMFS. 2004b. Federal Register Notice, 69 Fed. Reg. 33102, June 14, 2004. Endangered and Threatened Species: Proposed Listing Determinations for 27 Evolutionarily Significant Units of West Coast Salmonids. Proposed Rule.
- NMFS. 2005a. Federal Register Notice, 70 Fed. Reg. 37160, June 28, 2005. Endangered and Threatened Species: Final Listing Determinations for 16 Evolutionarily Significant Units (ESUs) of West Coast Salmon, and Final 4(d) Protective Regulations for Threatened Salmonid ESUs. Final Rule.
- NMFS. 2005c. Federal Register Notice, 70 Fed. Reg. 52488, September 2, 2005. Endangered and Threatened Species: Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California. Final Rule.
- NMFS. 2006a. Federal Register Notice, 71 Fed. Reg. 834, January 5, 2006. Endangered and Threatened Species: Final Listing Determinations for 10 Distinct Population Segments of West Coast Steelhead. Final Rule.

NMFS. 2006c. Federal Register Notice, 71 Fed. Reg. 61022, October 17, 2006. Endangered and Threatened Species: Revision of Species of Concern List, Candidate Species Definition, and Candidate Species List.

NMFS. 2009a. Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project (OCAP BiOp). NMFS, Southwest Office, Long Beach, June 4, 2009. Available at: <http://swr.nmfs.noaa.gov/ocap.htm>.

NMFS. 2009b. Public Draft Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter - run Chinook Salmon and Central Valley Spring - run Chinook Salmon and the Distinct Population Segment of Central Valley Steelhead. NMFS, Southwest Region, Sacramento Protected Resources Division. October 2009.

San Joaquin River Restoration Program (SJRRP). 2010. SJRRP website at www.restoresjr.net/background.html.

Enclosure D

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Placer County Water Agency)
Middle Fork American River Hydroelectric Project)
_____)

Project No. P-2079

CERTIFICATE OF SERVICE

I hereby certify that I have this day served, by first class mail or electronic mail, a letter to Secretary Bose, Federal Energy Regulatory Commission, containing the National Marine Fisheries Service's comments and Resource Management Goals and Objectives regarding the Draft License Application for the Middle Fork American River Hydroelectric Project (P-2079). This Certificate of Service is served upon each person designated on the official Service List compiled by the Commission in the above-captioned proceeding.

Dated this 21st day of December 2010



William E. Foster
National Marine Fisheries Service

Document Content(s)

NMFS_P2079MFAmer_ComsonDLA_Final_21Dec10.PDF.....1-15

**United States Department of Commerce, National Oceanic and Atmospheric
Administration, National Marine Fisheries Service
Comment Letter Dated January 10, 2011;
Filed with FERC January 13, 2011 (20110113-5012)
access file at:
http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20110113-5012**



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
777 Sonoma Ave., Room 325
Santa Rosa, California 95404-4731

January 10, 2010

In response, refer to:
FERC P-2079

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: Re-filing of the Biological Opinion and Conference Opinion (OCAP BiOP), Previously Filed as part of Submittal No. 20101220-5100, to the Administrative Record of the Middle Fork American River Hydroelectric Project, Federal Energy Regulatory Commission Project No. P-2079, Middle Fork American River, California

Dear Secretary Bose:

NOAA's National Marine Fisheries Service (NMFS) is re-filing electronically NMFS' entire "*Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and California State Water Project*" (OCAP BiOP), dated June 4, 2009 (including Appendices and Essential Fish Habitat Recommendations). The text of the OCAP BiOp was previously e-filed with the Federal Energy Regulatory Commission as part of Submittal No. 20101220-5100. The Cover Letter and the Draft Recovery Plan provided as part of that submittal are still applicable. The entire OCAP BiOP now enclosed should be considered during the relicensing proceedings for the Middle Fork American River Hydroelectric Project, FERC Project No. P-2079, Middle Fork American River, California.

If you have questions regarding these documents, please contact Mr. William Foster (916-930-3617) or Mr. Larry Thompson (916-930-3613) of my staff.

Sincerely,

A handwritten signature in blue ink, appearing to read "Richard L. Wantuck".

Richard L. Wantuck
Hydropower Program Supervisor
Habitat Conservation Division

Enclosures

cc: Steve Edmondson, NMFS, Santa Rosa, CA
Maria Rea, NMFS, Sacramento, CA
Howard Brown, NMFS, Sacramento, CA
U.S. Bureau of Reclamation
P-2079 Service List



**Williams, Donna - Member of the Public
Comment Letter Dated October 4, 2010;
Filed with FERC October 13, 2010 (20101013-0054)**

ORIGINAL

October 4, 2010

To: Kimberly D.Boise, Secretary, Nathaniel J. Davis, Deputy Secretary
 Federal Energy Regulatory Commission
 888 First Street, N.E.901
 Washington, D.C. 20426
 FERC Project No. 2079-061 PCWAMFP

FILED
 SECRETARY OF THE
 COMMISSION

2010 OCT 13 A 10:45

FEDERAL ENERGY
 REGULATORY COMMISSION

As a Relicensing Participant for recreational trails for the Middle Fork of the American River Relicensing, it is my understanding from the many Placer County Water Agency meetings I attended, that FERC now recognizes and incorporates recreation as one of the important components of relicensing.

