

Appendix G

**Responses to Comments Received on the
Draft Habitat Expansion Plan**

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Acronyms and Abbreviations

2007 BiOp	<i>Biological Opinion for the U.S. Army Corps of Engineers' Operation of Englebright and Daguerre Point Dams on the Yuba River, California (NMFS 2007)</i>
AFRP	Anadromous Fish Restoration Program
AMP	adaptive management plan
CEQA	California Environmental Quality Act
Co-Manager Review Draft Recovery Plan	<i>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 Co-Manager Review Draft</i>
Corps	U.S. Army Corps of Engineers
Delta	Sacramento River-San Joaquin River Delta
DFG	California Department of Fish and Game
DWR	California Department of Water Resources
ESA	Endangered Species Act
FED	federal agency
FERC	Federal Energy Regulatory Commission
Forest Service	U.S. Department of Agriculture Forest Service
HEA	Habitat Expansion Agreement for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead
HEP	Habitat Expansion Plan
HET	Habitat Expansion Threshold
Licensees	(California Department of Water Resources and Pacific Gas and Electric Company)
LOC	local agency
Lower Yuba River Actions	Lower Yuba River Habitat Expansion Actions
LYRL	Lower Yuba River landowner
NGO	non-government organization

NMFS	National Marine Fisheries Service
Oroville Facilities	Oroville Facilities, FERC Project No. 2100
Oroville Settlement Agreement	Settlement Agreement for Licensing of the Oroville Facilities
PG&E	Pacific Gas and Electric Company
Poe	Poe Hydroelectric Project, FERC Project No. 2107
Public Draft Recovery Plan	<i>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 2009)</i>
RM	river mile
RMT	Yuba Accord River Management Team
STA	State agency
State Water Board	State Water Resources Control Board
SWP	State Water Project
SYRCL	South Yuba River Citizens League
Three-Creek Actions	Battle Creek, Big Chico Creek, and Antelope Creek Habitat Expansion Actions
Upper North Fork Feather River	Upper North Fork Feather River Hydroelectric Project, FERC Project No. 2105
USFWS	U.S. Fish and Wildlife Service
VSP	Viable Salmonid Population
YCWA	Yuba County Water Agency
Yuba Accord	Lower Yuba River Accord

Responses to Comments Received on the Draft Habitat Expansion Plan

The Draft Habitat Expansion Plan (HEP) for the Habitat Expansion Agreement for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead (HEA) was released on November 20, 2009. Pursuant to the HEA, the Department of Water Resources (DWR) and Pacific Gas and Electric Company (PG&E) (together, the *Licensees*) were required to submit the Draft HEP to the HEA signatories and other interested parties for review and comments within 2 years from the HEA effective date of November 20, 2007. Comments on the Draft HEP were to be submitted to the Licensees within 90 days, or no later than February 18, 2010. This appendix includes all comment letters and electronic mail received by the Licensees on the Draft HEP from the release of the document through October 2010. Responses are provided for each comment received.

Comment Letters

Eighteen comment letters (including electronic mail) were received from federal agencies, state agencies, local agencies, non-government organizations, and individuals (Lower Yuba River landowners). The comment letters are organized and numbered with acronyms as follows:

- Federal agency – FED
- State agency – STA
- Local agency – LOC
- Non-government organization – NGO
- Lower Yuba River landowner – LYRL

Table G-1 lists the comment letters that were received on the Draft HEP.

Table G-1. Comment Letters Received on the Draft Habitat Expansion Plan

Comment Letter No.	Date	Agency/Organization	Name
Federal Agencies			
FED1	02/18/10	National Marine Fisheries Service	Rodney R. McInnis, Regional Manager
FED2	02/18/10	U.S. Fish and Wildlife Service	M. Kathleen Wood, Assistant Field Supervisor, Sacramento Fish and Wildlife Office
State Agencies			
STA1	02/10/10	California Department of Fish and Game	John McCamman, Director
Local Agencies			
LOC1	02/15/10	Yuba County Resource Conservation District (RCD)	John Waskiewicz, Chair, Yuba County RCD Board of Directors
LOC2	02/17/10	High Sierra Resource Conservation & Development Area	William J. Bennett, President
LOC3	02/18/10	KC Hydro	Kelley W. Sackheim, Principal
LOC4	02/18/10	Yuba County RCD	John Waskiewicz, Chair, Yuba County RCD Board of Directors
Non-Government Organizations			
NGO1	01/19/10	California Fisheries and Water Unlimited	Robert J. Baiocchi, President
NGO2	01/22/10	California Sportfishing Protection Alliance	Chris Shutes, FERC Projects Director
NGO3	02/12/10	Pacific Coast Federation of Fishermen's Associations	W. F. "Zeke" Grader, Jr., Executive Director
NGO4	02/12/10	Yuba Watershed Protection & Fire Safe Council	Glenn Nader, Facilitator
NGO5	02/17/10	State Water Contractors	Terry Erlewine, General Manager
NGO6	02/18/10	South Yuba River Citizens League	Gary Reedy
NGO7	02/20/10	American Rivers	Steve Rotherth, Director, California Regional Office

Table G-1. Continued

Comment Letter No.	Date	Agency/Organization	Name
Lower Yuba River Landowners			
LYRL1	01/21/10	Private landowner	Ralph Mullican
LYRL2	02/05/10	Law Offices of Letty Litchfield	Letty Litchfield
LYRL3	02/12/10	Private landowner	Kit Burton
LYRL4	02/18/10	Western Aggregates	David A. Greenblatt, Senior Vice President

Responses to Comments

This appendix includes scanned copies of the letters received. Each distinct issue in the comment letter is numbered, and the corresponding response to the comment is similarly numbered. For example, the first comment received from the National Marine Fisheries Service (NMFS) (Comment Letter FED1) is labeled FED1-1.

Comments received on the Draft HEP were considered during preparation of the Final HEP. According to Section 4.2.1 of the HEA, “The Final Habitat Expansion Plan shall address all comments received during the 90-day review and comment period, and shall include an explanation of why any such comment was not adopted.” Responses to the comments received identify specific changes that were made to the Draft HEP and incorporated into the Final HEP, or provide an explanation of why the comment was not adopted.

The Licensees recognize that comments regarding the Lower Yuba River Actions proposed in the Draft HEP do not necessarily apply to the Lower Yuba River Actions that are presented in the Final HEP, as the recommended actions were modified.

Master Responses

A review of the comment letters received on the Draft HEP revealed that some comments were made frequently, demonstrating a common concern among those submitting written comments. In some cases, the array of similar comments about a particular topic provided more clarity about a specific issue than any single comment. To allow presentation of a response that addresses all aspects of these related comments, master responses have been prepared for those topics that were raised in a number of comments. These master responses are intended to allow a well-integrated response that addresses all facets of a particular issue,

in lieu of piecemeal responses to individual comments that may not have portrayed the full complexity of the issue.

When applicable, the individual responses to comments cross-reference an applicable master response to further respond to the comment or to provide additional explanation and information. In some cases, a master response may fully respond to the individual comment.

Master responses have been provided for the following issues raised in comments received on the Draft HEP:

- Comments related to the contribution to the Habitat Expansion Threshold (HET) (see Master Response 1)
- Comments related to the Three-Creek Actions (see Master Response 2)
- Comments related to the eligibility of the Lower Yuba River Actions (see Master Response 3)
- Comments related to use of an optional segregation weir (see Master Response 4)
- Comments related to mitigation for unmitigated impacts on the Feather River (see Master Response 5)

Each master response is presented in the following sections.

Master Response 1, Contribution to the Habitat Expansion Threshold

“The specific goal of the Agreement [HEA] is to expand spawning, rearing and adult holding habitat sufficiently to accommodate an estimated net increase of 2,000 to 3,000 Spring-Run for spawning (“Habitat Expansion Threshold”) in the Sacramento River Basin...” (Section 2.2 of the HEA). The HEA notes that, although the HET refers to habitat for spring-run Chinook salmon, expansion of suitable habitat should benefit steelhead as well. The actual number of fish that return to utilize the expanded habitat in any year is determined to a large degree by factors outside the Yuba River and beyond the scope of the HEA.

The HEA directs the Licensees to use the “[c]ontribution to achieving the Habitat Expansion Threshold” (Section 4.1.2[a] of the HEA) as a criterion for selection of habitat expansion actions; however, the HEA does not specify a methodology for estimating the contribution of recommended actions to the HET. For this reason, and given time and data constraints related to the selection of actions, the Licensees developed a methodology that is based on existing scientific knowledge and provides a conservative estimate of habitat potential associated with the recommended actions. While developing this methodology, the

Licensees took into account comments received through consultation with NMFS and other HEA signatories. In keeping with the language of the HEA, actions benefiting spring-run Chinook salmon were presumed to benefit steelhead, and no explicit evaluation of the actions was made with regard to their benefits for steelhead.

The methodology for determining contribution to the HET involved two steps. First, the *quantity* of habitat for spawning by spring-run Chinook was evaluated based on the extent of habitat expansion and plausible estimates of Chinook spawning densities in the Yuba River and elsewhere (Pasternack 2010a, 2010c). Second, the *quality* of the expanded habitat for spring-run Chinook salmon was evaluated to adjust the quantity of expanded habitat for existing habitat limitations across life stages. The evaluation of environmental conditions adjusted the area-based spawner estimates of Pasternack (2010a, 2010c) downward to account for environmental limitations not addressed by the HEA recommended actions.

Through application of this methodology, the sum of the estimated increases in habitat potential for spring-run Chinook salmon resulting from expansion of spawning habitat in the Lower Yuba River at Sinoro Bar and at Narrows Gateway was demonstrated to exceed the HET (see discussion in Chapter 4 of the Final HEP for more detail).

Master Response 2, Three-Creek Actions

The Licensees removed the Three-Creek Actions (Battle Creek, Big Chico Creek, and Antelope Creek Habitat Expansion Actions) from consideration in the Final HEP because the individual actions have been fully or partially funded by other sources, or funding appears to be imminent. The funding status for each action is described below.

- **Battle Creek Actions.** DFG has identified full funding for the Battle Creek Actions (i.e., Phase 2 of the Battle Creek Salmon and Steelhead Restoration Project). Funding is currently being secured. (Berry pers. comm.)
- **Antelope Creek Action.** As documented during a teleconference with California Department of Fish and Game (DFG) (Bratcher pers. comm.), the Anadromous Fish Restoration Program (AFRP) will provide full funding for Paynes Crossing in Fiscal Year 2010–2011. The Antelope Creek Action will be implemented by DFG in summer 2011.
- **Big Chico Creek Action.** As explained by Susan Strachan (Strachan pers. comm.), partial funding for the restoration of the Iron Canyon fish ladder has been obtained. Providing funding for the remainder of this project would not result in a significant contribution to the HET; thus, the Licensees eliminated this action from consideration.

Should the status of anticipated funding change before approval of the Final HEP by NMFS, the Licensees may reconsider recommending these actions for implementation under the HEA.

Master Response 3, Eligibility of the Lower Yuba River Actions

The recommended actions in the Final HEP are eligible as defined in Section 3.2 (a—d) in the HEA:

3.2 Existing Requirements and Commitments

For purposes of this Agreement, the term “Existing Requirements and Commitments” is intended to encompass actions expected to occur in a timeframe comparable to implementation of habitat expansion action(s) under this Agreement. Existing Requirements and Commitments may include but are not limited to:

- (a) legal or regulatory requirements that are the subject of any form of binding order issued by a regulatory agency or court of competent jurisdiction, at the time NMFS approves the habitat expansion action(s);
- (b) legal or regulatory requirements that are the subject of ongoing or imminent administrative or judicial action by an agency or court of competent jurisdiction at the time NMFS approves the habitat expansion action(s);
- (c) obligations or commitments set forth in a draft license application, final license application, settlement agreement, or agreement-in-principle in a pending hydroelectric relicensing proceeding at the time NMFS approves the habitat expansion action(s); and
- (d) reasonable and prudent alternatives, reasonable and prudent measures, and terms and conditions of any final Biological Opinion that has been issued at the time NMFS approves the habitat expansion action(s).

NMFS comments on the Draft HEP state that the recommended actions in the Draft HEP should be considered within the scope of the actions required in the NMFS 2007 *Final Biological Opinion Concerning the Effects of the U.S. Army Corps of Engineers Operation of Englebright and Daguerre Point Dams on the Yuba River, California* (2007 BiOp) and therefore do not meet the HEA Approval Criteria regarding eligibility. As explained below, the recommended actions are not currently part of a final biological opinion, nor are they an existing legal or regulatory requirement. Consequently, the spawning habitat expansion actions at Sinoro Bar and Narrows Gateway are eligible under the HEA.

Currently, two documents direct resource management activities in the Lower Yuba River and thus hold the potential to affect the eligibility of the Lower Yuba River Actions being recommended under the HEA: the Lower Yuba River

Accord (Yuba Accord) and the 2007 BiOp. The Yuba Accord is a collaborative agreement to provide flows and temperatures that are conducive to successful production of listed anadromous salmonids within the Lower Yuba River. Because the Final HEP does not recommend any change to flows in the river, the existing Yuba Accord does not affect the eligibility under the HEA of actions recommended in the Final HEP. The 2007 BiOp requires the U.S. Army Corps of Engineers (Corps) to implement a gravel augmentation program in the Lower Yuba River within 3 years of issuance, raising the issue of eligibility under the HEA for recommended Lower Yuba River Actions.

Corps Gravel Augmentation Program

The spawning habitat expansion actions at Sinoro Bar and Narrows Gateway are independent of, and complementary to, the Corps' gravel augmentation program below Englebright Dam. The purpose of the HEP recommended actions is to create spawning habitat where negligible amounts currently exist in the lower portion of the Englebright Dam Reach and the upper portion of the Narrows Reach. The spawning habitat expansion action at Sinoro Bar (Englebright Dam Reach) involves the removal of shot rock, reshaping the streambed, and placement and contouring of gravel to create new spawning habitat. The spawning habitat expansion action at Narrows Gateway (Narrows Reach) involves creation of additional spawning habitat immediately downstream of Sinoro Bar through removal of the armored surface layer of the streambed, recontouring of the streambed, and placement and contouring of gravel.

In contrast, the Corps gravel augmentation program is designed to provide a periodic injection of gravel to compensate for the loss of gravel recruitment caused by Englebright Dam. The 2007 BiOp contains, as one of its Reasonable and Prudent Measures, the following:

1. *The Corps shall develop and implement a long-term gravel augmentation program to restore quality spawning habitat below Englebright Dam.*
 - A) *The Corps shall utilize information obtained from the pilot gravel injection project to develop and commence implementation of a long-term gravel augmentation program within three years of the issuance of this biological opinion.*

The Corps initiated a pilot gravel injection project in November 2007, with 450 short tons of spawning-sized gravel placed below Englebright Dam (in the pool below Narrows 2 Powerhouse). Based on the results of this and other geomorphic studies, Pasternack (2010b) prepared the *Gravel/Cobble Augmentation Implementation Plan (GAIP) for the Englebright Dam Reach of the Lower Yuba River, CA*. As part of that plan, the Corps is proposing to place an additional 2,000 to 5,000 short tons of spawnable-sized gravel below Englebright Dam (approximately 115 feet downstream of the Narrows 1 powerhouse, to avoid potential impacts to powerhouse operations) in November 2010 (Corps 2010). This would likely be the first of multiple gravel injections in

the upper portion of the Englebright Dam Reach over a period of a few years, as proposed for the Corps by Pasternack (2010b).

Pasternack (2010b) indicates that implementation of the full plan is designed to erase the current deficit of gravel in the Englebright Dam Reach; however, rehabilitation at Sinoro Bar and Narrows Gateway is clearly beyond the scope of the plan. The Corps' program would likely create new spawning habitat upstream of Sinoro Bar/Narrows Gateway and potentially help to sustain the spawning habitat created downstream by the HEP recommended actions.

As noted, the HEP spawning habitat expansion actions and the Corps gravel augmentation program are complementary. Each set of actions would independently provide expanded spawning habitat, and the Corps program could help to sustain the HEP actions over time through periodic introduction of gravel to Sinoro Bar and Narrows Gateway. Other actions outlined in the 2007 BiOp that complement the HEP recommended Lower Yuba River Actions include injection of woody debris (which could aid in gravel retention and improved microhabitat conditions), improvements to passage at Daguerre Point Dam, and screening of diversions downstream of the Lower Yuba River habitat expansion actions.

Existing Legal and Regulatory Requirements

The 2007 BiOp recently was challenged in federal court (*South Yuba River Citizens League and Friends of the River v. National Marine Fisheries Service et al.*). The July 8, 2010 court order found that the 2007 BiOp had failed to provide a rational connection between the determination that operation of Englebright Dam would perpetuate unmitigated stressors and the conclusion by NMFS that those stressors would not jeopardize the listed fish. Given that, the court held it could not conclude whether the measures required in NMFS Incidental Take Statement achieved the goal of not jeopardizing the species — that is, the court could not decide on the record whether the measures were inadequate [July 8, 2010 Order p. 70].

More importantly, the court's ruling did not center on the Corps' gravel augmentation program, which is currently being implemented. Accordingly, it appears that the other stressors identified in the litigation would be subject to change in any revised biological opinion that may be issued as a result of the court's ruling. The ruling does address inadequate language related to fish passage at Daguerre Point Dam, inadequate language addressing screening at the South Yuba-Brophy diversion, failure to consider the effects of fish straying from the Feather River Fish Hatchery, failure to address the effects of climate change, failure to include a discussion of effects from the condition of the Delta, and failure to address the potential threat of poaching. It should be noted that the court discussed the Corps' gravel augmentation program and concluded that the reliance of the biological opinion on the proposed gravel augmentation program was itself reasonable.

Consequently, the expansion of spawning habitat recommended in the Final HEP is not part of any legal or regulatory requirement that is the subject of any form of binding order issued by a regulatory agency or court of competent jurisdiction. In addition, there is no evidence to indicate that the gravel augmentation program that is currently being undertaken by the Corps will be expanded upon by either the court or by NMFS at a future time to include the recommended HEP actions.

The Final HEP assumes that the gravel augmentation will continue over the long term; however, the Licensees recognize their responsibility for maintaining habitat expansion actions at the spawning rehabilitation sites (Sinoro Bar and Narrows Gateway) for the term of their obligation under the HEA. Therefore, gravel augmentation necessary to sustain the habitat created will be assured by one of these two processes.

Master Response 4, Optional Segregation Weir on the Lower Yuba River

The segregation weir remains in the Final HEP as an optional component of the Lower Yuba River Actions to be used at the discretion of the resource agencies (NMFS, U.S Fish and Wildlife Service [USFWS], and DFG). If the fish do not naturally segregate, the weir could be implemented to minimize potential impacts resulting from fall-run Chinook salmon spawning in the same reach as spring-run Chinook salmon (e.g., superimposition and introgression). If the spring-run and fall-run Chinook salmon naturally segregate to a degree that is deemed acceptable by the resource agencies, the weir would not be implemented.

During the 6-month extension for preparing the Final HEP, the Steering Committee met with DFG to discuss an optional segregation weir and to develop a conceptual adaptive management plan (AMP) (Appendix J). If the resource agencies elect to install a segregation weir, an AMP could be developed to identify the acceptable conditions under which a segregation weir would be installed. The AMP would address criteria for determining whether a sufficient degree of natural selection is occurring (e.g., percentage of spring-run versus fall-run Chinook salmon using the habitat), installation timing, placement, duration, and other watershed-specific considerations. Provisions to minimize or eliminate negative effects on steelhead and fall-run Chinook salmon also would be included through consideration of optimal weir placement and the duration of weir operation, thereby supporting the overall HEA objectives. DFG has expressed support for managing the Lower Yuba River from the Narrows Pool to Englebright Dam for spring-run Chinook salmon (Hill pers. comm.).

The segregation weir could be managed under two strategies, a long-term strategy and an in-season strategy. Both would be supported by monitoring data. The long-term strategy would determine the overall need for installation of the segregation weir to ensure adequate separation between the runs. The in-season strategy would involve an annual decision whether to install the segregation weir based on projections for the seasonal abundance of fall-run Chinook salmon. For

example, should the fall-run projections indicate a high potential for spawning overlap with spring-run, the weir could be installed. The Licensees anticipate that the segregation weir would be managed by the resource agencies, with funding provided by the Licensees via the HEA.

A detailed discussion on the optional segregation weir is presented in Chapter 3 of the Final HEP. An example of an AMP that could be used for management of the segregation weir is provided in Appendix J.

Master Response 5, Mitigation for Unmitigated Impacts on the Feather River

The HEA is not intended to mitigate for *all* habitat losses in the Feather River watershed. As specified in Section 1.2 of the HEA, fulfilling the agreement will “*fully mitigate for any presently unmitigated impacts due to blockage of fish passage* (emphasis added) of all fish species caused by the Feather River Hydroelectric Projects.” In order to fulfill the agreement, the Licensees must expand spawning, rearing, and adult holding habitat to accommodate a net increase of 2,000–3,000 spring-run Chinook salmon (Sections 2.1 and 2.2 of the HEA). Expansion will be accomplished through enhancements to existing accessible habitat, improving access to habitat, or other physical habitat improvements (Section 2.1 of the HEA). Other mitigation measures to compensate for loss of habitat include those outlined in Appendix A of the Settlement Agreement for Licensing of Oroville Facilities (see Chapter 1 of the Final HEP for more information) and the continued operation of the Feather River Fish Hatchery. Additionally, under the Settlement Agreement, DWR will be developing Hatchery Genetic Management Plans for the three salmonid stocks produced at the Feather River Fish Hatchery to minimize potential negative effects of hatchery fish on natural populations.

The HEA has been adopted to fully mitigate for any presently unmitigated impacts due to blockage of fish passage of all fish species caused by the Feather River Hydroelectric Projects, as an alternative to NMFS exercising their authority under Section 18 of the Federal Power Act (Section 1.2 of the HEA). Impacts of other facilities, State and private, are mitigated under other proceedings not related to the HEA.

Comment Letter FED1 (Rodney R. McInnis, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, February 18, 2010)



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

2

FEB 18 2010

In response, refer to:
SWR/F/SWR3:RW

FED1

Director Hydro Licensing, Power Generation
Pacific Gas and Electric Company
P.O. Box 770000
San Francisco, California 94177

Chief, Division of Environmental Generation
Department of Water Resources
P.O. Box 942836
Sacramento, California 94236

Subject: Response of NOAA's National Marine Fisheries Service to the November 2009 Draft
Habitat Expansion Plan submitted by the California Department of Water Resources
and Pacific Gas and Electric Company

Dear Licensees:

Thank you for providing a copy of your Draft Habitat Expansion Plan (DHEP) for review by NOAA's National Marine Fisheries Service (NMFS) and other stakeholders who are Parties to the 2007 *Habitat Expansion Agreement for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead* (HEA), applicable to several hydroelectric projects in the Feather River watershed. The HEA Steering Committee is to be commended for their diligent search for prospective projects that will potentially satisfy the requirements of the HEA. Over the course of 12 months, the Committee identified numerous salmonid habitat restoration projects which may be completed to help contribute to the recovery of Central Valley spring-run Chinook salmon and steelhead populations.

As you know, the HEA was a negotiated agreement among Parties concerned with the outcome of FERC relicensing actions pertaining to your respective hydroelectric projects operating in the Feather River watershed. The primary hydroelectric project impact addressed by the HEA is the loss of well over one hundred miles of historic Feather River salmonid habitats due to man-made migration barriers (dams and other project structures) and the alterations to the aquatic environment caused by project operations and maintenance. The basis of the agreement was an understanding that the California Department of Water Resources (DWR) and Pacific Gas and Electric Company (PG&E) would identify and implement a program to restore spring-run

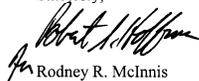
Chinook salmon habitat elsewhere in the Sacramento River watershed such that the newly gained habitat: (1) fully mitigates for the loss of habitats in the Feather River due to project-related impacts, (2) meets the conditions and criteria identified within the agreement, and (3) is ultimately subject to acceptance by NMFS within the context of the provisions of the agreement. Consistent with the HEA section 4.1.3 (Draft Habitat Expansion Plan), the Licensees fulfilled the task of producing a Draft Plan and distributed it among the Parties on November 20, 2010. A 90-day period ensued wherein the Parties were provided an opportunity to review and comment on the draft plan. Within 90 days after the close of this review and comment period on the DHEP, the HEA calls for the Licensees to prepare and submit a Final Habitat Expansion Plan to NMFS for approval within 90 days, unless a time extension is agreed to between NMFS and the Licensees.

After reviewing the DHEP, NMFS determines that there are significant areas of concern that need to be reconciled before moving forward with a Final Habitat Expansion Plan that can meet the approval requirements of the HEA. Appendix A of this document addresses some of the key reasons for our conclusions and offers our recommendations for moving toward a successful resolution of our concerns.

In light of the deficient status of the DHEP, NMFS recommends a formal time extension of six months for completion of the Final Habitat Expansion Plan, consistent with HEA sections 4.2 and 5 (Timeframes). The "good cause" we cite for this extension is to allow time for NMFS to confer with the Licensees and other Parties over the reasons why we believe the DHEP is deficient, and to introduce new information and another alternative that NMFS believes will meet the requirements of the HEA.

NMFS proposes to convene a meeting among all interested Parties at the earliest opportunity to discuss ideas for resolving our disparate viewpoints successfully so that the HEA process can resume in a productive and viable fashion.

If you have questions about NMFS' response to the DHEP, please contact Mr. Rick Wantuck, NMFS Regional Hydropower Program Supervisor, at 707-575-6063.

Sincerely,

Rodney R. McInnis
Regional Administrator

Enclosure

cc: Bob Hoffman, HCD, NMFS, Long Beach, CA
Chris Yates, PRD, NMFS, Long Beach, CA
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Maria Rea, Howard Brown, Brian Ellrott, Larry Thompson, NMFS, Sacramento, CA
HEA Signatory Parties



Comment Letter FED1 (Continued)

Appendix A

**Response of NOAA's National Marine Fisheries Service
(NMFS) to the November 2009 Draft Habitat Expansion Plan
submitted by the California Department of Water Resources
and
Pacific Gas and Electric Company**

1.0 Introduction

As explained in the 2007 *Habitat Expansion Agreement for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead* (HEA), the purpose of the HEA is to fully mitigate for the unmitigated impacts resulting from the blockage of fish passage caused by the Feather River Hydroelectric Projects:

"Except as specifically provided, this Agreement: (a) fully mitigates for any presently unmitigated impacts due to the blockage of Fish Passage of all fish species caused by the Feather River Hydroelectric Projects; and (b) resolves among the Parties during the term of this Agreement issues related to regulatory conditions for Fish Passage associated with or related to any of the Feather River Hydroelectric Projects in excess of the action(s) contemplated under this Agreement, including, but not limited to, issues (related to Fish Passage) arising under exercise of authority under the ESA (subject to Section 13 of this Agreement), California Endangered Species Act (subject to Section 13 of this Agreement), Sections 18, 4(e), 10(a) and 10(j) of the FPA, and Section 401 of the Clean Water Act, provided the Licensees are complying with their obligations under this Agreement. (p. 5)."

NMFS' view is that full mitigation should carefully consider the extensive habitat lost to California spring-run Chinook salmon and Central Valley steelhead resulting from the Feather River hydroelectric projects that are the subject of the HEA. These projects block access to what

was likely the most productive and largest spring-run Chinook salmon system in the Central Valley; and they create additional impacts to existing aquatic habitats resulting from the operations and maintenance of these facilities.

The Feather River is the only Central Valley watershed that historically supported four independent spring-run Chinook salmon populations (West Branch, North Fork, Middle Fork, and South Fork) (Lindley *et al.* 2004). The North Fork of the Feather River between Oroville Dam and Lake Almanor covers roughly 80 river miles. Factoring in the historic upstream limits for Chinook salmon on the West Branch, Middle Fork, and South Fork (see Yoshiyama *et al.* 1996), access to well over 100 miles of spring-run Chinook salmon habitat are blocked by Oroville Dam. The Central Valley steelhead is blocked from access to at least this much Feather River habitat (and probably much more, given the species' tendency to migrate to high watershed elevations).

The declining status of the California spring-run Chinook salmon and the Central Valley steelhead are evident. These species remain threatened with extinction despite implementation of many habitat improvement projects in the lower elevations of the Central Valley; within currently occupied habitat downstream of dams that block upstream passage (see <http://www.fws.gov/stockton/aftp/> to view projects undertaken by the Anadromous Fish Restoration Program). The options for fish passage for the Feather River Hydroelectric Projects that were contemplated during relicensing, if enacted, would have expanded anadromous access into higher elevation Feather River habitats; these options were set aside in lieu of implementing a Habitat Expansion Plan (HEP) under the HEA, that would expand habitat in the Sacramento River basin. Given the origins of the HEA, NMFS encourages development of a HEP that strongly favors expansion into habitats that are presently inaccessible, over actions that only

Comment Letter FED1 (Continued)

affect existing habitat. NMFS was pleased that the DHEP includes some proposals that expand habitat for anadromous species, and agrees in principle with these action types. However, among these action types, some are not HEA-eligible proposals and the remaining proposals do not appear to be of sufficient scale to meet the HEA's Habitat Expansion Threshold (HET) of 2,000 to 3,000 adult spring-run Chinook, either individually or collectively. Our comments on actions proposed in the DHEP regarding eligibility, ability to meet the HET, and other facets are found in sections below.

2.0 Goals and Objectives of the Habitat Expansion Agreement

The HEA states at Section 2.1:

"The overall goal of this Agreement is to expand the amount of habitat with physical characteristics necessary to support spawning, rearing and adult holding of spring-run [Chinook salmon] and Steelhead in the Sacramento River Basin as a contribution to the conservation and recovery of these species. The expansion shall be accomplished through enhancements to existing accessible habitat, improving access to habitat, or other action(s) and, as stated in Section 1.2(a), is intended to fully mitigate for any presently unmitigated impacts due to the blockage of Fish Passage of all fish species caused by the Feather River Hydroelectric Projects."

