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Proposal to Facilitate and Develop an Adaptive Management Plan for Coleman National Fish Hatchery for consideration by Greater Battle Creek Watershed Working Group

Purpose

The purpose of this proposal is to request funds to facilitate the development of an adaptive management plan (AMP) for Coleman National Fish Hatchery (CNFH) in a process: a) which would be inclusive of responsible agencies and interested stakeholders, b) which would conform to the “goals and objectives” of Battle Creek Salmon and Steelhead Restoration Project and legally-mandated hatchery-specific goals and objectives, c) which would be reviewed by the California Bay-Delta Authority Science Panel on CNFH and other principal scientific bodies, and d) which would include the scoping and prioritization of diagnostic studies necessary for CNFH adaptive management. This CNFH-AMP would be developed to closely interact with the AMP developed for the Battle Creek Salmon and Steelhead Restoration Project so that salmon and steelhead restoration in Battle Creek would be adaptively managed within a single integrated framework.

Background and Problem Statement

On February 5, 2004, the California Bay-Delta Authority (CBDA) Science Program held a public meeting to report on the findings of a Science Panel review of the effects of CNFH on the recovery of anadromous salmonids in the Battle Creek Watershed. The findings were provided in a 65-page report entitled *Compatibility of Coleman National Fish Hatchery Operations and Restoration of Anadromous Salmonids in Battle Creek*. A key finding of this Science Panel was the need to implement adaptive management at CNFH in a manner which would support the Battle Creek Salmon and Steelhead Restoration Project (Restoration Project). The Science Panel stated that an “adaptive management plan is essential” and that the “adaptive process should be capable of changing management policies including those at CNFH.”

The principal message of the Science Panel’s findings, and the main reason that adaptive management is needed for CNFH, is that “scientific uncertainties” underlie all aspects of Battle Creek fisheries management, including the interactions between the Restoration Project and CNFH. Adaptive management is the best strategy for incorporating scientific uncertainty into decision making. While a thorough AMP has been developed for the Restoration Project, no such plan exists for CNFH. This proposal seeks to develop a CNFH-AMP. The CNFH-AMP will acknowledge, identify, study, and evaluate uncertainties regarding the operation of a large scale fish hatchery in a watershed being restored for natural salmonid populations. Results of monitoring and evaluation will be evaluated against goals and objectives of the CNFH-AMP. Improved understanding resulting from this formal adaptive management program may result in the development of alternative management strategies to better achieve goals and objectives of both CNFH and the Restoration Project.

Other programs recognize the need for adaptive management at CNFH. For example, staff from the U.S. Bureau of Reclamation (USBR), the agency responsible for funding CNFH, and the U.S. Fish and Wildlife Service, CNFH operators, have publicly recognized the need for

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adaptive management at CNFH. Additionally, adaptive management plans are generally required for projects funded through CBDA. Adaptive management of the CNFH barrier weir and fish ladder modification project (funded through CBDA) could therefore be integrated into a comprehensive CNFH AMP. Finally, local support for adaptive management at CNFH has been expressed; for example, the Battle Creek Watershed Conservancy recently issued a call for the development of such a program.

USBR is the logical lead agency for this effort because: 1) it has the ultimate funding responsibility for the hatchery, 2) is the lead agency for the Restoration Project, for which purpose the CNFH-AMP is needed, and 3) because of a strong track record of funding and facilitating the development of adaptive management in Battle Creek.

Project Description and Expected Outcomes

USBR would facilitate the development of an adaptive management plan for CNFH in a process which would be inclusive of responsible agencies and interested stakeholders. The “goals and objectives” of the CNFH-AMP would include those of the Restoration Project in addition to legally-mandated hatchery-specific goals and objectives, including but not limited to those in the CBDA EIS.

The CNFH-AMP would be compatible with, and as rigorous as, the Restoration Project AMP and would be developed using a common framework and similar organization as that document. The CNFH-AMP would include, at a minimum: goals, objectives, conceptual models, uncertainties, monitoring and data assessment approaches, specification of focused studies, description of decision making process, funding prioritization, and all other elements of formal adaptive management. Adaptive management operating procedures would be well coordinated with those of the Restoration Project AMP.