After 35 years as a Neonatal Intensive Care R.N. I retired in 2005.

- I have for over three decades horseback ridden and walked the trails of the foothills, and the mountains of the Sierra Nevada. Most of this trail experience has been in the canyon trails of the Middle, the North, and the South fork of the American River. During this time I have spent numerous hours and days volunteering time and money to enhance the recreational trails in the Auburn and Folsom Lake State Park Recreational Area, and Placer County Parks.
- I belong to five non-profit organizations providing for the protection and enhancement of trails. I have been involved in trail maintenance, trail creation, over 90 miles of trail marking, interpretative kiosk, and establishing potable water at trail head staging areas.
- In 2009 and 2010 have been part of a team to create and to produce the Park Watch Card and the www.parkwatchreport.org web site. The Park Watch Card and Web Site empowers the trail using public to be stewards of our public lands.
- In addition, I have for three decades been involved with sweep riding (horse back riding following event participants for safety and encouragement to the participants to follow their dream of completion). I have swept ridden for the American River 50 mile Run, the Way to Cool Run (a trail marathon), the 100 mile Sierra Nevada Run, and the historic and world renown Western States 100 mile Run. I have done the same support sweep riding for the American River 50 mile Ride, and the historic and world renown Western States 100 mile Ride; or more often referred to as the Tevis.
- I have three Tevis buckles for completing this 100 mile ride in less than 24 hrs. from Lake Tahoe to Auburn, California thru the mountains of the Sierra Nevada. All of these much valued and challenging recreational trail events take place in the canyon trails of the Middle Fork and the North Fork of the American River.

These many years of experience have given me the wisdom to fully appreciate a vision statement made by Arthur Carhart, Forest Service Landscape Architect, 1919:

Renewing Body and Spirit,
 Inspiring Passion for the Land

Perhaps the rebuilding of the body and spirit is the greatest service derivable from our forests, for what worth are material things if we lose the character and quality of people that are the soul of America".

First, I would like to address the limited confines of the nexus to the project. I realize limits need to be set in order to set the accountability, yet I believe the trail systems within the American River canyons offers a wide diversity of recreational experience that offers 365 days a year experience, and should without a doubt be included in the nexus. It is worthy of protection. The extensive trail system is there because of the Middle Fork of the American River. The ability to access the water of the American River is crucial to the recreational experience. Recreational trail users are dependent on the Middle Fork of the American River for their recreation experience in these canyons. Throughout the late spring, summer, and early fall, temperatures can vary between high 80 to over 110 degrees, and sometimes higher. The miles between staging area, many without water, in combination with steep terrain, and varying degrees of temperature makes the ability to access the water of the American River crucial to the recreational experience. In addition, an integral ingredient to the quality, and the safety of the connectivity of these trails is the ability to cross the American River. Basically, the American River is the life blood of a great diversity of recreational experience.

These PM&E measures for protecting the quality of the recreational hiking and equestrian trail experience philosophy and standard already have been established by the Federal Energy Regulatory Commission Project No. 2100-119, in a ruling set in the relicensing of the Feather River in Oroville. *"To the contrary, maintaining trails within the project only by equestrians and hikers offers a unique recreational experience worthy of preservation."*

To maintain this diversity of recreational experience, it is important that the PM&E measures in the Middle Fork Relicensing maintain the current trail designations that provide for equestrian and hiking only trails. Additional "multi-use" trails are needed and some have been built recently but the redesignation of trails built for hiking and equestrian only use should not be redesignated for uses they were not designed for and which create severe safety issues for other users. Many of the trails along the Middle Fork such as the Western States Trail are extremely steep, narrow and characterized by precipitous drop-offs. Redesignating such trails as "multi-use" in order to allow mountain bike use is contrary to FERC policy and previous rulings such as that for the Feather River and Oroville trails. It also leads to decreased trail use and recreational opportunities for hikers and equestrians.