In addition to the above general goal of the HEA, the specific goal and objective of the HEA is to increase the numbers of spring-run Chinook salmon and steelhead by meeting or exceeding the HET, as stated in relevant part at Section 2.2:

"The specific goal of the Agreement is to expand spawning, rearing, and adult holding habitat sufficiently to accommodate an estimated net increase of 2,000 to 3,000 spring-run [Chinook salmon] for spawning ('Habitat Expansion Threshold') in the Sacramento River Basin, as compared to the habitat available under any relevant 'Existing Requirements or Commitments' [this term is defined in HEA Section 3.2]. The Habitat Expansion Threshold is focused on Spring-Run [Chinook Salmon] as the priority species, as expansion of habitat for Spring-Run typically accommodates steelhead as well."

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Currently occupied habitats are entirely downstream of major dams and mostly confined to the lower foothills and Central Valley floor. In order to successfully recover these species and ensure their survival and recovery over the next 50 or more years, the habitats for these species must be expanded upstream of some of the major dams and into the historic, higher-elevation, habitats. These historic habitats are located above dams in mountainous elevations where the habitat conditions remain highly viable for these species: year-round supplies of very cold water, little human impacts, ample riparian/forest habitat for shading, and sufficient amounts of spawning substrate and holding/rearing habitats. Thus, one could improve existing habitats on the Central Valley floor, but that may only be a temporary and limited solution. While there may be some detrimental impacts from future potential global climate change scenarios, the much more immediate, ongoing, and likely impacts will continue to result from ever increasing demands for human use of water resources, as well as the increasing anthropogenic impacts from an increasing human population in the lower foothills, the Central Valley, and other developed areas of California that are dependent on limited fresh water resources produced in the western Sierra Nevada mountain range. Therefore, actions in currently occupied habitats are much less likely to meet the goals of the HEA.

FED1-1

3.0 NMFS Support of Licensees' Process for Development of DHEP

NMFS commends the Licensees for what has obviously been an extensive and diligent process to search for suitable projects that satisfy the conditions agreed to by the Parties who are signatories to the HEA. Many of the identified projects are certainly worthy of further consideration, but for reasons explained below – some of these projects are ineligible for consideration under the provisions of Section 3 of the HEA, and others do not meet either the

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Comment Letter FED1 (Continued)

specific selection, evaluation, or acceptance criteria – or the current NMFS management objectives articulated in our Draft Central Valley Recovery Plan .

The Licensees’ Steering Committee called its first public HEA meeting in December 2008. NMFS staff attended this meeting, and subsequently met with the Steering Committee and other parties on at least six occasions during the DHEP development phase. In addition, NMFS staff responded to numerous phone calls and e-mails from Steering Committee members to communicate and share information. From the outset, NMFS staff clearly expressed its viewpoints to the Steering Committee. On one occasion in late spring of 2009, NMFS program managers met in person with the DWR and PG&E hydropower managers to ensure that our interests and concerns were as transparent as possible.

FED1-2

Unfortunately, we find little evidence that NMFS’ perspectives and interests regarding the HEA are embodied in the DHEP. Some of our fundamental concerns surround issues that are clearly matters of interpretation of the agreement, but we can find little support within the HEA for some key conclusions arrived at by the Steering Committee through the DHEP development process. Other matters of concern have to do with the opaque nature of the Steering Committee’s techniques for scoring projects and estimating numeric contributions to the Habitat Expansion Threshold. These concerns and other relevant issues are discussed in greater detail in the following sections of this document.

FED1-3

FED1-4

4.0 NMFS Comments and Instructions Relative to Draft HEP Section 3.2, "Applying the HEA [Evaluation and Selection] Criteria"

4.1 General Comments and Instructions - Evaluation Criteria

Pages 3-9 through 3-12, Section 3.2.2.

In this discussion of applying the Evaluation Criteria under Section 4.1.1 of the HEA, NMFS has the following comments related to specific criteria (for clarity, we have used uppercase to indicate the Criteria below):

(F) Separation (Genetic).

The discussion here relates only to the spatial separation of runs – fall-run and spring-run Chinook salmon. However, HEA section 4.1.1(f) provides an evaluation criteria that calls for “favorable spatial separation from other populations or runs to maintain genetic diversity by minimizing interbreeding[.]” This section and the evaluation should be revised based on this criterion to include discussion and consideration of favorable spatial separation from other populations, not just other runs.

FED1-5

(J) VSP/ESA Consistency.

The discussion here relates only to consistency with the VSP concept. However, HEA section 4.1.1(j) also includes consistency with “ESA recovery goals and recovery plan (as available), and expected contribution to species recovery (higher consistency and greater contributions are favored)[.]” In October 2009, NMFS issued a Public Draft Recovery Plan for 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. This section and the evaluation should be revised based on this criterion to include

FED1-6

Comment Letter FED1 (Continued)

discussion and consideration of consistency with ESA recovery goals and this recovery plan, and expected contribution to species recovery, not just consistency with the VSP concept.

FED1-6
Cont'd

(M) Available Stocks.

The discussion here indicates that a more favorable score of 5 was given “[i]f an action would occur in a watershed with an independent, self-sustaining population[.]” However, HEA section 4.1.1(m) provides an evaluation criteria that calls for “favorable relative availability of appropriate stocks of Spring-Run and Steelhead for reintroduction.” There is no explanation why a more favorable score should be given for an action that would occur in a watershed with an independent, self-sustaining population, compared to the text of the criterion that provides “...relative availability of appropriate stocks.” For example, there is no explanation why appropriate stocks would be any less available for an action that would occur in watersheds with extant, remnant populations. In addition, providing a greater score based on this factor appears contrary to NMFS’ approval criterion in HEA section 4.2.3(c) that the action “supports establishing a geographically separate, self-sustaining population of Spring-Run[.]” This section and the evaluation should be revised based on this criterion accordingly.

FED1-7

(N) Actions Taken by Others.

The discussion here relates only to actions taken by others. HEA section 4.1.1(n) provides an evaluation criteria that calls for a “low expectation for the action to be undertaken by the Licensees or others in the near future[.]” This section and the evaluation should be revised based on this criterion to include discussion and consideration of a low expectation for the action to be undertaken by the Licensees, not just a low expectation for the action to be undertaken by others, especially as this criterion relates to the Battle Creek Salmon and Steelhead Restoration Project.

FED1-8

4.2 Comparison of Scoring/Ranking of Evaluation Criteria for Upper Yuba River "Trap & Haul" Actions

4.2.1 Introduction

NMFS has concerns about certain aspects of the scoring process that yielded the Licensees’ recommended actions. Regardless, NMFS advises that because most of these choices are ineligible under HEA section 3; their overall high rankings may be a moot point. In addition, while two of the Three Creeks Actions - Antelope and Big Chico creeks - are eligible, there are still many impacts to listed salmonids occurring in the lower watersheds of these creeks which may tend to negate or impair the purported benefits of implementing these two small actions (see comments on Big Chico Creek and Antelope Creek actions).

FED1-9

FED1-10

The scoring/ranking process applied Evaluation Criteria to the "Short List of Potential Actions (Appendix C3) to create the "Ranked Preliminary List of Potential Actions" (Appendix C4) and then the application of the "Selection Criteria" to C4 created the "Ranked List of Viable Actions" ("with Selection Criteria") (Appendix C5). However, NMFS believes the scoring attributes for each of the Evaluation Criteria, and the subsequent scoring of the Selection Criteria on the previous data set, were not correctly applied. The results of the scoring process are shown below, whereby the top choices of the Licensees scored much better than, for example, the two upper Yuba River "Trap & Haul above New Bullards Bar Reservoir" actions currently recommended by NMFS:

FED1-11

(#NS-94a) Trap and Haul to North Yuba River (NY) and
(#NS-94c) Trap & Haul to Middle Fork Yuba River (MY).

Comment Letter FED1 (Continued)

4.2.2 Licensees' Scoring Results versus NMFS' Scoring Results

Licensees' Lower Yuba River and Three Creeks Actions:

C4 Ranking = 69-73 pts. or 95-100% (C4 range was 69-100%)
 C5 Ranking = 12-16 pts. or 78-100% (C5 range was 28-100%)

Licensees' Trap & Haul to North Yuba River (NS-94a) and to Middle Yuba River (NS-94c):

C4 Ranking = 54-55 pts. or 74-75% (C4 range was 69-100%)
 C5 Ranking = 6 - 8 pts. or 29-39% (C5 range was 28-100%)

NMFS' Revised Trap & Haul to North Yuba River and to Middle Yuba River:

New C4 Ranking = 69-70 pts. or 95-96% (C4 range was 69-100%)
 New C5 Ranking = 15-16 pts. or 94-100% (C5 range was 28-100%)

As NMFS will explain below, when the scoring for C4 and C5 are revisited and logical scoring choices are made (based on relevant data and reasonable assumptions), then the above "Trap & Haul" actions to the North and Middle Yuba Rivers rank much better and could be considered as "equivalent to" the ranked levels of the Licensees' choices as shown above. NMFS explains below how we would score the 17 Evaluation Criteria and the 4 Selection Criteria for our 2 recommended actions, "Trap & Haul to the North (NS-94a) and Middle Yuba (NS-94c) Rivers."

4.2.3 NMFS C4 Scoring by 17 Evaluation Criteria for "Trap & Haul to North and Middle Yuba Rivers

Definitions of how each criterion is to be scored to generate C4 are found in DHEP Section 3.2.2, on pages 3-9 to 3-11 (we have used uppercase letters to denote the criteria for clarity). Ranking/Scoring of the North Yuba (NY) and Middle Yuba (MY) actions are discussed below where NMFS disagrees with the Steering Committee's scoring. NMFS describes below how each Evaluation Criteria ranks some attribute; how each criteria could be scored; and finally, the

FED1-11
 Cont'd

Licensees' draft scores are listed for the two actions (NY; MY) and NMFS' corrected score and rationale is presented.

(A) Feasibility

Ranks: Technical feasibility, supported by accepted science, and proven methodology.

Scoring Criteria: Meet all three = 5; Meet one or two = 3; Meet none = 1.

Licensees' Score: NY=2; MY=2. (Rated a 2 when above states it as at least a 3).
NMFS' Score: NY=5; MY=5.

NMFS scoring indicates all three feasibility criteria would be met. Trap and haul is technically feasible, supported and accepted by science, and is a proven methodology. Contrary arguments based on a contention that these systems are not in common use for fish passage in California are irrelevant, as successful collection and transport operations have been demonstrated in the Pacific Northwest and elsewhere. In addition, in California, many thousands of hatchery reared salmonids are collected and transported hundreds of miles annually. The facts support that this fish passage method does work, can be safe and effective, and is a feasible alternative for reintroducing anadromous fish to the upper Yuba River. Hence, the revised score should be a 5, rather than a 2.

FED1-12

(B) Scale

Ranks: Large gain in potential spawners; increased habitat; and benefits all three habitat types (spawning, rearing, adult holding).

Scoring Criteria: Meet all three = 5;
 Meet some gain in spawners and at least one habitat type = 3;
 Low spawner gain and poor habitat = 1.

Licensees' Score: NY=4; MY=3.
NMFS' Score: NY=5; MY=5.

FED1-13

Comment Letter FED1 (Continued)

NMFS scoring indicates all three scale criteria would be met. The primary purpose is to achieve an increase in spawners and increase available habitats that benefit all three life stages. Moving fish into upstream habitats would achieve this purpose. Hence, the revised score should be a 5, rather than a 3.

(C) Sustainability

Ranks: Lifespan and relative maintenance.

Scoring Criteria: Long lifespan and minimal maintenance = 5; Limited lifespan and regular maintenance = 3; and Short lifespan and high maintenance = 1. (implied above is a "4" = Long lifespan, but regular maintenance).

Licensees' Score: NY=2; MY=2. (Rated a 2 when above states it as at least a 3).
NMFS' Score: NY=4; MY=4.

The nature of a successful collection and transport system means that it will have a long lifespan over the term of the new licenses. Hence, the revised score should be a 4, rather than a 2.

(D) Cost-Effective¹

Ranks: Total capital/O&M cost verses gain in population.

Scoring Criteria: Low-capital/O&M with a mid-high population gain = 5; Mid-capital/O&M with a low-mid population gain = 3; High-capital/O&M with a low population gain = 1. (implied above is a Mid-high capital/O&M and mid-high population = 4)

Licensees' Score: NY=1; MY=1. (Assumes a "high cost" only and a "low" population gain).
NMFS' Score: NY=4; MY=4.

The nature of fisheries collection and transport programs to higher elevation habitats dictate a capital cost and O&M that will be significantly higher than incremental habitat enhancement

¹ NMFS believes that cost-effectiveness comparisons must take into account the potential costs of the default alternative to the HEA: a major collection and transport operation on the Feather River above project dams.

FED1-13
Cont'd

FED1-14

FED1-15

programs on the Valley floor. However, the inherent purpose of such programs is to regain access to large amounts of existing and extremely productive habitats, so it is expected that such a program would ultimately result in a very substantial population gain (or such a program would not be done). In addition, higher elevation salmonid habitats are an invaluable resource – one that is currently under utilized; and therefore the value of these habitats is diminished until access is restored.

By comparison to the considered challenges of a similar collection and transport reintroduction program in the Feather River watershed, the Yuba River offers a less complex and less challenging environment from an engineering perspective. A comparable program in the Feather River is estimated by NMFS-engineering at a considerably higher cost. Hence, the revised score should be a 4, rather than a 1.

(E) Minimal Intervention; (F) Separation/Genetic; and (G) Separation/Catastrophe
Ranks: Degree of human intervention (E) and separation of stocks both genetically (F), and from potential catastrophes (G)

Licensees' Score: NY=1,5,5; MY=1,5,5. [E,F,G]
NMFS' Score: NMFS agrees with the Licensees' scoring of the above criteria.

(H) Time to Implement

Ranks: Relative implementation time.

Scoring Criteria: Implemented within 5 years = 5; Implemented within 5-10 years = 3; Implemented within more than 10 years = 1.

Licensees' Score: NY=2; MY=2. (Rated a 2 when above states it as at least a 3).
NMFS' Score: NY=3; MY=3.

Although there is no scoring level of 2, there could be a 4 if actions could be implemented within a 5-7 year timeframe. However, NMFS would score this conservatively as a 3 because we have already been conducting feasibility studies and are attempting to form broad coalitions

FED1-15
Cont'd

FED1-16

FED1-17

Comment Letter FED1 (Continued)

comprised of agencies, licensees and stakeholders in order to accomplish NMFS' recovery plan goals. Hence, the revised score should be a 3, rather than a 2.

(I) Local/Political Support

Ranks: Relative degree of support.

Scoring Criteria: Support from all = 5; some support, but some opposition = 3 [50/50 implied?]; Little or no support = 1. (implies that "most support" and "little opposition" = 4).

Licensees' Score: NY=3; MY=3.

NMFS' Score: NY=4; MY=4.

The degree of actual opposition versus support is very hard to quantify and by its nature, speculative. NMFS, however, believes that our initial and ongoing initiatives, NMFS-financed studies, and NMFS' leadership in forming a broad-based coalition, based on the successful Yuba Accords concept, leads NMFS to score this as a 4, rather than a 3. In addition, as institutional momentum and supporting data is acquired, such a scoring shifts closer to a 5.

(J) VSP/ESA Consistency

Ranks: Consistency with Viable Salmonid Populations (VSP) concept: Abundance, Productivity, Biological Diversity, and Spatial Structure.

Scoring: Consistent with: All four = 5; three = 4; two = 3; one = 2; zero = 1.

Licensees' Score: NY=4; MY=4.

NMFS' Score: NY=5; MY=5.

Clearly, as NMFS is proposing a collection and transport action to the upper Yuba River and continuing to gather supporting data and form broad-based coalitions for implementing such an action, then it is in our best interests to meet all VSP criteria. Such an action is also contemplated in our draft recovery plan which is underpinned by the VSP concepts. The upper

FED1-17
Cont'd

FED1-18

FED1-19

Yuba River proposed action meets all four VSP concepts.² Hence, the revised score should be a 5, rather than a 4.

(K) Balance of Benefits, (M) Available Stocks, (O) Other Feather River Species, and (Q) Adverse Affects on Cultural Resources

Ranks: Relative degrees for balance of benefits to spring-run Chinook and Steelhead (K); degree of stocks available in watershed(s)(M); benefits to Feather River species (O); and adverse affects to cultural resources (Q).

Licensees' Score: NY=5,4,1,5; MY=5,4,1,5. [K,M,O,Q]

NMFS' Score: NMFS agrees with the Licensees' scoring of the above criteria.

(L) Resource Consistency, (N) Actions by Others, and (P) Adverse Affects on Listed Species

(L) Resource Consistency

Ranks: Degree by which the following are adversely affected by Action: Water supply, public safety, flood control; recreation, and power supply.

Scoring Criteria: Number Affected: None = 5; one = 4; two = 3; three = 2; and four = 1.

Licensees' Score: NY=3; MY=3.

NMFS' Score: NY=4; MY=4.

A claim is made in the DHEP that two components would be adversely affected. NMFS does not believe this to be true. A collection and transport program would have some effects on other resources, but these effects are part of a realistic balancing of natural resources and public uses of those resources. Considering that the Central Valley hydroelectric project impacts have been on-going for decades without commensurate mitigation of their effects on anadromous fish, NMFS believes a re-balancing of public trust resources is in order at this point in time. Some recreation may have to be adapted, but the actual degree is not yet known. Hence, the revised score should be a 4, rather than a 3.

² The HEA Steering Committee selected the North and Middle forks of the Yuba River for analysis. At this time, NMFS does not limit its consideration for reintroduction of salmonids to these two streams, but is considering the habitat potential in the South Fork Yuba as well.

FED1-19
Cont'd

FED1-20

FED1-21

Comment Letter FED1 (Continued)

(N) Actions by Others

Ranks: Degree by which the action could be done by others within 5 years.

Scoring Criteria: Action not likely to be taken by others = 5; Action potentially taken by others = 3; Action would likely be taken by others =1.

Licensees' Score: NY=4; MY=4

NMFS' Score: NY=5; MY=5.

FED1-22

NMFS believes that such an action may be taken by others within 5-10 years, but no other party would likely take such an action within 5 years. Hence, the revised score should be a 5, rather than a 4.

(P) Adverse Affects on Listed Species

Ranks: Degree by which action was not expected to adversely affect listed species or Critical Habitat.

Scoring Criteria: "Not expected to adversely affect" = 5; "minimal, but mitigated, impacts" = 3; "Adversely affected and non-mitigated" = 1.

Licensees' Score: NY=4; MY=4

NMFS' Score: NY=5; MY=5.

FED1-23

NMFS believes that because a collection and transport action is within the guidance of our draft recovery plan and that the purpose of the action is to expand and enhance habitat for all life stages of listed spring-run and steelhead, then this action would benefit these species and not adversely affect them. Increasing available habitat also puts less stress on existing Critical Habitat which also benefits the species as a whole. Hence, the revised score should be a 5, rather than 4.

4.2.4 Summary

The original scoring of the "Trap & Haul" into North and Middle Yuba Rivers for C4 by the Licensees' was much lower than NMFS' revised C4 scoring, as shown below.

C4 Scoring "Trap & Haul to North Yuba (NS-94a) and to Middle Yuba (NS-94c) Rivers:
Licensees' C4 Ranking = 54-55 pts. or 74-75% (C4 range was 69-100%)
NMFS' C4 Ranking = 69-70 pts. or 95-96% (C4 range was 69-100%)

FED1-24

Consequently, when NMFS' C4 data is integrated and scored with the Selection Criteria for C4, NMFS' recommended "Collection and Transport" to upper Yuba River actions also rated significantly higher than what the Licensees' had rated them.

5.0 General Comments on Selection Criteria

5.1 Page 3-12, Section 3.2.3.

The discussion here of the Steering Committee's methodology for applying the Selection Criteria notes that 'cost effectiveness' is considered in the scoring process under both criterion (b) and (c), suggesting a stronger weighting based on a single criteria than was provided for under the HEA. HEA section 4.1.2(b) provides, "*Most cost-effective compared to other potential habitat expansion actions.*" Furthermore, HEA section 4.1.2(c) provides, "*Feasibility (action(s) can reasonably be accomplished)[.]*" HEA section 4.1.2(c) does not suggest that cost effectiveness should be considered again under the feasibility criterion. This section and the evaluation should be revised based on this section to remove consideration of cost effectiveness under the feasibility criterion.

FED1-25

Comment Letter FED1 (Continued)

5.2 NMFS C5 Scoring/Ranking by Four Selection Criteria for "Trap & Haul" to North and Middle Yuba Rivers

Definitions of how each criterion is to be scored to generate C5 (based on C4 results) are found in DHEP Section 3.2.3, on pages 3-11 to 3-12 (we have used uppercase letters to denote the criteria for clarity). Ranking/Scoring of the North Yuba (NY) and Middle Yuba (MY) actions are discussed below where NMFS disagrees with Licensees' scoring. NMFS describes below how each Selection Criteria ranks some attribute; how each criteria would be scored; and finally, the Licensees' draft scores are listed for the two actions (NY; MY) and NMFS' corrected score and rationale is presented.

(A) Contribution to the HET³

Ranks: Relative degree by which action exceeds, meets, or fails to meet the HET.

Scoring Criteria: Exceeds HET = 5; Meets HET = 3; Fails to Meet HET = 1.

Licensees' Score: NY=1; MY=1.

NMFS' Score: NY=5; MY=5.

NMFS' data shows that the combination of the North Fork and Middle Fork Yuba River trap and haul actions could exceed the HET of 2,000 to 3,000 fish. Estimates and ongoing studies are still being conducted or reviewed, but a recent conceptual engineering study⁴ used an estimate of roughly 20,000 adult spring-run Chinook as a preliminary metric in sizing potential fish collection and transport systems for the upper Yuba River. Hence, the revised scores for both of these upper Yuba River actions should be a 5, rather than a 1.

FED1-26

³ The HEA Steering Committee did not evaluate any reintroduction actions for the South Fork of the Yuba River, but NMFS does not dismiss the potential of the South Fork Yuba to support anadromous salmonids at this point in time. The South Yuba River will be considered in future analysis.

⁴ Yuba River Fish Passage – Conceptual Engineering Project Options, Montgomery-Watson-Harza, Inc., February 2010

(B) Cost-Effectiveness

Ranks: Relative cost-effectiveness.

Scoring Criteria: Lowest 10% = 5; mid-range = 3, Upper 10% = 1.

Licensees' Score: NY=3; MY=1.

NMFS' Score: NY=3; MY=3.

NMFS agrees with the Licensees' scoring estimate for this item, but only to a limited degree. In viewing both the North Fork and the Middle Fork Yuba Rivers' collection and transport actions collectively, both should significantly increase the habitat and approach or meet the HET. Economies of scale can be realized in a comprehensive anadromous fish reintroduction program, and the fish production potential in the upper Yuba River watershed is high. NMFS' believes that such a comprehensive program could ultimately be highly cost-effective as compared to other actions. Thus, the revised scoring for both of these actions is a 3 each, rather than a 1 for the Middle Fork action.

FED1-27

(C) Feasibility

Ranks: Relative feasibility, based on scores from the C4, Evaluation Criteria, data set: (A) feasibility, (D) cost-effectiveness, (I) local/political support, and (L) resource consistency. These scores were simply added up and averaged.

Scoring Criteria: The above C4, Evaluation Criteria, scores were simply added up and averaged (rounded up or down) for a single C5, Selection Criteria, score.

Licensees' Score: NY's C4: (A+D+I+L) divided by 4: (2+1+3+3)/4 = 9/4 = 2.25 = [2]

NMFS' Score: NY's C4: (A+D+I+L) divided by 4: (5+4+4+4)/4 = 18/4 = 4.5 = [5]

Licensees' Score: MY's C4: (A+D+I+L) divided by 4: (2+1+3+3)/4 = 9/4 = 2.25 = [2]

NMFS' Score: MY's C4: (A+D+I+L) divided by 4: (5+4+4+4)/4 = 18/4 = 4.5 = [5]

The four Evaluation Criteria scores revised by NMFS provide a higher score for the C5 Selection Criteria category (see rationale for each of NMFS' C4 scoring). NMFS believes that

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Comment Letter FED1 (Continued)

the direction from NMFS' Central Valley Recovery Plan - as well as the collection of additional scientific data and the ongoing efforts to develop broad-based coalitions in support of an upper Yuba River reintroduction program - will aid in implementing NMFS' recommended upper Yuba collection and transport options.

FED1-28
Cont'd

(D) Time to Implement

Ranks: Relative degree for implementation of action.

Scoring Criteria: C4 Evaluation Criteria score (H) "Time to Implement" was merely repeated here.

Licensees' Score: NY=2; MY=2.

NMFS' Score: NY=3; MY=3.

The same logic applies here, as was presented in: (H) "Time to Implement" Evaluation Criteria scoring. Because this action could be partially implemented within 5 years - and fully implemented within a 5-10 year time frame - and because we have already been conducting feasibility studies and are attempting to form broad coalitions comprising agencies, licensees, and stakeholders in order to accomplish NMFS' recovery plan goals, this element deserves a higher ranking. Hence, the revised score should be a 3, rather than a 2.

FED1-29

5.3 C5 Summary

The original scoring of the "Trap & Haul" [above New Bullards Bar] into North and Middle Yuba Rivers for C5 by the Licensees' was much lower than NMFS' revised C5 scoring, as shown below.

FED1-30

C5 Scoring "Trap & Haul" to North Yuba (NS-94a) and to Middle Yuba (NS-94c) Rivers:

Licensees' C5 Ranking = 6-8 pts. or 29 - 39% (C5 range was 28-100%)

NMFS' C5 Ranking = 15-16 pts. or 94-100% (C5 range was 28-100%)

Consequently, when NMFS' new C4 data was integrated and scored with the Selection Criteria for C5, NMFS' preferred Yuba River Collection and Transport actions also rated significantly higher than what the Licensees' had rated them.

FED1-30
Cont'd

6.0 General Comments on the Draft HEP

Page 1-3, section 1.1.2.

This section states:

"NMFS prescribed the upper end of the trap-and-haul program in the Upper North Fork Feather River relicensing proceeding and intended to prescribe the lower end of the trap-and-haul program in the Oroville relicensing proceeding." We clarify that NMFS filed modified or amended modified prescriptions in the Oroville Facilities, Upper North Fork Feather River Hydroelectric Project, and Poe Hydroelectric Project relicensing proceedings to reserve its authority to prescribe fishways as provided in the Habitat Expansion Agreement."

FED1-31

Page 1-4, Section 1.3.

This discussion of section 3.1 of the HEA does not include several important provisions from that section:

- "Habitat expansion action(s) shall ensure future operation and maintenance if such operation and maintenance is needed after initial implementation."
- "Habitat expansion action(s) shall also include functional start-up testing, if needed, for technical validation of the action's design (e.g., that a fish ladder operates as designed), but not long-term monitoring of species utilization or benefit."
- "Actions identified in other venues, including unfunded actions, are acceptable for consideration, provided that implementation of the Agreement results in a net expansion

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Comment Letter FED1 (Continued)

of habitat over any Existing Requirements and Commitments, whether by the Licensees or others.” Section 3.2 of the HEA provides what the term “Existing Requirements and Commitments” means.

This discussion should be revised to include these important requirements of section 3.1 of the HEA, which are necessary to understand the scope of eligible habitat expansion actions.

Page 2-2, section 2.2.1.

We clarify that “Consultation with NMFS”, as provided in the header of this section, means “...the act of conferring and is distinct from the term ‘Consultation’ under the ESA.” See HEA section 1.1, definition of “Consultation.”

Page 5-1.

The discussion at the beginning of Chapter 5 provides... “[o]nce comments are received, the Licensees expect to then select one of the two groups of [recommended] actions, as may be modified by comments received, and propose this group of actions in the final HEP.” However, this discussion assumes that comments on the two groups of recommended actions will not result in a change from the actions recommended in the DHEP to any different proposals for action, or group of actions, in the final HEP, and this should not be assumed.

Page 10-3, Section 10.2.2.

In this description of Pre-Approval Consultation requirements under the HEA, this section provides, “During the consultation period, NMFS will consider comments received on the DHEP ...” However, HEA section 4.2.2 provides for Pre-Approval Consultation “...[p]rior to approving the Final Habitat Expansion Plan ...” In addition, HEA section 4.2.2 provides, in relevant part, “During such consultation, NMFS shall give due consideration to any comment

FED1-32
Cont'd

FED1-33

FED1-34

FED1-35

received. . . .” Therefore, during the Pre-Approval Consultation period, NMFS will give due consideration to any comment received during that consultation period, and those comments will likely be on the final rather than the DHEP. This discussion should be revised accordingly.

Appendix A.

In this table, the line related to HEA section 4.2.7, the entry under the schedule column provides, “variable (~90 days).” However, HEA section 4.2.7 does not provide any time limit or refer to any number of days related to NMFS’ approval decision. Therefore, delete “(~90 days).”

Appendix C.

In all of the tables or sub-appendices for this Appendix (C1 to C5), the actual “method” for determining the HET, numbers of fish, was only indicated as a minor footnote in Table C5, as “Contribution from Quantification Method (unless otherwise noted).” NMFS could find no reference or explanation of what modeling or method was used to determine the contribution of an action to the HET. Please elaborate and describe in detail how all fish numbers were derived and if models were used please reference them and provide NMFS with copies to review. Not all methods or modeling may be acceptable to NMFS.

Appendix F.

Section VII of the questionnaire response from Gary Reedy of the South Yuba River Citizens League, states in relevant part:

“Access to rehabilitation site requires either permission from two private landowners so far offering less than consistent support, or construction of road on steep slopes of PG&E mitigation land. CDFG has expressed concerns

FED1-35
Cont'd

FED1-36

FED1-37

FED1-38

Comment Letter FED1 (Continued)

about the new road and immediate impacts of the project on holding spring-run salmon."

Please explain how this access problem and related concerns would be addressed in the recommended Lower Yuba River Actions.

Appendix G.