The Restoration Project AMP recognizes the need for the development of a CNFH-AMP and anticipates that the two AMPs would “share findings on key uncertainties, coordinate study designs and preliminary findings, and provide mutual assistance on activities and other items of mutual interest. Technical Teams for the AMP and CNFH-AMP will participate in any additional technical and scientific reviews of the Restoration Project or CNFH and the results of the reviews will be applied to each of the adaptive management programs, including necessary adjustments to accommodate the findings relevant to the programs using a watershed approach.”

Together, the Restoration Project AMP and the CNFH-AMP will form a single integrated framework for adaptive management in Battle Creek. However, the need to partition this framework into two documents remains due to legal constraints related to the focus of each document. The immediate focus of the Restoration Project AMP is the Battle Creek Hydroelectric Project, which is owned by Pacific Gas and Electric Company (PG&E) and is regulated by the Federal Energy Regulatory Commission. This plan deals with flow, water temperature, gravel transport, fish passage, and other aspects of the hydroelectric project under the control of PG&E. The immediate focus of the CNFH-AMP would be Coleman National Fish Hatchery, which is funded by USBR and is guided by U.S. Fish and Wildlife Service policy and other state and federal laws. This plan would manage the operations and facilities of CNFH and so that CNFH is compatible with the restoration of populations of salmon and steelhead in Battle

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Creek and the natural ecosystem processes on which these populations depend. To Battle Creek salmon and steelhead, however, such distinctions are artificial. Therefore, the USBR will build on its well founded Restoration Project AMP by crafting the CNFH-AMP to fill in the gaps (e.g. CNFH operations) and areas of overlap (e.g. lower Battle Creek) between the two plans and to establish processes that effectively integrate adaptive management under both plans to the maximum extent feasible under law.

The USBR may hire a contractor to facilitate and develop the CNFH-AMP or may hire/assign agency staff to complete this work. If a contractor is hired, the contractor would demonstrate adequate technical capabilities and would demonstrate that no actual or perceived conflict of interest exists. The USBR would develop the final CNFH-AMP within 18 months of receiving a funding commitment and developing a contract with CBDA.

A Technical Advisory Committee (TAC) would be established among members of the Greater Battle Creek Watershed Working Group (GBCWWG) to guide and assist the facilitation and development of the CNFH-AMP. This TAC would include technical representatives from USFWS, CDFG, NOAA Fisheries, and at least three non-agency members of the GBCWWG. The three responsible fisheries agencies would assist Reclamation or the contractor in development of key portions of the CNFH-AMP.

Principal scientific bodies would be asked to participate in the scoping and review of the CNFH-AMP. The CBDA Science Panel on CNFH would be asked to reconvene and provide peer review of the CNFH-AMP during key milestones of the document's development including scoping and administrative draft review. Monies to fund the participation of this Science Panel are included within this request. Also, the CBDA Ecosystem Restoration Program Science Panel and the California Advisory Committee on Salmon and Steelhead Trout would also be invited to provide peer review during scoping and administrative draft review. Additionally, all meetings of the TAC would be open to the public; scientists and lay persons interested in Battle Creek adaptive management would be encouraged to participate.

Diagnostic studies, those studies necessary to help advise between alternative adaptive management responses or monitoring approaches, were recommended or inferred in Science Panel's report. A preliminary list of diagnostic studies primarily excerpted from the Science Panel Report is included within this response packet under separate cover. While adaptive management of CNFH can be developed and implementation can be started prior to completion of all these diagnostic studies, the Science Panel makes clear that adaptive management will be more successful if uncertainties underlying these diagnostic studies were resolved as soon as possible. Therefore, a list of these studies would be evaluated by the USBR and TAC as part of the CNFH-AMP development process and would be prioritized, shortened, and/or added to in order to meet the goals and objectives of the final CNFH-AMP and the Restoration Project.

