

Issue Tracking as of May 16, 2017

Greater Battle Creek Watershed Working Group

The issues, ranked in order of the group’s sense of importance on May 17, 2016, that can be addressed and affected by the Greater Battle Creek Watershed Working Group to maximize restoration of all naturally produced anadromous fish and maintain, and restore, as necessary, a healthy watershed and landscape.

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Note: Links to issues histories are provided beneath descriptions.

The 5 steps to annually update the Issue Tracking document are as follows:

- 1) Based on the 1999 MOU that set up membership for the GBCWWG, and laid out attendance requirements prior to voting, review attendance at the past four meetings and determine which members have earned voting status;
- 2) Review the existing Issues to add clarifications/updates. After review of the existing issues, the Working Group determines if any issues have been resolved or should be deleted from the current prioritized or non-prioritized lists. If so, issues will be moved to the resolved or deleted issue portion of the document;
- 3) Consider adding new proposed Issues by reviewing a written description of the issue;
- 4) Voting representatives will place three stickers near the title of the issue/s that they feel are the highest priority to address to “...maximize restoration of all naturally produced anadromous fish and maintain, and restore, as necessary, a healthy watershed and landscape”;
- 5) Tally the stickers to gain a prioritized list. Issues without any “votes” are considered non-prioritized for the year.

Prioritized Issues

Rank	# Votes	Issue	Updated	Battle Creek Restoration Project	Coleman National Fish Hatchery	General Watershed Issues
1	6	Improving fish passage at natural barriers in Battle Creek requires funding	5/17	X		
2	5	Funding needed for the implementation of Watershed Projects	5/17			X
3a	3	Fine Sediment Delivery from the Ponderosa Fire	3/17			X

3b	3	Funding: The cost of implementing the Restoration Program increases as funding issues are being resolved	1/17	X	
3c	3	Concerns on the impacts of trespass marijuana cultivation on private and public lands	5/17		X
3d	3	Funding needed to implement Winter-run Chinook Salmon Reintroduction Plan	5/17		X
4	2	Long term watershed condition monitoring is needed	3/17		X
5a	1	Complete the comprehensive watershed planning process	3/17		X
5b	1	Concern about sediment delivery from roads negatively impacting Battle Creek streams	5/17		X

Other Non-Prioritized Issues

Issue	Updated	Battle Creek Restoration Project	Coleman National Fish Hatchery	General Watershed Issues
A. Lassen Lodge hydropower project	3/17			X
B. Degradation of socio-economic conditions	3/17			X
C. Degradation of natural watershed qualities	3/17			X
D. BLM lands as National Recreational Area	3/17			X
E. Risk of fish extinction	3/17	X		X
F. Continuation of hydroelectric project	3/17			X
G. Potential impact to private businesses	1/17	X		
H. Value of hatchery vs. natural/wild fish	3/17			X
I. Restoration Project Biological Opinion (Partially resolved)	3/17	X		X
J. Agreements with landowners	3/17	X		
K. Continue outreach activities to gain stakeholder support and understanding of the Battle Creek Restoration Project	1/17	X		
L. Coleman CNFH BA/BiOp Content	3/17		X	
M. Orwick Ditch breach/maintenance	3/17			X
N. Concern about gravel extraction negatively impacting habitat for naturally spawning salmon and steelhead	3/17	X		
O. Complete the Fisheries Management Plan	3/17	X		
P. Concern about land uses negatively impacting	5/17			X

[Battle Creek streams](#)

- Q. [Coleman Hatchery emergency water intake needs a fish screen](#) 3/17 X

Prioritized Issues Descriptions

1. Improving fish passage at natural barriers in Battle Creek requires funding.

Jim Smith (USFWS) and Jason Roberts (CDFW) are the contacts.

Status as of March 2017 – Provided by Laurie Earley (USFWS).

In contract with CDFW, Michael Love & Associates have completed the designs for the 2 barriers above and below Eagle Canyon Dam. USFWS will be submitting a CVPIA charter, in an effort to secure funding for permitting and will continue to work in partner with CDFW. Funding for the implementation/construction of the chosen passage alternative at each site has not been identified and is still needed at this time.

History

2. Funding needed for the implementation of Watershed Projects:

Steve Tussing (BCWC) is the contact.

Recently, significant resources (grant funding) have been directed towards assessment and planning efforts within the Battle Creek watershed with the goal of identifying and prioritizing implementation projects that can reduce sediment erosion and routing to stream channels, and forest health risks (e.g. catastrophic wildfire). These assessment and planning efforts include the BCWC Watershed Based Plan and the RCDTC Ponderosa Way efforts which are both funded by 319h / Timber Fund grants. Both of these ongoing planning efforts will have priority implementation projects identified in late 2017 and early 2018. However, a commitment of funding has not been secured for the implementation of sediment source reduction and forest health projects within the watershed. The effectiveness of the watershed based planning approach being implemented in the Battle Creek watershed relies upon the ability to bring funding sources to bear for the implementation of priority projects.

3a. Fine Sediment Delivery from the Ponderosa Fire:

Steve Tussing (BCWC) is the contact.

Status as of March 2017: In August 2012, the Ponderosa Fire burned approximately 27,000 acres at mid-elevations within the Battle Creek watershed. There are concerns about the potential delivery of large amounts of fine sediment to Battle Creek stream networks. Increased fine sediment delivery to stream channels has the potential to negatively impact both the BC Restoration Project and the Coleman National Fish Hatchery's water supply. This issue is focused on ongoing efforts to:

1. Fund and implement hillslope and stream monitoring to identify post-fire delivery of fine sediment, sedimentary effects on stream channels, water quality and channel recovery;
2. Identify, prioritize, fund and implement actions that can reduce fire-

related fine sediment delivery to stream channels; and 3) Identify, prioritize, fund and implement other sediment source remediation projects (e.g., road upgrades).

The Ponderosa Fire primarily burned private lands, a combination of Sierra Pacific (SPI) forest lands (approximately 63% of total burn area, ~17,500 acres) and smaller private landowners. To date, monitoring has implemented to document sediment related effects including: monitoring of fine sediment generation on SPI lands comparing various hillslope treatments (SPI); establishing pre-fire stream channel condition baselines (2012) and post-fire channel conditions (2013-2014) to detect change in channel indicators (BCWC); and the monitoring of stream channel turbidity (SPI and Battle Creek Alliance). Efforts have also been made to share information and coordinate among agencies, the GBCWWG (Presentations and Ponderosa Fire Fine Sediment Subcommittee), and outreach to local landowners affected by the fire, including a public open house on Oct. 23, 2012. The RWQCB also sponsored a hydrology and sediment assessment in 2015 (Henkle et. al. 2016).

In late 2015, the BCWC applied for a 319h / Timber Fund grant to develop a Watershed Based Plan largely focused on sediment. This project was selected for funding and a grant agreement was developed. This project was initiated in July 2016 and will be completed by March 31, 2018. This project will investigate sediment source processes, and identify and prioritize actions that can reduce fine sediment delivery to stream channels. Additional information regarding project activities can be found on the BCWC website at www.battle-creek.net.

Additionally, the Tehama Co. RCD applied for a 319h / Timber Fund grant in 2015 to develop prescriptions for addressing road failures and sediment contributions from Ponderosa Way in the S.F. Battle Creek canyon. This project was selected for funding and is currently in progress.

[History](#)

3b. Funding: The cost of implementing the Restoration Program increases as funding issues are being resolved.

Mary Marshall (USBR) is the contact.

Status as of January 2017: As indicated in the following table, the project is being supported with federal, state and private funding. Reclamation has received \$110.6 million (M) to date and currently estimates that an additional \$24 M is needed to complete the project. Reclamation is coordinating with the 1999 MOU partners to pursue additional funding.

Federal Funding	\$54.6 M
<i>CALFED Early Ecosystem Restoration Funds</i>	<i>\$32.0 M (to Reclamation)</i>
<i>American Recovery and Reinvestment Act Funds</i>	<i>\$12.8 M (to Reclamation)</i>
<i>FY 2015 Federal Funds</i>	<i>\$2.3 M (to Reclamation)</i>
<i>FY 2016 Federal Funds</i>	<i>\$6.5 M (to Reclamation)</i>
<i>FY 2017 Federal Funds</i>	<i>\$1 M (to Reclamation)</i>
Federal & State Funding	\$6.5 M

<i>Iron Mountain Mine Trustee Council</i>	<i>\$6.5 M (to Reclamation)</i>
State Funding	\$58.2 M
<i>California Department of Fish & Wildlife (DFW)</i>	<i>\$3.4M (to USFWS) \$26.8 M (to Reclamation)</i>
<i>California Wildlife Conservation Board</i>	<i>\$10.0 M (to Reclamation)</i>
<i>Benicia Bridge Mitigation Funds [via California Department of Transportation (CALTRANS)]</i>	<i>\$4.5 M (to Reclamation)</i>
<i>Richmond San Rafael Bridge Mitigation (via CALTRANS)</i>	<i>\$1.5 M (to Reclamation)</i>
<i>Delta Fish Agreement Amendment via Department of Water Resources</i>	<i>\$5.3M (to DFW) \$6.7M (to Reclamation)</i>
Private Funding	\$23.6 M
<i>PG&E (Foregone Power from 1999 MOU)</i>	<i>\$20.6 M</i>
<i>The Packard Foundation (via The Nature Conservancy)</i>	<i>\$3.0 M</i>
TOTAL	\$142.9 M
TOTAL FUNDS TO RECLAMATION	\$110.6 M

The full history for this issue can be found in [Restoration Funding History](#).

3c. Concerns on the impacts of trespass marijuana cultivation on private and public lands.

Laurie Earley (USFWS) and Melanie McFarland (USFS) are the contacts.

As more research is published on the negative effects of trespass marijuana cultivation and with the rise of illegal grows on both public and private lands within the Battle Creek watershed, there are increasing concerns on how these illegal operations impact terrestrial and aquatic species and the watershed as a whole. These illegal grows compromise both water quality and quantity. Water quality below these sites are adversely affected by sediment, chemicals, human waste, and trash. Mass quantities of fertilizer and pesticide, many poisonous to wildlife and humans, are carried into creeks through soil and rain. Often growers illegally divert water from streams and creeks nearby these sites, typically leaving these streams dry.

Trespass marijuana grows are often located near springs and tributaries that flow into Battle Creek. Although these tributaries are not essential habitat to anadromous fish, the water they deliver is extremely valuable. Salmonids rely on the clean, cold water that these springs and tributaries provide. These illegal diversions reduce the amount of inflow that would be available to Battle Creek, resulting in reduced habitat quality and quantity. There is little scientific evidence on the direct effects of pesticides on salmonids, however, the many toxicants used in these areas can be detrimental to cold-blooded species, including fish. Additionally, the increased erosion at these sites could cause more sediment to be transported to their spawning grounds, which may further compromise reproduction.

Many terrestrial species have died after being poisoned by bait laced with potent rodenticides. Even limited exposure to these poisons can result in slower reflexes, reduced ability to hear from injuries, and neurological impairment that can lead to death from other sources. In addition, mammals, raptors, and other carnivores often die after eating prey that has ingested these toxicants.

There are limited resources dedicated to the reclamation of lands after a site has been raided by law enforcement. Funding is needed to help clean-up these locations. Reclamation of these sites and removal of infrastructure also help to deter growers from returning to the same sites year after year.

3d. Funding needed to implement Winter-run Chinook Salmon Reintroduction Plan.

Doug Killam (CDFW) is the contact.

The Reintro plan still needs an implementation agency and funding identified. Upper management from the fisheries agencies are discussing this issue in a larger meeting in May and hope to settle on an implementing agency. We would then cooperatively seek funding together for them. The cost estimates for this project are a one-time expense of 3.4 million and an ongoing operation cost of 650k. The plan itself is complete and can be found on the CDFW website or by searching “CDFW winter-run reintroduction plan”.

4. Long term watershed condition monitoring is needed

Steve Tussing (BCWC) is the contact.