On page 1, this Appendix describes how the River Management Team (RMT) did not feel that it would be appropriate to provide comments as a group to the HEA Steering Committee, and members of the RMT have different views and perspectives about some habitat restoration measures. In addition, this page of the Appendix provides:

"However, some of the members of the RMT did work together to draft comments for the HEA Steering Committee, and to provide some feedback on the questions posed. Those comments are incorporated in this document."

This page also lists organizations included in the RMT. Please describe which members of the RMT prepared this Appendix in order to clarify whose comments and views are reflected in this Appendix.

On page 22, this Appendix describes additional information and analyses that are needed for the segregation weir component on the Lower Yuba River Actions and concludes... "[t]he segregation weir is not supported at this time." Please describe how and when the additional information would be collected and analyses would be done in relation to the recommended Lower Yuba River Actions.

FED1-38
Cont'd

FED1-39

FED1-40

7.0 Comments on Specific Habitat Actions

7.1 Comments on Lower Yuba River Draft HEP Actions

Section 6.1.1 of the DHEP (p. 6-1) provides a brief historical background regarding the habitat potential of the Yuba River, which describes habitat considerably diminished by extreme geomorphic alteration resulting from hydraulic and dredge mining for gold and then by construction of dams that blocked access to major spring-run Chinook salmon spawning areas. Englebright Dam (completed in 1941) at river mile 24 is mentioned, which now blocks all upstream passage of fish to the upper Yuba River. NMFS reviewed the historical background of the Yuba River provided in Yoshiyama *et al.* (2001) and noted accounts of appreciable salmon runs that occurred for many years in the Yuba River after its habitat was degraded by gold mining, and before construction of Englebright Dam. Yoshiyama *et al.* (2001) place the intensive hydraulic mining in the Yuba River as having occurred from 1853 to 1885, resulting in an immense influx of debris (sand and gravel) that filled the river channel, covered adjoining agricultural lands, and left the Yuba River discolored (yellow) and turbid. However, despite this severe habitat degradation, appreciable salmon migrations into the Yuba River persisted. For example, salmon were caught by PG&E workers in the North Yuba River (Bullards Bar area) during the 1898–1911 period of operation of the Yuba Powerhouse Project (Yoshiyama *et al.* 2001). Later, during the construction of PG&E's Bullards Bar Dam (1921-1924), so many salmon congregated and died below the Dam that their carcasses had to be burned (Yoshiyama *et al.* 2001). These accounts suggest that despite habitat impairments in the Yuba watershed due to gold mining, spring-run Chinook salmon ascended the North Yuba in considerable numbers until the Bullard's Bar Dam completely blocked their migrations into the higher gradient reaches (they are thought to have migrated beyond Sierra City to Loves Falls, about two miles above the

FED1-41

Comment Letter FED1 (Continued)

juncture of Salmon Creek) (Yoshiyama *et al.* 2001). In 1941, Englebright Dam was completed and from that date forward has prevented upstream passage of fish to the upper Yuba River watershed. In 1971, Yuba County Water Agency's New Bullards Dam project was constructed and it blocks all fish passage to the upper North Yuba River. NMFS believes a broader historical perspective would allow all parties to place the relative effects of hydraulic mining and dams in context as restoration projects are considered.

FED1-41
Cont'd

In the DHEP, the three proposed Lower Yuba River Habitat Enhancement Actions (p. 6-3) are:

- 1) Rehabilitate spawning habitat in the Englebright Dam reach of the lower Yuba River and augment gravel in lower Deer Creek;
- 2) Plan for, and if necessary, install a segregation weir at a location in the 6-mile reach between Englebright Dam and the Highway 20 Bridge;
- 3) Restore juvenile rearing habitat between the Highway 20 Bridge and the downstream extent of the Yuba Goldfields.

The DHEP emphasizes the importance of integrating these three separate sub-actions because they benefit from one another. However, NMFS finds that the portion of sub-action #1 (recommended spawning habitat rehabilitation in the Englebright Dam reach) should be considered within the scope of Existing Requirements and Commitments under the HEA – and therefore is not eligible and cannot be integrated with sub-actions #2 and #3. Several DHEP statements and discussions regarding eligibility appear inaccurate as related to the component to rehabilitate spawning habitat in the Englebright Dam reach (Page ES-5, Table ES-2, NMFS Approval Criteria Evaluation, Eligible. See also similar statements and discussions on pages ES-5 to ES-6; 5-3, Table 5-1; 5-5, Section 5.1.4; and 6-16, Section 6.4.8.1). Section 6.4.8.1 of the DHEP quotes a reasonable and prudent measure and term and condition from NMFS' final

FED1-42

biological opinion concerning the effects of the U.S. Army Corps of Engineers' Operation of Englebright and Daguerre Point Dams on the Yuba River, California, issued November 21, 2007. In addition, this section discusses the Licensees' proposed spawning habitat rehabilitation program in the Lower Yuba River in comparison to this reasonable and prudent measure and term and condition. This section provides... "[i]n contrast, the Corps' responsibility is simply for gravel augmentation (i.e., long-term gravel injection similar to the pilot project initiated by the Corps in 2007)."

To the contrary, the NMFS Biological Opinion with the Corps of Engineers specifically states:

"The Corps shall develop and implement a long-term gravel augmentation program to restore quality spawning habitat below Englebright Dam. The Corps shall utilize the information obtained from the pilot gravel injection project to develop and commence implementation of a long-term gravel augmentation program within three years of the issuance of this biological opinion."

FED1-42
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The reasonable and prudent measure and term and condition do not limit the Corps' responsibility simply to gravel injection similar to the pilot project initiated by the Corps in 2007. The Corps' responsibility is to "...restore quality spawning habitat below Englebright Dam." Subsequent to the issuance of the biological opinion, two key sources of information regarding salmonid spawning habitat in the lower Yuba River were produced (Pasternak 2008; Pasternak 2009). One was a comprehensive study on the hydrology, geomorphology, and ecology in two reaches a short distance downstream of Englebright Dam (Pasternak 2008), and the other (Pasternak 2009) reported results of the Corps' pilot gravel injection. Through the two reports, it became known that in order to restore quality spawning habitat in the Englebright Dam Reach (the first 0.8 miles downstream of Englebright Dam to the Deer Creek confluence), shot-rock removal and related rehabilitation are likely required prior to a long-term gravel augmentation

Comment Letter FED1 (Continued)

program. Given that it is the Corps' responsibility is to restore quality spawning habitat below Englebright Dam, the Corps must take whatever steps necessary to accomplish this task, including spawning habitat rehabilitation (e.g., shot-rock removal). An additional factor supporting that the Corps should be responsible for removing the shot-rock is that one of the primary sources of the shot-rock was rock excavation during the construction of Englebright Dam, which the Corps owns and operates.

Although NMFS is not making a final determination on approval of the HEP at this point, the Licensees' recommended spawning habitat rehabilitation program apparently does not meet the NMFS' approval criterion in HEA section 4.2.3(e) regarding the requirements for eligible habitat expansion action(s) pursuant to Section 3 of the HEA. The NMFS' approval criterion in HEA Section 4.2.3(e) provides, "...meets the requirements for eligible habitat expansion action(s) pursuant to Section 3 of the Agreement[.]" HEA Section 3.1 provides, in relevant part, "Actions identified in other venues, including unfunded actions, are acceptable for consideration, provided that implementation of the Agreement results in a net expansion of habitat over any Existing Requirements and Commitments, whether by the Licensees or others." HEA Section 3.2 provides, in part, "...the term 'Existing Requirements and Commitment' is intended to encompass actions expected to occur in a timeframe comparable to implementation of habitat expansion action(s) under this Agreement." In addition, this section includes a non-exclusive list of what "Existing Requirements and Commitments may include," and (d) in that list specifically includes, "...reasonable and prudent alternatives, reasonable and prudent measures, and terms and conditions of any final Biological Opinion that has been issued at the time NMFS approves the habitat expansion action(s)." The Licensees' recommended spawning habitat rehabilitation program is within the scope of the actions required in the reasonable and prudent measure and

FED1-42
Cont'd

term and condition that is quoted in the DHEP. Thus, this recommended spawning habitat rehabilitation program should be considered within the scope of Existing Requirements and Commitments under the HEA.

FED1-42
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A second component of sub-action #1 in the lower Yuba watershed is the augmentation of gravel substrates in Deer Creek to improve spring-run spawning habitat in lower Deer Creek and in the Yuba River at the mouth of Deer Creek (Section 6.4.1.3). It is unclear to NMFS if the DHEP recommends this component of sub-action #1 only if spawning habitat in the Englebright Dam Reach occurs concurrently. NMFS noted in the Questionnaire response for the Deer Creek Salmon and Steelhead Spawning Habitat Expansion Project (Appendix F) that passage of salmon and steelhead to the reach of Deer Creek upstream to Lake Wildwood Dam is a possibility if gravel placements in lower Deer Creek are sufficient to improve passage at Basher Falls. In principle, NMFS has a positive view of this possibility if access for anadromous fishes could be expanded into suitable historical habitats; Yoshiyama et al. (1996) cite an account of heavy runs of salmon up Deer Creek prior to the construction of Daguerre Point Dam, and personal communication indicating that steelhead migrated up Deer Creek a quarter of a mile where they were stopped by impassable falls. Given that impassable Lake Wildwood Dam has been constructed since the historical runs, it is likely that summer holding habitat potential for spring-run Chinook is lacking in Deer Creek, but restoration for steelhead spawning use may be possible. However, several outstanding issues need more discussion and evaluation, including the degree to which Basher Falls is an upstream migration impediment, the need to improve water quality, the need to provide a coarse sediment supply to areas downstream of Lake Wildwood Dam, the need for riparian vegetation restoration, and others.

FED1-43

Comment Letter FED1 (Continued)

Regarding sub-action #2 above (a lower Yuba River segregation weir), Table 6-1 (p. 6-10) provides a value for the segregation weir in the contribution to the HET. However, the discussion in Sections 6.5.3 and 6.5.5 imply that there would be some future determination about whether the segregation weir would be implemented as part of the Lower Yuba River Actions. NMFS requests clarification of whether the segregation weir is definitely part of the Lower Yuba River Actions discussed in Chapter 6 or whether it depends on some future determination, and how that determination would be made. If the segregation weir is not definitely part of the Lower Yuba River Actions, clarify in Table 6-1 that the value for the segregation weir in the contribution to the HET is not definitely part of the contribution of the Lower Yuba River Actions to the HET. Appendix G (p. 22) also describes additional information and analyses that are needed for the segregation weir component on the Lower Yuba River Actions and concludes, “[t]he segregation weir is not supported at this time.” NMFS requests description of how and when the additional information would be collected and analyses would be done in relation to the recommended Lower Yuba River Actions.

FED1-44

Appendix E includes contributions to the HET from use of a segregation weir; the entry for Segregation Weir under the column heading “Calculations/Assumption(s),” estimates that a segregation weir will improve the spatial segregation by 90%. However, it is unclear what this estimation of effectiveness assumes regarding the degree of temporal run-timing separation between spring-run and fall-run Chinook salmon in the lower Yuba River, and more study may be required to determine if temporal separation is discrete enough in the Yuba River so that a segregation weir could adequately spatially separate spring-run and fall-run Chinook. For example, preliminary results of a recent, genetically-based pilot study in the lower Yuba (Brian Elliott, NMFS, personal communications) indicate that appreciable numbers of fall-run Chinook

FED1-45

are entering the lower Yuba in the early (spring) season, and would therefore not be excluded from upstream areas by a segregation weir closed later in the season (summer or early fall); the result would be overlap in the spawning area used by spring-run and fall-run Chinook even if the mechanical separation efficiency were high once the weir was in place and closed. It is also possible that use of a segregation weir could exclude spring-run Chinook that enter the Yuba River later in the summer or early fall, and this possibility has not yet been studied. A recent, genetically-based investigation (Smith *et al.* 2008) in the upper Sacramento River (at Red Bluff Diversion Dam) was based on sampling that spanned spring through fall seasons, and its results indicate that spring-run Chinook were still present in the July and August-September samples (in addition, fall-run Chinook comprised the large majority of fish passing the dam during all sampling periods (May through September)). Therefore, NMFS suggests more evaluation is required before the potential benefits of a segregation weir to spring-run Chinook described in Section 6.5.2 can be assumed.

FED1-45
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Another consideration is that a segregation weir would reduce the Yuba River habitat available to Central Valley fall-run Chinook, a federal species of concern with recent escapement numbers near historic lows; some such concerns are discussed in Section 6.5.8. This species historically used lower elevation habitats for spawning and rearing to a greater extent than did spring-run Chinook. Restriction of fall-run Chinook to the areas downstream of Timbuctoo Bend in the lower Yuba River would appreciably reduce the habitat area available to these fish, which currently spawn both upstream and downstream of this river reach. While the proximate cause of the recent declines in fall-run Chinook escapement numbers is believed to be poor ocean conditions, the ultimate cause of the longer-term declines is the loss and degradation

FED1-46

Comment Letter FED1 (Continued)

of inland, freshwater habitats (Lindley *et al.* 2009). Thus, reducing the area of Yuba River habitat accessible to fall-run Chinook could further exacerbate such longer-term declines.

FED1-46
Cont'd

Regarding sub-action #3, NMFS is not opposed in principle to restoration of rearing habitats in the lower Yuba River between the Highway 20 Bridge and the downstream extent of the Yuba Goldfields. However, we note that these actions propose enhancements of habitat within areas currently accessible to spring-run Chinook salmon and steelhead, not actions that expand access to habitats historically occupied by these species but now inaccessible; the latter actions are more highly preferred by NMFS.

FED1-47

In our review of the DHEP, NMFS found that more evaluation and discussion is needed of the causes of the lack of suitable rearing habitat in the lower Yuba River, as well as rationale for how the actions proposed would contribute to long-term, sustainable habitat restoration (that would in turn contribute to the HET for adult spring-run Chinook). The proposed actions and sites are described in Section 6.6.1 of the DHEP as "initial concepts" that do not yet have site-specific designs completed (p. 6-22). For example, a South Yuba River Citizens League (SYRCL) proposal for restoration of off-channel rearing habitat below the Highway 20 Bridge is described as being in the initial phases of planning and design (NMFS assumes this proposed site is the same as Site 1, named "Upper Guilt Edge" (p. 6-23) proposed as an action in the DHEP). In reviewing the proposed lower Yuba rearing proposals, NMFS also noted reference to pilot studies either planned or underway, and we suggest that such studies should be completed and reviewed so their results can inform decisions about suitable restoration actions or sites.

FED1-48

NMFS briefly reviewed the results of a study of the Timbuctoo Bend area (Pasternack 2008) of the lower Yuba River; the study clearly demonstrates the intensity of the effort required to

FED1-49

understand the linkages between hydrology, geomorphology, and salmonid habitat. However, this investigation occurred upstream of the sites proposed for restoration of juvenile rearing habitat, and NMFS suggests that similar investigations may be required prior to moving forward on plans or designs for downstream actions. One important finding of Pasternack (2008) was that Yuba River floods (>10,000-20,000 cubic feet per second) are frequent and strong enough to drive significant change in the geomorphology of the lower Yuba River. This fact could bear on the degree to which boulder and large wood placements (to create side channels) (Sections 6.6.1.1, 6.6.1.2, pp. 6-23 to 6-28, Figures 6-4 to 6-11) would respond under various flows, or how these actions would persist over time. NMFS also noted the DHEP often links the dredge mining tailings in the lower Yuba (that constrict its channel in the Yuba Goldfields area) to the loss of habitat complexity. Assuming that channel constriction by tailings can be verified as a controlling factor causing the habitat loss, it is unclear how the restoration actions within the nine proposed sites address the cause (they don't appear to propose tailings removals). In addition to physical improvements, adequate stream temperatures are a required component of suitable juvenile salmonid rearing habitat (EPA 2003). The DHEP includes statements regarding cold releases from New Bullard's Bar Reservoir (Section 4.2.1, p. 4-7; Section 6.1.1, p. 6-1;) and the existing suitability of temperatures for all life stages of salmonids under the Yuba Accord flows (Appendix E, p. 2; Appendix G, p. 2, 4, 9, 22). However, the DHEP does not reference a document that contains temperature evaluations under the Yuba Accord flow regime. NMFS reviewed the information referenced in the DHEP (Kozlowski 2004), and found that summer temperatures downstream of the diversions at Daguerre Point Dam may be elevated above levels suitable for juvenile salmonid rearing (although we acknowledge that these data were collected before implementation or full implementation of the Yuba Accord flows). NMFS' concern is

FED1-49
Cont'd

Comment Letter FED1 (Continued)

that this evaluation be performed to assure that juvenile rearing habitat objectives can be met based on water temperatures as well as physical habitat requirements.

FED1-49
Cont'd

NMFS' review suggests that the proposed lower Yuba River actions are intended to incrementally improve existing anadromous habitat, but not to expand habitat into areas now inaccessible to anadromous fishes. Of the three sub-actions proposed, sub-action #1 (Englebright Dam Reach Spawning Habitat Rehabilitation) is not eligible under HEA Section 3. Because sub-action # 1 comprises the greatest estimated contribution to the HET (Table 6-1), the remaining eligible sub-actions fall far short of the HET threshold. A proposed action to physically segregate spring-run and fall-run Chinook would not expand habitat, but rather would divide existing habitat. Even if the segregation is effective, fall-run Chinook would experience decreased availability of habitat. It appears more information is needed to determine if run timing is discrete enough to allow a weir to meet its segregation objective. For these reasons, NMFS questions the HET contribution attributed to the segregation weir action. Lastly, the proposed lower Yuba actions to create/restore juvenile rearing habitat appear to rely on pilot studies not yet completed. In addition, NMFS suggests that a more comprehensive understanding of the linkages between hydrology, geomorphology, and salmonid habitat in the areas proposed for these actions is required. NMFS noted that the HET contribution for this sub-action is estimated to be the lowest of the 3 sub-actions.

FED1-50

7.2 Comments on the "Three Creeks" DHEP Actions

7.2.1 Introduction

The Licensees identified a group of actions that, when combined, would meet the goals of the HEA and contribute to the HET. Collectively, these three sub-actions are referred to as the

"Three-Creek" Actions. This group of sub-actions consists of habitat expansion and enhancement actions in three watersheds: Antelope Creek, Big Chico Creek, and Battle Creek. Specifically, the individual sub-actions consist of the following:

- 1) Antelope Creek Habitat Expansion Action consists of replacing an instream ford-structure at Paynes Crossing on Antelope Creek with a bridge over the creek;
- 2) Big Chico Creek Habitat Expansion Action consists of rehabilitating the Iron Canyon Fish Ladder on Big Chico Creek; and
- 3) Battle Creek Habitat Expansion Action consists of providing partial funding for implementation of Phase 2 of the Battle Creek Salmon and Steelhead Restoration Project, specifically certain actions that would occur only on South Fork Battle Creek.

7.2.2 Comments on the Antelope Creek Sub-action

The proposed action is to construct a new bridge at Paynes Crossing, where Ishi Road intersects Antelope Creek in the California Department of Fish and Game Tehama Wildlife Area. The existing road crossing is described as a partial barrier to upstream fish migration at certain flows. NMFS requests that any existing biological or engineering evaluations of this site be identified for our review.

FED1-51

"The quality and quantity of available habitat for spring-run Chinook salmon and steelhead spawning and holding habitat in Antelope Creek are essentially the same as historical conditions..." (p. 7-1). There is no supporting information for this statement. Please supply NMFS with any existing information or evaluations of spring-run Chinook and steelhead habitat upstream of Payne's Crossing.

FED1-52

The DHEP discusses limiting factors other than passage at Paynes Crossing that affect upstream and downstream passage and habitat suitability in Antelope Creek. Although not

FED1-53

Comment Letter FED1 (Continued)

mentioned with as much detail as found in the DHEP, Appendix D, these limiting factors quote NMFS' own "Co-Manager Review Draft" of the *Recovery Plan for the Sacramento River winter-run and Central Valley spring-run Chinook and Central Valley steelhead* (NMFS 2008). These include elevated water temperatures, insufficient attraction flows, stream braiding in the lower reaches that impairs upstream fish passage, and diversions that may cause entrainment, stranding and affect upstream passage. Diversions include Edwards Diversion Dam and others "...extending downstream of the Dam, to the confluence with the Sacramento River." The DHEP does not propose any actions to remedy the adverse effects of any "limiting factors" except the partial upstream barrier at Paynes Crossing (p. 7-2), but states that lower Antelope Creek actions are to be funded by the U.S. Fish and Wildlife Service's Anadromous Fish Restoration Program (AFRP) (p. 7-6).

FED1-53
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Antelope Creek can support at least 500 spring-run Chinook salmon (CH2M Hill 1998) (p. 7-3). It is not clear if this number, or the HET threshold established in the HEA, are averages, medians, etc.

FED1-55
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NMFS does not believe it is appropriate to count a gain of 250 adult spring-run Chinook (p. 7-5) due to a habitat expansion action that improves Paynes Crossing because this singular action does not address other limiting factors lower in the watershed.

FED1-54

Other information that should be considered is that *Lindley et al.* (2004) characterized the population of spring-run Chinook as dependent upon other populations (i.e. Butte, Deer, and Mill Creeks) for its existence. This will affect NMFS' approval decision toward the action under HEA section 4.2.3(c).

FED1-56

The Payne's Crossing option will result in increased numbers of adult spring-run Chinook and steelhead only if:

- 1) It is correct that Paynes Crossing is an appreciable impediment at most flows;
- 2) Habitat upstream is indeed suitable;
- 3) A new bridge is correctly designed and installed, and allows effective passage; and
- 4) Lower Antelope Creek diversions and other lower watershed impairments can be adequately remedied to improve attraction flows, upstream passage, downstream passage, water temperatures, and water quality, in conjunction with the Paynes Crossing action.

FED1-57

The reader is referred to Appendix E for the "Action-Specific Calculations of Contribution to the Habitat Expansion Threshold;" here, the modeling results are expressed in a highly condensed form (tabular and graphical), along with a summary table of model assumptions and sources. In this section, the result indicates the Paynes Crossing improvement would yield 264 adult spring-run Chinook salmon. Other information provided is that since 2000, the escapement of spring-run Chinook has ranged from 2 to 102 fish (p. 7-3), and a rounded average escapement from 1999 to 2008, using data from California Department of Fish and Game's (CDFG) GrandTab, is 50 fish (p. 7-4). Past estimates by CDFG suggest that

FED1-55

Even if one accepts a net gain of 250 adult spring-run Chinook, the project is relatively small and cannot alone satisfy the HET of 2,000 to 3,000 fish. It would need to be implemented along with several projects or another large project.

7.3.3 Comments on the Big Chico Creek Sub-action

The proposed action is to reconstruct the Iron Canyon fish ladder to facilitate the upstream passage of spring-run Chinook salmon and steelhead.

Comment Letter FED1 (Continued)

Section 8.2.1 describes the habitat as, "...the watershed is relatively pristine. The amount of available spawning and holding habitat for spring-run Chinook salmon and steelhead in Big Chico Creek is essentially the same as historical conditions..." (p. 8-2). However there is no supporting information for this statement. Please provide substantiating information that fish passage above this ladder will result in access to high quality habitat. It is very possible that the upstream habitat on Big Chico Creek may be so disturbed by human recreational use in the summer that its former (historical) value for summer holding of spring-run and steelhead is now degraded appreciably. It appears that the DHEP does not address this issue.

FED1-58

The DHEP mentions several limiting factors in the lower watershed that affect upstream and downstream passage and habitat suitability in Big Chico Creek: "There is no summer holding habitat below Iron Canyon..." (page 8-1), "Big Chico Creek is a small watershed with substantial urban, agricultural, and flood control impacts in the lower watershed..." (page 8-2); "Low flows, mainly due to agricultural diversions, and high water temperatures are the primary limiting factors (BCCWA [Big Chico Creek Watershed Alliance] 2006)..."; "Low flows affect passage for both adults and juveniles and contribute to increased water temperatures..."; and "...loss of riparian habitat in the [lower] valley reach and diversion by flood control structures limit salmonid production (BCCWA 2006)"(page 8-3). The combination of these apparent impacts - elevated water temperatures, stream braiding in the lower reaches, groundwater pumping, and diversions at One-Mile and Five-Mile dams that may affect upstream passage – all these may be limiting factors in addition to the Iron Canyon fish ladder problem. Yet, the DHEP does not propose any actions to remedy the adverse effects of any of the above "limiting factors" except to fix the Iron Canyon fish ladder. Thus, the expense to fix this ladder may not

FED1-59

be worth it if the listed salmonids will continue to have trouble even reaching Iron Canyon; this raises questions about the actual contribution to the HET and cost-effectiveness.

FED1-59
Cont'd

Finally, *Lindley et al. (2004)* characterized the population of spring-run Chinook as dependent upon other populations (i.e. Butte, Deer, and Mill Creeks) for its existence. This will affect NMFS' approval decision regarding the proposed action under HEA section 4.2.3(c). An apparent positive factor is that the hatchery influence is low and there may be no need to introduce stocks of spring-run Chinook or steelhead. However, the ability of these listed salmonids to reach the fish ladder in sufficient numbers is questionable. Comprehensive watershed restoration actions in Big Chico Creek will require addressing other key limiting factors in Big Chico Creek, in addition to improved passage at the Iron Canyon site.

FED1-60

In summary relative to this sub-action, NMFS comments positively on this project because it is obvious that fixing a fish ladder will help enable fish to access upstream habitats. However, human impacts will still occur downstream, in addition to the ubiquitous amount of summer recreation impacts upstream. These are limiting factors reducing the probability of substantial anadromous fish improvements from this action in isolation. This action will be beneficial and result in increased numbers of adult spring-run Chinook and steelhead only if:

FED1-61

- 1) Habitat upstream is indeed suitable and human impacts can be limited;
- 2) The fish ladder is correctly designed and installed, and allows effective passage;
- 3) The lower creek diversions, groundwater pumping and other lower watershed impairments can be adequately remedied to improve attraction flows, upstream passage, downstream passage, water temperatures, and water quality, in conjunction with the Iron Canyon Fish Ladder action.

Comment Letter FED1 (Continued)

7.3.4 Comments on the Battle Creek Sub-action

DHEP statements and discussions regarding eligibility related to the Battle Creek Habitat Expansion Actions appear inaccurate (Page ES-7, Table ES-2, NMFS Approval Criteria Evaluation, Eligible. See also, similar statements and discussions on pages ES-8; page 5-12, Table 5-4; and 9-13 to 9-14, Section 9.3.8.1). As these discussions recognize, the Battle Creek Habitat Expansion Actions are part of Phase 2 of the Battle Creek Restoration Project, and NMFS' Biological Opinion on the Long-Term Central Valley Project and State Water Project Operation, Criteria, and Plan (OCAP Biological Opinion), issued on June 4, 2009, include these actions in the Reasonable and Prudent Alternative Action I.2.6.

FED1-62

Although NMFS is not making a final determination on approval of the HEP at this point, the Licensees' recommended Battle Creek Habitat Expansion Actions apparently do not meet the NMFS' approval criterion in HEA section 4.2.3(e) regarding the requirements for eligible habitat expansion action(s) pursuant to Section 3 of the HEA. The NMFS' approval criterion in HEA Section 4.2.3(e) provides, "...meets the requirements for eligible habitat expansion action(s) pursuant to Section 3 of the Agreement[.]" HEA Section 3.1 provides, in relevant part, "Actions identified in other venues, including unfunded actions, are acceptable for consideration, provided that implementation of the Agreement results in a net expansion of habitat over any Existing Requirements and Commitments, whether by the Licensees or others." HEA Section 3.2 provides, in part, "...the term 'Existing Requirements and Commitment' is intended to encompass actions expected to occur in a timeframe comparable to implementation of habitat expansion action(s) under this Agreement." In addition, this section includes a non-exclusive list of what "Existing Requirements and Commitments may include", and (d) in that list specifically includes, "...reasonable and prudent alternatives, reasonable and prudent

FED1-63

measures, and terms and conditions of any final Biological Opinion that has been issued at the time NMFS approves the habitat expansion action(s)." The Battle Creek Habitat Expansion Actions proposed in the DHEP are part of the reasonable and prudent alternative of NMFS' final OCAP Biological Opinion. Thus, these actions are Existing Requirements and Commitments under the HEA.

FED1-63
Cont'd

On page ES-8 and in Section 9.3.8.1 of the DHEP, the Licensees argue that the reasonable and prudent alternative of NMFS' OCAP Biological Opinion "...does not ensure that such discretionary funds will be available, does not provide an alternate funding mechanism in the absence of such funds, as is presently the case, and ultimately does not secure full funding for Phase 2." In addition, the Licensees argue, "The biological opinion also does not provide a means for completing the project before 2019." However, there is no support under HEA Section 3 for Licensees' arguments. Funding and the means for completing the project are not part of the description of "Existing Requirements and Commitments" in HEA Section 3.2 and Subsection (d). In its reasonable and prudent alternative, NMFS has required that the project be completed within a timeframe comparable to implementation of habitat expansion action(s) under the HEA, and it has required reasonable conditions to follow implementation of the project and determine that it will be completed as required.