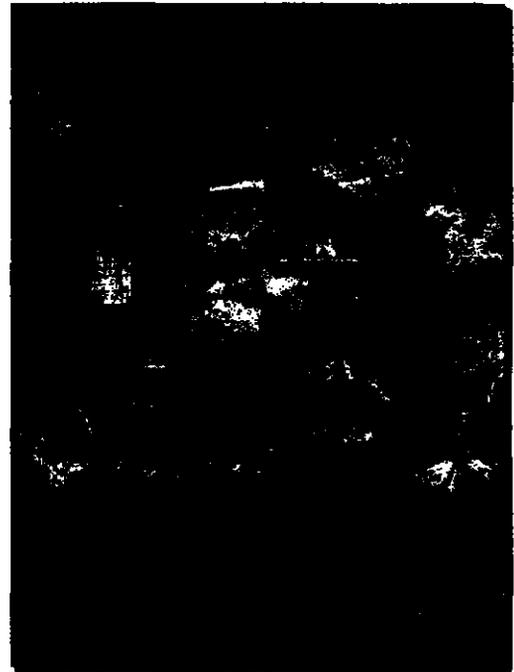
The great benefit the American River offers not only our peoples ability to recreate and to enjoy our country, it also provides crucial supplies of water and hydro electric power. This comes to the second point; the important factor of how the financial benefit derived from the American River can enhance, protect, and mitigate this valuable public resource of our recreational trail experience through the Relicensing of Middle Fork of the American River.

After reviewing a section of the Dept. of the Interior bill H.R. 3534 that has passed the House of Representative, I find the language in the bill has many of the elements my April 12, 2010 letter to PCWA for the relicensing process. "The Subcommittee on National Parks, Forests and Public Lands will hold an oversight hearing on "Locally Grown: Creating Rural Jobs with America's Public Lands." The Subcommittee will receive testimony on efforts by local communities, small businesses, and non-profit to partner with Federal land managers to create jobs and build healthier communities. Witnesses will provide firsthand accounts of how they are collaborating with Federal land managers to use America's parks, forests, and public lands to create jobs while simultaneously conserving the natural resources that sustain their communities and make them unique." This meeting occurred on July 15, 2010 at 10:00 A.M. in Room 1324 Longworth House Office Building.

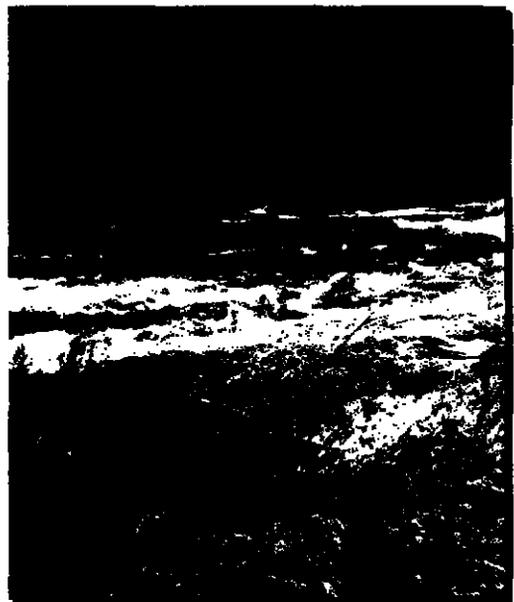
My letter of April 12, 2010 to PCWA is attached.

The third point, is an integral ingredient to the quality, and the safety of the connectivity of these trails is the ability to cross or ford the American River. There were two safe crossings on the American River. One was on the Middle Fork of the American River; the Greenwood Bridge which was destroyed with the break in the Hell Hole Dam on the Middle Fork of the American River. The Hell Hole dam, a rock-fill-type dam, was completed across the Rubicon River in December 1964. As the reservoir began filling the dam sprung a leak during a flood event and failed completely the next day. The resulting flood washed down the Middle Fork of the American River and washed away the Greenwood Bridge (fig. 1) near Auburn. The Greenwood Bridge has never been replaced, and yet this bridge would provide a safe crossing for our diverse recreational community, of trail enthusiastic, fishing, rafting, and camping as well as provide a crossing for fire, law, and emergency services. The second crossing was approximately 2 miles downstream from where the Middle Fork of the American River enters the North Fork of the American River. This was a land crossing over the Coffey Dam Tunnel. The Coffey Dam Tunnel has been removed without establishing a bridge in place of the land crossing. A bridge in this area would also provide the many benefits offered by the Greenwood Bridge.

During the PCWA relicensing meetings, the PCWA consultants presented a 1983 study, "Flow Requirements for Recreation and Wildlife in New Zealand - A Review" by M.P. Mosley, dated 1983. Page 167 in the study refers to Human instream uses. "Human instream uses, too, are not immune from the effects of flood flows. The possible hazards for recreationists of rapid increases in discharges in the residual upper Clutha River are discussed by Jowett (1980) in his study of the Luggate-Queensberry power development, and few years go by without trampers being drowned while attempting to cross rivers in flood. More recently, several rafting and canoeing parties have run into difficulties because of rapidly rising rivers, particularly on the Tongariro and Motu rivers. No doubt many other parties experience dangers like this, but because no injury or death occurs, their experiences never make the headlines" Now fast forward to our present day American culture. The safety provided by the bridges versus fording the American River during flooding



(fig. 1)
Remains of the Greenwood Bridge.
April 2, 2010



(fig. 2)
Middle Fork of the American
River near the remains of the
Greenwood Bridge. April 2, 2010

and fluctuating flows of the Middle Fork of the American River (**fig. 2**) throughout the year, I think it would be reasonable to deduct this would be a more than reasonable and safe decision.