Status as of March 2017: The primary long-term watershed condition monitoring issue is the need to fund and implement the Battle Creek Stream Condition Monitoring Plan (SCMP). The SCMP describes a program for monitoring the condition of streams within the Battle Creek watershed designed to be useful for status, trend, and restoration project effectiveness monitoring. This program is designed to work with other existing programs by filling data gaps necessary for understanding stream conditions and trends in Battle Creek by monitoring in four subject areas: biological monitoring through macroinvertebrate surveys and riparian condition surveys, physical stream condition surveys, water temperature monitoring, and monitoring of changes in land cover. Additionally, a recent hydrology and sediment assessment from UC Davis (Henkle et. al. 2015) has identified that a long-term sediment monitoring effort will be required to enable the development of a sediment budget for Battle Creek watershed.

Restoration Project managers recognized the important link between successful adaptive management of the Restoration Project and watershed conditions. The Adaptive Management Plan (AMP; Terraqua 2004) for the Restoration Project highlighted the role of BCWC in monitoring watershed conditions, sediment processes, water temperature and climate. It also called for very close coordination of the BCWC's stream condition monitoring and the Restoration Project's adaptive management (Terraqua 2004).

The Battle Creek Watershed Conservancy (BCWC) received a grant from SWRCB in 2005 to develop a long term watershed condition monitoring plan and to implement limited watershed monitoring. The BCWC completed the SCMP in 2008 with the assistance of a technical advisory committee comprised of Greater Battle Creek Watershed Working Group members. Since 2007, the BCWC has submitted numerous proposals to secure grant funds for implementing the SCMP which to date remains unfunded.

It is anticipated that the ongoing watershed based planning process will identify long-term watershed condition monitoring needs.

[History](#)

5a. Complete the comprehensive watershed planning process.

Steve Tussing (BCWC) is the contact.

Status as of March, 2017: This issue focuses on the identification, funding and implementation of additional assessment and planning effort(s) to provide for a more comprehensive Battle Creek watershed planning framework. Due to the significance of the Battle Creek watershed to anadromous salmonid restoration, the watershed has been the focus of several watershed assessment and planning efforts (e.g. Restoration Project AMP 2004; BC Community Watershed Strategy 1999 (updated 2007). Watershed wide assessment and planning efforts have largely focused on the stream network and sediment sources (e.g. BC Watershed Assessment 2004). Additional assessment and planning efforts are required to effectively focus sediment source reduction projects in light of the Ponderosa Fire of 2012 and subsequent sediment routing to stream networks. Several upland watershed elements have not yet been fully incorporated into watershed management plans (e.g. wildfire risk outside the wildland-urban interface). Additional assessment and planning efforts are also necessary to anticipate future watershed conditions (e.g. climate related changes in stream flow and temperature) and identify appropriate mitigating restoration actions that may take decades to fully realize (e.g. restoring fully functioning meadow / riparian conditions).

In late 2015, the BCWC applied for a 319h / Timber Fund grant to develop a Watershed Based Plan largely focused on sediment. This project was selected for funding and a grant agreement is currently being developed. This project was initiated in July 2016 and will be completed by March 31, 2018. In addition to the primary focus on sediment sources, the watershed based planning process will address other watershed health issues as funding permits. One topic of interest to the project technical advisory committee is wildfire risk and potential increases in risk related to increases in tree mortality rates. Additional information regarding project activities can be found on the BCWC website at www.battle-creek.net.

[History](#)

5b. Concern about sediment delivery from roads negatively impacting Battle Creek streams

Shane Edmunds (CVWB) and Guy Chételat (CVWB) are the contacts

Update May 2017: Work on the Battle Creek Watershed-Based Plan Project funded by the Timber Fund Grant is currently underway. The grant is composed of three components: a watershed plan, a watershed assessment and an implementation project. Field work is scheduled to be completed by early summer 2017 and a final report for the project is anticipated in spring 2018.

Part of the project will focus on sediment delivery from roads in the watershed. The grantees will use modeling technology to identify potential sediment sources along

roads in the watershed may quantify sediment loads coming from roads. After modeling is complete, field work will be done to validate the modeling results.

History

Other Non-Prioritized Issues Descriptions

A. The Lassen Lodge Hydro project plan could conflict with restoration of the watershed.

Jason Roberts (CDFW), Naseem Alston (NMFS) and Charlie Kuffner (Rugraw LLC) are the contacts.

Update May 2017: Submitted by: Rugraw, LLC, Applicant

The Lassen Lodge Hydroelectric Project (LLHP) is proposed to be located on the upper portion of South Fork Battle Creek. The Diversion and Intake is proposed to be located (RM 23.0 – approximate elevation 4,500 feet) about ½ mile above the Old Hwy. 36 bridge (RM 22.5) and about 0.8 RM above Angel Falls (RM 22.2). The Powerhouse/Tailrace is proposed to be located (RM 20.6 – approximate elevation 3,500feet) at about 1.7 RM above Panther Grade (RM 18.9), the uppermost extent of the Battle Creek Salmon and Steelhead Restoration Project at what is noted in the BCSSRP documents (Jones and Stokes 2005) as a ‘natural barrier’.

The project is proposed as a “run-of-the-river” project utilizing a small pond for the intake and diversion, but no water storage capacity for operating when the stream is not flowing with sufficient flow. As a “run-of-the-river” project, this baseload 100% renewable hydroelectric energy production project returns all of the flow diverted for power production operations back into the stream maintaining the natural flow just below the powerhouse/tailrace that is incoming to the project at the diversion/intake location. And, since the pipeline and penstock running from the diversion/intake to the powerhouse is buried underground, the warmer natural streamflows in the late spring and early summer will be cooled while traveling on their way to the powerhouse/tailrace. The Applicant has agreed in their FERC licensing proposal to “ramp” the streamflows for project operations and maintenance up and down at flow change rates proposed and as agreed to by the CDFW. Due to the project design maintaining the same natural flows and cooling of the diverted waters in the earth surrounded penstock in the warmer seasons, the project is not expected to negatively impact the streamflows or water temperature flowing over Panther Grade and into the area of the BCSSRP in any substantive way.

Although there does not appear to be any disagreement on the potential of minimal, if any at all, impacts to the habitat in South Fork Battle within the BCSSRP area below Panther Grade due to project operations as proposed by the Applicant, there have been some differences of opinion expressed about the possible potential for maximum salmonid production within the 1.6 RM project effected by-pass reach between River Mile 20.6 at the powerhouse/tailrace up to Angel Falls at RM 22.2.

The Applicant has done scientific studies on the natural barrier at River Mile 18.9 commonly known as “Panther Grade” (Parkinson 2012) that defines the easternmost extent of the BCSSRP in South Fork Battle Creek. These studies conclude beyond any doubt that this barrier is not passible at flows up to 200 cfs - the largest flows that could be safely measured within the stream. Some people have hypothesized that this natural barrier may possibly be passible at flows substantially greater than 300 cfs and maybe at flows greater than 400 cfs. The flow records (Northwest Hydrologic Consultants 2014) show that flows this high are quite infrequent. These same flow records show that the average low flows in the fall are in the range of 7-8 cfs, and that in many years flows have been recorded at 3 cfs and even dried up entirely as the streambed within the project reach did most recently in the fall of 2014 (Base Streamflow Study, Rugraw, 2014) and again in the fall of 2015.

Based on the fact of no or extremely rare and limited successful upstream fish passage over Panther Grade (RM 18.9), numerous other passage barriers that must be successfully navigated in the 1.7 RM above Panther Grade but below the proposed powerhouse/tailrace (RM 20.6), combined with the very low if not outright dry conditions that are not conducive to the requirement for summer/fall holdover for successful salmonid reproduction, the Applicant strongly believes that the project reach (RM 20.6 up to RM 22.2) is not a likely to be accessed by salmonids nor lead to successful salmonid reproduction. And, even if access is somehow possible, the project reach with its steep gradient, mobile gravels and annual low or no flows is not a hospitable place for salmonid reproduction like the year-round cold water springs flowing in at and just below Panther Grade is, 1.7 to 3.3 river miles downstream, as documented in the Base Streamflow Study (Rugraw, 2014).

Based on the forgoing, the Applicant has proposed a minimum in-stream retained flow of 13 cfs. With a minimum flow for operation of the project at 5 cfs, a minimum flow of 18 cfs would need to be present in the stream at the diversion site in order to operate the project. CDFW is acceptable to the Applicant’s operational proposal provided salmonids are not identified within the project reach. NOAA/NMFS thinks Panther Grade is passible – although provides no data to back up that claim - salmonids will be present in the project reach without question, and recommend 35 cfs minimum retained flow to allow for better upstream passage within the project reach and more wetted spawning gravels accessible for more potential spawning and more potential off-spring production within the project reach. As identified by the Applicant’s consultants, however, the more spawning habitat accessible and more potential production does not address the very limited holding and carry-over capacity within the project reach that is by far a greater limit to potential salmonid reproduction (many years zero hold-over potential within the project reach) than by trying to increase the number of spawners. Those spawners would be much more prone to reaching full life-stage if spawned around the year-round cold spring inflows at and just below Panther Grade than, if their mothers can get there, being spawned within the project reach and have to travel the 1.7 RM to 3.3 RM in the warm, shallow, upper South Fork Battle Creek flows to drift over Panther Grade to a place that they could successfully hold-over. The Applicant proposes a compromise that the project be licensed and allowed to operate at 13 cfs minimum retained flow as proposed and accepted by CDFW. If,

however, at some time in the future salmonids arrive at the powerhouse/tailrace looking for a place to spawn above RM 20.6 within the project reach, the Applicant proposes to work with the resource agencies to develop an adaptive management plan to address this situation should it come to pass. But with this an unknown to occur even upon the completion of the BCSSRP, the Applicant would like to be afforded the economic opportunity to operate this 100% renewable power hydroelectric generation power plant as proposed by Rugraw, LLC in a way that does not negatively impact the BCSSRP or any of its project goals.

The NEPA DRAFT Environmental Impact Statement (EIS) was due to be issued per the FERC schedule in November of 2016. Due to FERC Questions and Applicant responses in August of 2016 and March of 2017, this issuance has been delayed. When the FERC issues this DRAFT, the Applicant will inform the Battle Creek Working Group. The DRAFT CEQA Environmental Impact Report (EIR) will follow the issuance of the EIS. Likewise, the Applicant will inform the Working Group when the EIR is issued. There will be public comment periods to the DRAFT EIS and EIR documents before they become final EIS and EIR documents.

Please contact Charlie Kuffner, Rugraw, LLC, if you have any questions. 415-652-8553; Charlie.Kuffner@gmail.com

[History](#)

B. There is a potential for a degradation of the socio-economic condition of the watershed.

Steve Tussing (BCWC) is the contact.

Status as of March, 2017: No additional information.

Status as of January, 2015: This issue will never be fully resolved; the GBCWWG may be asked to consider specific items under this issue periodically as they arise in the future. Socio-economic conditions in Battle Creek Watershed are largely outside of this group's control; however, conditions can be influenced by the GBCWWG within certain forums including: implementation of the Restoration Project; management of public lands; and other agency actions.

C. The natural and scenic qualities of the watershed could be degraded due to Restoration Program construction.

Steve Tussing (BCWC) is the contact.

Status as of March, 2017: No additional information.

Status as of January, 2015: BCWC recognizes that some natural qualities will be improved through watershed restoration; for example, the existence of a thriving salmon population and related improvements to the ecosystem. On the other hand, the Conservancy also recognizes that scenic qualities could be degraded due to construction, such as the effects of construction on Oasis Springs resort and Rocky Springs Ranch.

BCWC understands that this issue is addressed in the EIS/EIR and will be addressed further once permits are obtained. The Conservancy also understands that this is not

an issue to be resolved but more of an area of concern to be aware of before, during and after construction.

D. The new designation of BLM property as National Recreational Area on their lands in Battle Creek.

Steve Tussing (BCWC) is the contact.

Status as of March, 2017: No additional information.