FED1-64

NMFS has other concerns related the proposed Battle Creek sub-action. Table ES-2 of the DHEP (p. ES-7), Note (b), provides, "Additional funding partners would need to be identified in order to meet this estimated contribution to the HET." Note (c) provides, "Cost estimate includes partial funding for implementation of Phase 2 of the Battle Creek Salmon and Steelhead Restoration Project, and full funding for construction of Antelope and Big Chico

FED1-65

Comment Letter FED1 (Continued)

Creek actions, as well as provisions for operations maintenance not already committed to by others.” As these notes and similar or related discussions (pages 5-9, Table 5-3; 5-10, Section 5.2.1.1; 5-12, Table 5.4; 5-13, Section 5.2.1; 9-2, Section 9.1.1; and 9-10, Section 9.3.4.1) recognize, the estimated contribution to the HET for major components of the Three Creek Actions depend on unsecured funding from other sources. The estimated contribution to the HET should be based on actions that the Licensees propose to fund without reference to other actions that would require additional funding that has not been secured. In addition, these notes and similar or related discussions listed above raise the question of whether these proposed actions meet the selection criteria in HEA Section 4.1.2(c) (Feasibility (action(s) can reasonably be accomplished)) and (d) (Timing (action(s) can be accomplished in a reasonable period of time) as well as the NMFS’ approval criterion in HEA Section 4.2.3(f) (expected to be implemented within a reasonable period of time). Table ES-2 of the DHEP (p. ES-7), Note (e), provides, “Criterion is not required for NMFS approval.” The text of this note is inaccurate. See also notes with the same text on pages 5-3, Table 5-1, Note (d); 5-7, Table 5-2, Note (b); 5-9, Table 5-3, Note (e); and 5-12, Table 5-4, Note (b). HEA Section 4.2.4 provides, “NMFS may approve recommended habitat expansion actions(s) that meet at least [four specific approval criteria listed in that section].” Thus, NMFS may approve recommended habitat expansion action(s) that do not meet the other two approval criteria, but NMFS may decide not to approve habitat expansion action(s) that do not meet those other two approval criteria. In other words, the determination of whether these two approval criteria are “required” is left to NMFS’ discretion.

In the DHEP, Section 9.3.8.3 (p. 9-14) discussion of the recommended Battle Creek Actions, this section provides:

FED1-65
Cont'd

“A landowner abutting one of the construction sites near South Powerhouse and Inskip Diversion Dam on the South Fork Battle Creek has filed a lawsuit against DFG and the State Water Board related to their issuance of CEQA documents. The case is pending before the courts.”

The Licensees should explain how this challenge may affect the expectation that this recommended action could be implemented within a reasonable period of time. See HEA Sections 4.1.2(c) and (d) and 4.2.3(f).

FED1-66
Cont'd

In Appendix C4, in the line related to Phase 2 of the Battle Creek Restoration Project, the table provides “Maybe” under the column entitled, “Deal Killer (No/Maybe).” Explain why this action may be a “Deal Killer” and why the Licensees recommend this action in the DHEP despite having recognized that it may be a “Deal Killer.”

FED1-67

In summary on the Three-Creek sub-action, this project could provide true habitat expansion, and NMFS’ supports the concept in principle. Unfortunately, there are two prevailing conditions that prohibit NMFS from accepting this option as an HEA action: (1) the Battle Creek action is subject to eligibility restrictions as described in HEA section 3.1 and 3.2; and (2) the Big Chico and Antelope Creek actions are geographically close to existing Mill/Deer/Butte Creek populations; thus they do not fully comport with the spatial diversity principles as described in Lindley et al. 2007.

FED1-68

8.0 The Upper Yuba River Fish Passage Alternative

NMFS staff conferred and met regularly with the Licensees’ HEA Steering Committee and other interested parties during the development phase of the Draft Habitat Expansion Plan. From the beginning, it was made clear to the Steering Committee that NMFS was interested in

FED1-69

FED1-66

Comment Letter FED1 (Continued)

taking a hard look at the upper Yuba River watershed as a geographic region for potential reintroduction of spring-run Chinook and steelhead. We expressed this viewpoint because NMFS had already conducted considerable science to inform the Draft Central Valley Recovery Plan, and that science indicates to us that reintroduction of spring-run Chinook and steelhead in the upper Yuba River is a prime candidate for a meaningful recovery action. While the Steering Committee indicated that the upper Yuba River was given consideration as a potential HEA action, it chose not to score this option as highly as other options; therefore it did not make the final list of recommended actions. NMFS is concerned about this preliminary determination because we believe that the upper Yuba River offers great potential for realizing the goals of the Habitat Expansion Agreement and meeting (or exceeding) the targeted Habitat Expansion Threshold of 2,000-3,000 adult spring-run Chinook salmon. Furthermore, since our analysis shows that the DHEP' recommended actions raise concerns about eligibility and suitability issues under the HEA, NMFS reminds all Parties that the upper Yuba River anadromous fish reintroduction option remains a viable alternative in our considered opinion.

During the period of development of the DHEP (December 2008- November 2009), NMFS undertook independent studies of the upper Yuba River watershed to assess its potential for reintroduction of spring-run Chinook salmon and steelhead.⁵ One of the drivers of this activity was the need to gain additional scientific information about habitat potential in the upper Yuba River to support NMFS' positions in the FERC-relicensing actions that are concurrently underway. Another driver is the recognition that NMFS' Draft Central Valley Recovery Plan identifies passage over certain Sierra Nevada rim dams as a key element needed for recovery of the ESA-listed evolutionarily significant units, i.e., - spring-run Chinook, winter-run Chinook,

⁵ Two studies commissioned by NMFS in 2008-2010 are: (1) *Yuba River Fish Passage: Conceptual Engineering Project Options*, Montgomery-Watson-Harza, Inc. February 2010 and (2) *Habitat Assessment and Reintroduction Planning for the upper Yuba River* - study currently underway by Stillwater Sciences, Inc. and R2 Resources, Inc.

FED1-69
Cont'd

and steelhead. Notably, Englebright Dam on the Yuba River is specifically identified as one of those dams where anadromous fish passage could substantially contribute to the recovery of spring-run Chinook and steelhead. Moreover, reintroduction of anadromous fish into the upper Yuba River watershed is consistent with the seminal science underpinning NMFS Draft Central Valley Recovery Plan and our current management strategies.⁶

Because the results of the NMFS' sponsored studies were not available to inform the deliberations of the HEA Steering Committee during the formulation of the DHEP, it is appropriate at this time for NMFS to introduce these studies as new information - in addition to what is already known about the upper Yuba River - to help frame a new perspective of the upper Yuba River option as the potential solution for meeting the intent and criteria of the HEA.

The first study of importance is the newly published report by Montgomery-Watson-Harza, Inc.: *Yuba River Fish Passage: Conceptual Engineering Project Options*. This report focuses on conceptual engineering alternatives for restoring anadromous fish passage to the upper Yuba River watershed. It identifies realistic options for developing fish passage facilities capable of supporting long-term anadromous fish reintroduction to the upper Yuba River and its tributaries. The significance of this information is that it describes what engineered facilities could be constructed to support a variety of anadromous fish reintroduction strategies.

The second study of importance is the Anadromous Fish Habitat Assessment and Reintroduction Plan project that is currently underway. This NMFS- sponsored effort by Stillwater Sciences and R2 Resources has two components: (1) use of the GIS-based RIPPLE

⁶ Two of the scientific documents that NMFS relies on to guide its decisions in matters related to salmonid management and recovery are: (1) *Viable Salmonid Populations and the Recovery of Evolutionarily Significant Units*, McElhany et al, NOAA Technical Memorandum NMFS-NWFSC-42, June 2000 and (2) *Framework for Assessing the Viability of Threatened and Endangered Chinook Salmon and Steelhead in the Sacramento-San Joaquin Basin*, Lindley et al., San Francisco Estuary and Watershed Science 5(1), February 2007.

Comment Letter FED1 (Continued)

computer model platform to assess reintroduction potential in each fork of the upper Yuba River basin, and (2) translate the new and existing information about habitat potential and engineering considerations into realistic options for reintroduction of anadromous fish. Because the results of this study are not yet available, more time is needed to allow the benefits of this forthcoming information to be considered in final HEA implementation decisions.

NMFS is aware of information that indicates the upper Yuba River offers vast areas of historic, higher elevation habitats where spring-run Chinook salmon and steelhead once thrived before the advent of large dams and water diversions. Although no quantitative population estimates are available for the Yuba River fisheries prior to the construction of Englebright Dam and New Bullards Bar Dam, anecdotal information indicates that Chinook salmon were abundant and in considerable numbers (Yoshiyama et al. 2001). Numerous informal field surveys by resource agency biologists, along with our long-standing participation on Yuba River management committees and in the FERC Integrated Licensing Process, has revealed that the upper Yuba River offers great potential for reintroduction of spring-run Chinook and steelhead. In addition, a recent field survey of the upper Yuba River by Stephanie Theis, a Montgomery-Watson-Harza senior biologist, produced a professional opinion that there is existing high quality salmonid habitat in parts of the upper Yuba River watershed.

In light of this existing and new information, NMFS believes it is wise for the HEA signatory parties and stakeholders to pause and carefully consider the upper Yuba River actions on the merits of their potential to satisfy all the elements of the Habitat Expansion Agreement.

9.0 Recommended Future Actions

In the interest of maintaining a collaborative approach toward the successful fulfillment of the HEA, NMFS recommends the following course of action to the Licensees and other interested Parties:

- 1) Licensees accept NMFS recommendation for a six month time extension
- 2) NMFS and Licensees develop a mutually acceptable, joint communication to the signatory parties informing them of the situation and a proposed approach for reconciling existing differences
- 3) Licensees and NMFS meet as required to explore specific areas in need of special consideration
- 4) Licensees and NMFS convene a special meeting (or meetings) among the signatory parties and directly affected third parties to explain the temporary impasse and enlist the other parties in seeking a solution
- 5) All interested parties direct their attention to the recent developments occurring in the Yuba River Multi-Party Forum arena to learn about the upper Yuba River anadromous fish reintroduction proposal, and whether there is a role for a Habitat Expansion Plan that can successfully fulfill all parties' expectations of the Habitat Expansion Agreement.

Comment Letter FED1 (Continued)

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Responses to Letter FED1 (Rodney R. McInnis, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, February 18, 2010)

FED1-1

No language in the HEA indicates that the HEA was intended to restore salmon above the rim dams. Further, the HEA does not impose any obligation on the Licensees to recover ESA species, but only to be consistent with recovery efforts (HEA Section 4.1.1[j]). The actions recommended by the Licensees are consistent with ESA recovery because they are similar to actions called for in the *Public Draft Recovery Plan for Central Valley Chinook and Steelhead* (Public Draft Recovery Plan) issued by NMFS (2010).

The current proposals for reintroduction above rim dams call for trapping of adults, transporting them above the dams, and capturing and transporting juvenile progeny to below the dams. The Licensees argue that trap and transport is not consistent with the HEA language calling for “minimal human intervention ... to achieve access to expanded habitat” and favoring “volitional passage over [actions] which require a high degree of human intervention” (HEA Section 4.1.1 [e]), cost effectiveness (HEA Sections 4.1.1 [d]) and 4.1.2 [b]) and timeliness of benefits (HEA Sections 4.1.1 [h], 4.1.2 [d] and 4.2.3[f]). Finally, because a trap-and-transport option would require extensive testing and development of facilities and operation, the Licensees argue that trap and transport must be considered experimental and is therefore discouraged under HEA Section 4.1.1(a).

FED1-2 and FED 1-3

While developing the Draft HEP, the Steering Committee did consider NMFS concerns, perspectives, and interests. Specifically, NMFS requested that the Steering Committee consider options for providing fish passage above Englebright Dam on the Yuba River (i.e., the Upper Yuba River Actions). This concept was first presented by NMFS during a Steering Committee meeting held on April 8, 2009. At the time, the Upper Yuba River Actions were not well defined. Studies to determine the feasibility of reintroduction above Englebright Dam were (and still are as of the release of the Final HEP) ongoing; a multi-party forum to consider reintroduction of spring-run Chinook salmon in the Upper Yuba River watershed was in the planning stages; and descriptions of the proposed Upper Yuba River

actions were provided verbally rather than in a written document, such as the HEA questionnaire.

Following the April 2009 meeting, NMFS responded to phone calls and email correspondence from the Steering Committee requesting additional information on the Upper Yuba River Actions; however, not enough information was relayed to the Steering Committee to adequately evaluate the Upper Yuba River Actions. Using the information provided by NMFS, the Steering Committee evaluated the Upper Yuba River Actions using the HEA Evaluation and Selection Criteria. Based on the minimal amount of information that was provided, the Upper Yuba River Actions did not score as high (and were not as ready to implement) as some of the other potential habitat expansion actions that the Steering Committee was evaluating for the Draft HEP.

On numerous occasions, the Steering Committee requested additional information from NMFS in order to better evaluate this action. Specifically, the Steering Committee requested that NMFS complete a questionnaire on the proposed action(s) for the Upper Yuba River so that the Steering Committee could fairly evaluate this action similar to evaluation of other potential actions (i.e., for all other potential actions evaluated in the Draft HEP, questionnaires had been completed specifically describing the action and providing information to a uniform set of questions).

NMFS did not respond to requests from the Steering Committee for additional information on the Upper Yuba River Actions until after the Draft HEP had been completed and released for review. After release of the Draft HEP (in November 2009), NMFS provided the Steering Committee with the following documents:

- Yuba River Fish Passage, Conceptual Engineering Project Options, prepared for NMFS by MWH (completed in February 2010)
- completed HEA questionnaire prepared by NMFS on the Upper Yuba River Actions (submitted in June 2010)

Even after providing this information, results from the following related studies commissioned by NMFS that were referenced in the HEA questionnaire were not available for consideration while developing this Final HEP:

- RIPPLE modeling being conducted by Stillwater Sciences to determine the capacity of the Upper Yuba River watershed for spring-run Chinook salmon (anticipated completion date is November 2010; however, the modeling had not been completed by the release of the Final HEP); and
- a detailed reintroduction plan for spring-run Chinook salmon to the Upper Yuba River, to be conducted by R2 Resources, Inc. (anticipated completion date is December 2010).

With the additional information provided by NMFS, the Steering Committee used the same working definitions and scoring process developed for the Draft HEP to re-evaluate the Upper Yuba River Actions in the Final HEP. The results of the evaluation are described in Chapter 2 of the Final HEP. Table F-1 in Appendix F of the Final HEP presents the scores for the Upper and Lower Yuba River Actions that were developed for the Final HEP. For comparative purposes, scores for the Upper Yuba River Actions that were included in the Draft HEP and those that were provided by NMFS in their comment letter on the Draft HEP also are included in Table F-1.

See also response to Comment FED1-11.

FED1-4

The Steering Committee held several meetings with the HEA signatories to explain the process used to score the potential habitat expansion actions and to estimate their contributions to the HET. Specifically, the Steering Committee held meetings with the HEA signatories to review this process on June 15, August 12, and October 15, 2009.

The scoring process is described in detail in Chapter 3 of the Draft HEP. Based on additional information and comments received after the release of the Draft HEP, the Lower Yuba River and Upper Yuba River Actions were rescored for the Final HEP (see Table F-1 in Appendix F).

The process to determine the contribution to the HET is explained in Chapter 4 of the Draft HEP, and a summary of the results are presented in Appendix E of the Draft HEP. The working spreadsheets that were used to estimate the contribution to the HET for actions recommended in the Draft HEP were made available on the HEA website following distribution of the Draft HEP.

Although the process was well documented in the Draft HEP, several comments on the Draft HEP question how the Steering Committee determined the contribution of recommended actions to the HET. These comments are addressed in Master Response 1 regarding contribution to the HET and in Appendix N of the Final HEP.

FED1-5

The Steering Committee developed Working Definitions of Evaluation, Selection, and Approval Criteria to help with the process of evaluating, selecting, and recommending actions to fulfill the HEA. While developing these definitions, the Steering Committee submitted draft definitions to NMFS and asked for their review and input to ensure a common understanding of the HEA criteria. Although the Steering Committee did not receive formal comments from NMFS, the working definitions reflect discussions between the Steering Committee and NMFS staff (see Appendix F of the Final HEP). For Evaluation Criterion (f) (i.e., favorable spatial separation from other populations or runs to maintain genetic diversity by minimizing interbreeding), the Steering Committee focused on spatial separation of spring-run and fall-run Chinook salmon, not separation of different populations of spring-run.

The issue of spatial separation between different populations of spring-run Chinook salmon was largely addressed by Evaluation Criterion (g) (i.e., favorable spatial separation from other spawning streams to minimize population impacts of a stream-specific adverse event [geographic distribution is favored over centralization]). Under Evaluation Criterion (g), the Steering Committee focused on spatial separation of newly created spring-run populations from the recognized independent, self-sustaining populations in Mill, Deer, and Butte Creeks. Application of Evaluation Criterion (g) did not specifically look at the effects of spatial separation from the standpoint of interbreeding; rather, it addressed the value of creating expanded habitat with sufficient separation to avoid impacts of catastrophic events on multiple populations of spring-run. However, in effect, application of Evaluation Criterion (g) in this manner did address the issue of minimizing interbreeding of newly created populations of spring-run with the currently recognized independent, self-sustaining populations.

Thus, favorable spatial separation between spring-run and fall-run Chinook salmon, and between different viable self-sustaining populations of spring-

run fish, was addressed through a combination of Evaluation Criteria (f) and (g).

FED1-6

According to the ESA recovery goals outlined in the NMFS Draft Recovery Plan, recovery of Central Valley spring-run Chinook salmon would be determined by the existence of at least two viable salmon populations in each of the four diversity groups outlined by Lindley et al. (2004). Given that Endangered Species Act (ESA) recovery as outlined in the NMFS Draft Recovery Plan is based on the viable salmonid population (VSP) concept, the four VSP parameters that are considered fundamental (abundance, productivity, biological diversity, and spatial structure) provide a useful metric in assessing the VSP/ESA consistency under Evaluation Criterion (j) for actions recommended in the HEP.

FED1-7

The Steering Committee concluded that the most favorable source for broodstock for any action would be an existing independent, self-sustaining population in the same stream as the proposed action; such actions would warrant a score of 5 for this criterion. This conclusion is consistent with available scientific thought supporting local adaptation of salmon populations, as well as general NMFS policy.

In any case, the difference in scoring makes no difference to the comparison of potential actions. Currently, the only independent, self-sustaining populations of spring-run Chinook salmon in the Central Valley are in Mill, Deer and Butte Creeks. Potential actions in these three streams only would have received a score of 5 for this criterion. However, the Steering Committee eliminated projects from streams with existing populations in an effort to expand habitat and support establishment of a new independent, self-sustaining population in other basins. Therefore, the highest score that any action evaluated could receive for this criterion is 4.

FED1-8

The Licensees included their actions outside of the HEA in the category of “Actions Taken by Others” when applying the scoring of this criterion to the potential actions. The definition has been revised in the Final HEP to clarify this point (see Chapter 2 and Appendix F of the Final HEP).

For Phase 2 of the Battle Creek Salmon and Steelhead Restoration Project, as described in the Draft HEP, the only potential action to be taken by others at that time was the potential for DFG to secure \$12 million for Phase 2. PG&E has no funding obligation to Phase 2 other than providing increased instream flows and operation and maintenance of the facilities post construction.

Refer to Master Response 2 for an update on Actions Taken by Others for Phase 2 of the Battle Creek Salmon and Steelhead Restoration Project, which includes a commitment of funds from DWR under its Delta Fish Agreement.

FED1-9

See Master Response 3 regarding the eligibility of the Lower Yuba River Actions.

FED1-10

The Three-Creek Actions are not considered in the Final HEP. See Master Response 2 regarding the Three-Creek Actions.

FED1-11

The Licensees believe that a logical scoring process was applied, given the best available information at the time of scoring. The Upper Yuba River action was not well defined when the Draft HEP was released, and few studies were available for reference. The scores assigned to the Upper Yuba River Actions were reassessed based on pertinent information received during the 6-month extension to prepare the Final HEP. The scoring and rationale for each score are included in Appendix F of the Final HEP. Table F-1 in Appendix F compares the scoring of Upper Yuba River Actions during preparation of the Draft HEP and the Final HEP. The total score for the North Yuba River, which has been presented as the NMFS priority for reintroduction in the watershed, remains below that of the Lower Yuba River Actions. Therefore, the Lower Yuba River Actions remain the recommendation by the Licensees.

FED1-12

See response to Comment FED1-11.

FED1-13

See response to Comment FED1-11.

FED1-14

See response to Comment FED1-11.

FED1-15

See response to Comment FED1-11.

FED1-16

Comment noted.

FED1-17

See response to Comment FED1-11.

FED1-18

See response to Comment FED1-11.

FED1-19

See response to Comment FED1-11.

FED1-20

Comment noted.

FED1-21

See response to Comment FED1-11.

FED1-22

See response to Comment FED1-11.

FED1-23

See response to Comment FED1-11.

FED1-24

See response to Comment FED1-11.

FED1-25

Cost effectiveness, as scored for the Evaluation Criteria, is based on best professional judgment about the gain in population from an action (i.e., its estimated contribution to the HET) as it relates to the amount spent to achieve that gain. Under Selection Criterion (c), cost effectiveness is specifically a comparison with other potential actions that are also under consideration following application of the Evaluation Criteria. The Licensees believe that a primary factor in whether an action is feasible is the cost associated with the action. For example, if an action is cost-prohibitive, it can no longer be “reasonably accomplished” and should therefore not rank well under Selection Criterion (b). Consequently, Evaluation Criterion (h) remains a consideration for Selection Criterion (b).

FED1-26

See response to Comment FED1-11.

FED1-27

See response to Comment FED1-11.

FED1-28

See response to Comment FED1-11.

FED1-29

See response to Comment FED1-11.

FED1-30

See response to Comment FED1-11.

FED1-31

Comment noted. Section 1.1.2 in Chapter 1 of the Final HEP has been revised accordingly.

FED1-32

Comment noted. Section 1.3 in Chapter 1 of the Final HEP has been revised accordingly.

FED1-33

Comment noted. The text has been revised to include a definition for “consultation” as referenced in the HEA (see Appendix C of the Final HEP).

FED1-34

Comment noted. The actions were modified based on comments and new information received, as noted in Chapter 3 of the Final HEP.

FED1-35

The text found under Section 10.2.2 on page 10-3 of the Draft HEP has been revised accordingly. The revised text is now found under Section 5.1.1 on page 5-2 of the Final HEP.

FED1-36

Comment noted. The timeline presented in Appendix A of the Draft HEP has been revised and is now found in Appendix A of the Final HEP. A footnote has been added to the timeline related to Section 4.2.7 of the HEA and states that the timing for NMFS to make an approval decision is not defined in the HEA; however, for planning purposes, the Steering Committee assumed that an approval would be made by NMFS in approximately 90 days.

FED1-37

The HET evaluation methodology used in the Draft HEP was described in detail in Chapter 4 (Contribution to the HET) of the Draft HEP. The HET evaluation methodology has been refined and expanded in the Final HEP. The revised discussion is found in Chapter 4 of the Final HEP.

FED1-38

The Licensees have considered both access options to reach Sinoro Bar and Narrows Gateway for the spawning habitat expansion component of the Lower Yuba River Actions. Constructing an access road on PG&E’s property on the north side of the river is possible but raises a number of environmental concerns (i.e., terrestrial resources and erosion issues). Accessing Sinoro Bar by crossing private property from the south side of the river appears to be the most feasible option. As a result, the Licensees have been coordinating with the private landowners regarding the use of

their property to access these sites. The landowners have been very supportive of the spawning habitat expansion actions and have offered to help develop this component of the Lower Yuba River Actions by providing historical information related to the subject stream reaches. The Licensees have solicited temporary entry permits from the landowners and expect to receive the permits in the near future, based on positive communications. After receiving temporary entry permits from each landowner, the Licensees will secure more long-term entry permits and negotiate easements with the landowners, in particular for operation and maintenance activities.

The Licensees also have been coordinating with DFG regarding access to Sinoro Bar by crossing the Lower Yuba River at low flows. DFG has expressed support for the spawning habitat expansion component recommended for Sinoro Bar and has indicated that a Streambed Alteration Agreement for a temporary crossing from the Mullican/Butler property to Sinoro Bar would likely be issued in order to implement the expansion of spawning habitat at this location (Hill pers. comm.).

FED1-39

RMT members who indicated their support to the Steering Committee of the document *Habitat Expansion for Spring-Run Chinook Salmon and Steelhead in the Lower Yuba River* (Appendix G of the Draft HEP) include Tom Johnson (Yuba County Water Agency [YCWA]), Tracy McReynolds (DFG), Gary Reedy (South Yuba River Citizens League [SYRCL]), and Gene Geary (PG&E).

FED1-40

See Master Response 4 regarding the optional segregation weir component of the Lower Yuba River Actions.

FED1-41

Comment noted. Yoshiyama et al. 2001 provides a good context for current management of the Yuba River and the overall impact of development throughout the watershed. Yoshiyama is cited throughout the Final HEP.

FED1-42

Please refer to Master Response 3 regarding eligibility of the Lower Yuba River Actions.

To reiterate, the Licensees believe that both the Sinoro Bar and Narrows Gateway spawning habitat expansion actions are eligible under the HEA, as they are independent of and complementary to the Corps gravel augmentation project. The Corps gravel augmentation project is described in the recent *Draft Environmental Assessment for the Lower Yuba River Gravel Augmentation Project, Yuba and Nevada Counties, California* (Corps 2010).

FED1-43

In the Draft HEP, the Licensees recommended placement of gravel in lower Deer Creek to help rehabilitate spawning habitat in both Deer Creek and the Yuba River at the mouth of Deer Creek. Since issuance of the Draft HEP, the Licensees have worked toward more fully developing this action. Based on issues raised by NMFS and other signatories regarding limitations to expanding spawning habitat in Deer Creek, the Licensees have modified this action to focus solely on spawning habitat expansion in the Yuba River immediately downstream of Deer Creek (i.e., Narrows Gateway; see Chapter 3 of the Final HEP). Rehabilitation of spawning habitat in Deer Creek itself has been removed from consideration. The Final HEP contains two independent, but complementary, spawning habitat expansion actions: spawning habitat expansion at Sinoro Bar and at Narrows Gateway. Both actions are located in the Yuba River channel between Englebright Dam and the Narrows Pool.

FED1-44

See Master Response 4 regarding the optional segregation weir component of the Lower Yuba River Actions.

FED1-45

See Master Response 4 regarding the optional segregation weir component of the Lower Yuba River Actions.

FED1-46

See Master Response 4 regarding the optional segregation weir component of the Lower Yuba River Actions.

FED1-47

The HEA allows for both habitat expansion and habitat enhancement, as stated in Section 3.1 of the HEA. The juvenile rearing habitat restoration component described in the Draft HEP, referred to as the juvenile rearing habitat *expansion* component, has been modified and is defined in more detail in Appendix L of the Final HEP. This action is difficult to quantify, does not significantly contribute to the HET, and was not included in the recommended actions in the Final HEP. The Licensees would consider restoration actions such as the juvenile rearing habitat expansion as an alternative to the optional segregation weir. The action would benefit juvenile spring-run Chinook salmon by expanding the amount of quality rearing habitat in the Lower Yuba River.

FED1-48

SYRCL, with funding from the AFRP, commissioned a study on rehabilitation concepts for juvenile salmonid rearing habitat in the Parks Bar to Hammon Bar Reach of the Lower Yuba River (cbec 2010). The draft study concluded that rehabilitation actions to diversify rearing habitats in the Lower Yuba River are warranted. However, specific designs of rehabilitation actions would need to be developed with geomorphic considerations in mind to ensure proper functioning and maximize their potential for being sustainable throughout the range of flows in the Lower Yuba River.

The juvenile rearing habitat restoration component described in the Draft HEP, referred to as the juvenile rearing habitat *expansion* component, was modified during the development of the Final HEP. The Licensees identified suitable sites for expanded juvenile rearing habitat that are different from those proposed in the SYRCL report. Implementation of these actions would not involve pilot studies. However, the benefits of these actions are difficult to quantify and do not significantly contribute to the HET. Therefore they were not included in the recommended actions. The Licensees would consider these or other restoration actions in the event that the segregation weir option is not implemented. The modified juvenile rearing habitat expansion actions are described in more detail in Appendix L of the Final HEP. Also see response to Comment FED 1-47.

FED1-49

The potential juvenile rearing habitat expansion actions are not recommended in the Final HEP. The potential actions considered are described in Appendix L.

NMFS correctly points out the complexity of flow and channel dynamics in creating and maintaining riverine habitat features and the special complexity of conditions in the Yuba River. Potential actions considered by the Licensees included expansion of juvenile rearing habitat in the Lower Yuba River below Highway 20. The habitat could be expanded by creating groundwater-fed alcoves and side channels that connect to the main river during high flows. Clearly the location and nature of these potential actions would need to be carefully considered in light of the hydro-geomorphology of the Lower Yuba River. However, it should be pointed out that an unusual richness of information is available on the hydro-geomorphology of the Lower Yuba River, in excess of almost any other area of the Sacramento River Basin. Dr. Gregory Pasternack, a professor of watershed hydrology and geomorphology at UC Davis, has extensively mapped and studied the area above Highway 20 while the Yuba Accord River Management Team (RMT), USFWS, and others have studied the area below Highway 20.

FED1-50

See Master Response 3 regarding the eligibility of the Lower Yuba River Actions. As explained by this master response, the Sinoro Bar and Narrows Gateway spawning habitat expansion actions are eligible under the HEA and, therefore, will contribute to the HET. See Chapter 4 of the Final HEP for a discussion on the estimated contribution to the HET from the Sinoro Bar and Narrows Gateway spawning habitat expansions.

The recommended actions, including spawning habitat expansion at Sinoro Bar and Narrows Gateway, are eligible under the HEA and expand habitat for spring-run Chinook salmon into an area not presently used to a significant degree by spring-run Chinook salmon. Habitat expansion at Sinoro Bar and Narrows Gateway provide quantity and quality of habitat for spring-run Chinook salmon sufficient to achieve the HET. The Licensees have proposed a segregation weir as an optional measure that could be used to enhance separation of the spring-run and fall-run fish, if determined necessary by the resource agencies (NMFS, USFWS, and DFG). Regarding

the juvenile rearing habitat expansion component, see responses to Comments FED1-47 and FED1-48.

The Lower Yuba River is one of the most extensively studied streams in the Sacramento River system. Lack of studies cannot be used as a rationale for inaction.

FED1-51

The Three-Creek Actions are not considered in the Final HEP. See Master Response 2 regarding the Three-Creek Actions.

FED1-52

See response to Comment FED1-51.

FED1-53

See response to Comment FED1-51.

FED1-54

See response to Comment FED1-51.

FED1-55

See response to Comment FED1-51.

FED1-56

See response to Comment FED1-51.

FED1-57

See response to Comment FED1-51.

FED1-58

See response to Comment FED1-51.