Public involvement is an important component of adaptive management and will be encouraged during all phases of CNFH-AMP development. While public input can occur at any phase of the process, public involvement will be specifically encouraged in several ways:

- Regular reports will be provided to the Greater Battle Creek Watershed Working Group during the regular meetings of that forum;

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- Contact with landowners and Battle Creek watershed residents will be coordinated through the Battle Creek Watershed Conservancy;
- The public will be invited to participate in three public meetings and to provide comment on the draft plan. The public's vision for adaptive management at CNFH will be solicited at an initial scoping meeting. A public review draft will be presented to the public during a 30-day comment period of this draft. The final CNFH-AMP will be presented and explained to the public once it has been completed; and
- Public participation in the implementation of the CNFH-AMP will be designed into the plan.

Goals and Objectives

The goals and objectives of the CNFH-AMP would include those of the Restoration Project in addition to legally-mandated hatchery-specific goals and objectives, including but not limited to those in the CBDA EIS.

The goals and objectives of the Restoration Project are summarized as: to restore and enhance anadromous fish habitat in Battle Creek to support an assemblage of fish species including four separate runs of Chinook salmon and steelhead and to implement a long-term adaptive management plan with dedicated funding sources to ensure the continued success of restoration efforts under this partnership. See other Restoration Project documentation for a complete set of these goals and objectives.

General goals for CNFH are characterized in the Service's Fisheries Strategic Vision. The general vision of all U.S. Fish and Wildlife Service fisheries activities is "...working with partners to restore and maintain fish and other aquatic resources at self-sustaining levels and to support Federal mitigation programs for the benefit of the American public."

Specific Goals from the Strategic Vision that pertain to CNFH include: self-sustaining populations of native fish and other aquatic resources that maintain species diversity provide recreational opportunities for the American public and meet the needs of tribal communities; and to meet the federal government responsibilities to mitigate for the impacts of federal water projects, including restoring habitat and/or providing fish and associated technical support to compensate for lost fishing opportunities.

Other station specific Goals and Objectives for CNFH are provided in the CNFH Station Development plan (the implementation of which is authorized under CVPIA), and the current Biological Assessment developed by the Service for operational compliance under ESA.

Some CBDA goals pertaining to CNFH and Battle Creek include: reduce or eliminate competition between hatchery salmonids in the upper Sacramento River and releases from the CNFH; direct harvest pressure from wild steelhead to steelhead produced at CNFH; increase naturally spawning steelhead population number and sizes sufficient to maintain population resiliency and to allow meta-population persistence through periods of adverse climatic and ecological conditions; improve the distributions of wild salmon and steelhead stocks through improvements to operation of Coleman National Fish Hatchery; reduce or eliminate conflicts in Battle Creek that require excluding anadromous fish from the upper section to protect the

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Coleman National Fish Hatchery water supply; and protect naturally produced salmon and steelhead by minimizing the likelihood that hatchery-reared salmon and steelhead produced in the Coleman National Fish Hatchery will stray into non-natal streams. See CalFed Bay-Delta Program Ecosystem Restoration Program Plan for a complete set of these goals and objectives.

The complete set of these goals, not just these summaries, will be included as the goals and objectives of the CNFH-AMP.

Work to Be Performed

- Task 1. Develop the CNFH-AMP including a) scoping, b) an administrative draft, c) public review draft, and d) final draft plan within 18 months of initiation of contract.
- Task 2. Facilitate scientific review of CNFH-AMP development. Reconvene the CBDA Science Panel on CNFH to meet with and advise the TAC at two phases of the CNFH-AMP development including: a) scoping and b) administrative draft review. Invite the participation of the CBDA Ecosystem Restoration Program Science Panel and the California Advisory Committee on Salmon and Steelhead Trout in a) scoping and b) administrative draft review.
- Task 3. Convene a Technical Advisory Committee which would include technical representatives from USFWS, CDFG, NOAA Fisheries and at least three non-agency members of the GBCWWG.
- Task 4. Facilitate up to 30 meetings (approximately every 2 weeks, at least initially) of the TAC to assist the USBR or contractor develop the CNFH-AMP.
- Task 5. Facilitate at least three public meetings to solicit and receive public comment on CNFH-AMP scoping, public draft, and final CNFH-AMP.
- Task 6. Perform community outreach related to the development of the CNFH-AMP.
- Task 7. Report on CNFH-AMP to GBCWWG on regular basis and provide written progress reports to CBDA.