Status as of January 2012: Waiting for an update from Kelly Williams, BLM. The (proposed) Sacramento River Bend National Recreation Area has already been designated as an Outstanding Natural Area/Area of Critical Environmental Concern (ONA/ACEC) in 1993. It encompasses 26 miles of the Sacramento River from Balls Ferry Bridge to the section line south of Seven Mile Creek. Within the 26-mile river corridor, BLM manages approximately 15 miles of river frontage and an additional 2 miles of conservation easement along the river. Battle Creek traverses 4 miles of BLM managed lands. The issue of concern regarding this proposal is that with the designation of this area as a National Recreation Area, there will be the possibility of more use of the river, creeks and lands within this critical area, which could have an adverse effect on the Restoration Project. BCWC would like assurance that BLM will have the staff to manage this sensitive area consistently and effectively.

On March 20, 2007, Kelly Williams, BLM, led Greater Battle Creek Working Group members on a tour of the Battle Creek area of the proposed Recreation Area. The concern regarding management was raised, and Williams responded that BLM hopes that with the official designation of National Recreation Area, BLM will have more leverage in requesting additional staff to manage it. He also suggested that constituents of the area could request more staff support by writing to Congressional representatives.

This is an issue that will need to be tracked if the proposed Recreation Area is approved, especially after the Restoration Project begins.

E. The risk of fish extinction increases with the passage of time

Steve Tussing (BCWC) is the contact.

Status as of March, 2017: No additional information.

Status as of January, 2015: Ongoing issue. If the Restoration Project is implemented in a timely fashion, concerns will be moderated. Further delays in the Project will increase risk. The GBCWWG letter to CBDA urged a timely decision to award additional funding to the Project. The initial recommendation was made on June 20, 2005, but a final decision still need to be made.

http://www.delta.dfg.ca.gov/erp/signature_battle_creek_dareview.asp

F. Continuation of the Battle Creek Hydroelectric project license amendment (FERC# 1121) process is important.

Lisa Whitman (PG&E) is the contact.

Status as of March 2017: The license amendment application for Phase 2 of the Restoration Project was submitted to FERC on March 2, 2015. FERC's approval of

the license amendment application is required before Phase 2 can be implemented.

[History](#)

G. There are potential impacts to private businesses in the Battle Creek Watershed (e.g. Rocky Springs Ranch, and Oasis Springs Lodge) as a result of the Restoration Project.

Mary Marshall (USBR) and Kerry Burke (Rocky Springs/Oasis Ranch) are the contacts.

Status as of March, 2017: No additional information.

[History](#)

H. There is not a common understanding of the relative value/importance of hatchery versus natural/wild fish.

Jim Smith (USFWS) and Scott Ferris are the contacts.

Status as of March, 2017: No additional information.

Current as of January, 2012: This is a difficult problem because there are two schools of thought in the scientific community and among some of our stakeholders on this issue. On one side there are those who apparently prefer to have completely wild salmon/steelhead populations that would sustain themselves solely by natural reproductions. This would be accomplished by curtailing or eliminating hatchery production, restoring rivers to pre-1900 conditions by breaching dams, limiting water diversions and greatly reducing agricultural and forestry impacts on our western anadromous streams.

Others in the scientific community contend that society has shown no indication that it is willing to make the societal economic sacrifices that would be necessary to make the foregoing scenario a reality. They believe that if we are to deal with the ever increasing urban and agricultural demands for more water and an exploding west coast human population, we need a scientifically and biologically sound blend of both wild and hatchery fish based on best known technology.

Hatcheries in the Pacific Northwest have been operating for more than 50 years and have generally been very successful in producing quality salmon and steelhead for sport and commercial harvest as well as helping compensate for steadily declining wild fish populations. This group of fishery scientists is of the opinion that state of the art fish hatcheries are critical to maintaining future recreational, commercial and Treaty harvest obligations. Like it or not, 60 to 80 percent of the salmon and steelhead that have been harvested in recent years in California, Oregon, and Washington originated in State, Federal and Tribal hatcheries.

Coleman NFH together with three other Sacramento River tributary hatcheries have in recent years, produced more than 60 percent of all commercial and sport caught salmon and steelhead in California. The trickle down economic value of these fish arguably can range from 70 to more than 100 million dollars a year. Based on projected human population growth and estimates during the next 25 years, it does not appear that wild/natural spawning fish will, now, or in the foreseeable future be able to support current harvest levels, let alone increased levels that are likely to occur with increased numbers of people.

To create a better common understanding of this issue the Resource Agencies and the scientific community must be up front with the general public regarding the realities of restoring wild/natural fish to a point where they could sustain current harvest rates with our strong hatchery support. Remaining populations of wild/natural fish are important and should be protected and enhanced whenever possible.... However, hatchery fish are important also. If we are to have salmon and steelhead for the public to catch now and in the future, we must have a delicate balance between hatchery operations and the wild/natural stocks. All the while keeping in mind that many of the so called natural spawning stocks are probably of Coleman parentage. In the case of Coleman NFH and the Battle Creek Restoration Project, the Resources Agencies should make clear to all parties that Coleman NFH has a congressional mandate to produce fish as mitigation for lost habitat, that it can and will meet its mitigation responsibilities to the best of its abilities without jeopardizing the success of the project. A good adaptive management plan will be helpful in making sure all parties are working cooperatively together without the tail wagging the dog.

If in the work group's future deliberations, we can all make greater efforts to work together and focus more of our attention on providing our wild/natural Battle Creek stock with the access and water quality they need, and less on Coleman's operational production efforts, the completion of this project will become a reality.

I. Complete the Restoration Project Biological Opinions

PG&E FERC License Amendment and Biological Opinion:

Lisa Whitman (PG&E) and Naseem Alston (NMFS) are the contacts.

Status as of March 2017: NMFS is currently drafting the biological opinion for Phase 2 of the Restoration Project.

[History](#)

J. The Restoration Project requires the development of agreements with the landowners for temporary and permanent construction easements. (Agreements are completed and signed once the Record of Decision is issued.)

Lisa Whitman (PG&E) is the contact.

Status as of March 2017: Based on the current project design, construction of Phase 2 of the Restoration Project will require that temporary and permanent easements be obtained from landowners. In late 2016, PG&E made an initial offer to the landowner in an effort to obtain temporary and permanent easements to accommodate construction of Phase 2, but has not yet received a written response.

[History](#)

K. Continue outreach activities to gain stakeholder support and understanding of the Battle Creek Restoration Project.

Laurie Earley (USFWS) is the contact.

Status as of January 2017: The bimonthly meetings of the Greater Battle Creek Watershed Working Group are open to all and provide a venue for information sharing. Agency representatives and stakeholders give status updates on activities underway in the watershed. Following the guidelines provided in the USFWS

Anadromous Fish Restoration Program Plan (1997), this local watershed group has been meeting since 1999 and has had much engagement from the community. Information about this restoration project to restore fish passage and flows to Battle Creek can also be found at the following websites:

<http://www.usbr.gov/mp/battlecreek/status>

<http://www.fws.gov/redbluff/activities.html>

and <http://www.battle-creek.net>
[History](#)

L. Coleman CNFH BA/BiOp Content

Steve Tussing (BCWC) is the contact.

Status as of March, 2017: No additional information.

Status as of January 2015: This issue is focused on the content of the CNFH BA/BiOp with respect to its compatibility with the Battle Creek Salmon and Steelhead Restoration Project and was added to the Issue Tracking document at the 1/24/12 GBCWWG Meeting. Upon review of the CNFH BA, the BCWC perceived deficiencies in the assessment including:

1. The CNFH BA did not include a comprehensive listing of impacts from CNFH production on listed salmonid populations (spring Chinook, winter Chinook and steelhead) in Battle Creek, and did not adequately quantify these impacts due to omission of take sources and the cumulative effect of low level take sources. Importantly the analysis did not adequately evaluate these impacts in terms of incidental take and the possibility that this incidental take could appreciably delay population recovery.
2. Moving late-fall Chinook and Steelhead production off site was not considered and this action has high certainty to reduce incidental take and provide other potential benefits.
3. Federal agencies have the primary burden for ESA compliance. When the CNFH BA does not adequately address all sources of incidental take and does not consider beneficial alternatives, this unfairly shifts the burden for recovery to the Conservancy and other private parties aiding in the Restoration Project.

BCWC is hopeful that the CNFH AMP process will address these concerns and inform the BA/BiOp.

The examination of the content of the CNFH BA/BiOp in this issue is differentiated from the other CNFH BiOp related issue which is focused solely on the administrative act of issuance of the BiOp to CNFH in a timely manner.

[History](#)

M. Orwick Ditch breach/maintenance

Guy Chételat (CVWB) is the contact.

March 3, 2017: *Re-written from earlier versions by Tricia Parker Hamelberg as one of her last acts as USFWS contact person for Battle Creek Working Group.*

Southside Ditch (formerly known as Orwick Ditch)

An irrigation diversion approximately 7.5 miles upstream from Battle Creek's confluence with the Sacramento River diverts water down alongside the south side of

Battle Creek year-round. When heavy rains occur, the flows become too much for the ditch and it breaches. This is a problem for the irrigator and a problem for upstream migrating anadromous fish because the fish are falsely attracted to migrate along the south side of Battle Creek by the overland flows. The remote location of this frequently breached irrigation diversion is also problematic because of the length of time required to access the site for repairs. Also, the access using Spring Branch Road is potentially hazardous with muddy, high gradient, 4wd side roads with thick brush and high stream conditions. The issue is complicated with multiple private and public responsibilities, ownerships, water rights and right of ways.

Since the breaches tend to occur during high winter flows, adult steelhead are impacted during their upstream migration. They are attracted into the overland flowing water and are stranded when the breach is fixed and/or water is shut off. These fish are listed under the ESA so "take" concerns are an issue. This ditch has been in place since before 1914. It is now located on land managed by BLM. The CDFW Red Bluff Screen Shop works with the ditch operator to adjust flows and maintain the ditch. This large, approx 50 cfs ditch, needs better maintenance to prevent overflowing and breaching of the earthen walls. In recent years, breaches occurred in 2013, 2014 and 2017. In Feb 2014 the breach occurred up the hill from stream mile 6.0 with a significant amount of water (approx 4-6" deep and 4 feet wide) that attracted fish out of the creek. The water-rights holder needs to turn off the diversion into this canal and proper maintenance has to occur to minimize resource damage from overland flow.

[History](#)

N. Concern about gravel extraction negatively impacting habitat for naturally spawning salmon and steelhead.

Tricia Parker Hamelberg (USFWS) was the contact.
Status as of March, 2017: No additional information.

Dec 2014: Reviewed. Status accurate for 2015.

Status as of December 2013: Representatives on the Battle Creek Work Group recognize that gravel in the mainstem Sacramento River and tributaries is important for reproduction of naturally spawning salmon and steelhead. A 2006 proposed gravel mining operation is now underway by Tullis Inc. "Shasta Ranch Aggregates".

[History](#)

O. The Fisheries Management Plan has not been completed

Doug Killam (CDFW) is the contact.
Status as of March, 2017: No additional information.

Status as of February 2016 – Provided by Doug Killam, CDFW.

At this time there is no schedule for the Fishery Management Evaluation Plan for Battle Creek. Ongoing work on other priorities in the watershed (winter-run, CNFH integrated AMP, barrier removals, CNFH fish sorter, etc.) need to be completed before a FMEP can be written. As the challenges facing these other activities are overcome, it will lead to a better understanding of the feasibility for managing the fisheries in Battle Creek that will eventually be included in the FMEP.

[History](#)

P. Concern about land uses negatively impacting Battle Creek streams

Shane Edmunds (CVWB) and Guy Chételat (CVWB) are the contacts.

Update May 2017: Work on the Battle Creek Watershed-Based Plan Project funded by the Timber Fund Grant is currently underway. The grant is composed of three components: a watershed plan, a watershed assessment and an implementation project. Field work is scheduled to be completed by early summer 2017 and a final report for the project is anticipated in spring 2018.

Part of the project will focus on different land uses that have occurred in the watershed over time. The project aims to estimate erosion rates in the watershed and will take land use into account.

Note that on 3/18/14 “sediment delivery” was struck from the title of this issue so that other water quality concerns would also be captured by this issue.