FED1-59

See response to Comment FED1-51.

FED1-60

See response to Comment FED1-51.

FED1-61

See response to Comment FED1-51.

FED1-62

See response to Comment FED1-51.

FED1-63

See response to Comment FED1-51.

FED1-64

See response to Comment FED1-51.

FED1-65

See response to Comment FED1-51.

FED1-66

See response to Comment FED1-51.

FED1-67

See response to Comment FED1-51.

FED1-68

See response to Comment FED1-51.

FED1-69

The Licensees did confer with NMFS and discussed the alternatives, including Upper Yuba River trap and transport. One of the primary reasons for requesting a 6-month extension to prepare the Final HEP was to evaluate the Upper Yuba River Actions proposed by NMFS. As a result, the Steering Committee devoted considerable attention to evaluation of the Upper Yuba River reintroduction proposal. See also responses to Comments FED1-1, FED1-2, and FED1-3.

The Steering Committee reviewed the science in the NMFS Draft Recovery Plan and found considerable support for the expansion of habitat in the Lower Yuba River, in addition to support for reintroduction in the Upper Yuba River. Using the working definitions of the HEA criteria (found in Appendix F of the Final HEP), the Steering Committee rated the Lower Yuba River Actions higher than the Upper Yuba River Actions primarily due to the experimental nature of trap and transport, cost effectiveness, and timeliness of benefits for spring-run Chinook. See response to Comment FED1-11. See also Master Response 3 regarding the eligibility of the Lower Yuba River Actions.

Comment Letter FED2 (Kathleen Wood, U.S. Fish and Wildlife Service, February 18, 2010)



United States Department of the Interior

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In Reply Refer To:

FEB 18 2010

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FED2

Chief, Division of Environmental Generation
Department of Water Resources
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Subject: Comments on November 2009 Draft Habitat Expansion Plan for the Habitat Expansion Agreement for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead

Dear Licensees:

Thank you for the opportunity to comment on the November 2009 *Draft Habitat Expansion Plan* (DHEP) for the *Habitat Expansion Agreement for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead* (HEA). The U. S. Fish and Wildlife (Service) appreciates the work of the Licensees in identifying projects that may be of benefit to salmonids.

As described in the HEA, through this draft plan and consultation with Parties and with directly affected and responsive third parties, the Licensees are to complete identification, evaluation and recommendation of habitat expansion actions, in accordance with evaluation and selection criteria set out in the HEA (Section 4.1 of the HEA). The ultimate goal of the HEA, and thus of the eventual Habitat Expansion Plan, is to expand the amount of habitat with physical characteristics necessary to support spawning, rearing and adult holding of spring-run Chinook salmon (spring-run Chinook) and Central Valley steelhead in the Sacramento River Basin as a contribution to the conservation and recovery of these species (Section 2.1 of HEA). Ultimately, the specific goal of the HEA is to expand spawning, rearing and adult holding habitat sufficiently to accommodate an estimated net increase of 2,000 to 3,000 spring-run Chinook for spawning (Section 2.2 of HEA). The Service has reviewed the DHEP with these considerations in view.

The Service's primary concern with the DHEP is that, as presently constituted, it does not present recommendations that will achieve the goals set out in the HEA. Although we are on record for supporting many of the individual projects identified in the DHEP, we continue to have

FED2-1



2

concerns regarding the approach used to select the recommended alternatives in the DHEP and in the accounting used to estimate Habitat Expansion Threshold (HET) contributions.

FED2-1
Con't

The DHEP identifies two sets of recommended actions to meet the goals, terms and conditions of the HEA: (1) the Lower Yuba River habitat expansion actions (Lower Yuba River actions) and (2) the Battle Creek, Big Chico Creek, and Antelope Creek habitat expansion actions (Three-Creek actions). After careful review of the DHEP, the Service believes that neither of these recommended actions, if implemented as described in the DHEP, are likely to achieve the HEA goal of expanding the amount of spawning, rearing and adult holding habitat for spring-run Chinook and steelhead in the Sacramento River Basin. Nor would the actions establish an independent run of spring-run Chinook or support the spring-run Chinook numbers identified for each set of actions.

FED2-2

General comments. In our July 15, 2009, comment letter, we expressed concern that habitat expansion projects appeared to be disproportionately linked with the designation of "deal killer" in the June 10, 2009, *Habitat Expansion Agreement: Working Definitions of Evaluation, Selection, and Approval Criteria* (Working Definitions). We were also concerned that habitat expansion projects disproportionately fell out of the timing window of the Working Definitions and were designated as having a long "time to implement." We are concerned that the Licensees have prematurely eliminated habitat expansion projects from consideration, due to an inaccurate perception that such projects will take longer to implement than habitat enhancement projects. We continue to believe that some projects, such as those involving fish passage above rim dams, were eliminated from consideration too early in the development of the DHEP and deserve a more detailed examination of their benefits and limiting factors. We urge the Licensees to more thoroughly consider habitat expansion projects, such as fish passage on the Yuba River, in order to meet the spirit and intent of the HEA.

FED2-3

The Service supports both restoring spawning habitat targeting spring-run Chinook salmon in the Englebright Dam reach and restoring juvenile rearing habitat in the lower Yuba River. However, the likelihood that these actions will lead to a geographically separate, self-sustaining population of spring-run Chinook salmon is uncertain in part because of the lack of clear temporal and spatial separation between spring- and fall-run Chinook salmon. Hence, these actions do not appear to meet the National Marine Fisheries Service's (NMFS) approval criteria for the Habitat Expansion Plan as described in section 4.2.3 of the HEA.

FED2-4

Lower Yuba River Actions. The Lower Yuba River actions are comprised of riverbed work between Englebright and Daguerre Point Dams, an optional segregation weir, and restoration of juvenile rearing habitat between Highway 20 Bridge and the downstream extent of the Yuba Goldfields. These three actions all have merits, but their combined contribution to spring-run Chinook numbers appears to be overstated in the DHEP.

The primary example of overstated benefits is the riverbed work between Englebright and Daguerre Point Dams. Daguerre Point Dam is a known impediment to spring-run Chinook and steelhead, causing significant delays in migration, and perhaps increased overlap in spawning with fall-run Chinook salmon. Increasing spawning habitat is an important consideration in conserving all Chinook salmon; however, increasing spawning habitat without a commensurate increase in fish passage may not be expected to attain the numbers put forward in the DHEP.

FED2-5

Comment Letter FED2 (Continued)

If additional adult spring-run Chinook are not able to access the habitat, then the enhanced habitat should not be considered expansion under the HEA. The HEA was careful not to burden the Licensees with responsibility for fluctuating salmonid populations; however, the proposed changes in the physical characteristics of the river should not be considered as adequate mitigation for blockage of fish passage, if blockage of fish passage continues to be an overriding consideration in habitat availability.

3
FED2-5
Con't

In addition, the Army Corps of Engineers (ACOE) has an existing regulatory requirement for long-term gravel augmentation in this reach. The increases in spawning habitat expected to occur as a result of ACOE actions appear to be counted toward the HET. A very clear accounting must be done to assure that there is no overlap between obligations of the ACOE and incremental contributions of the DHEP actions.

FED2-6

Three-Creek Actions. Actions identified in other venues are acceptable under the HEA, provided that their implementation results in a net expansion of habitat over any Existing Requirements and Commitments. It appears that the Licensees are counting habitat contributions made by other parties in the Three-Creek action area toward the estimated contribution of the DHEP actions to the HET. This is not consistent with Section 3.1 of the HEA. The Service bases this conclusion on the fact that the entire Battle Creek restoration, including both Phase 1 and Phase 2, is estimated to support approximately 2,500 spring-run Chinook (U.S. Bureau of Reclamation *et al.* 2004), but the DHEP contribution to Battle Creek Restoration will be toward Phase 2 only, and the maximum contribution from the HEA will be \$16.9 million (36 percent of the Phase 2 total).

FED2-7

The DHEP overstates the potential habitat expansion of the Three-Creek Actions. By our calculations, the Three-Creek Actions would support an additional 1,042 adult spring-run Chinook¹, rather than the 2,250 identified in the DHEP. The discrepancy in the numbers may be irrelevant in the final discussion, because it appears that parts of the Three-Creek actions overlap with regulatory requirements placed upon other agencies.

It also appears that Existing Requirements and Commitments from the NMFS' final OCAP biological opinion on long-term operations of the Central Valley Project and State Water Project (NMFS 2009) are being combined with mitigation needs under the HEA. Specifically, the Battle Creek Habitat Expansion Actions proposed in the DHEP are part of the reasonable and prudent alternative of NMFS' final OCAP biological opinion. These actions fall under the Existing Requirements and Commitments restriction in section 3.1 of the HEA.

FED2-8

Section 6.2.3 (Limiting Factors). Two of the limiting factors identified in this section (*i.e.*, lack of temporal or spatial segregation of spawning spring-run and fall-run fish, and straying of hatchery fish) are potentially serious enough to render the contribution of the Lower Yuba River actions to the HET for spring-run Chinook salmon as smaller than estimated, or as not

FED2-9

1 The Battle Creek Phase 2 funding contribution would contribute to habitat for an additional 387 adult spring-run Chinook. The Antelope Creek Habitat Expansion Action at Paynes Crossing would support an additional 224 adult spring-run Chinook. The Big Chico Creek Habitat Expansion Action at Iron Canyon would support an additional 431 spring-run Chinook.

measureable. These limiting factors deserve further discussion, and, in particular, justification explaining why the Lower Yuba River actions should proceed in the face of these limiting factors.

4
FED2-9
Cont

Section 6.4 (Spawning Habitat Rehabilitation). Both the Sinoro Bar Shotrock Removal project and Deer Creek Gravel Augmentation project will require the cooperation of landowners and continual post-project maintenance by other parties (as was noted). Although these are not limiting factors *per se*, the feasibility of implementing these projects hinges greatly on reaching appropriate agreements with complex entities. Multiple landowners will be impacted by project access, including the ACOE, for which budget constraints and priorities may impact the schedule of meeting the statutory requirements of the NMFS biological opinion on the operation of Daguerre Point Dam and Englebright Dam (Section 6.4.6). The DHEP should map out a more detailed strategy to provide some assurance that these agreements can be attained.

FED2-10

Section 6.6 (Juvenile Rearing Habitat Restoration). In addition to a pilot restoration project, the Service's Anadromous Fish Restoration Program (AFRP) has funded a pre-project assessment that is addressing geomorphic, hydrologic, hydraulic and riparian conditions at different sites. The results of this study are expected to be available in April 2010 (Gary Reedy, SYRCL, personal communication). Recent preliminary results have indicated (1) the Yuba River is so dynamic that single-event substrate restoration actions should not be viewed as permanent (and certainly not maintenance-free), and (2) there are some places with appropriate soil conditions and summer water levels where riparian plantings of cottonwoods would be valuable and have a high likelihood of success. These are scientifically valid points and they differ from what is presented in this section of the DHEP.

FED2-11

It would be optimal to have restoration actions last 10 to 15 years, at the very minimum. The Service is concerned that the Lower Yuba River actions may be short-lived (even returning to baseline within a year of implementation), if not maintained properly. Hopefully, juvenile habitat restoration will have some lasting value with maintenance, through contribution to instream woody material and new establishment of cottonwoods over the long term. A cost/benefit analysis is the key to determining whether it is acceptable to fund restoration projects that may have limited longevity. The issue of action longevity should be discussed in this section.

Conclusion. Although substantial progress has been made in preparing a foundation for decision-making, the Service finds the decision-making process of the DHEP to need further work. As outlined above, the DHEP is not consistent with the HEA, because it is not likely to contribute to a new population of spring-run Chinook, overestimates contribution to the HET, appears to overlap with the regulatory requirements and obligations of other parties, and does not give adequate consideration to in-kind mitigation. We recommend that increased fish passage on the Yuba River be re-examined and that a clear and thorough accounting of potential HET contributions be done on any recommended actions that are shared with other parties. We also recommend that the decision-making process be modified to address the concerns enumerated in this letter.

FED2-12
FED2-13
FED2-14

Comment Letter FED2 (Continued)

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If you have any questions regarding our comments, please contact Alison Willy at (916)414-6534. We look forward to continued involvement in this important process.

Sincerely,


for M. Kathleen Wood
Assistant Field Supervisor

Attachment

cc:

FERC Washington, DC
Liv Imset, HEA Steering Committee
Heidi Rooks, HEA Steering Committee
Paul Kubicek, HEA Steering Committee
Chris Wilkinson, HEA Steering Committee
Brenda Olson, Red Bluff Fish and Wildlife Office
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Ramon Martin, Stockton Fish and Wildlife Office
Mary Lisa Lynch, DFG
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Melanie McFarland, USFS

6

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- U.S. Bureau of Reclamation, Pacific Gas and Electric Company, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and California Department of Fish and Game. 2004. Draft Battle Creek Salmon and Steelhead Restoration Project, Adaptive Management Plan. April 2004. 238pp.
- U.S. Fish and Wildlife Service. 2009. Comments on Draft Oroville Habitat Expansion Agreement Documents, FERC Project No. 2100. U.S. Fish and Wildlife Service, Sacramento, CA.

Responses to Letter FED2 (Kathleen Wood, U.S. Fish and Wildlife Service, February 18, 2010)

FED2-1

The Three-Creek Actions are not considered in the Final HEP. See Master Response 2 regarding the Three-Creek Actions and Master Response 1 regarding contribution to the HET.

Regarding the Lower Yuba River Actions in the Draft HEP, the Steering Committee has obtained independent estimates from Dr. Gregory Pasternack on the amount of available habitat (Pasternack 2010a) and consulted with biologists with local expertise in the watershed to further refine the results of the method used in the Draft HEP. Given the results of these efforts, the Licensees believe that the Lower Yuba River Actions are sufficient to meet the goals of the HEA, specifically the HET (Section 2.2 of the HEA). See Chapter 4 of the Final HEP for additional detail.

FED2-2

Currently, negligible spawning habitat is present in the Englebright Dam Reach of the Lower Yuba River. The Englebright Dam Reach contains large deposits of angular shot rock (Pasternack et al 2010) due to construction of the dam and sloughing of material from canyon slopes in the vicinity of the dam. Since construction of Englebright Dam and the resulting sediment entrainment, there is no opportunity for recruitment of the appropriate rounded alluvial gravels for spawning. Therefore, by creating appropriate spawning conditions in a reach where conditions are prohibitive to spawning, the Licensees will be expanding usable habitat for spring-run Chinook salmon and steelhead.

When the Yuba River is considered as a whole, the watershed is of adequate size and distance from other watersheds to support an independent population according to requirements specified in Lindley et al. (2004). Insufficient data are available to determine whether the Lower Yuba River alone is capable of supporting an independent population; however, the stated objective of the HEA is to *contribute* to the conservation and recovery of the species (Section 2.1 of the HEA), and according to NMFS Approval Criteria (c) to “help support establishment of a geographically separate, self-sustaining population” (Section 4.2.3 of the HEA). The HEA is not intended to establish an independent population on its own. The Licensees believe that the Lower Yuba River can support an independent

population, defined by McElhany et al. (2000) as “any collection of one or more local breeding units whose population dynamics or extinction risk over a 100-year time period are not substantially altered by exchanges of individuals with other populations.”

FED2-3

Fish passage above Shasta and Folsom Dams is addressed in the *Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project* (NMFS 2009b); fish passage actions involving these dams therefore are ineligible under the HEA.

The Steering Committee evaluated fish passage above Englebright Dam on the Yuba River (i.e., the Upper Yuba River Actions) during preparation of the Draft HEP and in the Final HEP. As discussed in response to Comment FED1-69, trap-and-transport actions were not favored primarily due to the experimental nature of trap and transport, cost effectiveness, and timeliness of benefits for spring-run Chinook salmon. Additionally, the HEA was developed as an alternative to fish passage prescriptions above Oroville Dam on the Feather River.

FED2-4

It is not necessary under the HEA that the actions recommended by the Licensees lead to development of an independent, self-sustaining population of spring-run Chinook salmon. Instead, the HEA states that the Licensees actions should *support* establishment of a geographically separate, self-sustaining population of spring-run Chinook salmon and also *support* segregation of fall-run and spring-run Chinook salmon.

The Licensees believe that the recommended actions do indeed support development of an independent spring-run Chinook salmon population (1) by providing sufficient quantity of habitat to support an independent population; (2) by providing habitat with the biological needs of spring-run Chinook salmon in an area not presently used to any great degree by spring-run Chinook salmon; and (3) through the use of a segregation weir by the resource agencies (NMFS, USFWS, and DFG) if determined necessary to segregate fall-run and spring-run Chinook salmon.

FED2-5

See Master Response 1 regarding contribution of the Lower Yuba River Actions to the HET and Chapter 2 of the Final HEP.

FED2-6

The HEA-recommended spawning habitat expansion actions are independent of, and complementary to, the Corps gravel augmentation project. The spawning habitat expansion action at Sinoro Bar involves the removal of shot rock, replacement of the shot rock with gravel, and re-contouring of the streambed to create new spawning habitat for spring-run Chinook salmon. The spawning habitat expansion action at Narrows Gateway involves creation of additional spawning habitat immediately downstream of Sinoro Bar through removal of the armored surface layer of the streambed, replacement of the armored layer with gravel, and recontouring of the streambed. The purpose of these two recommended actions is to create spawning habitat where negligible amounts currently exist.

In contrast, the Corps' gravel augmentation project is designed to provide an annual injection of gravel to compensate for the loss of gravel recruitment caused by Englebright Dam. As described in the *Gravel/Cobble Augmentation Implementation Plan (GAIP) for the Englebright Dam Reach of the Lower Yuba River*, prepared for the Corps by Dr. Gregory Pasternack (Pasternack 2010b), and in the recent *Draft Environmental Assessment for the Lower Yuba River Gravel Augmentation Project, Yuba and Nevada Counties, California* (Corps 2010), the Corps' project involves injection of gravel in the vicinity of the Narrows 1 Powerhouse over the period of a few years. Pasternack (2010b) indicates that implementation of the full plan is designed to erase the current deficit of gravel in the Englebright Dam Reach; however, rehabilitation of Sinoro Bar is beyond the scope of the plan. The Corps' project would likely create new spawning habitat upstream of Sinoro Bar and potentially help to sustain the spawning habitat created downstream by the HEA-recommended actions. However, it is unlikely that the Corps' project would create any new spawning habitat in the vicinity of Sinoro Bar or Narrows Gateway, which are the targets of the HEA-recommended actions.

Thus, in terms of estimating contribution to the HET, there is no overlap between the HEA-recommended actions and the Corps' project. Estimates of contribution to the HET as presented in the Final HEP reflect

contributions for the spawning habitat expansion actions at Sinoro Bar and Narrows Gateway. Any additional contribution that could be achieved by the Corps' project has not been included in these estimates.

FED2-7

The Battle Creek Actions are not considered in the Final HEP. See Master Response 2 regarding the Three-Creek Actions.

FED2-8

The Battle Creek Actions are not considered in the Final HEP. See Master Response 2 regarding the Three-Creek Actions.

FED2-9

See Master Response 4 regarding the optional segregation weir component of the Lower Yuba River Actions.

Straying of hatchery fish into the Yuba River is a potential concern for any project in the Lower or Upper Yuba River. In fact, NMFS has suggested the use of fish from the Feather River Hatchery to seed the Upper Yuba River as part of its proposed reintroduction program. Straying of Feather River Hatchery fish into the Yuba River is a function of hatchery practices outside the scope of the HEA that are likely to be addressed through future management of the hatchery.

FED2-10

The Licensees are committed to follow through with operation and maintenance of the recommended action(s) for the term of their obligation under the HEA (i.e., approximately 50 years). See response to Comment FED1-38 regarding access to the spawning habitat expansion sites, as well as successful coordination efforts with the landowners regarding access from their properties to these sites.

FED2-11

The Licensees have accepted the obligation of ensuring that actions implemented under the HEA are maintained over a 50-year period. Thus, with the help of stream geomorphology experts, the Licensees are planning to design actions that take advantage of natural geomorphic processes and are sustainable over the long term. Additionally, the Licensees are

incorporating operation and maintenance funds into the recommended actions to allow for maintenance activities that may be required following catastrophic events (e.g., channel-changing flood flows).

The Licensees contracted with Dr. Gregory Pasternack to help evaluate and develop conceptual designs for the recommended spawning habitat expansion actions at Sinoro Bar and Narrows Gateway. With appropriate design considerations, Dr. Pasternack considers these actions sustainable (Pasternack 2010a, 2010c).

In relation to developing conceptual designs for juvenile rearing habitat expansion sites, the Licensees benefitted from the work of SYRCL and their contractor (cbec, inc. eco engineering) who have been evaluating concepts for rehabilitating the Lower Yuba River channel. Additionally, the Licensees have involved experts from ICF International to develop conceptual designs for potential juvenile rearing sites, with sustainability being an important objective. (See Appendix L for a description of the juvenile rearing habitat expansion sites.)

Finally, for the optional segregation weir, the Licensees are planning to rely on proven designs in use elsewhere to ensure the protection and longevity of any facility that may be installed seasonally in the Lower Yuba River.

FED2-12

See Master Response 1 regarding contribution to the HET, Master Response 3 regarding eligibility of the Lower Yuba River Actions, Master

Response 5 regarding mitigation for unmitigated impacts on the Feather River, Chapter 4 of the Final HEP, and response to Comment FED 2-2.

FED2-13

Increased fish passage on the Yuba River (i.e., introduction into the North Yuba River) has been re-examined by the Licensees. Scoring of this action and rationales for each score are found in Appendix F of the Final HEP. The spreadsheets that were used by the Steering Committee to calculate the HET are posted to the HEA website (www.sac-basin-hea.com). The reports with Dr. Pasternack's estimates of the contribution to the HET for the habitat expansion actions at Sinoro Bar and Narrows Gateway are included as Appendices H and K of the Final HEP. Additional detail on the calculation method used by the Steering Committee to determine contribution to the HET is found in Chapter 4 of the Final HEP. All parties to the HEA have access to each of these resources, and each party will receive a copy of this Final HEP.

FED2-14

As documented in Appendix C, the Steering Committee consulted with the signatories to the HEA during development of the decision-making process. See responses to comments above and Chapters 2 and 4 of the Final HEP.

Comment Letter STA1 (John McCamman, California Department of Fish and Game, February 10, 2010)



California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
1416 Ninth Street
Sacramento, CA 95814

ARNOLD SCHWARZENEGGER, Governor
John McCamman, Director



February 10, 2010

STA1

Ms. Liv Imset
Senior License Coordinator
Pacific Gas and Electric Company, Power Generation
245 Market Street
San Francisco, California 94105
Mail Code N11C
Post Office Box 770000
San Francisco, California 94177

Ms. Heidi Rooks
Environmental Program Manager
Department of Water Resources
Division of Environmental Services
901 P Street, 4th Floor
Post Office Box 94836
Sacramento, California 95814

Subject: Habitat Expansion Agreement, Draft Habitat Expansion Plan for Central Valley Spring-Run Chinook Salmon and Steelhead Trout

Dear Mss. Imset and Rooks:

Thank you for the opportunity for the Department of Fish and Game (Department) to provide recommendations regarding the subject Habitat Expansion Agreement, Draft Habitat Expansion Plan (HEP), dated November 2009. As described in the Habitat Expansion Agreement (HEA) steering committee letter to the nine signatories, dated October 28, 2008, the HEA was negotiated as an alternative to Federal Power Act (ACT) fish passage prescriptions as part of the Federal Energy Regulatory Commission (FERC) relicensing of Oroville, Poe, and Upper North Fork Feather River hydropower projects located on the Feather River. The overall goal of the HEA is to expand the amount of habitat with physical characteristics necessary to support spawning, rearing, and adult holding for an increase of between 2,000 and 3,000 spawning Spring-run Chinook salmon in the Sacramento River Basin.

As one of the nine signatories, our Department supports the goal of the HEA and recommends funds from the HEA be directed to achieve these goals as soon as possible. The HEP identified two groupings of habitat expansion and enhancement actions that each meet the goals, terms and conditions of the HEA: 1) the Lower Yuba River Habitat Expansion Actions (Lower Yuba River Actions); and 2) the

Conserving California's Wildlife Since 1870

Ms. Liv Imset and Ms. Heidi Rooks
February 10, 2010
Page Two

Battle Creek, Big Chico Creek, and Antelope Creek Habitat Expansion Actions (Three Creek Actions). The HEP concludes that one of these two groups of actions should be implemented under the HEA.

The Department agrees each of the groups of actions identified in the HEP meets the goals, terms, and conditions of the HEA. Furthermore, the Department believes that the Three Creek Actions is the preferred group of actions to meet the HEA goals. All of the actions in this group are essentially shovel-ready projects that could use HEA money to leverage other funds to begin construction and provide immediate and permanent access to habitat for the target species (Spring-run Chinook salmon and Central Valley steelhead trout) as identified in the HEA.

Throughout the development of the HEA there has been concern regarding the eligibility of funding Phase 2 of the Battle Creek Salmon and Steelhead Restoration Project (Project), one of the actions identified in the Three Creek Actions, based on Section 3.1 of the HEA. Section 3.1 provides language indicating eligible habitat expansion actions must result "in a net expansion of habitat over any existing requirements or commitments". Further the National Marine Fisheries Service questions the eligibility of the Project in a letter to the Department of Water Resources (DWR) and Pacific Gas and Electric Company, dated November 10, 2009, stating that "All phases of the Battle Creek Salmon and Steelhead Restoration Program are part of the Reasonable and Prudent Alternative (RPA) included in the Biological Opinion (BO) on the long term operations of the Central Valley Project and State Water Project (OCAP BO)".

The OCAP BO Action I.2.6 requires the U.S. Bureau of Reclamation and DWR to direct discretionary funds to the Project. However, as the HEP clearly points out, this statement does not ensure that such discretionary funds will be available, does not provide an alternative funding source, and therefore does not secure enough funding to complete Phase 2 of the Project. Because of these uncertainties our Department believes Phase 2 of the Project clearly meets the eligibility requirements for the HEA, and funding the Three Creek Actions group will provide expeditious permanent habitat in three separate Sacramento Valley tributaries for both target species.

The Department believes the Lower Yuba River Actions have elements that are desirable and should be pursued. These include spawning habitat rehabilitation of the Englebright Dam Reach, floodplain and riparian habitat restoration, and fish passage improvements at Daguerre Point Dam. However, we do have concerns with some of the proposed actions such as the installation of a segregation weir.

STA1-1

STA1-2

STA1-3

STA1-4

Comment Letter STA1 (Continued)

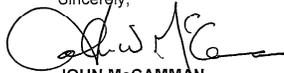
Ms. Liv Imset and Ms. Heidi Rooks
February 10, 2010
Page Three

Over summer holding patterns of Spring-run Chinook salmon in the Lower Yuba River have not been clearly delineated. Without understanding of these holding patterns, the operation of a segregation weir could reduce available spawning habitat for those fish holding downstream of the proposed weir. This is potentially in conflict with overall HEA objectives. STA1-4
Cont'd

The Department will continue to work with the various State and federal agencies, corporations, and non-government organizations in the effort to recover Spring-run Chinook salmon and steelhead trout populations in the lower Yuba River.

If you have questions regarding our recommendations, please contact Staff Environmental Scientist Mike Berry at (530) 225-2131 or e-mail mberry@dfg.ca.gov.

Sincerely,



JOHN McCAMMAN
Director

Attachments

cc: Mr. Mike Berry
Staff Environmental Scientist
Department of Fish and Game, Northern Region
601 Locust Street
Redding, California 96001

Mr. Mark Stopher
Acting Regional Manager
Department of Fish and Game, Northern Region
601 Locust Street
Redding, California 96001

Mr. Kent Smith
Acting Regional Manager
Department of Fish and Game, North Central Region
1701 Nimbus Road
Rancho Cordova, California 95670

Ms. Liv Imset and Ms. Heidi Rooks
February 10, 2010
Page Four

cc: Mr. Chris Wilkinson
Senior Environmental Scientist
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901 P Street, 4th Floor
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Sacramento, California 95814

Mr. Paul Kubicek
Aquatic Biology Consulting Biologist
Pacific Gas and Electric Company, Power Generation
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Mail Code N11C
Post Office Box 77000
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Mr. Steve A. Edmondson
Northern California Habitat Supervisor
NMFS/SWO22
777 Sonoma Avenue, Suite 325
Santa Rosa, California 95404

ec: Mss. Kathy Hill, Donna Cobb, Tracy McReynolds, Colleen Harvey-Arrison,
Tricia Bratcher and MaryLisa Lynch
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khill@dfg.ca.gov, dcobb@dfg.ca.gov, tmcreynolds@dfg.ca.gov,
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Responses to Letter STA1 (John McCamman, California Department of Fish and Game, February 10, 2010)

STA1-1

Comment noted.

STA1-2

Comment noted. See Master Response 2 related to the Three-Creek Actions.

STA1-3

Comment noted. See Master Response 2 related to the Three-Creek Actions.

STA1-4

See Master Response 4 related to the optional segregation weir.

Comment Letter LOC1 (John Waskiewicz, Yuba County Resource Conservation District, February 15, 2010)

From: FlyingRancher@aol.com LOC1
To: hea@water.ca.gov
cc: flyingrancher@aol.com, Larry.Lloyd@ca.nacdn.net
[net.](#)
Subject: Lower Yuba River Comments
Date: Monday, February 15, 2010 7:49:51 PM

Dear Chief of Environmental Services, DWR

I am writing to you on behalf of the Yuba County Resource Conservation District. Our Board of Directors would like you to know that we support the HEA Central Valley Spring Chinook Salmon and Steelhead Draft for the Lower Yuba River.

LOC1-1

Our Resource Conservation District has been involved for a number of years in Watershed and habitat issues on the Yuba River, particularly in the stretch just below Englebright Dam and around Deer Creek. We believe that the Physical habitat enhancements proposed on the Yuba is the most cost efficient method for increasing salmon and steelhead spawning and holding habitat.