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Schedule Of Deliverables

Task No. / Deliverables	Deliverable Schedule
TASK 1: Develop CNFH-AMP	
1a. Scoping	Within six weeks of contract initiation
1b. Administrative Outline of CNFH-AMP	Within 3 months of contract initiation
1b. Administrative Draft CNFH-AMP	14 months after contract initiation
1c. Public Review Draft CNFH-AMP	16 months after contract initiation
1d. Final Draft CNFH-AMP	18 months after contract initiation
TASK 2: Facilitate Scientific Review of CNFH-AMP Development	
2a. CNFH Science Panel and other principal scientific bodies (i.e. ERP Science Panel and CACSST) invited to participate in initial scoping meeting	Agreements established with members of CNFH Science Panel within 2 weeks of contract initiation; Invite CNFH Science Panel and other principal scientific bodies to scoping meeting within 4 weeks of contract initiation
2b. CNFH Science Panel to participate in initial scoping meeting	Within 6 weeks of contract initiation
2c. CNFH Science Panel to provide scoping comments	Within 3 months of contract initiation
2d. CNFH Science Panel to issue comments on administrative draft	Within 4 weeks of completion of administrative draft
2e. CNFH Science Panel to issue final comments on public review draft	Within 4 weeks of completion of public review draft
TASK 3: Technical Advisory Committee	
3a. Solicit and receive commitments of support from agency and non-agency members of the TAC.	Within 2 weeks of contract initiation.
TASK 4: Facilitation/Coordination of CNFH-AMP Development with Technical Advisory Committee	
4a. Convene up to 30 meetings of the TAC to develop CNFH-AMP	Hold first meeting within 4 weeks of contract initiation to plan initial scoping meeting; hold other meetings as needed.
TASK 5: Public Meetings	
5a. Convene initial scoping meeting.	Within 6 weeks of contract initiation
5b. Convene Public draft review meeting.	Allow for a 30 day public comment period on public review draft. Present public review draft of CNFH-AMP to public 16 months after contract initiation during this comment period.
5c. Present final CNFH-AMP to public.	Present the final CNFH-AMP to public 18 months after contract initiation.
TASK 6: Community Outreach	
6a. Issue public service announcements for each of three public meetings.	At least 2 weeks in advance of public meetings.
6b. Post copies of CNFH-AMP drafts and final plan, and development materials on USBR web site	Within 1 week of completion of each draft; as needed for development materials such as supporting documents, data, and models.
6c. Notify local landowners of public meetings and plan development by coordinating with Battle Creek Watershed Conservancy.	At least 2 weeks in advance of public meetings. Within 1 week of completion of each draft; as needed for development materials such as supporting documents, data, and models.
TASK 7: Reporting / Administration	
7a. Attend and report to Greater Battle Creek	As scheduled by GBCWWG

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Watershed Working Group at regular GBCWWG meetings	
7b. Provide monthly progress reports to CBDA via monthly Ecosystem Restoration Subcommittee meeting.	As scheduled by Ecosystem Restoration Subcommittee

Budget

Task No. Deliverables	Estimated Cost (*see "Budget Notes" for rationale)
TASK 1: Develop CNFH-AMP	\$175,000
TASK 2: CBDA Science Panel on CNFH	\$45,000
TASK 3: Establish Technical Advisory Committee	\$0.00
TASK 4: Facilitation/Coordination	\$0.00
TASK 5: Public Meetings	\$10,000
TASK 6: Community Outreach	\$10,000
TASK 7: Reporting / Administration	\$0.00
TOTAL	\$240,000

Budget Notes

- Task 1 budget is based on the cost of development of Restoration Project AMP by USBR (approximately \$125,000). The Restoration Project AMP cost was increase in this proposal to account for inflation and the possible need to retain specialized experts on genetics or other hatchery topics.
- Task 2 budget is based on the labor and travel costs (approximately \$41,000) associated with the Science Panel that reviewed CNFH operations in 2003.