[History](#)

Q. Coleman National Fish Hatchery emergency intake doesn’t have a fish screen.

Brett Galyean (USFWS) is the contact.

Status as of March, 2017: Currently Intake 3 is not screened and four new metal screens will be installed at Intake #3 during summer 2017. Phase I: Construction of fish screen at intake #3, expansion of intake #1 and install new pipeline between intake #1 and #3 was completed in 2014 —see History Appendix A. Phase II, the screening/modification of the emergency intake, intake #2, is not funded at this time. Use of Intake #2 is only required when primary intakes (Intake #1 or #3) not available. Expansion of Intake #1 and increased reliability of water through the PG&E system (Intake #1 water source) should result in limited need to operate Intake #2. An evaluation program to determine actual usage of Intake #2 will be put into place upon completion of the BC Restoration Project. Results of the evaluation will be used to determine current impact of the unscreened diversion given expectation of reduced usage due to other system improvements. This information will allow cost effectiveness to be considered in examining cost of project based on remaining estimated impact.

[History](#)

Appendix A: Issue Histories

1. Improving fish passage at natural barriers in Battle Creek requires funding.

History

Feb 2016	Provided by Doug Killam, CDFW. The CDFW contracted with Michael Love & Associates to develop plans for fish passage around 2 barriers above and below Eagle Canyon Dam. Work is ongoing on creating a number of fish passage alternatives at each site. Upon completion in mid to late 2016 the individual barrier plans will be delivered to CDFW. Funding for the implementation/construction of the chosen passage alternative at each site will then need to be identified before construction planning and contracting can commence.
Dec 2014	CDFW has initiated a project to develop designs to modify two barriers located on North Fork Battle Creek (rm 5.06 and rm 5.40). The contract should be awarded in the beginning of 2015. The USFWS has continued to monitor potential sites below

	Eagle Canyon Dam, but no surveys have been completed above Eagle Canyon Dam.
March 2014	<p>New Issue March 2014: In 1988, Thomas Payne and Associates completed a barrier survey for the California Department of Fish and Wildlife (CDFW, formerly California Department Fish and Game) to classify potential barriers within Battle Creek. The assessment found 26 potential barriers within Battle Creek, of which 21 of them were located in the North Fork. It was suggested that fish passage could be facilitated by: 1) modifying low flow barriers, monitor, and modify or remove new low flow barriers, 2) provide flows of at least 30 cfs during migration periods and monitor for new barriers, or 3) combination of physically modifying barriers and increase flows in increments until impediments are deemed passable.</p> <p>The Battle Creek Salmon and Steelhead Restoration Plan (BCRP) MOU and BCRP Adaptive Management Plan (AMP) identified improving fish passage at natural barriers as an essential part of salmonid restoration in Battle Creek. The barriers in North Fork Battle Creek prevent passage to the upper reaches of the Restoration Project area. While BCRP stream flows were intended to provide passage over many of the barriers, some barriers will require physical modification or additional stream flow. The AMP outlines the process for monitoring, evaluation, and improvement of the barriers. Although BCRP funding is available for monitoring of the barriers or for providing additional stream flows, funding is needed for planning and making physical modifications, which are preferred over additional stream flows.</p> <p>Recently the AMP process for improving natural barriers was followed to resolve a barrier downstream of Eagle Canyon Dam. USFWS monitoring verified that the site was a total barrier to fish. A geological study and environmental documents were developed, then in 2012 it was blown up by CDFW. Additional modifications to the barrier may be needed. Funding for this additional work may also be required. As stream geomorphology is dynamic, barriers can change and new barriers may be formed over time. This is one reason the AMP calls for periodic fish passage surveys. Recent USFWS barrier assessments identified a new barrier that was not documented in surveys in 1988 and 1989. However, USFWS noted the barrier during a reconnaissance survey in 2001. Seeing that the survey completed in 1988 and 1989 was a very thorough survey, this would suggest that sometime between 1990 and 2001 these boulders fell into the creek and created the boulder jumble and passage barrier. Until fish passage is allowed at Eagle Canyon Dam, no monitoring can determine the passability of this potential total barrier. This site is located a short distance upstream of Eagle Canyon Dam and will probably require demolition. Demolition could include geological evaluation, planning, and permitting in addition to actual field costs.</p>

2. Fine Sediment Delivery from the Ponderosa Fire

History

Jan 2015	<p>In August 2012, the Ponderosa Fire burned approximately 27,000 acres at mid-elevations within the Battle Creek watershed. There are concerns about the potential delivery of large amounts of fine sediment to Battle Creek stream networks. Increased fine sediment delivery to stream channels has the potential to negatively impact both the BC Restoration Project and the Coleman National Fish Hatchery's water supply. This issue is focused on ongoing efforts to: 1. Fund and implement hillslope and stream monitoring to identify post-fire delivery of fine sediment, sedimentary effects on stream channels, water quality and channel recovery; 2. Identify, prioritize, fund and implement actions that can reduce fire-related fine sediment delivery to stream channels; and 3) Identify, prioritize, fund and implement other sediment source remediation projects (e.g., road upgrades).</p>
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	<p>The Ponderosa Fire primarily burned private lands, a combination of Sierra Pacific (SPI) forest lands (approximately 63% of total burn area, ~17,500 acres) and smaller private landowners. To date, monitoring has implemented to document sediment related effects including: monitoring of fine sediment generation on SPI lands comparing various hillslope treatments (SPI); establishing pre-fire stream channel condition baselines (2012) and post-fire channel conditions (2013-2014) to detect change in channel indicators (BCWC); and the monitoring of stream channel turbidity (SPI and Battle Creek Alliance). Efforts have also been made to share information and coordinate among agencies, the GBCWWG (Presentations and Ponderosa Fire Fine Sediment Subcommittee), and outreach to local landowners affected by the fire, including a public open house on Oct. 23, 2012. Funding options for sediment source reductions on private lands have also been explored. Currently, the BCWC is pursuing the submission of a proposal to the Fisheries Restoration Grant Program in 2015 to implement several sediment source reduction projects in Battle Creek (one proposal, several sites).</p>
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3. Complete the comprehensive watershed planning process.

History

Jan 2015	<p>This issue focuses on the identification, funding and implementation of additional assessment and planning effort(s) to provide for a more comprehensive Battle Creek watershed planning framework. Due to the significance of the Battle Creek watershed to anadromous salmonid restoration, the watershed has been the focus of several watershed assessment and planning efforts (e.g. Restoration Project AMP 2004; BC Community Watershed Strategy 1999 (updated 2007). Watershed wide assessment and planning efforts have largely focused on the stream network and sediment sources (e.g. BC Watershed Assessment 2004). Several upland watershed elements have not yet been fully incorporated into watershed management plans (e.g. wildfire risk outside the wildland-urban interface). Additional assessment and planning efforts are also necessary to anticipate future watershed conditions (e.g. climate related changes in stream flow and temperature) and identify appropriate mitigating restoration actions that may take decades to fully realize (e.g. restoring fully functioning meadow / riparian conditions).</p> <p>In recent years the BCWC and Tehama County Resource Conservation District (RCD) have collaborated to submit several proposals for further watershed assessment and planning activities to fill information gaps and support restoration in Battle Creek. To date several of these have not yet been funded and are described in the proposed project section for issue 2b. in Appendix A.</p>
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Completed Projects

	Title	Purpose	Status	Responsible	Link
1	Battle Creek Community Watershed Strategy	Establish framework for future watershed restoration and education activities in the Battle Creek Watershed	Completed 1999; Updated Dec. 2007	BCWC	http://www.battle-creek.net/CommunityStrategy.htm
2	Battle Creek Watershed Assessment	This project characterized stream conditions and investigated sediment source factors within the watershed.	Completed Aug. 2004	BCWC	http://www.battle-creek.net/docs/BCWA_Report_Final1.pdf
3	Battle Creek Stream Condition	Develop a program for monitoring the condition of streams	Completed 9-2-2008	BCWC	http://www.battle-creek.net/docs/monitoring/StreamConditioning

	Monitoring Plan (SCMP)	within the Battle Creek watershed designed to be useful for status, trend, and restoration project effectiveness monitoring.			nMonitoringPlan.pdf
4	Aquatic Condition Report for the Upper Battle Creek Watershed	In this report, the results of stream inventory data collected was analyzed for major tributaries on LNF lands.	Completed 2001	USFS / LNF	Aquatic Condition Report for the Upper Battle Creek Watershed
5	Integrated Weed Management Plan for the Battle Creek Watershed: Manton CA 2012-2016	Development of an integrated long term weed management plan for the Battle Creek Watershed and preparation of a formal planning document.	Completed 2013	TCRCD	

Proposed Projects

	Title	Purpose	Status	Responsible	Link
1	Battle Creek Watershed Assessment and Management Plan	Incorporate the assessment of upland watershed conditions (wildfire, wildlife, vegetation etc.) into existing assessment activities to date that have largely focused on the stream network and sediment sources.	Unfunded Mar. 2008	TCRCD/ BCWC	
2	Battle Creek Watershed Stewardship; Phase IV	Identify high priority restoration projects to address current and emerging threats of wildfire and climate change to the Battle Creek riparian zones and stream networks	Unfunded Sept. 2010	BCWC / TCRCD	
3	Anticipating climate related changes in stream flow and temperature	Identify watershed restoration projects that can mitigate future impacts to anadromous salmonid habitat restoration investments in Battle Creek,	Unfunded Feb. 2011	BCWC	

4. Long term watershed condition monitoring is needed

History

Jan 2015	The primary long-term watershed condition monitoring issue is the need to fund and implement the Battle Creek Stream Condition Monitoring Plan (SCMP). The SCMP describes a program for monitoring the condition of streams within the Battle Creek watershed designed to be useful for status, trend, and restoration project
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History

	<p>effectiveness monitoring. This program is designed to work with other existing programs by filling data gaps necessary for understanding stream conditions and trends in Battle Creek by monitoring in four subject areas: biological monitoring through macroinvertebrate surveys and riparian condition surveys, physical stream condition surveys, water temperature monitoring, and monitoring of changes in land cover.</p> <p>Restoration Project managers recognized the important link between successful adaptive management of the Restoration Project and watershed conditions. The Adaptive Management Plan (AMP; Terraqua 2004) for the Restoration Project highlighted the role of BCWC in monitoring watershed conditions, sediment processes, water temperature and climate. It also called for very close coordination of the BCWC's stream condition monitoring and the Restoration Project's adaptive management (Terraqua 2004).</p> <p>The Battle Creek Watershed Conservancy (BCWC) received a grant from SWRCB in 2005 to develop a long term watershed condition monitoring plan and to implement limited watershed monitoring. The BCWC completed the SCMP in 2008 with the assistance of a technical advisory committee comprised of Greater Battle Creek Watershed Working Group members. Since 2007, the BCWC has submitted numerous proposals to secure grant funds for implementing the SCMP which to date remains unfunded.</p>
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Completed Projects

	Title	Purpose	Status	Responsible	Link
1	Battle Creek Stream Condition Monitoring Plan (SCMP)	Develop a program for monitoring the condition of streams within the Battle Creek watershed designed to be useful for status, trend, and restoration project effectiveness monitoring.	Completed 9-2-2008	BCWC	http://www.battle-creek.net/docs/monitoring/StreamConditionMonitoringPlan.pdf
2	Battle Creek Stream Condition Monitoring 2006	Report the results of stream condition monitoring conducted within the Battle Creek watershed in 2006 on behalf of the BCWC by Terraqua, Inc.	Completed 9-29-2008	BCWC	http://www.battle-creek.net/docs/monitoring/StreamConditionMonitoring2006.pdf
3	HFQLG Monitoring Stream Condition Inventory (SCI) Cumulative Report	Monitoring of stream conditions before and after ground disturbing project activities to assess their effects on both physical and biological attributes. Includes results and assessment for two headwater tributary streams in Battle Creek; Summit and SF Bailey Creeks.	Completed 1-13-2013	USFS	http://www.fs.fed.us/r5/hfqlg/monitoring/resource_reports/hydrology_and_fisheries/Stream%20Condition%202012%20-%20Cumulative%20Report.pdf
4	Long-term environmental effects of	Monitoring key stream attributes to evaluate the effects of conifer	Completed 1-12-2011	USFS	http://rangelandwatersheds.ucdavis.edu/publication%20list%20a

	conifer removal to achieve aspen release in near-stream areas within the Northern Sierras	removal (to restore aspen) on water resources. One (of four) project sites is located in the Battle Creek watershed in the S.F. Bailey Creek (Brokeoff Meadows).			nd%20files/Final%20Aspen%20Report_s mall.pdf
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Proposed Projects