Our Resource Conservation District looks forward to working with you and your department in the future, if there is any further assistance we can offer please don't hesitate to contact me at the above email or phone, (5306399980)

Sincerely, John Waskiewicz
Chair, Yuba County RCD Board of Directors

Response to Letter LOC1 (John Waskiewicz, Yuba County Resource Conservation District, February 15, 2010)

LOC1-1

Your comment is noted in support of the Lower Yuba River Actions.

Comment Letter LOC2 (William J. Bennett, High Sierra Resource Conservation & Development Area, February 17, 2010)



HIGH SIERRA RESOURCE CONSERVATION & DEVELOPMENT AREA
251 AUBURN RAVINE ROAD, SUITE 105, AUBURN, CALIFORNIA 95603 (530) 823-5687

LOC2

February 17, 2010

To Whom It May Concern:

This letter is being sent to support the HEA Central Valley Spring Run Chinook Salmon and Steelhead draft. We support the proposed selection of the Lower Yuba River for the \$20 million in funding.

The High Sierra Resource Conservation and Development Council is involved in activities supporting the proper management and conservation of our natural resource base in Yuba County through working with the Yuba Resource Conservation District and the Yuba River Watershed Protection and Fire Safe Council.

We believe physical habitat enhancements along the Lower Yuba River starting in the Deer Creek area, and then down river of the watershed would significantly improve the spawning and holding habitat, while being the most cost effective action in our opinion.

The local community has been actively working on this project for over six years and we feel they are ready for implementation. We therefore request that the Lower Yuba River Actions be favorably considered for funding by the National Marine Fisheries Service.

LOC2-1

Sincerely,

/S/

William J. Bennett
President

Response to Letter LOC2 (William J. Bennett, High Sierra Resource Conservation & Development Area, February 17, 2010)

LOC2-1

Your comment is noted in support of the Lower Yuba River Actions.

Comment Letter LOC3 (Kelly Sackheim, KC Hyro, February 18, 2010)

LOC3



February 18, 2010

Director Hydro Licensing, Power Generation
Pacific Gas and Electric Company
P.O. Box 770000
San Francisco, CA 94177

Chief, Division of Environmental Services
Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

*submitted via e-mail to hea@water.ca.gov
No Hard Copy Follows*

Re: Comments on Draft Habitat Expansion Plan for Central Valley Spring-Run Chinook
Salmon and California Central Valley Steelhead

Dear Licensees of FERC Project Nos. 1962, 2100, 2105, and 2107:

KCLLC, a collaboration of Davis Hydro LLC and Sackheim Consulting, has reviewed
the subject document, and offers the following comments for consideration by the
Licensees for incorporation into the final Habitat Expansion Plan (HEP).

KCLLC understands that the Licensees expect to select and propose one of the two
groups of recommended actions described in the HEP for approval by the National
Marine Fisheries Service for implementation to comply with the Licensees
responsibilities under the Habitat Expansion Agreement (HEA) that was created to
complement licensed operations of the Oroville, Poe, Upper North Fork Feather River,
and Rock Creek-Cresta hydropower projects, all located on the Feather River. It is
understood that this program is anticipated to provide greater gains for the target species
beyond project boundaries through identification, evaluation, selection, and
implementation of the most promising and cost-effective actions.

LOC3-1

Licensees of FERC Project Nos. 1962, 2100, 2105, and 2107
Re: Comments on Draft Habitat Expansion Plan for Central Valley Spring-Run Chinook Salmon and
California Central Valley Steelhead
February 18, 2010
Page 2

KC LLC offers its comments in this letter in support of the Licensees reaching the
following conclusions:

1. Both groups of recommended actions described in the HEP would contribute to reaching the Habitat Expansion Threshold (HET) specified in the HEA.
2. At least some of the Three-Creek Actions, based on the identified contribution to habitat expansion, could be selected to mitigate for any presently unmitigated impacts to fish species in the Sacramento River Basin, including those believed to be caused by the existence of the P-606 Kilarc Hydroelectric Development on Old Cow Creek. Consequently, given that there is now an adequate alternative available to maintain the Kilarc facilities in place, funds for the removal of the Kilarc facility would beneficially be allocated instead to implementation of the Three-Creek Actions.

LOC3-1
cont'd

KC LLC notes that the Three-Creek Actions identified in the HEA for Feather River impacts involve three totally discrete actions that may be implemented independently, while the Lower Yuba River Actions would involve an integrated program estimated to achieve a nearly 50% greater contribution to the HET. For these reasons, it would appear sensible to apply the available HEA funding to the integrated, more effective program, and seek alternative funding for the individual Three-Creek Actions.

KC LLC further notes that construction of the Segregation Weir proposed as part of the Lower Yuba River Actions would not occur unless and until there was evidence of its necessity and until its use was supported by the resource agencies and other stakeholders.

Funding earmarked for the Segregation Weir would not be utilized for some time, and could be allocated to other more beneficial programs, similar to the P-606 dismantling fund that is already being drawn down by a protracted and contentious hydropower license surrender process. KC LLC proposes that P-606 funds be utilized immediately for projects that have already been determined to be beneficial to fish and habitat. Additional funds can be generated by hydropower operations for on-going P-606 studies, and eventual demolition of P-606 facilities, should such be deemed warranted, can be funded from new sources as they emerge.

Comment Letter LOC3 (Continued)

Licenses of FERC Project Nos. 1962, 2100, 2105, and 2107
Re: Comments on Draft Habitat Expansion Plan for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead
February 18, 2010
Page 3

The HEA serves as off-site mitigation for the Feather River projects, where a variety of actions are considered eligible for inclusion in the HEP. KC LLC is striving for a similar approach to maximize habitat enhancement as the P-606 license is surrendered, specifying as in the Feather River HEA, "Actions identified in other venues, including unfunded actions, are acceptable for consideration, provided implementation results in a net expansion of habitat over any existing requirements and commitments."

Whether or not the Lower Yuba River Actions are selected for implementation with the HEA funding, P-606 dismantling funds could be re-directed to unmet needs identified under the Three-Creek Actions.

Individually, the Big Chico Creek and Antelope Creek Actions represent relatively "shovel-ready," cost-effective, and well supported actions, that would complement a number of restoration efforts that are ongoing by others in these watersheds. The combined estimated cost of \$3.7 million could be covered entirely by the P-606 dismantling funds, with immediate benefits.

The first element of the Three-Creek Actions provides partial funding for implementation of Phase 2 of an existing Restoration Project for which funding would still be inadequate, even including approximately \$12 million identified by California Department of Fish and Game (CDFG) that may be obligated if additional funds can be identified to complete Phase 2. Funding of the Three-Creek Actions under the HEA, including \$16.9 million for Battle Creek Habitat Expansion Action, would still fail to meet the total estimated cost estimate of \$46.3 million for Phase 2. Funds earmarked for dismantling of the P-606 Kilarc facilities, which benefit has yet to be specifically estimated, could serve to help to bridge the remaining gap and secure funding for Phase 2 in its entirety,

In summary, KC LLC supports the overall biological goal to expand habitat with the physical characteristics necessary to support spawning, rearing, and adult holding of spring-run Chinook salmon and steelhead in the Sacramento River Basin as a contribution to the conservation and recovery of these species. KC LLC recognizes that the cost of the projects identified exceeds the amount of funds available under the Feather

LOC3-1
cont'd

5096 Cocoa Palm Way
Fair Oaks, CA 95628
www.kilarc.info
KC Hydro
fax: 916/880-5597
ph: 916/962-2271

Licenses of FERC Project Nos. 1962, 2100, 2105, and 2107
Re: Comments on Draft Habitat Expansion Plan for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead
February 18, 2010
Page 4

River HEA. The projects are well-developed and justified, and could benefit from P-606 funding earmarked for the same goals, if the superior mitigation within the Sacramento River Basin were approved, notwithstanding that projects would be implemented outside the tributary Cow Creek Watershed. A comprehensive approach, directing all available funding to the best projects, will be most effective in achieving the goal of conservation and recovery of species.

Sincerely,

Kelly W. Sackheim, Principal
KC Hydro, a partnership of Davis Hydro LLC and Sackheim Consulting

LOC3-1
cont'd

5096 Cocoa Palm Way
Fair Oaks, CA 95628
www.kilarc.info
KC Hydro
fax: 916/880-5597
ph: 916/962-2271

Response to Letter LOC3 (Kelly Sackheim, KC Hyro, February 18, 2010)

LOC3-1

Comment noted. See Master Response 2 regarding the Three-Creek Actions. Decommissioning of the Kilarc-Cow Creek Hydroelectric Project is outside the purview of the HEA.

Comment Letter LOC4 (John Waskiewicz, Yuba County Resource Conservation District, February 18, 2010)

LOC4



Yuba County Resource Conservation District
1511 Suite B, Butte House Road, Yuba City, CA 95993 (530) 674-1461 ext.130

February 18, 2010

Director Hydro Licensing, Power Generation
Pacific Gas and Electric Company
P.O. Box 770000

San Francisco, CA 94177
Chief, Division of Environmental Services
Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

Submitted via e-mail to hea@water.ca.gov
No Hard Copy Follows

Re: Comments on Draft Habitat Expansion Plan for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead

Dear Licensees of FERC Project Nos. 1962, 2100, 2105, and 2107:

I am writing to you on behalf of the Yuba County Resource Conservation District. Our Board of Directors would like you to know that we support the HEA Central Valley Spring Chinook Salmon and Steelhead Draft for the Lower Yuba River for the following reasons.

- 1. The first of the three actions has been the subject of years of research and is ready for implementation. Yuba County Resource Conservation District (YCRCD) has lead the development of a site-specific proposal to remove the shot rock as the first step in rehabilitation, that was deemed appropriate based on the results of the U.C. Davis studies led by geomorphologist Greg Pasternack.
2. The estimated contribution to the Habitat Expansion Threshold (HET) for the Lower Yuba River Actions is the highest of all of the actions considered.
3. These actions appear to be the most cost effective, according to the draft HEP, and additional funding may also be made available, if necessary, from PG&E's Narrows Project mitigation fund, grants identified by the USFWS previously but then deemed premature, and/or grants administered by the Sierra Nevada Conservancy for which YCRCD has applied twice and been encouraged to re-apply (after the first application was deemed premature and the second

LOC4-1

application was never considered due to the state budget crisis). The Licensees note that they propose to continue working with the signatories and active watershed groups who have been considering these actions for a number of years, including the YCRCD and other participants in the Lower Yuba River Technical Working Group (LYRTWG).

- 4. The YCRCD would be a willing landowner if the Stewardship Council were to select it as the recipient of the property upstream of lower Deer Creek, and would continue to support ongoing operations and maintenance of the site for habitat benefits.
5. The Lower Yuba River Actions could be implemented within a 5-year time frame, with a benefit to spring-run Chinook salmon realized within 10 years – when time, truly, is of the essence.
6. If the Three-Creeks Actions were selected, \$16.9 million would be earmarked for the \$46.3 million Phase 2 of the Battle Creek action, while the balance of necessary funding has not been identified and "Phase 2 will not be implemented unless and until funding is secured" – thus, a majority of the HEA funding could remain undisbursed for an indefinite period of time while the balance of funds are secured or another project is identified.

LOC4-1
Cont'd

Our Resource Conservation District looks forward to working with you and you department in the future, if there is any further assistance we can offer please don't hesitate to contact me at the above email or phone, (530-639-9980)

Sincerely,

John Waskiewicz
Chair, Yuba County RCD Board of Directors

Responses to Letter LOC4 (John Waskiewicz, Yuba County Resource Conservation District, February 18, 2010)

LOC4-1

1. Your comment is noted in support of the Lower Yuba River Actions.
2. Your comment is noted in support of the Lower Yuba River Actions.
3. The HEA actions in the Lower Yuba River would be fully funded. The funds noted could be used by others for complementary actions.
4. Comment noted. The Stewardship Council Lands are outside the purview of the HEA.
5. Comment noted.
6. See Master Response 2 regarding the Three-Creek Actions.

Comment Letter NGO1 (Robert Baiocchi, California Fisheries and Water Unlimited, January 19, 2010)

January 19, 2010	NGO1	<p>areas above the dams. I was exposed to the historic significant salmon runs because I was born in 1931 among Italian commercial salmon fishermen in San Francisco. Unfortunately because of the lack of enforcement and adequate mitigation measures by the State of California and the federal government the commercial fishing fleet of the San Francisco area has been harmed and damaged because of the significant losses of salmon populations.</p>	NGO1-4 Cont'd
<p>Chief Heidi Rooks et al Department of Water Resources Habitat Expansion Agreement et al</p>			
<p>Re: Comments Regarding the Draft Habitat Expansion Agreement and Habitat Expansion Plan Committee by the California Fisheries and Water Unlimited</p>			
Chief Rooks:			
<p>Please place the California Fisheries and Water Unlimited on the mailing list for the Draft Habitat Expansion Plan and all submittals. Robert J Baiocchi is the president of the California Fisheries and Water Unlimited, a California Non-Profit Corporation. His e-mail address is enclosed. His background is enclosed.</p>	NGO1-1	<p>4. Spring-run salmon were exterminated in the San Joaquin River watershed by water and hydropower projects because their historic spawning and rearing areas were cut over by the dams and very poor flow conditions. The responsible state and federal government overlooked the extermination of the San Joaquin River watershed salmon fishery because of politics.</p>	NGO1-5
<p>The Habitat Expansion Agreement for the Sacramento River has some major significant discrepancies as follows:</p>			
<p>1. I was an interested party to the Department of Water Resources (DWR), Pacific Gas and Electric Company (PG&E), State Water Contractors, CDFG, and a few NGOs prevented the needed Spring-run Chinook Salmon and Steelhead Restoration Project that was recommended by the US NOAA Fisheries on the North Fork Feather River and also the Middle Fork Feather River above Oroville Dam. Clearly the issues for DWR, PG&E, and the State Water Contractors was the cost of mitigating the damages these parties caused from Oroville Dam and PG&E dams to the presently endangered spring-run salmon and threatened Steelhead. At that time I represented the California Salmon and Steelhead Association. I now represent the California Fisheries and Water Unlimited.</p>	NGO1-2	<p>5. The Habitat Expansion Agreement Committee is made of the California Department of Water Resources (DWR) and the Pacific Gas and Electric Company (PG&E). Both CDWR and PG&E have self-serving conflicts of interest to save money and not mitigate for the losses of spring-run salmon species and also steelhead species that were damaged by their projects. I reference you to the proposed mitigation measures for the restoration of endangered spring-run salmon and threatened steelhead trout developed by the US NOAA Fisheries for the North Fork Feather River (Truck and Haul). DWR; PG&E; State Water Contractors; CDFG, and a few NGO's prevented that restoration project from being implemented for self-serving reasons.</p>	NGO1-6
<p>2. The Habitat Expansion Plan limits mitigation of pre-project spring-run Chinook salmon to 2,000 to 3,000 adults. That number of spring-run salmon to be mitigated in the Habitat Expansion Agreement is unreasonable and not in the public interest, and does not reflect the significant number of spring-run salmon that were damaged and harmed by dams in the Sacramento River watershed. Correct that discrepancy.</p>	NGO1-3	<p>6. PG&E hydro dams on the North Fork Feather River prior to the construction of Oroville Dam adversely affected and damaged the <u>spring-run salmon</u> spawning and rearing habitat: above Big Bend Dam in the NFFR; above Poe Dam in the NFFR; above Cresta Dam in the NFFR; above Rock Creek Dam in the NFFR and also in the East Branch NFFR above Rock Creek Dam; and above Canyon Dam in the NFFR.</p>	NGO1-7
<p>3. Most likely adult spring-run salmon exceeded 100,000s of thousands of salmon in the Sacramento River watershed before the Shasta Dam, Oroville Dam; Bullards Bar Dam; and other dams were constructed and cut off their historic spawning and rearing habitat</p>	NGO1-4	<p>7. PG&E hydro dams on the North Fork Feather River prior to the construction of Oroville Dam adversely affected and damaged the <u>steelhead trout</u> spawning and rearing habitat: above Big Bend Dam in the NFFR; above Poe Dam in the NFFR; above Cresta Dam in the NFFR; above Rock Creek Dam in the NFFR and also the East Branch NFFR above Rock Creek Dam; and above Canyon Dam in the NFFR.</p>	NGO1-8
		<p>8. The construction of Oroville Dam by CDWR prevented the upstream migration of adult spring-run salmon and steelhead trout to their historic spawning and rearing areas above Oroville Dam in the North</p>	NGO1-9

Comment Letter NGO1 (Continued)

<p>Fork Feather River watershed and Middle Fork Feather River watershed. The Feather River Salmon and Steelhead Hatchery has never mitigated for the losses to pre-project spring-run salmon.</p>	<p>NGO1-9 Cont'd</p>	<p>(D) Below Shasta Dam; Sacramento River (E) Below Englebright Dam; Yuba River (F) Above Englebright Dam; Yuba River (G) Below Bullards Bar Dam; North Yuba River (H) Above New Bullards Bar Dam; North Yuba River; (I) Below Folsom Dam; American River Watershed (J) Above Folsom Dam; American River Watershed (K) Bear River; (L) Butte Creek; (M) Big Chico Creek; (N) Deer Creek; (O) Mill Creek; (P) Battle Creek; (Q) Bear Creek; (R) Cow Creek; (S) Clear Creel; (T) Cottonwood Creek; (U) Paynes Creek; (V) Antelope Creek; (W) Elder Creek (X) Thomes Creek (Y) Stony Creek (Z) Auburn Ravine</p>	<p>NGO1-13 Cont'd</p>
<p>9. Some of the losses to juvenile spring-run salmon and steelhead trout in the Sacramento River watershed were caused at DWR's State Pumps in the Bay Delta Estuary when juvenile fish migrate through the Bay Delta Estuary to the Pacific Ocean. 22 million striped bass, salmon, and steelhead trout were document by DWR lost at the State Pumps. That number does not include the length of time the State Pumps was operating and it is a very low number of fish being damaged and lost. Consequently the Habitat Expansion Agreement (HEA) is deficient because the Agreement failed to take into consideration the losses to juvenile endangered spring-run salmon and juvenile threatened steelhead trout at the State Pumps. A glaring conflict of interest by DWR as a member of the Committee controlling the Habitat Expansion Plan</p>	<p>NGO1-10</p>		
<p>10. PG&E's unlicensed and unmitigated Miocene Dam Hydro Project on the West Branch Feather River prevented the upstream migration of spring-run salmon and steelhead trout to their historic spawning and rearing areas in the West Branch Feather River before the construction of Oroville Dam because PG&E does not release or is not required to release daily year round flows from the Miocene Dam. Today the West Branch Feather River from the Miocene Dam to Oroville Reservoir is dewatered because of the greed of PG&E to not provide water for the river to satisfy the operation of their small hydropower projects associated with the Miocene Dam. A glaring conflict of interest by PG&E as a member of the Committee controlling the Habitat Expansion Plan.</p>	<p>NGO1-11</p>	<p>13. The California Fish and Water Unlimited recommends a bare minimum of 100,000 adult spring-run salmon are mitigated under the Habitat Expansion Agreement for the Sacramento River Watershed, which includes their pre-project spawning and rearing areas above Shasta Dam; above Oroville Dam; above Englebright Dam; above Bullards Bar Dam; above Folsom Dam and all other tributaries to the Sacramento River.</p>	<p>NGO1-14</p>
<p>11. The Habitat Expansion Agreement does not provide a specific number of adult steelhead to be mitigated in the Sacramento River watershed. As a starter I recommend a minimum of 50,000 adult steelhead, which includes their pre-project spawning, and rearing areas above Shasta Dam; above Oroville Dam; above Englebright Dam; above Bullards Bar Dam; above Folsom Dam and all other tributaries to the Sacramento River. i.e. Auburn Ravine. Correct this discrepancy.</p>	<p>NGO1-12</p>	<p>14. Spring-run Chinook salmon species are listed as endangered under the federal Endangered Species Act. All dam owners have an obligation to mitigate for losses to endangered spring-run salmon above their dams. That includes DWR and PG&E. All dam owners have the duty and responsibility to comply with the provisions of the federal Endangered Species Act.</p>	<p>NGO1-15</p>
<p>12. What are the projected number of steelhead that will be mitigated in the Habitat Expansion Plan for the following rivers and streams? (A) Below Oroville Dam; Feather River (B) Above Oroville Dam; NFFR; WBFW; MFFR (C) Above Shasta Dam; McCloud; Pit; Upper Sacramento et al</p>	<p>NGO1-13</p>	<p>15. Steelhead trout species are listed as threatened under the federal Endangered Species Act. All dam owners have an obligation to mitigate for losses to threatened steelhead trout above their dams. That includes DWR and PG&E. All dam owners have the duty and responsibility to comply with the provisions of the federal Endangered Species Act.</p>	<p>NGO1-16</p>

Comment Letter NGO1 (Continued)

<p>16. The US NOAA Fisheries has the duty and responsibility to enforce the federal Endangered Species Act and protect and mitigate for all losses of endangered spring-run salmon and threatened steelhead trout caused by the construction and operation of all dams and diversions in the Sacramento River watershed.</p>	<p>NGO1-17</p>	<p>to justify the terms and conditions of the Agreement pursuant to NEPA.</p>	<p>NGO1-24 Cont'd</p>
<p>17. There has been the "taking" of endangered salmon in the Sacramento River watershed. All dam owners must be required by the US NOAA Fisheries to acquire "a take permit" that mitigates for all damages and harm to spring-run salmon and their habitat.</p>	<p>NGO1-18</p>	<p>24. American Rivers who signed the Habitat Expansion Agreement did not represent the interest of the California Fisheries and Water Unlimited and most likely many other NGOs.</p>	<p>NGO1-25</p>
<p>18. There has been the "taking" of threatened steelhead in the Sacramento River watershed. All dam owners must be required by the US NOAA Fisheries to acquire "a take permit" that mitigates all damages and harm to spring-run salmon and their habitat.</p>	<p>NGO1-19</p>	<p>25. The State Water Contractor who signed the Habitat Expansion Agreement did not represent the interest of the California Fisheries and Water Unlimited. The interest of the State Water Contractors is self-serving.</p>	<p>NGO1-26</p>
<p>19. The Habitat Expansion Agreement was not subject to public review and comments by the public and was agreed to privately and politically among state and federal agencies and one (1) NGO. A NEPQA and CEQA document that supported the terms and conditions in the Habitat Expansion Agreement were not prepared with full public participation and opportunity for comments.</p>	<p>NGO1-20</p>	<p>The California Fish and Water Unlimited is formally requesting a combined NEPA (EIS) and CEQA (EIR) document is prepared for the draft Habitat Expansion Plan before it is finalized. Said combined draft EIS and EIR must have wide spread public distribution in the greater Sacramento River Watershed for public review and participation. I request a copy of the draft EIS/EIR document for my review and comment.</p>	<p>NGO1-27</p>
<p>20. There are several federal and state agencies that signed the Habitat Expansion Agreement without providing public notice to the public using their agency public review and participation processes before the agreement was signed. Those agencies were: (a) CDWR; (b) PG&E; (c) US NOAA Fisheries; (d) US Fish and Wildlife Service; (e) California Department of Fish and Game; (f) US Forest Service; and (g) State Water Resources Control Board (Art Baggett Jr.).</p>	<p>NGO1-21</p>	<p>The California Fish and Water Unlimited is formally requesting the specific reasons why the US NOAA Fisheries; US Fish and Wildlife Service; and the California Department of Fish and Game are not members of the Habitat Expansion Agreement Committee. All three of these state and federal agencies have a duty and responsibility to protect endangered spring-run salmon and steelhead trout species and their habitat of the Sacramento River watershed.</p>	<p>NGO1-28</p>
<p>21. Art Baggett Jr. of the State Water Resources Control Board signed the Habitat Expansion Agreement without the SWRCB holding a hearing to receive evidence, testimony, and public comments whether the terms and condition of the Habitat Expansion Agreement were in compliance with the state statutes and also were reasonable considering the state of anadromous fisheries in California.</p>	<p>NGO1-22</p>	<p>The California Fish and Water Unlimited is formally requesting a signed copy of the Habitat Expansion Agreement from you. Please forward said agreement electronically to me. See attachment (HEA).</p>	<p>NGO1-29</p>
<p>22. Three (3) state agencies signed the Habitat Expansion Agreement without preparing a CEQA document for public review and comment to justify the terms and conditions of the Agreement pursuant to the California Environmental Quality Act and its Guidelines.</p>	<p>NGO1-23</p>	<p>The California Fish and Water Unlimited is formally requesting the opportunity to review the draft Habitat Expansion Plan at this time and also in the future. Forward the draft Plan electronically to me. I reference the California Public Information Act Section 6250 et seq. The California Fisheries and Water Unlimited is a non-profit California Corporation. Consequently waive all fees for material forwarded to me</p>	<p>NGO1-30</p>
<p>23. Three (3) federal agencies signed the Habitat Expansion Agreement without preparing a NEPA document for public review and comment</p>	<p>NGO1-24</p>	<p>The California Fish and Water Unlimited is requesting the minutes that are taken of all committee meetings and that all Committee meeting minutes are published on the internet at a specific public website. Forward copies of all committee-meeting minutes held to date. Also forward past and future agendas, and agenda material to me. Also maintain a roll call of the people attending the meetings.</p>	<p>NGO1-31</p>

Comment Letter NGO1 (Continued)

The California Fish and Water Unlimited is also requesting a teleconference system is used so that the public can call in and take part at the committee meetings. Forward the teleconference telephone number to me with the password and also makes it available to the public.

NGO1-32

Develop a mailing list of interested parties such as California licensed anglers and also California fishery organizations for the purpose of forwarding agendas, minutes, material et al.

NGO1-33

I am disabled and cannot travel to Sacramento for Committee meetings. I am also hearing impaired so please use a sound system that assist hearing impaired persons pursuant to California disability statues and regulations. Thank you.

NGO1-34

A written response is requested within 10 days pursuant to the California Public Information Act Section 6250 et seq.

Respectfully

Signed by Robert J, Baiocchi

Robert J. Baiocchi, President,
California Fisheries and Water Unlimited
California Non-Profit Corporation

cc: Mr. Steve Edmondson, Supervisor, US NOAA Fisheries

Interested Parties (California Licensed Anglers)

Responses to Letter NGO1 (Robert Baiocchi, California Fisheries and Water Unlimited, January 19, 2010)

NGO1-1

Comment noted.

NGO1-2

The HEA was developed “as an alternative to the Resource Agencies or other Parties seeking project specific Fish Passage prescriptions or license conditions in the New Project Licenses for the Licensees’ Feather River Hydroelectric Projects” (HEA Section 1.2). The HEA parties (signatories to the HEA) agreed that satisfying the terms of the HEA “(a) fully mitigates for any presently unmitigated impacts due to the blockage of Fish Passage of all fish species caused by the Feather River Hydroelectric Projects; and (b) resolves among the Parties during the term of this Agreement issues related to regulatory conditions for Fish Passage associated with or related to any of the Feather River Hydroelectric Projects in excess of the action(s) contemplated under this Agreement [the HEA]...” (HEA Section 1.2).

Protection, mitigation, and enhancement measures identified in the Settlement Agreement for Licensing of the Oroville Facilities (Oroville Facilities Settlement Agreement) are intended to mitigate other impacts to salmonid production resulting from the Oroville Facilities, FERC Project No. 2100 (Oroville Facilities), as outlined in Chapter 1 of the Final HEP. Other impacts include operations of the Feather River Hatchery. Impacts related to other facilities of the State Water Project (SWP) and projects not part of the SWP are to be handled through other proceedings (e.g., the *Biological and Conference Opinion on the Long-Term Operations, Criteria, and Plan for the Central Valley Water Project and State Water Project* [NMFS 2009b] and other Federal Energy Regulatory Commission [FERC] licenses).

The signatories to the HEA (including PG&E, DWR, NMFS, USFWS, DFG, the U.S. Department of Agriculture Forest Service (Forest Service), the State Water Contractors, Inc., and American Rivers) agreed that habitat to support an estimated net increase of 2,000–3,000 spring-run Chinook salmon within the Sacramento River Basin was an adequate threshold to fully mitigate any presently unmitigated impacts due to the blockage of fish passage caused by the Feather River Hydroelectric Projects (HEA

Section 2.2). (For more information on the HEA as mitigation for unmitigated impacts on the Feather River, refer to Master Response 5.)

During development of the HEA, it was decided that steelhead would benefit from habitat expansion for spring-run Chinook salmon due to similarities in habitat requirements of the two species, and no threshold was assigned to steelhead habitat (HEA Section 2.2). Under the HEP, the HET and ancillary benefits to steelhead will be accomplished via the Lower Yuba River Actions. Other potential actions in streams throughout the Sacramento River Basin were evaluated but did not provide adequate habitat to achieve the goals of the HEA. (See Appendix B in the Final HEP for more information on these potential actions.)

The Licensees and other signatories to the HEA have certain responsibilities and obligations under the Agreement. Unique among the signatories is Mr. Arthur Baggett, Jr., who signed not as a representative of the State Water Resources Control Board (State Water Board) but as an individual making a recommendation to the State Water Board. The State Water Board is not a signatory to the HEA.

Other responsibilities under the HEA include the requirement that the Licensees recommend actions in a Final HEP, following a 90-day comment period on the Draft HEP, at which time NMFS is required to approve or deny the plan (HEA Section 4). The terms of the HEA are not being renegotiated at this time. Once a plan is approved, the Licensees will fully comply with any required environmental regulations and permitting (e.g., California Environmental Quality Act [CEQA] and federal and State Endangered Species Act permits). Protection of listed species beyond the actions in the approved Final HEP will be handled through other proceedings.

NGO1-3

See response to Comment NGO1-2.

NGO1-4

See response to Comment NGO1-2.

NGO1-5

See response to Comment NGO1-2.

NGO1-6

See response to Comment NGO1-2.

NGO1-7

See response to Comment NGO1-2.

NGO1-8

See response to Comment NGO1-2.

NGO1-9

See response to Comment NGO1-2.

NGO1-10

See response to Comment NGO1-2.

NGO1-11

See response to Comment NGO1-2.