Providing these two bridge crossings provides construction jobs, continues and increases revenues from the diverse and unique recreational community back into the local and regional economy.

Suggested bridge type (**fig. 3**) is the prefabricated weathering steel bow truss above deck. This one of the more economical bridge options in the Feasibility Study done by State Park in June, 2007. This bridge offers multiple assets that make it well worth its consideration. Maintenance is reduced with the long lasting durability of steel. Bridge doesn't need to be painted. Wood deck would require maintenance, but is economical in comparison to other deck surfaces, and is a good surface for all users. This decking is the material of choice for bridges that might be moved. Safe crossing by all users would be enhanced by the 5 ft. 4 in. and greater truss railing height above the deck. The structure offers a very appealing esthetic architecture for the American River Canyons. It is prefabricated, giving it a future option of being able to be relocated if needed. Possible estimates of cost could be drawn from the State Park's Feasibility Study done in 2007.



(fig. 3)
Bridge is a prefabricated weathering steel bow truss above deck. Located in Folsom, California. April 5, 2010

I have a passionate belief that to explore and to know our land, teaches us to love our land and protect it. By closing opportunities to diverse recreational community *"we do lose the character and quality of people that are the soul of America."* The Middle Fork of the American River provides revenues. A dedicated portion of the revenues would insure the diverse recreational community of the American River the ability to achieve the protection, enhancement, and mitigation of this recreational area that every day of the year returns so much to the quality of our lives. This would in every sense *"use America's parks, forests, and public lands to create jobs while simultaneously conserving the natural resources that sustain their communities and make them unique."* Natural resources of our historic and world renowned recreational trails definitely make our community unique.

What I am therefore requesting from FERC is: (1) require that the nexus sphere of influence include the American River Canyon recreational trails and their PM&E, (2) require as part of the relicensing the restoration of recreational access across the Middle Fork by mandating the rebuilding of the Greenwood Bridge and a new bridge to replace the lost crossing at the Coffey Dam Tunnel and (3) require the establishment and permanent funding of a recreational PM&E advisory board made up of elected officials from the various non-profit recreation boards that serve the communities within the Middle fork watershed; The dedicated funding to come from the power and the water revenues from the Middle Fork of the American River.

Thank you for your time and consideration,

Donna Williams, Relicensing Participant for the Relicensing of the Middle Fork of the
American River

signature

Date: October 4, 2010

Address: 4170 Auburn Folsom Road, Loomis, California 95650

Phone: (916) 652-6436

Email: dmwynot@gmail.com

CC: Placer County Water Agency, Bureau of Reclamation, National Forest, California State
Parks, Rep Tom McClintock

**Middle Fork of the American River Relicensing
Recreational Funding to provide present and future PM&E
for the benefit of the American River Canyons and the public.
April 12, 2010**

Create a board of recreational disciplines, that is made up of elected volunteers chosen by the American River recreational disciplines representing hikers, fishermen, boaters, bicyclists, and equestrians. The board would have consultants from the interrelated public agencies to provide resource knowledge. Be better able to coordinate the recreational community and the public agencies to accomplish PM&E measures. Funding would be provided by a dedicated 3% of the revenues derived annually from the revenue budget of power and electricity of the Middle Fork of the American River. Funding would be audited annually, and available for private and public evaluation. An annual report of recreational accomplishments to protect, mitigate and enhance, would be available for private and public evaluation as well.

The board would have a unique role to provide multiply benefits to the American River Recreation area *now and into the future*. Creative ideas produced by individuals who live, breath, and love this area could be put action items forward to accomplish with the benefit of this dedicated funding. A dedicated funding would be a catalyst for volunteerism and private funding. In essence, this would say, "there is, and will be funding on the table "now let's make a difference with our donation of labour and private funding." Within public agencies there is never enough funding to do the maintenance, this dedicated fund would assist in maintenance to protect the American River Recreational Area. This can easily be seen in trails that are maintained and signed have a greater degree of averting volunteer trails, with their ecologically damage, and increased odds of injury to visitors. Over time decreases much higher expenditures for lack of scheduled maintenance.

With FERC's recognition and incorporation of recreation as one of the components of relicensing, the creation and funding of this board would make it a functioning reality today and tomorrow.

Respectfully submitted, Donna Williams, Relicensing Participant