	Title	Purpose	Status	Responsible	Link
1	Battle Creek Stewardship Phase IV: Stream Condition Monitoring, Outreach, and Watershed Management Plan Update	Implement Battle Creek Stream Condition Monitoring Plan (SCMP) and update Watershed Management Plan	Unfunded March 2007	BCWC	
2	Battle Creek Stream Monitoring 2010-2011: A Pre-Proposal	Implement Battle Creek Stream Condition Monitoring Plan (SCMP). Pre-proposal submitted to CDFG for CalFed Directed Action funding consideration.	Unfunded June 2010	BCWC	
3	Battle Creek Stream Condition Monitoring for Adaptive Management	Project proposes to implement stream condition monitoring following the established monitoring plan (Ward et al. 2008) in order to identify the current status of stream conditions and establish trends since 2001-2002	Unfunded June 2011	BCWC	

5. Concern about land uses negatively impacting Battle Creek streams

History

March 2016	<p>The Central Valley Water Board and the Battle Creek Watershed Conservancy have agreed to jointly draft a Watershed-Based Plan for Battle Creek over the next two years. The goals of the plan are to identify water quality concerns in the watershed and implementation projects that will address the pollutants identified in the plan to lessen the impacts to Battle Creek and the Restoration Project. The plan will prioritize implementation projects in the watershed and be used to apply for applicable grant funding to implement multifaceted projects across different ownerships in the watershed. A draft of the WBP is anticipated by the end of 2016 with the final version expected by June 2018.</p> <p>The final report of the Central Valley Water Board funded University of California Davis 2015 Battle Creek Watershed Hydrology and Sediment Assessment was completed in January of 2016 and will be posted on the Water Board website sometime soon. The report included a literature review, hydrologic modeling, erosional modeling</p>
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	and recommendations for future sediment-related work in Battle Creek.
Jan 2015	<p>The Central Valley Water Quality Control Board is actively working with land owners in the Battle Creek watershed to ensure the protection of the beneficial uses of water. Projects currently permitted by the water board include timber harvest operations, utility projects, agricultural projects, construction projects and the restoration project itself.</p> <p>Since the Ponderosa Fire in August of 2012, Water Board staff has conducted over 100 inspections in the watershed. These inspections include green tree timber harvest operations, post-fire emergency salvage logging operations, rural roads and storm patrol.</p> <p>The Central Valley Water Board is also currently funding a research project at UC Davis to look at sediment sources in the Battle Creek watershed. The project is a one-year agreement to collect data during the winter of 2014-2015 and use GIS modeling to identify controllable sediment sources in the watershed. The Water Board hopes the results of this study can clearly identify the largest sources of sediment in the watershed so we can focus our resources on addressing these land uses. The results of the study are anticipated in September 2015.</p> <p>Note that on 3/18/14 “sediment delivery” was struck from the title of this issue so that other water quality concerns would also be captured by this issue.</p>
March, 2014	<p>The Central Valley Water Quality Control Board (Central Valley Board) is very interested in the restoration of the Battle Creek Watershed and is currently working on multiple projects in the area. Since the Ponderosa Fire in August of 2012, Central Valley Board staff have conducted over 90 inspections of timber harvest operations and rural roads to identify impacts to water quality in the Battle Creek Watershed.</p> <p>The Central Valley Board and the California Department of Fish and Wildlife are working on a coordinated pilot project to test a new type of sampling device. The project is using in-stream Continuous Low-Level Aquatic Monitoring (CLAM) devices to detect pesticides/herbicides. The sampling devices have been deployed three times since late 2013 in both the North and South Fork of Battle Creek. As of March 17, 2014 the results from these deployments are pending.</p> <p>Question: Are land management activities impacting the water quality of Battle Creek and how? Can these activities be adjusted to minimize impacts to Battle Creek?</p> <p>Timber Harvest Operations within the Battle Creek Watershed:</p> <p>Concern has been raised regarding potential for sediment discharges from clear cutting (AKA even age cutting) on private lands in Battle Creek watershed. During the period 1998 through 2011 approximately 23,655 acres were clear cut over a total of 145,073 acres (approximately 16%) of mixed ownership timber managed lands (CAL FIRE data). In response to public concern, a multiagency task force comprised of agencies that oversee the timber harvest plan approval process was formed to assess the potential for impacts to water quality from established clearcuts in the watershed. The complete task force report can be found at the CAL FIRE internet site address below. http://www.bof.fire.ca.gov/board_business/other_board_actions</p> <p>Results from the task force assessment were also presented at the American Geophysical Union Fall Meeting in December 2012. Highlights from the report include:</p> <ul style="list-style-type: none"> • No direct water quality impacts emanating from clearcut units were observed; • Most observed water-quality impacts from timber harvest activities were attributed to private and public roads; • The assessment could not evaluate the potential for indirect water quality impacts due to clearcut harvest (e.g., channel modifications and changes in sediment load due to logging-induced increases in peak flows). <p>To date, recommendations from the report have been implemented on a limited basis.</p>

	<p>County roads are starting to be addressed by the Public Works departments of both Shasta and Tehama Counties. Shasta county has inventoried a portion of their road network in the watershed and has paved portions of Rock Creek road to reduce sediment inputs to Canyon Creek. Tehama County RCD is pursuing grant monies to make improvements on Ponderosa Way.</p> <p>To gain additional understanding regarding the potential for indirect impacts from logging, Dr. Gordon Grant (Forest Service Pacific Northwest Research Station) was invited to speak at the Monitoring Study Group (MSG) meeting of the Board of Forestry. Dr. Grant's presentation is at the following link: http://bofdata.fire.ca.gov/board_committees/monitoring_study_group/msg_archived_documents/msg_archived_documents_/grant_msg_sept_2012.pdf. In his presentation, Dr. Grant postulated that hydrologic effects from logging in Battle Creek would be lower than those documented in the published literature. This was due to the influence of the young volcanic geology in the watershed, which serves to dampen potential changes in hydrology.</p> <p>In August of 2012, the Ponderosa Fire burned over 27,000 acres in the Battle Creek watershed, including approximately 16,000 acres on Sierra Pacific Industries properties. Extensive salvage harvesting has occurred throughout the burn area, with SPI nearing completion of their salvage operations. SPI has placed an emphasis on contour ripping as a measure for mitigating post-fire erosion. Research swales monitored by Sierra Pacific indicate that logging in conjunction with contour ripping is resulting in substantial sediment reduction relative to unlogged sites.</p>
January, 2011	<p>There have been 16 Timber Harvest Plans filed for the Battle Creek watershed area between Manton and Lassen National Forest since 1998. These contiguous plans cover 19,586 acres. Thirteen of these plans, 14,803 acres, have been filed since 2002. Eleven of these plans have been completed, three have been approved and are in litigation and three are not-yet-approved. There is extensive road building included in 3 of the uncompleted plans, all of which are connected to the drainages of South Fork of Battle Creek.</p>
June 2005	<ul style="list-style-type: none"> • Land and timber management activities on private lands throughout Battle Creek are conducted under existing rules and regulations. • The BCWC Assessment of the Battle Creek Watershed (2001-2002) did not find strong evidence that land use is significantly affecting sediment delivery to the South Fork at the watershed scale. • BCWC will soon be developing a monitoring plan that will augment the Watershed Assessment and will be designed to further investigate the issue of upper watershed land management.

6. Concern about sediment delivery from roads negatively impacting Battle Creek streams

History

March 2016	<p>The State Water Resources Control Board has funded a grant application by the Battle Creek Watershed Conservancy to conduct a watershed assessment for Battle Creek from 2016-2018. The assessment will look at many different variables in the watershed including sediment delivery from roads. Results of the assessment are expected by June 2018.</p>
January, 2011	<p>There have been 16 Timber Harvest Plans filed for the Battle Creek watershed area between Manton and Lassen National Forest since 1998. These contiguous plans cover 19,586 acres. Thirteen of these plans, 14,803 acres, have been filed since 2002. Eleven of these plans have been completed, three have been approved and are in litigation and three are not-yet-approved. There is extensive road building included in 3 of the uncompleted plans, all of which are connected to the drainages</p>

	of South Fork of Battle Creek.
June 2005	<ul style="list-style-type: none"> • Land and timber management activities on private lands throughout Battle Creek are conducted under existing rules and regulations. • The BCWC Assessment of the Battle Creek Watershed (2001-2002) did not find strong evidence that land use is significantly affecting sediment delivery to the South Fork at the watershed scale. • BCWC will soon be developing a monitoring plan that will augment the Watershed Assessment and will be designed to further investigate the issue of upper watershed land management.

7. Coleman National Fish Hatchery emergency intake needs a fish screen.

History

Jan 2014	Phase I: Construction of fish screen at intake #3, expansion of intake #1 and install new pipeline between intake #1 and #3 has been completed—see History Appendix A. Phase II, the screening/modification of the emergency intake, intake #2, is not funded at this time. Use of Intake #2 is only required when primary intakes (Intake #1 or #3) not available. Expansion of Intake #1 and increased reliability of water through the PG&E system (Intake #1 water source) should result in limited need to operate Intake #2. An evaluation program to determine actual usage of Intake #2 will be put into place upon completion of the BC Restoration Project. Results of the evaluation will be used to determine current impact of the unscreened diversion given expectation of reduced usage due to other system improvements. This information will allow cost effectiveness to be considered in examining cost of project based on remaining estimated impact.
Fall 2010	Expansion of Intake #1 Completed
Sep 2009	Construction of fish screen at Intake #3 completed
Nov 2007	<p>Overall Project: The plan is to begin vegetation clearing no later than early January 2008 and be completed by February 1, close of the neotropical bird window. Actual construction expected to begin in May with screening intake #3, expanding intake #1, and installing the new pipeline between intake #1 and #3. This is still a tentative schedule as many things still need to fall into place.</p> <p>Project Design: Still taking comments and hope to have specs completed and ready for bid in next 1-2 months. Received detailed comments from the NMFS a day or so ago regarding proposed Intake #3 screen designs.</p> <p>Vegetation Removal: Still hoping permits will be obtained and EA/IS signed in time to begin clearing in late December/early January and completed by February 1 deadline.</p> <p>Environmental Compliance/permitting:</p> <ul style="list-style-type: none"> • EA/IS: Received only a few comments on draft FONSI and Mitigated Negative Declaration and both have been finalized. The EA/IS is very close to being finalized with responses to comments done. (For copies, contact Jim DeStaso at jdestaso@mp.usbr.gov.) • Section 404: Letter of Permission application submitted about October 24. • Section 401: Submitted about October 23. • Section 402 (for vegetation clearing only): Submitted about October 23. • FWS Consultation: Completed about October 18. • NMFS Consultation: Ongoing, mildly hopeful BO will be completed in December.