NGO1-12

See response to Comment NGO1-2.

NGO1-13

See response to Comment NGO1-2.

NGO1-14

See response to Comment NGO1-2.

NGO1-15

See response to Comment NGO1-2.

NGO1-16

See response to Comment NGO1-2.

NGO1-17

See response to Comment NGO1-2.

NGO1-18

See response to Comment NGO1-2.

NGO1-19

See response to Comment NGO1-2.

NGO1-20

See response to Comment NGO1-2.

NGO1-21

See response to Comment NGO1-2.

NGO1-22

See response to Comment NGO1-2.

NGO1-23

See response to Comment NGO1-2.

NGO1-24

See response to Comment NGO1-2.

NGO1-25

See response to Comment NGO1-2.

NGO1-26

See response to Comment NGO1-2.

NGO1-27

The HEP itself does not constitute a “project” under the guidelines of CEQA and the National Environmental Policy Act. Once a final plan is approved, all necessary permitting and compliance documents will be completed by the Licensees prior to beginning implementation of any of the actions contained in the plan.

NGO1-28

The HEA specifies that the Licensees (i.e., DWR and PG&E) are responsible for recommending the actions included in the Final HEP (Section 4). According to the HEA, which is legally binding, NMFS is the approving authority, and DFG and USFWS have been consulted throughout the process.

NGO1-29

An electronic copy of the HEA was forwarded to Robert Baiocchi with California Fish and Water Unlimited, as requested.

NGO1-30

A paper copy of the Draft HEP was forwarded to Robert Baiocchi with California Fish and Water Unlimited. An electronic copy of the Draft HEP is available on the HEA website at <http://www.sac-basin-hea.com/Draft%20Habitat%20Expansion%20Plan/Forms/AllItems.aspx>.

NGO1-31

Minutes that were subject to the Public Records Act were forwarded to Robert Baiocchi, as requested.

NGO1-32

A teleconference number has been, and will continue to be, provided to signatories, stakeholders, and affected third parties, as well as other interested parties, at all public meetings.

NGO1-33

All interested parties have been added to the HEA mailing list upon their request. A website is also available to the public at www.sac-basin-hea.com.

NGO1-34

Accommodations compliant with the Americans with Disabilities Act of 1990 will be provided for any future public meetings.

Comment Letter NGO2 (Chris Shutes, California Sportfishing Protection Alliance, January 22, 2010)

NGO2



California Sportfishing Protection Alliance
"An Advocate for Fisheries, Habitat and Water Quality"
 Chris Shutes, FERC Projects Director
 1608 Francisco St, Berkeley, CA 94703
 Tel: (510) 421-2405 E-mail: blanca@aloma@msn.com
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January 22, 2010

COMMENTS
Draft Habitat Expansion Plan

Director Hydro Licensing, Power Generation
 Pacific Gas and Electric Company
 P.O. Box 770000
 San Francisco, CA 94177

Chief, Division of Environmental Services
 Department of Water Resources
 P.O. Box 942836
 Sacramento, CA 94236

Via e-mail (HEA@water.ca.gov)

Dear Sir(s) or Madam(s):

The California Sportfishing Protection Alliance respectfully submits these comments on the proposed measures on the draft Habitat Expansion Plan that was released in November, 2009.

1. The proposed actions do not mitigate for the loss of the Feather River salmon and steelhead fisheries upstream of Lake Oroville.

Historically, the Feather River boasted one of the largest salmon and steelhead runs in California's Central Valley. The proposed actions, to either enhance habitat in the Yuba River downstream of a rim dam, or to enhance habitat in two small watersheds (Big Chico and Antelope Creeks) and in a somewhat larger watershed where millions of dollars have already been committed and a project is well underway, does not come close to doing justice to the loss of the upper Feather River anadromous salmonid fisheries.

CSPA has previously commented on the severe inadequacy of the estimated dollar amount of the commitments under the Habitat Expansion Agreement. The goal of creating habitat for 2000-3000 spring-run Chinook is equally penurious. Yet even given these constraints, the proposed projects disregard the extent of the crisis of Central Valley

NGO2-1

salmon and steelhead and the extent of the measures that will be needed to turn around the present descent of these species into oblivion.

Over 90% of the historic freshwater habitat for Central Valley salmonids has been blocked by Central Valley rim dams, of which Lake Oroville is the second largest. The reservoir is the storage linchpin of the State Water Project, which supplies water to locations four hundred miles away. The draft HEP now proposes one or perhaps three niche projects, which spruce up few minor fisheries that have not been completely destroyed by water development. The presumption that this can mitigate for blockage of the Feather River and all the added damage done in moving its water around the state is deficient by orders of magnitude.

2. The proposed actions are not passage projects that will substantially increase the amount and diversity of habitat accessible to spring-run Chinook and Central Valley steelhead.

In order to recover Central Valley salmon and steelhead, these species need to be re-established upstream of rim dams in every major watershed to which passage has been blocked. The Habitat Expansion Plan should support this approach.

The message that is sent by the projects as proposed in the November draft is that safe, contained, and simple solutions will be sufficient to get the job done. They will not.

Any action undertaken to mitigate the loss of the upper Feather River to anadromous fish absolutely must be a passage project past a major rim dam. If not a mitigation in place, it must at least be a mitigation in kind. A fish ladder on Big Chico Creek, as much as it is needed, is simply inappropriate in the context proposed.

3. Priority should be given to actions in the Feather River watershed.

While some reasons have been provided for why hydropower projects on the North Fork Feather make a trap-and-haul program there problematic, we are unaware of good reasons why a trap-and-haul program that would move fish to and from the Middle Fork Feather is not feasible. The presumption should be that this option, which could move fish to over 40 miles of wild and scenic habitat, should be selected unless definitive proof is made that it cannot work. In this regard, it is important to note that the Wild and Scenic River Act does not prohibit structures that are consistent with the values of the Act, such as the promotion of fisheries restoration.

Prioritizing the Middle Fork Feather also fits with the imperative of restoring fish upstream of all major rim dams. It is not simply a question of choosing the best place to start a stand-alone program. It is rather a question of starting at the best time, which is now, and then expanding the first effort throughout the Valley.

NGO2-1
Cont'd

NGO2-2

NGO2-3

Comment Letter NGO2 (Continued)

4. The proposed actions seek to improve remnant habitat rather than re-establish substantial habitat that has been lost to dams.

Improving remnant salmonid habitat fisheries in the Central Valley can at best create boutique fisheries. The appropriate goal is to restore reconnected upper watershed ecosystems, with fish populations that support both extensive sport fisheries and a robust commercial salmon fishery in the ocean.

NGO2-4

5. The proposed actions do not meet the criteria of the HEA because they contemplate actions that should be undertaken as the result of other processes or actions.

The Yuba actions as proposed in the draft HEP should be addressed under a Biological Opinion for the operation of Englebright and Daguerre Dams. PG&E and others are obligated to complete restoration of Battle Creek, which is also mandated by a Biological Opinion for the Operations and Criteria Plan of the State Water Project and Central Valley Project. As suggested by the November 10, 2009 letter from Steve Edmondson of the National Marine Fisheries Service to Ralph Torres and Randal Livingston, these proposed actions should not be considered eligible for inclusion in the Habitat Expansion Plan, and should be withdrawn from consideration in this context.

NGO2-5

Thank you for the opportunity to comment on the draft Habitat Expansion Plan.

Respectfully submitted,



Chris Shutes
FERC Projects Director
California Sportfishing Protection Alliance

Responses to Letter NGO2 (Chris Shutes, California Sportfishing Protection Alliance, January 22, 2010)

NGO2-1

As required by the HEA, the Licensees are responsible for expanding spawning, rearing, and adult holding habitat sufficiently to accommodate an estimated net increase of 2,000–3,000 spring-run Chinook salmon for spawning in the Sacramento River Basin. Under the HEA, the Licensees are not required to mitigate all salmon and steelhead impacts upstream of Lake Oroville. Additional mitigation for impacts to the Feather River is being addressed under other proceedings. See Master Response 5 regarding mitigation for unmitigated impacts on the Feather River and response to Comment NGO1-2.

NGO2-2

See response to Comment NGO2-1.

NGO2-3

The HEA does not specify that priority should be given to actions in the Feather River watershed. As provided for by the HEA, The Licensees' evaluation and selection process has targeted the best opportunities for expansion of habitat for spring-run Chinook salmon and steelhead in the Sacramento River Basin. See response to Comment NGO2-1.

Following an evaluation of the Middle Fork Feather River using the same method as all potential actions that were assessed, the Licensees determined that other more cost-effective and feasible actions could achieve the HET (see Chapter 2 and Appendix B in the Final HEP for more information on the evaluation of potential actions). In addition, the recommended actions would produce benefits that would be realized much sooner than a trap-and-transport program on the Middle Fork Feather River.

NGO2-4

Currently, negligible spawning habitat is present in the Englebright Dam Reach of the Lower Yuba River. The Englebright Dam Reach contains large deposits of angular shot rock (Pasternack et al. 2010) due to construction of the dam and sloughing of material from canyon slopes in the vicinity of the dam. Since construction of Englebright Dam and the resulting sediment entrainment, there is no opportunity for recruitment of

the appropriate rounded alluvial gravels for spawning. Therefore, by creating appropriate spawning conditions in a reach where conditions are prohibitive to spawning, the Licensees will be expanding usable habitat for spring-run Chinook salmon and steelhead.

NGO2-5

See Master Response 3 regarding eligibility of the Lower Yuba River Actions.

Comment Letter NGO3 (W.F. "Zeke" Grader Jr., Pacific Coast Federation of Fishermen's Association, February 12, 2010)

David Bitts
President
Larry Collins
Vice-President
Tom Hart
Secretary
Marilyn Battistella
Treasurer
In Memoriam:
Nathaniel S. Bingham
Harold C. Christensen



W.F. "Zeke" Grader, Jr.
Executive Director
Glen H. Spain
Northwest Regional Director
Vivian Helliwell
Watershed Conservation Director
Duncan MacLean
Salmon Advisor

NGO3

2

Please Respond to:

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12 February 2010

Director Hydro Licensing, Power Generation
Pacific Gas and Electric Company
P.O. Box 770000
San Francisco, CA 94177

Via e-mail (HEA@water.ca.gov)

Chief, Division of Environmental Services
Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

RE: Feather River/Lake Oroville Habitat Expansion Plan

Dear Sir(s) or Madam(s):

The Pacific Coast Federation of Fishermen's Associations (PCFFA) represents working men and women in the West Coast commercial fishing fleet, including California's organized salmon fishermen who depend on salmon production from the Central Valley rivers, including Feather River.

PCFFA respectfully submits these comments on the proposed measures on the draft Habitat Expansion Plan that was released in November, 2009.

1. The proposed actions do not mitigate for the loss of the Feather River salmon and steelhead fisheries upstream of Lake Oroville.

Yoshiyama et al. (2001) provide an historical narrative of the distribution of salmon in the Feather River:
'Salmon originally ascended a considerable distance into the Feather River system, particularly the spring run which spawned in the higher streams and headwaters. They

NGO3-1

went up the West Branch at least to the site of Stirling City (F. Meyer, personal communication, see "Notes"), and also up along the entire length of the North Fork Feather River through the area now covered by Lake Almanor and into the surrounding tributary streams (> 4,200 ft elev.)"

NGO3-1
Cont'd

Historically, the Feather River boasted one of the largest salmon and steelhead runs in California's Central Valley. The proposed actions, to either enhance habitat in the Yuba River downstream of a rim dam, or to enhance habitat in two small watersheds (Big Chico and Antelope Creeks) and in a somewhat larger watershed where millions of dollars have already been committed and a project is well underway, does not come close to doing justice to the loss of the upper Feather River anadromous salmonid fisheries.

Central Valley spring-run Chinook salmon and California Central Valley steelhead have been eliminated or nearly eliminated on several Central Valley rivers. Populations on the Feather River have been heavily impacted by dam construction, and require further protection to prevent losses and changes to their genome. The lack of fish passage has altered the genotype of Central Valley spring-run Chinook salmon due to hybridization with Central Valley fall-run Chinook salmon, and has likely caused alterations in California Central Valley steelhead.

Over 90% of the historic freshwater habitat for Central Valley salmonids has been blocked by Central Valley rim dams, of which Lake Oroville is the second largest. The reservoir is the storage linchpin of the State Water Project, which supplies water to locations four hundred miles away. The actions proposed in the draft HEP are inadequate to meet the 2-3,000 criteria, create any "new self sustaining populations or achieve the agreed upon bargain by providing the same or more habitat than NMF'S section 18 fishway prescription. The presumption that this can mitigate for blockage of the Feather River is deficient by orders of magnitude.

2. The proposed actions are not passage projects that will substantially increase the amount and diversity of habitat accessible to spring-run Chinook and Central Valley steelhead.

In order to recover Central Valley salmon and steelhead, these species need to be re-established upstream of rim dams in every major watershed to which passage has been blocked. The Habitat Expansion Plan should support this approach.

The draft Habitat Expansion Plan is not consistent with NMFS VSP approach or the draft recovery plan. Because of this, it should be considered invalid.

Any action undertaken to mitigate the loss of the upper Feather River to anadromous fish absolutely must be a passage project past a major rim dam. If not a mitigation in place, it must at least be a mitigation in kind. A fish ladder on Big Chico Creek, as much as it is needed, is simply inappropriate in the context proposed.

NGO3-2

3. Priority should be given to actions that provide passage to the Middle Fork of the Feather River and Upper Yuba Fish Passage over Englebright Dam.

Middle Fork
Middle Fork While some reasons have been provided for why hydropower projects on the North Fork Feather make a trap-and-haul program there problematic, we are unaware of good reasons

NGO3-3

Comment Letter NGO3 (Continued)

3

why a trap-and-haul program that would move fish to and from the Middle Fork Feather is not feasible. The presumption should be that this option, which could move fish to over 40 miles of wild and scenic habitat, should be selected unless definitive proof is made that it cannot work. In this regard, it is important to note that the Wild and Scenic River Act does not prohibit structures that are consistent with the values of the Act, such as the promotion of fisheries restoration.

Prioritizing the Middle Fork Feather also fits with the imperative of restoring fish upstream of all major rim dams. It is not simply a question of choosing the best place to start a stand-alone program. It is rather a question of starting at the best time, which is now, and then expanding the first effort throughout the Valley.

Upper Yuba

The Yuba River is the fourth largest river in the Sacramento River Basin. The river provides water for agriculture, domestic use, hydroelectric power generation, and recreation. In addition, the Yuba River downstream from Englebright Dam (lower Yuba River) supports numerous species of fish including Chinook salmon and steelhead. Englebright Reservoir is located on the Yuba River about nine miles downstream of New Bullards Bar Reservoir and about 26 miles east of Marysville. The dam was completed by the California Debris Commission in 1941 as a debris barrier and is now under the jurisdiction of the U.S. Army Corps of Engineers. Englebright Dam impounds the waters of the upper Yuba Rivers (North, Middle and South Yuba rivers), creating Englebright Lake, which serves as the afterbay for New Colgate Powerhouse and the forebay for power generation at the Narrows 1 and Narrows 2 powerhouses.

The Yuba River watershed, composed of the lower mainstem river fed by its upper North, Middle, and South Fork branches and tributary streams, is identified as having historic habitat and populations of spring-run Chinook salmon, fall-run Chinook salmon and steelhead. Both spring-run Chinook salmon and steelhead historically migrated as far as they could into higher elevation habitats before reaching a passage impediment in the North, Middle and South Yuba rivers where they would hold, spawn and rear.

In the North Yuba, there are no apparent natural barriers upstream from New Bullards Bar Reservoir, so Chinook salmon were historically able to ascend a considerable distance. The historic upper limit of migration for spring-run Chinook, and possibly steelhead was about two miles upstream from the confluence with Salmon Creek (around RM 50) and their absolute upstream limit on the North Fork would have been Loves Falls (Yoshiyama et al. 2001). Deep pools are present throughout the North Fork Yuba River from its mouth up to Sierra City and likely provided prime holding habitat for spring-run Chinook salmon.

On the Middle Yuba, at about 0.4 miles upstream from the confluence with the North Yuba is a cascade totaling approximately 13 to 15 feet (Gast et al. 2005, and Vogel 2006 both in DWR 2007). This cascade is likely a partial barrier to anadromous fish passage at low flows, but may be passable by larger fish at higher flows (Gast et al. 2002/005 in DWR 2007). In addition, there are apparently two (2) low-flow barriers (less than 200 cfs) that are located at RM 0.2 and RM 3.2 (Gast et al. 2005). These locations need additional evaluation by qualified fish passage engineer(s) and hydrologists to determine the exact extent and duration of fish passage impedance. Both Chinook salmon and steelhead were observed during a DFG survey in 1938 in the lower part of the Middle Yuba, near confluence with the North Yuba (DFG unpublished data

NGO3-3
Cont'd

4

as cited in Yoshiyama et al. 2001). Steelhead were found as far upstream as the mouth of Bloody Run Creek (around RM 17.5) (DFG unpublished data as cited in Yoshiyama et al. 2001). Our House Dam, located at RM 12.7, was constructed in 1969 without fish passage facilities. At 75 feet high, this dam currently constitutes a complete barrier to fish passage, but could be easily retrofitted with fish passage facilities to provide substantial habitat gains in the middle fork.

The original distribution of Chinook salmon and steelhead in the South Yuba is uncertain. There are records of Chinook salmon within one to two miles upstream of the confluence with the South Yuba River (DFG unpublished data as cited in Yoshiyama et al. 2001). Two cascades with at least a 6-foot drop, located at RM 6.2 and at RM 20 (one-half mile below the juncture of Humbug Creek (Yoshiyama et al. 2001, Gast et al. 2005)), may have posed a significant obstruction to salmon migration in low flow conditions. Steelhead ascended the South Yuba as far as the juncture of Poorman Creek near the present town of Washington (DFG unpublished data as cited in Yoshiyama et al. 2001), and perhaps some spring-run Chinook salmon historically also reached that point.

The lower Yuba River currently sustains one of the few remaining natural (non-hatchery) Chinook salmon and steelhead populations in the Central Valley, although there is input of strays from the Feather River and other Central Valley hatcheries. There is a sustainable fall-run Chinook salmon population that is surveyed annually. It also has a sustainable Central Valley steelhead population, though the population size is relatively unknown due to the difficulty in quantifying steelhead population sizes. In addition, there is currently a small spring-run Chinook salmon population.

There are several field investigations and reports that vary in their identification of the upstream migration limits as well as descriptions of the natural barriers (Gast et al. 2005, Vogel 2006) current evidence indicates that well over 500 miles of historic salmon and steelhead habitat occur above Englebright Dam.

4. The proposed actions do not meet the criteria of the HEA because they contemplate actions that should be undertaken as the result of other processes or actions.

The Yuba actions as proposed in the draft HEP should be addressed under a Biological Opinion for the operation of Englebright and Daguerre Dams. PG&E and others are obligated to complete restoration of Battle Creek, which is also mandated by a Biological Opinion for the Operations and Criteria Plan of the State Water Project and Central Valley Project. As suggested by the November 10, 2009 letter from Steve Edmondson of the National Marine Fisheries Service to Ralph Torres and Randal Livingston, these proposed actions should not be considered eligible for inclusion in the Habitat Expansion Plan, and should be withdrawn from consideration in this context. Accepting these proposals would not provide any additional benefit to salmon and steelhead because the result would be to simply provide additional funds to existing mitigation requirements and on-going projects.

5. The proposed actions do not meet the criteria of the numeric criteria of the HEA.

NGO3-3
Cont'd

NGO3-4

NGO3-5

Comment Letter NGO3 (Continued)

5

The draft Habitat Expansion Plan relies on the Ecosystem Diagnostic Treatment (EDT) model to determine actual numbers of fish generated under the proposed actions. However, these estimates are utterly invalid. According to the consultants that developed and are now practitioners, of EDT, the EDT is a “wholly deterministic” model. Hence, confidence intervals or sensitivity analysis is irrelevant as the output of EDT does not represent numbers of fish or any other absolute value. The output provides a relative metric that can be compared to other model runs only. Accordingly, the estimates of fish numbers contained in the draft Habitat Expansion Plan are irrelevant and cannot be used as absolute values or estimates of fish numbers.

NGO3-5
Cont'd

In closing, the proposed actions contained in the draft Habitat Expansion Plan do not meet the requirements of the HEA, do not deliver the “negotiated for bargain”, are inferior to the current fishway prescriptions and should not be accepted by NMFS. Alternatively, providing passage to either the Middle Fork Feather River, or Upper Yuba above Englebright Dam, would meet the intent and letter of the HEA and substantially contribute to the recovery of steelhead and spring-run Chinook salmon .

Thank you for the opportunity to comment on the draft Habitat Expansion Plan.

Sincerely,

W.F. “Zeke” Grader, Jr.
Executive Director

cc: California Department of Fish & Game
National Marine Fisheries Service

Responses to Letter NGO3 (W.F. “Zeke” Grader Jr., Pacific Coast Federation of Fishermen’s Association, February 12, 2010)

NGO3-1

See Master Response 5 regarding mitigation for unmitigated impacts on the Feather River and Master Response 3 regarding contribution to the HET.

The Licensees are proposing actions that will expand habitat in order to support establishment of a self-sustaining population, as specified in the HEA, specifically Approval Criterion (c). The goal of the HEA is to expand habitat as a contribution to the conservation and recovery of the species (HEA Section 2.1) rather than to specifically create a self-sustaining population. Many factors that influence creation of a self-sustaining population are beyond the scope of the HEA.

NGO3-2

The HEA does not require passage projects but rather expansion of habitat for spring-run Chinook salmon beyond what is available at the present time (HEA Section 2.2). The HEA allows a variety of measures, including enhancements of passage conditions, temperature and flow improvements, and “other physical habitat enhancements” (HEA Section 3.1). The Licensees are recommending actions to expand spawning habitat for spring-run Chinook salmon in the Lower Yuba River between Englebright Dam and the Narrows Pool. This area presently receives little use by Chinook salmon, presumably due to habitat limitations that will be addressed by the actions recommended by the Licensees. Because the project area is presently underutilized by Chinook salmon, the recommended Lower Yuba River Actions represent an expansion of habitat.

The Licensees considered the VSP criteria and the *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* (Public Draft

Recovery Plan) (NMFS 2009a) when evaluating potential habitat expansion actions and believe that the recommended actions are consistent with each. As a result, the recommended actions received relatively high scores for Evaluation Criterion (j), which was largely based on meeting the four VSP criteria. The actions address the VSP concept by increasing abundance and productivity of Central Valley spring-run Chinook salmon. Also, by *supporting* development of a viable spring-run population, the recommended actions increase spatial diversity. Finally, the Lower Yuba River is identified as a Core 1 Project in the NMFS Public Draft Recovery Plan. For these reasons, the recommended actions are consistent with both the VSP concept and the Public Draft Recovery Plan.

See Chapter 4 in the Final HEP for additional discussion of consistency with the VSP criteria and the NMFS Public Draft Recovery Plan.

NGO3-3

See response to Comment NGO 2-3.

NGO3-4

See Master Response 3 concerning eligibility of the Lower Yuba River Actions.

NGO3-5

The actions recommended in the HEP provide habitat with ample potential to meet the HET. Evaluation of the actions relative to the HET is described in Chapter 4 and in Appendix N of the Final HEP. The Draft HEP did not use EDT, and EDT was not mentioned in the Draft HEP.

Comment Letter NGO4 (Glenn Nader, Yuba Watershed Protection & Fire Safe Council, February 12, 2010)

From: Glenn Nader
To: hea@water.ca.gov
Subject: HEA Central Valley Spring Run Chinook Salmon and Steelhead draft
Date: Friday, February 12, 2010 3:55:22 PM

NGO4



Department of Water Resources Division of Environmental Services Power
Generation
PO Box 942836 PO Box 770000
Sacramento, CA 94236-0001

February 12, 2009

Dear California Department of Water Resources Department,

The Yuba Watershed Protection and Fire Safe Council have worked diligently since 1983 to implement measures and facilitate projects designed to protect foothill forests, watersheds and communities in the Yuba County Foothills.

This letter is being sent to support the HEA Central Valley Spring Run Chinook Salmon and Steelhead draft. We support the proposed Lower Yuba River to be selected over the Three creek actions.

Physical habitat enhancements along the Lower Yuba starting in the Deer creek area, and then down river of the watershed would significantly improve the spawning and holding habitat, while being the most cost effective action in our opinion.

We therefore request that the Lower Yuba River Actions be favorably considered for funding by the NMFS over the Three Creek Actions.

Sincerely,

Glenn Nader
Facilitator

Glenn Nader
Livestock & Natural Resources Advisor
University of California
Cooperative Extension
142-A Garden Hwy
Yuba City Ca. 95946
Phone 530.822.7515
Fax 530.673.5368

NGO4-1
Cont'd

Response to Letter NGO4 (Glenn Nader, Yuba Watershed Protection & Fire Safe Council, February 12, 2010)

NGO4-1

Comment noted.

Comment Letter NGO5 (Terry Erlewine, State Water Contractors, February 17, 2010)

February 17, 2010

Director Hydro Licensing, Power Generation
Pacific Gas and Electric Company
P.O. Box 770000
San Francisco, CA 94177

and

Chief, Division of Environmental Services
Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

Re: Draft Habitat Expansion Plan for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead

The State Water Contractors (SWC) have reviewed the Draft Habitat Expansion Plan (HEP) developed by Pacific Gas & Electric (PG&E) and the California Department of Water Resources (DWR) pursuant to the Habitat Expansion Agreement (HEA) that was negotiated as part of the Oroville Facilities FERC Relicensing Settlement Agreement (SA). As one of many signatories to both the SA and HEA, the SWC are supportive of the efforts of PG&E and DWR to move forward with the development and eventual implementation of a suite of habitat expansion actions designed to meet the overall biological goal of the HEA, which is to expand habitat with the physical characteristics necessary to support spawning, rearing, and adult holding of spring-run Chinook salmon and steelhead in the Sacramento River Basin as a contribution to the conservation and recovery of these species. Specifically, the Habitat Expansion Threshold (HET) agreed to in the HEA is to expand habitat to accommodate an estimated net increase of 2,000-3,000 spring-run Chinook salmon for spawning in the Sacramento River Basin.

The Draft HEP is the culmination of a process outlined in the HEA involving the following steps:

- outreach to signatories and stakeholders to develop a list of possible habitat expansion actions (178 actions)
- evaluation and refinement of this list of possible actions based on the potential of each to contribute to the HET (106 actions)
- development of a short list of those possible actions that have the highest potential to contribute to the HET (18 actions)
- Application of the 17 evaluation criteria in section 4.1.1 of the HEA to this short list, resulting in a preliminary ranking of these 18 viable habitat expansion actions
- Application of the four selection criteria in section 4.1.2 of the HEA to select recommended habitat expansion actions for implementation

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- General Manager**
Terry Erlewine

February 17, 2010
Page 2

The SWC believe that the efforts of DWR and PG&E to date have met or exceeded the requirements of the HEA in terms of the schedule, deliverables, and process described in the HEA. The Draft HEP does an excellent job of describing how the first phase of the HEA has been implemented, presents the Licensees' recommended habitat enhancement actions and describes each action in detail, including its estimated contribution to the HET, a preliminary cost estimate for implementation, a proposed implementation schedule, the responsibilities of each Licensee, and the rationale for selecting each action. The Draft HEP also describes the outreach activities taken by the Licensees to keep stakeholders and HEA signatories informed about and involved in the HEA process, and explains the remaining phases for implementation of the HEA. Finally, the Draft HEP provides thorough documentation of every step in this process.

NGO5-1

We understand that the NMFS has raised concerns regarding the two alternatives recommended by DWR and PG&E. We are hopeful that through discussions among the parties these concerns may be resolved. The SWC will be available to participate in these discussions if that would be helpful. However, we do believe that these discussions should be conducted in earnest prior to seeking dispute resolution as provided for under the HEA.

NGO5-2

The SWC thank DWR and PG&E for their efforts to date to fulfill their contractual obligations under the HEA, and look forward to the next steps in this process.

Sincerely,

Terry Erlewine,
General Manager

Responses to Letter NGO5 (Terry Erlewine, State Water Contractors, February 17, 2010)

NGO5-1

Comment noted.

All of these activities have been accomplished, and their results are included in the Final HEP. The Licensees will continue to work with NMFS and the other HEA signatories in an attempt to resolve outstanding issues.

NGO5-2

Comment noted. During the 6-month extension for preparation of the Final HEP, the Licensees have been coordinating and consulting with NMFS in an attempt to resolve differing views on actions that will fulfill the HEA. Among other items, the Licensees and NMFS agreed to do the following during the 6-month extension period:

- The Licensees will review with NMFS the methodology used to estimate the contributions to the HET as described in Chapter 4 and Appendix E of the Draft HEP.
- The Licensees will further develop the actions recommended in the Draft HEP, informed by comments received; conferring with the HEA signatories, directly affected third parties, and other interested parties; and incorporating additional information that becomes available during the 6-month period.
- NMFS will clarify a proposed action in the Upper Yuba River watershed based on new and anticipated information being developed. The Licensees will re-evaluate the proposed Upper Yuba River action, in accordance with the terms and conditions of the HEA, and determine whether it should be included as a recommended action.

Comment Letter NGO6 (Gary Reedy, South Yuba River Citizens League, February 18, 2010)

NGO6



February 18, 2010

Habitat Expansion Agreement Steering Committee c/o Chief, Division of Environmental Services California Department of Water Resources P.O. Box 942836 Sacramento, CA 94236-0001

Re: Draft Habitat Expansion Plan

Dear HEA Steering Committee:

The South Yuba River Citizens League (SYRCL) is committed to the restoration of salmon and steelhead populations in the Yuba River watershed, and the greater Central Valley. This mission is not unique to SYRCL but shared among many organizations and agencies. I wish to acknowledge the contribution of your committee in preparing a Draft Habitat Expansion Plan which provides valuable information to support recovery actions. I submit these few comments and ask you to consider them in preparing a final plan.