	<ul style="list-style-type: none"> State Historic Preservation Office Consultation: Initiated about November 5.
July 2007	On March 20, 2007 A public meeting on the CNFH Intake Improvement project was held in conjunction with the release of the Draft EA/IS for the NEPA/CEQA process. The comment period on the draft document closed on April 13, 2007. Reclamation and FWS are working with the contractor, Tetra Tech. Inc., to respond to comments and identify a preferred alternative. Due to cost/funding issues, options are being examined for a "phased" project.
September 2006	Reclamation is moving forward with the project to provide fish screens for the Coleman National Fish Hatchery water intakes. Reclamation has secured funds for design and 50% of the cost of construction. A contract with Tetra Tech, Inc. has been secured to prepare the required environmental documentation and Reclamation engineers are providing technical support to this process. A multi-agency/stakeholder meeting for this project was held on Sept 7, 2006.
May 2006	Funding is being sought. The need to screen the intakes is supported by the four agencies (DFG, USBR, USFWS & NOAA). In July 2005, Reclamation and USFWS reinitiated an effort to assess previously identified intake screening alternatives. Four alternatives are being examined for further study. The USBR Technical Service Center (TSC) is in the process of preparing an Intake Alternatives Analysis including the re-estimation of construction and operating costs at current price levels, and the reevaluation of the alternatives against specific selection criteria. In early 2006, Reclamation's Northern California Area Office intends to contract for environmental compliance service to prepare appropriate NEPA and CEQA documents.
June 2005	Currently have verbal agreement from USBR to split cost of the screening of the Coleman NFH intakes. USBR to provide funds under the RAXS program. Need to secure that other half of funding from CBDA. \$200,000 coming in 2006 from CVPIA for intake #1. Considering using these funds for environmental documentation. Ideally construction to begin in 2007 and continue through 2009. Intake #1 needs rehabilitation. Intakes #2 need screens. Total project cost is estimated at \$10 million.

8. Funding: The cost of implementing the Restoration Program increases as funding issues are being resolved.

History

March 2016	<p>As indicated in the following table, the project is being supported with federal, state and private funding. Reclamation has received \$109.1 million (M) to date and currently estimates that an additional \$13.3 M is needed to complete the project. Reclamation is coordinating with the 1999 MOU partners to pursue additional funding.</p> <table border="1"> <thead> <tr> <th>Funding Type & Source as of March 2016</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>Federal Funding</td> <td>\$53.3 M</td> </tr> <tr> <td><i>CALFED Early Ecosystem Restoration Funds</i></td> <td><i>\$32.0 M (to Reclamation)</i></td> </tr> <tr> <td><i>American Recovery and Reinvestment Act Funds</i></td> <td><i>\$12.8 M (to Reclamation)</i></td> </tr> <tr> <td><i>FY 2015 Federal Funds</i></td> <td><i>\$ 2.3 M (to Reclamation)</i></td> </tr> <tr> <td><i>FY 2016 Federal Funds</i></td> <td><i>\$6.2 M (to Reclamation)</i></td> </tr> <tr> <td>Federal & State Funding</td> <td>\$6.5 M</td> </tr> <tr> <td><i>Iron Mountain Mine Trustee Council</i></td> <td><i>\$6.5 M (to Reclamation)</i></td> </tr> <tr> <td>State Funding</td> <td>\$58.2 M</td> </tr> <tr> <td><i>California Department of Fish & Wildlife (DFW)</i></td> <td><i>\$3.4M (to USFWS)</i></td> </tr> <tr> <td><i>California Wildlife Conservation Board</i></td> <td><i>\$26.8 M (to Reclamation)</i></td> </tr> <tr> <td><i>California Wildlife Conservation Board</i></td> <td><i>\$10.0 M (to Reclamation)</i></td> </tr> </tbody> </table>	Funding Type & Source as of March 2016	Amount	Federal Funding	\$53.3 M	<i>CALFED Early Ecosystem Restoration Funds</i>	<i>\$32.0 M (to Reclamation)</i>	<i>American Recovery and Reinvestment Act Funds</i>	<i>\$12.8 M (to Reclamation)</i>	<i>FY 2015 Federal Funds</i>	<i>\$ 2.3 M (to Reclamation)</i>	<i>FY 2016 Federal Funds</i>	<i>\$6.2 M (to Reclamation)</i>	Federal & State Funding	\$6.5 M	<i>Iron Mountain Mine Trustee Council</i>	<i>\$6.5 M (to Reclamation)</i>	State Funding	\$58.2 M	<i>California Department of Fish & Wildlife (DFW)</i>	<i>\$3.4M (to USFWS)</i>	<i>California Wildlife Conservation Board</i>	<i>\$26.8 M (to Reclamation)</i>	<i>California Wildlife Conservation Board</i>	<i>\$10.0 M (to Reclamation)</i>
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<i>Delta Fish Agreement Amendment via Department of Water Resources</i>	\$5.3M (to DFW) \$6.7M (to Reclamation)
Private Funding	\$23.6 M
<i>PG&E (Foregone Power from 1999 MOU)</i>	\$20.6 M
<i>The Packard Foundation (via The Nature Conservancy)</i>	\$3.0 M
TOTAL	\$141.6 M
TOTAL FUNDS TO RECLAMATION	\$109.3 M

Dec 2014

To date, funding for the Restoration Project has been provided by federal and state agencies and through private donations, as indicated in the following table. Reclamation has received approximately \$101 million for overall project management, including, design; regulatory compliance; construction; environmental mitigation, and adaptive management plan development. Beginning in Federal Fiscal Year (FY) 2017, Reclamation estimates a need for an additional approximate \$17 million to complete the entire project. Reclamation is coordinating with the 1999 MOU Partners to seek funding. In late October, 2014 a request for \$9.1 million was submitted to Reclamation's budget office to receive possible funding under a proposed 2015 Senate Energy and Water Development Appropriation Bill. In early November 2014, a funding request (for an estimated \$0.5 million) was submitted to Reclamation's Bay Delta Office for inclusion with their Federal FY 2017 appropriations request.

A summary of project funding is listed below:

Funding Type & Source	Amount
Federal Funding	\$44.8 million
<i>CALFED Early Ecosystem Restoration</i>	\$32.0 million (to Reclamation)
<i>American Recovery and Reinvestment Act</i>	\$12.8 million (to Reclamation)
Federal & State Funding	\$6.5 million
<i>Iron Mountain Mine Trustee Council</i>	\$6.5 million (to Reclamation)
State Funding	\$58.2 million
<i>California Department of Fish & Wildlife</i>	\$3.4 million (to USFWS) \$26.8 million (to Reclamation)
<i>California Wildlife Conservation Board</i>	\$10.0 million (to Reclamation)
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Private Funding	\$23.6 million
<i>Pacific Gas and Electric Company (Foregone Power from 1999 MOU)</i>	\$20.6 million
<i>The Packard Foundation (via The Nature Conservancy)</i>	\$3.0 million
TOTAL	\$133.1 million

	<table border="1"> <tr> <td>TOTAL FUNDS TO RECLAMATION</td> <td>\$100.8 million</td> </tr> </table> <p>At the GBCWWG meeting on March 18th, 2014 it was noted that there is still full support from the working group for moving forward with increasing natural habitat for salmonids.</p>	TOTAL FUNDS TO RECLAMATION	\$100.8 million
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January 2012	Reclamation anticipates approximately \$28 M in State funds from DFG and DWR for Phase 2 by the end of June 2012.		
January 2011	In early 2011, Reclamation anticipates receipt of \$28 M in State funds from DFG and DWR for Phase 2.		
July 2011	Reclamation anticipates receipt of \$28 M in State funds from DFG and DWR for Phase 2 by the end of 2011.		
Sept 2009	<p>In early 2011, Reclamation anticipates receipt of \$28 M in State funds from DFG and DWR for Phase 2.</p> <p>In July 2008, via funding agreements, Reclamation received \$49.25 M from the following sources to implement Phase 1A of the Restoration Project:</p> <ul style="list-style-type: none"> • DFG State (Proposition 50) Funds: \$26.82 M • California Wildlife Conservation Board Proposition 50 Funds: \$9.98 M • Caltrans Benicia Bridge Mitigation State Funds: \$ 4.45 M • Caltrans Richmond San Rafael Bridge Mitigation State Funds: \$1.5 M • Iron Mountain Mine Mitigation Federal Funds: \$ 6.5 M <p>In April 2009, Reclamation received \$26 M in Recovery Act Funding to implement Phase 1B of the Restoration Project.</p> <p>Funding for Phase 2 of the Restoration Project has not been determined.</p> <p>During Phase 1A, fish passage improvements on the North Fork will be achieved by installing fish screens and ladders at the North Battle Creek Feeder and Eagle Canyon Diversion Dams; installing the Eagle Canyon Canal pipeline, removing the Wildcat Diversion Dam and appurtenant conveyance systems, and modifying the Asbury Dam on Baldwin Creek. During Phase 1B, improvements on the lower South Fork will be achieved by installing a tailrace connector from Inskip Powerhouse to Coleman Canal and a new Inskip Powerhouse bypass (near Coleman Dam). During Phase 2, additional fish passage improvements on the South Fork of Battle Creek will be achieved by removing the Coleman, South, Lower Ripley Creek Feeder, and Soap Creek Feeder Diversion Dams; installing screens and ladders on the Inskip Diversion Dam; installing a tailrace connector from South Powerhouse to Inskip Canal; and decommissioning the South Canal.</p>		
March 2008	In addition to three funding transfer agreements between DFG and Reclamation, up to three funding assurance agreements between PG&E and Reclamation will be prepared. All of these agreements are specific to Phase 1A of the Restoration Project. All of these agreements need to be completed before PG&E will submit the FERC License Amendment application for Phase 1A. These agreements are anticipated to be completed in Spring 2008.		
November 2007	Three different funding transfer agreements may be completed by late fall of 2007. There are three agreements because the Ecosystem Restoration Program (ERP) funds that the California Bay Delta Authority (CBDA) transferred to the California Department of Fish and Game (CDFG), combined with CDFG's existing ERP funds wasn't as high as CDFG previously thought so CDFG found mitigation money in California Department of Transportation (Caltrans) and money in the State of California Wildlife Conservation Board (WCB) to make up for the difference. CDFG and the Bureau of Reclamation (USBR) are working with the WCB and Caltrans to transfer these funds through two additional and separate agreements (from than the CDFG agreement). These agreements need to be in place before Pacific Gas and Electric Company (PG&E) will submit their license amendment application to the Federal Energy Regulatory		

	Commission (FERC) and USBR can proceed with the construction contract procurement processes. There is also \$6.5 million being provided by the Iron Mountain Mine Trustee Council; these federal funds can be transferred easily to Reclamation.
May 2007	Agreements to transfer funds are being finalized.
March 2006	In September, 2005 a Final Cost Estimate Summary was relayed to the CBDA, which indicates a need for an additional \$73.5 million for the Restoration Project. In October 2005, CBDA voted to transfer their remaining ERP State Prop. 50 Funds (\$45 million) to CDFG, and CBDA also recommended that CDFG fund the Battle Creek Salmon & Steelhead Restoration Project 'conditioned upon the completion of the environmental documents for the project, acquisition of necessary easements and compliance with all other legal requirements'. Additional information is available at: http://www.delta.dfg.ca.gov/erp/signature_battle_creek_dareview.asp
January 2006	<p>On August 3, 2005 the CBDA made a final recommendation to approve funding with conditions for up to 64 million dollars. The Selection Panel received three letters from the general public during the 30-day public comment period of the Panel's initial recommendation. All three letters were from landowners in the Battle Creek Watershed. The ERP Selection Panel believes the issues raised in the comment letters are more appropriately addressed in the project's joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and/or by the project lead agencies, including the CDFG. The State Water Board is the CEQA lead, and the USBR is the NEPA lead. These public comment letters are available for viewing at the following link: http://www.delta.dfg.ca.gov/erp/signature_battle_creek_dareview.asp</p> <p>The Selection Panel also received a letter from USBR, CDFG, US Fish and Wildlife Service, and NOAA Fisheries responding to our initial recommendations. The Panel appreciates this response to the initial recommendation and the agencies' affirmation of a commitment to the project's timely implementation and long-term management. The ERP Selection Panel would like to reiterate three aspects of our Initial Recommendation.</p> <p>First, we recommend that both the CBDA Ecosystem Restoration Program staff and Science Program staff assist with independent technical review of future project management documents, including the Battle Creek fish management strategy.</p> <p>Second, we urge the agencies to develop life-cycle models for winter-run and spring-run Chinook salmon and steelhead before the construction phase of the project is completed. The Joint Battle Creek Review Panel (JBCRP) stated in its technical review that these models could be used "to demonstrate the degree of success of the Project" and "to explain what happened to the channels, habitats, thermal environments, and fish populations in Battle Creek." These models should include a level of specificity that allows them to inform adaptive management of the target species on Battle Creek, as recognized in the agencies letter by their commitment to modify and expand developing models for use in Battle Creek. We agree with the JBCRP that the models would provide a critical framework for understanding the observed responses in Battle Creek and therefore would be more useful if developed before construction is completed.</p> <p>Third, the Selection Panel believes that public workshops and meetings that bring together the State and Federal agencies, PG&E, the scientific community, and local stakeholders are necessary to ensure the success of restoration efforts. These public forums will also ensure that regular reports and information collected during project implementation are widely disseminated and that there is accountability by the agencies with a role during and after implementation of the Restoration Project. The project agencies should work with the CBDA ERP staff to schedule these forums at key times during project implementation.</p>
June 2005	<p>A letter of support for the request for additional funds was sent from the GBCWWG to California Bay-Delta Authority Director Patrick Wright. Carissa Dunn was responsible for completing this letter.</p> <p>There is a 30-day review period once a decision is made by the selection committee (June 20th). This group may be able to comment during this 30-day review either as</p>

	individual entities or as the GBCWWG. Website: http://www.delta.dfg.ca.gov/erp/signature_battle_creek_dareview.asp
May 2005	During the annual meeting of the Battle Creek Watershed Conservancy on May 23rd, there were 51 people in attendance, 31 people voted (including proxies), all in favor of supporting the Battle Creek Salmon and Steelhead Restoration Project.
March 2005	See Battle Creek Restoration Project March 2005 final revised Ecosystem Restoration Program PSP forms to provide documentation for cost increases. http://www.delta.dfg.ca.gov/erp/signature_battle_creek_dareview.asp