One of the actions in the Draft HEP aims to expand rearing habitat for Chinook salmon and steelhead trout in the lower Yuba River. I appreciate the thorough consideration that you have given to this type of action, including the information I submitted by questionnaire, the information submitted by the Yuba Accord River Management Team and your outreach to landowners. This type of action is closely linked to a project funded by the Anadromous Fish Restoration Program which I manage. The project is in an assessment phase whereby the historic and current conditions, geomorphic and hydrologic processes are being studied for the development of concept projects or actions. I understand the timeline and requirements of the HEA which necessitated a description of a single type of action to be implemented in the next few years. Nonetheless, it is important to realize that while there are many promising types of projects to expand or enhance rearing habitat in the lower Yuba, the best will be borne out of a thorough process of development, scientific and otherwise.

The factors which have limited rearing habitat so dramatically include the artificial constriction of the floodplain, hydrologic alteration effects on riparian, and loss of a large wood supply by upstream dams. Creating or restoring side-channels within the existing floodplain -- as proposed in the Draft HEP --- does little to mitigate these impacts. Successful rearing enhancement projects in the lower Yuba River will either remedy these factors or work in concert with physical and biological processes to add habitat value over time. The expansion of functional floodplain habitat may not be feasible

NGO6-1

within the schedule of the HEA, but it will be a part of a more far-reaching habitat restoration program. Riparian enhancements, including cottonwood sprigs, will also be a part of the restoration program, and this could be included or more emphasized as part of the existing HEP action.

NGO6-1 Cont'd

The primary action for the lower Yuba River is the rehabilitation of spawning habitat in the one-mile reach from Englebright Dam to Deer Creek. While I strongly support this project concept, and collaboration for its design and implementation, I do not see sufficient evidence that the project will meet the biological threshold for habitat expansion or qualify as eligible given existing requirements. The Army Corps of Engineers must implement a gravel augmentation program under the terms of a 2007 Biological Opinion, and the opinion of NMFS seems to be that this would include rehabilitation. Certainly, the ACOE could be required by NMFS, congress or a judge to treat shotrock and place existing gravels. In such a case, only a small portion of the overall biological benefit of rehabilitation could be available as credit to the HEA. Incidentally, I am skeptical of the estimate that rehabilitation would provide for as many as 3000 additional spring-run Chinook salmon.

NGO6-2

Section 5.1.2 (Springboard to the Upper Yuba) references the interest of NMFS in a reintroduction of salmon and steelhead above Englebright Dam. This is the interest of SYRCL and other organizations too, and considerable information exists to support reintroduction planning. As I submitted in a distinct questionnaire regarding reintroduction, it seems feasible for the HEP to include a preliminary phase of fish passage into the Upper Yuba involving trap and haul to North Yuba and Middle Yuba Rivers. This type of action seems much more eligible than other actions from the standpoint of the intention of the HEA and the capacity to meet or exceed the expansion threshold.

NGO6-3

SYRCL is one of many organizations and stakeholders which will be disappointed if the final HEP involves only marginally successful actions, and does not provide access to habitats currently inaccessible due to dams. We know the primary cause of extinction risk for spring-run Chinook salmon in the Central Valley and we know the bold type of actions required to recover spring-run. Lots of smart people with good intentions (including yourselves) have invested in the HEA. Let's make sure we don't settle for something less than satisfying and successful.

NGO6-4

In closing, I wish to confirm my willingness to work with the HEA steering committee in further developing specific action details for the lower Yuba River, particularly if NMFS indicates support for such a HEP. I earnestly hope that the next Draft HEP will advance plans for reintroduction above Englebright, and can pledge much help for that endeavor.

NGO6-5

Sincerely,

Gary Reedy

Responses to Letter NGO6 (Gary Reedy, South Yuba River Citizens League, February 18, 2010)

NGO6-1

The Licensees recognize the problems in the Lower Yuba River caused by deposition of mining debris and subsequent re-working of the tailings. Correction of these problems is far beyond the scope of the HEA. The Licensees considered juvenile rearing habitat expansion actions below Highway 20 to complement actions by SYRCL and other parties to restore conditions in the lower Yuba River but did not include these as recommended actions in the Final HEP. In the event that the optional segregation weir action is not approved for implementation, the Licensees would consider other restoration actions such as the juvenile rearing habitat expansion actions. These potential actions are described in Appendix L.

NGO6-2

See Master Response 1 regarding contribution to the HET and Master Response 3 regarding eligibility of the Lower Yuba River Actions.

NGO6-3

As stated in the HEP, the recommended actions fully support future reintroduction of spring-run Chinook salmon and steelhead into the Upper Yuba River. In fact, the recommended actions represent a reasonable first step in a reintroduction program by allowing development of a more robust

Yuba River spring-run Chinook salmon population that represents the most genetically plausible source population for a reintroduction program.

NGO6-4

As stated elsewhere, the HEA was not developed to provide access to habitat above dams but rather to expand habitat for spring-run Chinook salmon in the Sacramento River Basin using a range of allowable types of actions. The HEP recommended actions meet the HET, significantly expand habitat, and are not properly characterized as “marginally successful.”

NGO6-5

Comment noted. The recommended Lower Yuba River Actions can act as a springboard for reintroduction of spring-run Chinook salmon above Englebright Dam.

Comment Letter NGO7 (Steve Rotherth, American Rivers, February 20, 2010)



NGO7

February 20, 2010

Director Hydro Licensing, Power Generation
Pacific Gas and Electric Company
P.O. Box 770000
San Francisco, California 94177

Chief, Division of Environmental Generation
Department of Water Resources
P.O. Box 942836
Sacramento, California 94236

Via Electronic Mail

Subject: Response of American Rivers to the November 2009 Draft Habitat Expansion Plan developed by the California Department of Water Resources and Pacific Gas and Electric Company

Dear Licensees:

American Rivers appreciates the opportunity to review and comment on the Draft Habitat Expansion Plan (DHEP). We commend the Habitat Expansion Agreement (HEA) Steering Committee for its diligent investigation of potential projects for consideration to meet the requirements of the HEA. The importance of the success of the HEA and other recovery efforts is highlighted by the record or near-record low returns of Central Valley salmonids in 2009. Comments provided here are limited to the methodology for evaluating viable actions and the eligibility of the two proposed actions.

American Rivers was an active participant in the relicensing of the Oroville Hydropower Project (Project) and in negotiations of the HEA. Our goal for the HEA was to create a process that would identify and implement the project(s) that would most effectively mitigate for the ongoing impacts of the project, including the loss of more than 100 miles of salmonid spawning and rearing habitat, and contribute to the recovery of Central Valley Spring-run Chinook and Steelhead. American Rivers has followed progress of the Steering Committee, participated in

outreach meetings for signatories/stakeholders and provided written comments three times prior to these comments. For the reasons stated below, however, the recommended actions described in the DHEP would not meet the requirements of the HEA or contribute appropriately to the recovery of the target species. American Rivers cannot support the actions as proposed. We request an opportunity to meet with the Steering Committee and other signatories to discuss possible next steps at the earliest opportunity.

NGO7-1

Methodology for Evaluation of Viable Actions

In previous comment letters, American Rivers has recommended changes in the way the Steering Committee evaluated the performance of potential actions against the evaluation, selection and approval criteria. We will not repeat those details here, but in summary, we had the following concerns: 1) several evaluation and selection criteria included in the HEA were further interpreted by the Steering Committee in ways that do not seem logical or appropriate; 2) the method developed by the Steering Committee to score projects under each criteria also seemed illogical or inappropriate in some cases; 3) the Steering Committee appeared to select the two proposed projects before it had undertaken the analysis and comparative scoring necessary to make selections.

NGO7-2

The DHEP reveals further questions related to how the Steering Committee scored certain projects in relation the scores attributed to the two proposed projects. For example, Appendix C5 lists the viable actions scored for performance in each selection criteria. Yet for one of the most important selection criteria, Contribution to the Habitat Expansion Threshold (HET), it is impossible to determine why a certain action was assigned a particular score, unless it is one of the two options preferred by the Steering Committee. Aside from the two proposed options, the DHEP provides no explanation or documentation for assigning scores for all other projects.

For example, for Battle Creek Phase 2, which would open up less than 25 miles of habitat, the DHEP estimates it to have the potential to contribute ~1,650 fish and cites the 1999 Battle Creek Salmon and Steelhead Restoration Plan as evidence. However, the DHEP estimates that providing passage to the North Yuba River, which would provide access to more than 75 miles of mainstem and tributary habitat, would contribute only 1,750 fish. No explanation of the assumptions or analytical methodology is provided. Without substantiation of the scores for each potential project it is not possible to understand, let alone verify, how the analysis was conducted and how the Steering Committee reached the conclusions it did.

NGO7-3

Comment Letter NGO7 (Continued)

Lower Yuba River Actions

The Lower Yuba River Habitat Enhancement Actions (Lower Yuba Actions) proposed by the DHEP are:

1. Rehabilitate spawning habitat in the Englebright Dam reach of the lower Yuba River and augment gravel in lower Deer Creek;
2. Plan for, and if necessary, install a segregation weir at a location in the 6-mile reach between Englebright Dam and the Highway 20 Bridge;
3. Restore juvenile rearing habitat between the Highway 20 Bridge and the downstream extent of the Yuba Goldfields.

As stated in previous comment letters, American Rivers finds the first of the Lower Yuba Actions, i.e., rehabilitation of spawning habitat in the lower Yuba River, is ineligible pursuant to section 3.2 of the HEA because this action is required by the NMFS Biological Opinion with the Corps of Engineers for the operation of Englebright and Daguerre Point dams. HEA Section 3.2 includes a non-exclusive list of what "Existing Requirements and Commitments may include," that specifically includes, "... reasonable and prudent alternatives, reasonable and prudent measures, and terms and conditions of any final Biological Opinion that has been issued at the time NMFS approves the habitat expansion actions."

The DHEP attempts to distinguish the Lower Yuba Actions from the Biological Opinion by stating that the "Corps' responsibility is simply for gravel augmentation (i.e., long-term gravel injection similar to the pilot project initiated by the Corps in 2007)." This is incorrect. The Biological Opinion reads:

"The Corps shall develop and implement a long-term gravel augmentation program *to restore quality spawning habitat below Englebright Dam*. The Corps shall utilize the information obtained from the pilot gravel injection project to develop and commence implementation of a long-term gravel augmentation program within three years of the issuance of this biological opinion." (emphasis added).

Of the 3,459 Spring Chinook that the DHEP estimates would be the total contribution to the HET of the three Lower Yuba Actions, the proposed habitat rehabilitation element accounts for 2,523. In other words, less than 1,000 Spring Chinook would be produced by Lower Yuba Actions not precluded by sections 3.2 and 4.2.3(e) of the HEA.

NGO7-4

Three Creek Actions

The DHEP also proposes the "Three Creek Actions" as a recommended action consisting of:

1. Replacing an instream ford-structure at Paynes Crossing on Antelope Creek with a bridge over the creek;
2. Rehabilitating the Iron Canyon Fish Ladder on Big Chico Creek; and
3. Providing partial funding for implementation of Phase 2 of the Battle Creek Salmon and Steelhead Restoration Project, specifically certain actions that would occur only on South Fork Battle Creek.

As the DHEP acknowledges, Phase 2 of the Battle Creek Restoration Project is included as a Reasonable and Prudent Alternative in NMFS' Biological Opinion on the Long-Term Central Valley Project and State Water Project Operation, Criteria, and Plan (OCAP) Biological Opinion, issued on June 4, 2009.

The DHEP argues that including Battle Creek Phase 2 as a reasonable and prudent alternative of NMFS' OCAP Biological Opinion "...does not ensure that such discretionary funds will be available, does not provide an alternate funding mechanism in the absence of such funds, as is presently the case, and ultimately does not secure full funding for Phase 2." In addition, the DHEP argues, "The biological opinion also does not provide a means for completing the project before 2019." Section 3 of the HEA does not recognize these arguments as means to qualify an otherwise ineligible action. Guaranteed funding and the specific means for completing an action by date certain are not part of the definition of "Existing Requirements and Commitments" in HEA Section 3.2.

As stated in previous comment letters to the Steering Committee, American Rivers continues to find that implementation of Battle Creek Phase 2 should be considered ineligible pursuant to section 3.2 of the HEA.

NGO7-5

Based on the issues discussed above and others not addressed here, American Rivers cannot support the findings and recommendations of the Draft Habitat Expansion Plan. We would like to meet with the Steering Committee and other signatories at the earliest opportunity to discuss the status of the DHEP and next steps, including the possibility of extending the timeframe to complete a draft Habitat Expansion Plan. American Rivers suggested such an extension in June 2009 when it became clear that

NGO7-6

Comment Letter NGO7 (Continued)

the HEA did not appear to provide adequate time for the Steering Committee to complete the work required by the agreement.

Thank you for your consideration of these comments and recommendations. Please do not hesitate to contact me at 530-277-0448.

Regards,

Steve Rothert
Director, California Regional Office
Regards,



Steve Rothert
Director

Responses to Letter NGO7 (Steve Rothert, American Rivers, February 20, 2010)

NGO7-1

Comment noted. The Licensees believe that the recommended actions meet the terms of the HEA and would contribute to the recovery of spring-run Chinook salmon.

NGO7-2

The Steering Committee developed an objective approach for identifying, evaluating, and selecting habitat expansion actions under the HEA, as described in Chapter 3 of the Draft HEP. Through a series of logical steps, Evaluation and Selection Criteria were applied to successive lists of potential habitat expansion actions, and each action was scored. To facilitate the application of the criteria and scoring of the actions, the Steering Committee developed a working definition and a scoring protocol for each criterion. During the process of evaluating and selecting actions, the Steering Committee shared the overall approach, working definitions, and scoring protocols with the HEA signatories and solicited comments. The Steering Committee took into consideration all comments received before completing the task of evaluating and selecting habitat expansion actions that were recommended in the Draft HEP.

No actions were pre-selected, as suggested by American Rivers in their comment letter. The selection process, as described in Chapter 3 of the Draft HEP, was followed to its conclusion before any actions were selected. It was the application of this objective process that resulted in the selection of actions recommended in the Draft HEP.

NGO7-3

As discussed in the response to Comment NGO6-2, the Steering Committee developed an objective scoring system that was applied to the potential habitat expansion actions. A Technical Team (comprised of Steering Committee members with technical expertise in aquatic biology and additional selected technical experts from PG&E, DWR, and ICF) scored the actions based on available information and professional judgment. During the scoring process, each action was treated in a similar manner. It should be noted that, for purposes of the Final HEP, the Technical Team

rescored the Upper Yuba River Actions based on new information provided by NMFS that was not available when the Draft HEP was prepared. (See Appendix F of the Final HEP for a comparison of scoring for the Upper Yuba River Actions during preparation of the Draft HEP and the Final HEP.)

NGO7-4

See Master Response 3 regarding eligibility of the Lower Yuba River Actions.

NGO7-5

The Three-Creek Actions are not considered in the Final HEP. See Master Response 2 regarding the Three-Creek Actions.

NGO7-6

On May 18, 2010, the Licensees sent a letter to NMFS requesting a 6-month extension to complete the Final HEP. On June 1, 2010, NMFS responded to the Licensees request in a letter that granted the extension. The NMFS letter allows completion of the Final HEP by November 20, 2010. The Steering Committee held a conference call with American Rivers (Steve Rothert) on July 12, 2010, to discuss the status of development of the Final HEP, review the next steps to be taken in order to finalize the HEP, and answer any questions by American Rivers.

Comment Letter LYRL1 (Ralph Mullican, January 21, 2010)

Ralph Mullican

LYRL1

P.O. Box 265

Smartsville, Ca 95977

530-906-5542

yubablue@syix.com

River property address 12347 Mooney Flat Road-no mail here please!

Statement for Jan.21, 2010 meeting YCWA

Two things come to mind that are important to consider for local residents regarding the proposal to remove shot rock and replace with gravel below Englebright Dam.

First is PG&E has twenty million dollars to spend. The shot rock in question is in Yuba County and Yuba County has the one of the highest unemployment rates in California.

LYRL1-1

Local businesses, contractors and at least some landowners will benefit by keeping this project here.

Regardless of the genetics of the salmon, spring run or fall run, the narrows area below Englebright Dam is short of gravel. The temperature of the river is twenty degrees below pre dam levels during summer months. The volume of summer river flows immediately below Englebright Dam are four to ten times pre dam amounts. Yet salmon have no place to spawn thereby negating all the efforts to save them.

LYRL1-2

Exposing gravel already there or injecting gravel will replace the missing link in efforts to increase the salmon in this stretch of river.

Ralph Mullican

Responses to Letter LYRL1 (Ralph Mullican, January 21, 2010)

LYRL1-1

Comment noted.

LYRL1-2

Your comment is noted in support of the Lower Yuba River Actions.

Comment Letter LYRL2 (Letty Litchfield, February 5, 2010)

LYRL2

LAW OFFICES OF LETTY LITCHFIELD

716 D Street
Marysville, CA 95901
(530) 673-4616
(916) 485-4253
FAX (530) 742-8576

FEBRUARY 5, 2010

CHIEF, DIVISION OF ENVIRONMENTAL SERVICES
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

Re: **COMMENTS ON THE DRAFT HABITAT EXPANSION PLAN
REQUEST THAT LOWER YUBA RIVER ACTIONS BE SELECTED**

Dear Chief:

This letter is sent to provide comments on the draft "Habitat Expansion Plan for Central Valley Spring-Run Chinook Salmon and California Central Valley Steelhead." Specifically, I am requesting that the National Marine Fisheries Service select the proposed Lower Yuba River Habitat Expansion Actions over the proposed Three-Creek Actions (the Battle Creek, Big Chico Creek and Antelope Creek Habitat Expansion Actions).

I am a long-time resident and property owner in Smartsville, Yuba County, California. The lower Yuba River runs through our community. I have walked this section of the river, and I have been in it. This section of the Yuba River remarkably endured the destructive forces of the California Gold Rush. Its wild fish have done the same. It should be our obligation to restore their habitat that we destroyed.

During the past couple of years, I have worked as part of the collaborative effort of the Yuba River Preservation Foundation, South Yuba River Citizens' League, Western Aggregates and Yuba Outdoor Adventures, in connection with the fisheries habitat restoration plans for a proposed 3-mile Conservation Easement from Parks Bar Bridge downriver. I have listened to the expert consultants in River Science, Geomorphology, Biology, the Native Americans and the Anglers.

It is important to me to see this river and its fisheries thrive. In order to grow the Spring-Run Chinook Salmon and the California Central Valley Steelhead more resilient, the habitat expansion that is outlined in the proposed Lower Yuba River habitat expansion actions, is vital. These fish need side-channels and vegetation protection.

As set forth in the proposed Plan document, "The estimated contribution to the Habitat Expansion Threshold for the Lower Yuba River Actions is the highest of all of the actions considered." The Lower Yuba River Actions also appear to be the most cost-effective.

The specific proposed Lower Yuba River Actions that cause me to give my support to the Lower Yuba River Actions over the Three-Creek Actions, include (1) rehabilitating spawning habitat in the Englebright Dam reach, and augmenting gravel in lower Deer Creek which is a tributary to the Yuba River; and (?) restoring juvenile rearing habitat between the Highway 20 Parks Bar Bridge and the downstream extent of the Yuba Goldfields.

I believe that these habitat expansion actions should be implemented on the lower Yuba River, and that such implementation will result in expanded spawning, rearing and adult holding habitat for Spring-Run Chinook Salmon and Steelhead in the Sacramento River basin.

I respectfully request that the National Marine Fisheries Service select the Lower Yuba River Actions over the Three-Creek Actions. Thank you for your consideration of this request.

Sincerely,


Letty Litchfield

LYRL2-1
Cont'd

LYRL2-1

Response to Letter LYRL2 (Letty Litchfield, February 5, 2010)

LYRL2-1

Your comment is noted in support of the Lower Yuba River Actions.

Comment Letter LYRL3 (Kit Burton, February 12, 2010)

From: kitburton@hotmail.com
To: hea@water.ca.gov
Subject: Lower Yuba
Date: Friday, February 12, 2010 12:41:06 PM

LYRL3

Gentlemen:

Please select the Lower Yuba River (as opposed to the 3 Creeks) to receive funding for the project to improve Salmon habitat. LYRL3-1

Kit Burton, Yuba County, CA

Response to Letter LYRL3 (Kit Burton, February 12, 2010)

LYRL3-1

Your comment is noted in support of the Lower Yuba River Actions.

Comment Letter LYRL4 (David A. Greenblatt, Western Aggregates, February 18, 2010)



WESTERN AGGREGATES LLC

LYRL4

February 18, 2010

VIA E-MAIL to hea@water.ca.gov

Chief, Division of Environmental Services
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

Re: Habitat Expansion Agreement – Proposed Expansion of Spring-Run Chinook
Salmon and Steelhead Habitat in the Lower Yuba River

Ladies and Gentlemen:

On behalf of Western Aggregates LLC ("Western"), I am writing in support of the habitat expansion actions being considered by the California Department of Water Resources ("DWR") and Pacific Gas & Electric Company ("PG&E") with respect to the Lower Yuba River Habitat Expansion Actions (the "Lower Yuba River Actions") described in the November 2009 Draft Habitat Expansion Plan issued by DWR and PG&E (the "Draft Plan"). We at Western are supportive of the actions being proposed by DWR and PG&E and, for the reasons set forth below, have no comments about the Three-Creek Actions but wish to register our strong support of the Lower Yuba River Actions described in the Draft Plan.

LYRL4-1

I believe that it would be helpful to provide to you a little background about Western, and then I will turn to a discussion of our support of the Lower Yuba River Actions. Western is a wholly owned subsidiary of Eagle Materials Inc., a Dallas, Texas-based New York Stock Exchange-listed company in the building materials business (primarily, cement and gypsum wallboard, with operations also in recycled paperboard, concrete, and aggregates). Western was formed in 1987 and owns substantial surface acres and aggregate mineral interests in the Yuba Goldfields, located approximately 7 miles to the east of Marysville, California along the Yuba River. (In using the term "aggregate" or "aggregates", we refer to those words in their building materials context and thus mean sand, gravel, stone, rock, and other similar mineral resources; we often use the phrase "sand and gravel" as a short-hand for all aggregates.) Aggregates are used in all facets of construction, including pavement, roads, highways, bridges, buildings, and other infrastructure. Western's mineral resources in the Yuba Goldfields represent the largest reserves of minable sand and gravel in the State of California and constitute a crucial and valuable resource for the future construction and growth needs of Northern California. In addition to Western's mineral interests in the Yuba Goldfields, Western also owns substantial surface acres in the Yuba Goldfields, including riverfront property along the Yuba River.

About two years ago, Western commenced a dialogue with the South Yuba River Citizens League ("SYRCL") for restoration projects on the Lower Yuba River on land owned by Western. After much hard work and thought and planning, those discussions led to an announcement in October of 2008 of an Agreement in Principle among Western, SYRCL, and

LYRL4-2

Chief, Division of Environmental Services
California Department of Water Resources
February 18, 2010
Page 2

several other project partners for the establishment of a permanent conservation easement on up to 180 acres of land owned by Western along the Yuba River for use in connection with the planning and implementing of habitat restoration projects on the Lower Yuba River. In short, Western's and SYRCL's Agreement in Principle contemplates a public-private partnership with Western burdening certain of its lands adjacent to the Yuba River with a conservation easement and SYRCL planning, designing, implementing, and monitoring habitat restoration projects for salmon, trout, and other native biota of the Yuba River on these lands. Western has found SYRCL to be an effective partner as well as a manager of the program conducting scientific analysis and planning for these restoration activities. Our project was announced publicly in October 2008, and, since such time, Western and SYRCL have continued to diligently work together towards completing the formal granting of the conservation easement. Moreover, SYRCL has actively pursued the pre-planning and design phases of the project since the announcement of the partnership and the project in 2008. SYRCL, founded in 1983, is a community-based public benefit organization (501c3) with a mission to protect and restore the Yuba Rivers and the greater Yuba Watershed.

LYRL4-2
Cont'd

Western notes that a specific portion of the Draft Plan actually highlights certain areas conducive to restoring juvenile salmonid rearing habitat that involve areas that are the subject of Western's conservation easement and SYRCL's planned habitat restoration projects. Specifically, Figure 6-3 (which is immediately after page 6-24 of the Draft Plan) directs the reader to three sites, Site 1, Site 2, and Site 4, that are part of the planned areas of Western's conservation easement and the SYRCL habitat restoration and enhancement projects. Figure 6-4 (a close-up of Site 1) reflects a potential enhancement project on the Upper Gilt Edge Bar, which is a piece of land owned by Western and destined for our conservation easement; Figure 6-5 (a close-up of Site 2) describes a possible project involving lands on First Island and some restoration on lands of Western to the south across the river (which we call the Lower Gilt Edge Bar); finally, Figure 6-6 (a close-up of Site 4) depicts juvenile rearing habitat restoration on Silica Bar, another piece of land owned by Western and contemplated for inclusion in the conservation easement. We also note that additional projects for certain lands described in the Draft Plan, while not currently contemplated by Western and SYRCL for inclusion in the conservation easement, involve lands or interests owned by Western, including the South Bar above Daguerre Point Dam Site (Figure 6-8), the Waterway 13 Site (Figure 6-9), and the Goldfields Terminus Bar (Figure 6-11). While Western has had no discussions with SYRCL or others regarding these additional lands, Western is willing to consider additional lands it owns for inclusion in future habitat restoration and enhancement projects, such as those described in Figures 6-8, 6-9, and 6-11.

While SYRCL has obtained some initial limited funding in support of this project, including a \$50,000 challenge grant issued by Western, additional funding will be necessary for the project to be properly funded, designed, implemented, and monitored. Accordingly, Western strongly supports the project contemplated by DWR and PG&E that directs funding for the projects included in the Lower Yuba River Actions.

LYRL4-3

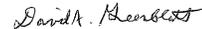
Comment Letter LYRL4 (Continued)

Chief, Division of Environmental Services
California Department of Water Resources
February 18, 2010
Page 3

Please feel free to contact me if I can provide any more supporting information or if you have any further questions about Western, our proposed conservation easement and the habitat restoration projects contemplated on Western's lands, or this letter. If you need to contact me, please do so by contacting me at my office in Dallas at Western Aggregates LLC, c/o Eagle Materials Inc., 3811 Turtle Creek Blvd., Suite 1100, Dallas, Texas 75219-4487, phone: (214) 432-2024, fax: (214) 432-2110, e-mail: dgreenblatt@eaglematerials.com. Finally, please revise Western's contact information on your distribution lists for this matter to send any materials for Western to my attention at the address listed in the previous sentence.

LYRL4-4

Very truly yours,



David A. Greenblatt
Senior Vice President

cc: Lloyd Burns (Western Aggregates)
Jason Rainey (SYRCL)
Gary Reedy (SYRCL)
Curt Aikens (Yuba County Water Agency)

Responses to Letter LYRL4 (David A. Greenblatt, Western Aggregates, February 18, 2010)

LYRL4-1

Your comment is noted in support of the Lower Yuba River Actions.

LYRL4-2

Your comment is noted in support of the Lower Yuba River Actions.

LYRL4-3

Your comment is noted in support of the Lower Yuba River Actions.

LYRL4-4

Comment noted. The contact information for Western Aggregates has been revised as requested.

Appendix G

References

G.1 Printed References

cbec. See cbec, inc. eco engineering.

cbec, inc. eco engineering. 2010. Rehabilitation Concepts for the Parks Bar to Hammon Bar Reach of the Lower Yuba River. Review Draft. Prepared by cbec, inc. eco engineering, with assistance from McBain & Trush. Prepared for South Yuba River Citizens League. July 18.

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Lindley, S. T., R. Schick, B. P. May, J. J. Anderson, S. Greene, C. Hanson, A. Low, D. McEwan, R. B. MacFarlane, C. Swanson, and J. G. Williams. 2004. Population structure of threatened and endangered Chinook salmon ESUs in California's Central Valley Basin. NOAA Technical Memorandum, NOAA-TM-NMFS-SWFSC-360. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Santa Cruz, CA.

McElhany, P., M. H. Ruckelshaus, M. J. Ford, T. C. Wainwright, and E. P. Bjorkstedt. 2000. Viable salmonid populations and the recovery of evolutionarily significant units. NOAA Technical Memorandum, NMFS-NWFSC-42. U.S. Department of Commerce, Seattle, WA.

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Pasternack, G. B. 2010b. Gravel/Cobble Augmentation Implementation Plan (GAIP) for the Englebright Dam Reach of the Lower Yuba River, CA. Prepared for U.S. Army Corps of Engineers. September 30.

Pasternack, G. B. 2010c. Estimate of the Number of Spring-Run Chinook Salmon Supportable by River Rehabilitation in the Narrows Reach of the Lower Yuba River. Prepared for Habitat Expansion Agreement Steering Committee (California Department of Water Resources and Pacific Gas and Electric Company). November 9.

U.S. Army Corps of Engineers. 2010. Draft Environmental Assessment for the Lower Yuba River Gravel Augmentation Project, Yuba and Nevada Counties, California Sacramento District. September.

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G.2 Personal Communications

Berry, Mike. California Department of Fish and Game. Teleconference with HEA Steering Committee. June 2, 2010.

Bratcher, Tricia. California Department of Fish and Game. Teleconference with HEA Steering Committee. June 2, 2010.

Hill, Katherine. Program Manager – Fisheries, Hatcheries, and Fish Habitat Shop. California Department of Fish and Game North Central Region (Region 2), Rancho Cordova, CA Email to the HEA Steering Committee with a management goals statement for spring-run Chinook salmon in the upper Lower Yuba River. November 4, 2010.

Strachan, Susan. California State University, Chico. Email to Chris Wilkinson, California Department of Water Resources regarding funding for Iron Canyon fish ladder. October 11, 2010.

Wantuck, Rick. Regional Hydropower Program Supervisor. National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS). Southwest Region. Discussion of proposed reintroduction of spring-run Chinook salmon into the Upper Yuba River in a meeting with NMFS technical staff and the HEA Steering Committee in Santa Rosa, CA. July 21, 2010.