Non-Prioritized Issue Histories

A. The Lassen Lodge Hydro project plan could conflict with restoration of the watershed.

History

March 2016	Provided by Naseem Alston: In November of 2015, CDFW met with the Licensee to discuss comments on their reports. In January of 2016, NMFS provided comments to FERC on the applicant's final reports and modeling. FERC is currently reviewing reports, model, and comments.
Dec 2014	Applicant filed with FERC in early December 2014. Agencies are currently commenting on FERC filing. FERC will likely issue a Ready for Environmental Assessment (REA) notice in January. There will be several months for commenting on the environmental assessment. The CA Department of Fish and Wildlife believes the Final License Application poorly analyzed the Project's effects on hydrology, temperature and instream biological needs. Refer to the Department's specific comments and recommendations. Documents related to Lassen Lodge hydro project can be found on Federal Energy Regulatory Commission (FERC) website under Project No. 12496, or on the BCWC website at http://www.battle-creek.net/lassen_lodge_docs.html (not a comprehensive listing of all documents). In September 2013 the project proponent, Phillip Leapley of Tetra Tech, gave a project summary to the Battle Creek Work Group as part of Tetra Tech's efforts to show FERC that they had done public outreach. Mr Leapley clarified that: The [proposed] project is located from above Angel Falls (all agree impassible) to above Panther Grade (River Mile 18.9 and the defined furthest extent upstream for the Battle Creek Salmon and Steelhead Restoration Project). The Lassen Lodge Hydroelectric project is not taking a position on whether Panther Grade is passable or not, but is evaluating the habitat above Panther Grade, below and above the LLHP tailrace due to its designation as critical habitat for chinook salmon and steelhead. A subsequent field trip to the site was offered didn't materialize. (NOAA Fisheries, CDFW and USFWS are participating in this potential project at agency levels.) For more information: contact phillip.leapley@tetrattech.com or view the filings with FERC for this project.
Jan 17, 2012	Status as of January 17, 2012: In early December 2011, Department of Fish and Game's (DFG) Region 1 FERC Coordinator was contacted by the new owner of the Lassen Lodge Project (Applicant). DFG Staff, the Applicant and their Consultant conducted a site visit on December 7, 2011 on the proposed Project, associated facilities, and Panther Grade. DFG was given a preliminary proposal consisting of: 1) A grouted rock and boulder diversion structure; 2) a proposed 36-inch diameter steel penstock; 3) a proposed powerhouse with one generating unit having a total installed capacity of 5 megawatts; 4) a proposed 60 kilovolt transmission line that would cross the creek and tie into an existing powerline at the top of the canyon (distance not included); 5) a fish ladder with baffling; and 6) a trash rack, fishscreen,

	<p>and fish return raceway.</p> <p>The original powerhouse was to be located just upstream of Panther Grade at river mile 18.85. The Applicant's new proposal is to move the powerhouse 1.5 mile upstream of Panther Grade to river mile 20.75. Angel Falls (a known barrier to anadromous fish) is 1.9 miles upstream of the powerhouse in the bypass reach. The diversion structure proposed to be located at river mile 22.9.</p>
Nov 27, 2007	<p>This project is currently proceeding under the Traditional Licensing Process (FERC Project No. P-12496). Interested parties may sign up for the FERC e-Subscription service if they wish to receive project correspondence. http://www.ferc.gov/docs-filing/esubscription.asp</p> <p>It is too early in the process to determine if the new facilities will affect the Restoration Project. Progress is being monitored and reported on by PG&E.</p>

F. Continuation of the Battle Creek Hydroelectric project license amendment (FERC# 1121) process is important.

History

Dec 2014	Based on the current Restoration Project schedule, the license amendment application for Phase 2 of the Restoration Project will be submitted to FERC in February 2015. FERC will have to approve the license amendment before implementation of Phase 2 of the Restoration Project.
January 2011	A license amendment application for Phase 1A of the Restoration Project was submitted on July 21, 2008; FERC issued its Order Amending License on August 25, 2009 allowing implementation of Phase 1A to occur. A license amendment application for Phase 1B was submitted on January 26, 2010; FERC issued its Order Amending License on May 21, 2010.
Mar 2008	Submittal of the final license amendment application for Phase 1 of the Restoration Project is contingent on the completion of the funding transfer agreements (see Issue #1.2).

G. There are potential impacts to private businesses in the Battle Creek Watershed (e.g. Mt. Lassen Trout Farm, Rocky Springs Ranch, and Oasis Springs Lodge) as a result of the Restoration Project.

History

January 24, 2012	Mike Berry noted that Mount Lassen Trout Farms Willow Springs should be removed from the issue.
January 2012	<p>Coordination with Phil Mackey completed.</p> <p>The Restoration Project July 2003 Draft EIS/EIR, February 2005 Draft Supplemental EIS/Revised EIR, and July 2005 Final EIS/EIR discusses the impacts to the private businesses. Public comments regarding this matter have been incorporated into the Final EIS/EIR. Under CEQA, CDFG is coordinating with Phil Mackey regarding the mitigation associated with the Mount Lassen Trout Farms Willow Springs. In September 2005, CDFG relayed a letter to Val Vaden (owner of Rocky Springs Ranch and Oasis Springs Lodge), which identifies the process associated with compensation for business losses.</p>

I. Complete the Restoration Project Biological Opinions.

NOTE: Former Issues 8.1 i. and 8.1 iii., that were formerly tied to this issue were moved to Past Issues That Have Been Resolved, (per Tricia Parker Hamelberg).

History

Jan 2015	Final license amendment (Phase 2) for the Battle Creek Restoration Project is expected to be filed with FERC this month. ESA consultation between FERC (PG&E) and NOAA Fisheries will follow.
Dec 2014	There are currently no requests pending for a Biological Opinion, however, Phase 2 of the Restoration Project will require a Biological Opinion to be issued. A draft Biological Assessment has been reviewed by NMFS, and will be included as an appendix to the Phase 2 license amendment application to be filed with FERC in January 2015.
January, 2011	NMFS issued a Biological Opinion for Phase 1A of the Restoration Project on July 21, 2009. It was incorporated into the license by FERC Order Amending License issued August 25, 2009. NMFS issued a Biological Opinion for Phase 1B on April 27, 2010; it was incorporated into the license by FERC Order Amending License issued May 21, 2010.

J. The Restoration Project requires the development of agreements with the landowners for temporary and permanent construction easements. (Agreements are completed and signed once the Record of Decision is issued.)

History

March, 2016	Based on the current project design, construction of Phase 2 of the Restoration Project will require that temporary and permanent easements be obtained from landowners. In 2016, PG&E plans to request temporary and permanent easements from landowners to accommodate construction of Phase 2. Site-specific landowner agreements for Phase 1A and Phase 1B were coordinated with the affected landowners, as needed, to address Restoration Project construction-related issues
Dec 2014	Based on the current project design, construction of Phase 2 of the Restoration Project will require temporary and permanent easements be negotiated with landowners. In 2015, PG&E plans to request temporary and permanent easements from landowners to accommodate construction of Phase 2. Site-specific land owner agreements for Phase 1A and Phase 1B have been coordinated with the affected landowners as needed to address Restoration Project construction related issues.
Feb 2011	Site specific land owner agreements for Phase 1A and Phase 1B have been coordinated with the affected landowners as needed to address Restoration Project construction related issues.
Sept 2009	PG&E is coordinating the landowner agreements for Phase 1A of the Restoration Project.
Nov 2007	Landowner coordination is ongoing. In 2007, several meetings occurred between the agencies, PG&E and the landowners associated with Phase 1 of the Restoration Project - Bruce McCampbell, Shirley Davis (and Kelly Ferris), Ron Reid, Horace & Peggy Crawford and Sue & Ed Shaw.
Sept 2006	USBR, DFG, USFWS and PG&E met with Battle Creek Watershed Conservancy Board Members and landowners, Leland & Shirley Davis, Bruce McCampbell and Erich Vaden, Kerry Burke, & Lannie Johnson (representing Val Vaden) on June 15, 2006 to discuss landowner agreements associated with temporary and permanent construction easements, and other issues. Per the 1999 Memorandum of Understanding, PG&E will coordinate with the landowners to develop these agreements.
March 2006	USBR, USFWS, DFG and NOAA Fisheries developed and sent a letter to landowner Val Vaden (dated March 9, 2006) which requests his feedback on construction items and refinements to proposed mitigation and avoidance measures to address noise, aesthetic or recreational impacts near the Inskip Diversion Dam/South Powerhouse Site. PG&E plans to set up meetings with the landowners in regard to agreements for

History

	temporary and permanent construction easement on their properties.
January 2006	USBR and project partners have been meeting with property owners to try to resolve outstanding issues. Meetings have occurred in Mid-June 2005 as well as subsequent meetings in August 2005 and December 2005.
June 2005	There has been two previous Project Managers that have made numerous contacts with the private landowners. USBR is working with PG&E to clearly define the property ownership and easements in the project area. After the ownership determination with PG&E, USBR will be moving forward with discussions with Landowners affected by the Restoration Project. GBCWWG members should communicate any landowner issues that they become aware of to Mary Marshall. The plan is to meet initially with the landowners in mid-June. Final negotiations will occur after signing of the ROD.

K. Continue outreach activities to gain stakeholder support and understanding of the Battle Creek Restoration Project.

History

Dec 2014	The bimonthly meetings of the Greater Battle Creek Watershed Working Group are open to the public and provide a venue for information sharing. Status updates are given on most of the activities underway (e.g. the USFWS distributes written updates on all their Battle Creek activities, USBR gives an update on their activities and local stakeholders give updates). Information can also be found at the following websites: http://www.usbr.gov/mp/battlecreek/status http://www.fws.gov/redbluff/activities.html www.Battle-Creek.net
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L. Coleman CNFH BA/BiOp Content

History

January 2014	<p>This issue is focused on the content of the CNFH BA/BiOp with respect to its compatibility with the Battle Creek Salmon and Steelhead Restoration Project and was added to the Issue Tracking document at the 1/24/12 GBCWWG Meeting. Upon review of the CNFH BA, the BCWC perceived deficiencies in the assessment including:</p> <ol style="list-style-type: none"> 1. The CNFH BA did not include a comprehensive listing of impacts from CNFH production on listed salmonid populations (spring Chinook, winter Chinook and steelhead) in Battle Creek, and did not adequately quantify these impacts due to omission of take sources and the cumulative effect of low level take sources. Importantly the analysis did not adequately evaluate these impacts in terms of incidental take and the possibility that this incidental take could appreciably delay population recovery. 2. Moving late-fall Chinook and Steelhead production off site was not considered and this action has high certainty to reduce incidental take and provide other potential benefits. 3. Federal agencies have the primary burden for ESA compliance. When the CNFH BA does not adequately address all sources of incidental take and does not consider beneficial alternatives, this unfairly shifts the burden for recovery to the Conservancy and other private parties aiding in the Restoration Project. <p>As no public comment period was provided for the CNFH BA, the BCWC forwarded concerns to NMFS via letter/memorandum on Jan 19th, 2012, consistent with the GBCWWG MOU. A copy of this document is available at: http://www.battle-creek.net/docs/BCWC_PositionPapers/BCWCCommentsOnCNFHBA20120119_Revise d%20Final_.pdf</p> <p>Within this letter the BCWC board concluded (pg. 4): "Incidental take at CNFH may appreciably delay the recovery of listed of spring Chinook</p>
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	<p>salmon, winter-run Chinook salmon, and steelhead populations in Battle Creek, thereby jeopardizing the recovery of these species in the Central Valley. A full accounting and analysis of the relevant population growth parameters is therefore necessary. More importantly, such an analysis needs to be understood within the proper policy context and should be done as part of a Biological Opinion with binding terms and conditions and include reasonable and prudent alternatives. Additionally, mandatory reasonable and prudent measures that minimize take should be included in any ITS issued by NMFS. Alternatives to the production of steelhead and late-fall Chinook salmon at CNFH exist and need to be fully explored and analyzed.”</p> <p>The examination of the content of the CNFH BA/BiOp in this issue is differentiated from the other CNFH BiOp related issue which is focused solely on the administrative act of issuance of the BiOp to CNFH in a timely manner.</p>
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M. Orwick Ditch breach/maintenance

History

<p>Feb March 2014</p>	<p>Feb 2014: The CA Department of Fish and Wildlife is not actively engaged in fixing the issues with the Orwick Diversion/Ditches because they do not have a mechanism to move forward due to the fact that they do not own the property or a water right associated with the ditch/diversion. CDFW is actively trying to purchase a water right that is currently ‘donated’ to them. CDFW no longer maintains the head gate of the diversion.</p> <p>New issue March 2014: A large private irrigation ditch (approx. 50 cfs) that diverts water off Battle Creek at approx stream mile 7.5, needs better maintenance to prevent overflowing and breaching of the earthen walls. In terms of natural production of steelhead this is a concern because when the canal is breached, adult steelhead that are trying to migrate upstream may be falsely attracted into the broken ditch. The two recent occurrences in Feb 2014 occurred up the hill from stream mile 6.0 so that adult fish potentially left natural habitat to be dead-ended in an inhospitable ditch. In these cases, a significant amount of water (approx 4-6" deep and 4 feet wide) attracted fish out of the creek. The water-rights holder needs to turn off the diversion into the Orwick Canal and proper maintenance has to occur to minimize resource damage from overland flow. In 2013 similar breeches occurred.</p> <p>This ditch has been in place since before 1914. It is now located on land managed by BLM. The CDFW Red Bluff Screen Shop works with the ditch operator to adjust flows and maintain the ditch.</p>
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N. Concern about gravel extraction negatively impacting habitat for naturally spawning salmon and steelhead.

History

Dec 2013	<p>PROJECT CHARACTERISTICS In 2006, a gravel company , Tullis Inc , proposed to establish a gravel operation on 947 acres adjoining the Sacramento River in Anderson, CA. Tullis Inc. worked with Shasta County Department of Resource Management to follow the NEPA process and gain project approval to excavate, crush, screen, wash, stockpile and load approx. 267,000 cubic yards of sand and gravel/year. Potentially significant impacts included indirect and direct loss of federal and state-listed endangered Sacramento River winter-run ESU Chinook salmon and threatened Central Valley spring-run ESU Chinook salmon; federal-listed threatened Central Valley ESU steelhead and/or their designated critical habitat; and federal-listed as threatened green sturgeon. http://www.co.shasta.ca.us/Departments/Resourcemgmt/drm</p>
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O. The Fisheries Management Plan has not been completed.

History

Feb 2015	<p>Status as of February 2015: The CA Department of Fish and Wildlife is currently working through the issue of Fishery Management Evaluation Plans with the National Marine Fisheries Service. Once an agreement is reached, the Department will prioritize watersheds for Fishery Management Evaluation Plans.</p>
March 2014	<p>Status as of March 2014: Status of completing the Battle Creek FMP is on hold until the more urgent WRRP has been completed. This was a BCFMP TAC decision. Staffing changes within CDFW has also resulted in a delay in both documents. At the TAC meeting 2/6/14, CDFW expressed that they were willing to assist with the development of the WRRP and FMP but didn't want to be the lead agency solely responsible for completion of these plans. This was of concern to the TAC, which requested that CDFW staff communicate this concern to their management. CDFW is currently working on a response to this concern.</p>
2012	<p>The FMP will include historical information for each of the 5 salmonid species eventually reintroduced into the new habitat created by the BC Restoration Project. Also included will be population based management goals and objectives for each salmonid species.</p>
Jan 2006	<p>The fishery management plan (strategy) has been on hold until completion of the winter run Chinook salmon feasibility analysis (see separate issue). The winter run feasibility analysis will be completed in 2006 prior to construction of the Restoration Program in 2007. Once the feasibility analysis has been completed, work will continue on the fish management strategy as a sub-committee of the Battle Creek working group. The Management strategy will be finished prior to the completion of the physical components of the restoration plan for Battle Creek.</p>

Appendix B: Resolved Issues

Past Issues That Have Been Resolved

Resolved Issue	Resolved	Battle Creek Restoration Project	Coleman National Fish Hatchery	General Watershed Issues
R-1. Concern over creating a new genetic run as a result of the Restoration Project	6/05	X		
R-2. Steelhead trout above the barrier weir	6/05		X	
R-3. Fishing regulations may change as a result of the Restoration Project	6/05	X		
R-4. Fish stocking policies may change where anadromous fish exist	6/05			X
R-5. Agency decisions are made without adequate stakeholder input stocking policies may change where anadromous fish exist	opinion			X
R-6. Insufficient outreach and information sharing with the public	opinion	X		
R-7. Restoration goals are inadequately defined	1/06	X		
R-8. Restoration Project environmental documentation	9/09	X		
R-9. Modify the Coleman NFH Barrier Weir	10/08		X	
R-10. Screen Orwick Diversion	9/06			X
R-11. Restoration Project Biological Opinion	1/12	X		
R-12. Alternative actions in the Restoration Project	1/12			X
R-13. Land management activities in the Battle Creek watershed need to be compatible with goals of the restoration project (public lands portion)	1/14			X
R-14. Litigation against the Restoration Project may cause further delays and increase costs to construction.	1/14	X		
R-15. Coleman Hatchery Biological Opinion	3/14	X		
R-16. The NMFS Central Valley Chinook Salmon & Steelhead Recovery Plan has not been completed.	3/15			X
R-17. Winter Chinook Re-Introduction Plan	1/17			X

Past Issues That Have Been Resolved

- R-1. **There is concern that, in the event a new genetic run (e.g. ESU-WR) of salmonids is created as a result of the Restoration Program, new regulations would be enacted by regulatory agencies.**

Naseem Alston (NMFS) was the contact for this issue.

Status as of June 10, 2005 - RESOLVED

With regards to the classification and treatment of restored populations of listed salmonids in Battle Creek, the concern has been voiced by various stakeholders that such a restored population (in particular, a winter-run Chinook salmon population) would somehow be classified as a separate species or ecologically significant unit (ESU) from the ESU that has already been designated in the Sacramento River. This is not the case. A restored population of winter-run Chinook salmon in Battle Creek would be classified as a sub-population of the Sacramento River winter-run Chinook salmon ESU just as the various sub-populations of spring-run Chinook salmon (Deer Creek, Mill Creek, etc.) are considered parts of the whole Central Valley spring-run Chinook salmon ESU. Establishment of a new sub-population of winter-run Chinook salmon in Battle Creek could only improve the recovery prospects for the entire Sacramento River ESU.

DFG sent a letter to the Battle Creek Watershed Conservancy concerning their view of this issue.

- R-2. **Passage strategies of steelhead trout above the Coleman Barrier Dam could negatively impact other salmonid species.**

Scott Hamelberg (USFWS) was the contact for this issue.

Status as of June 10, 2005 - RESOLVED

In 2004, in response to the recommendations of a CBDA Science Panel, the Resource Agencies issued a decision to discontinue releases of hatchery-origin steelhead above the Coleman NFH barrier weir. USFWS will continue to collect information on this issue through Coleman NFH adaptive management, CBDA science panel recommendation, and the 2001 biological opinion.

- R-3. **Fishing regulations may negatively impact the take of salmonids in the Battle Creek Watershed once an anadromous fishery is restored under the restoration program.**

Mike Berry (CDFW) was the contact for this issue.

Status as of June 10, 2005 - RESOLVED

The fishing regulations in Battle Creek throughout the project reach are the same as all other anadromous waters in Shasta and Tehama counties. They currently read: Open-Last

Saturday in April through November 15 Only artificial lures with barbless hooks may be used. Bag Limit - 0. These regulations will not change as a result of the restoration project.

R-4. The fish stocking permit policies will change for certain areas in the Battle Creek Watershed where anadromous fish could be present.

Mike Berry (CDFW) was the contact for this issue.

Status as of June 10, 2005 - RESOLVED

Currently DFG policy prohibits stocking fish in anadromous waters of the state. The exception to this policy in Battle Creek is the operations at Oasis Springs Lodge. They currently have a stocking permit that expires in 2006, but could be extended depending on the progress of the restoration project. Once a project alternative is chosen (even if it is no project), fish passage on Battle creek will be provided and fish planting will cease. The number of native sport fish should increase substantially under any alternative that provides augmented flow and improved fish passage.

R-5. Agency decisions are made without adequate stakeholder input.

This is an opinion. The objectives of the GBCWWG MOU address this issue.

R-6. There is insufficient outreach and information sharing to the public.

This is an opinion. The objectives of the GBCWWG MOU address this issue.

R-7. Restoration goals and the measurement of success are not adequately defined.

Harry Rectenwald was the contact for this issue.

Status as of January 10, 2006 - RESOLVED

Status as of June 10, 2005 – The restoration goals and measure of success for the Restoration Project (Project), as defined as the 42 miles of anadromous habitat upstream of Coleman Powerhouse, is included in two documents part of the Supplemental Draft Environmental Impact Statement/Revised Environmental Impact Report (review period ended April 29). The goal and success benchmarks for the Project are contained in the Adaptive Management Plan (Plan) at the finest level of detail available in the documentation package; and in the Action Specific Implementation Plan at a broader level of detail relating to goals for the Sacramento River system as a whole. The Plan underwent substantial review during the CalFed proposal process producing substantial revisions from the previous version circulated with the Draft EIS/R.

The Action Specific Implementation Plan is focused on how the Project relates to the CalFed Program's blue print that establishes goals and measures of success for the multiple species and ecological communities in the Sacramento River Valley. One suggested way forward on this issue is to provide an overview of these revised documents focused on goals and measurement of success.

R-8. Restoration Project environmental documentation has not been completed.

December 2008: State Water Board filed Final CEQA Findings and issued Notice of Determination on the EIR, and issued the Clean Water Act Section 401 Water Quality Certifications for the project.

January 2009: Bureau of Reclamation Signed Record of Decision on the EIS

History

November 2007 In March 2007, CDFG issued the CEQA Findings and Notice of Determination in regard to a Funding Decision on the Restoration Project.

December 2006 The environmental documents completed to-date for the Restoration Project follow. These documents are located on: <http://www.usbr.gov/mp/battlecreek/documents.html>

NEPA/CEQA:

Draft Supplemental EIS/Revised EIR- February 2005

Draft EIS/EIR - July 2003

Final EIS/EIR - July 2005

ESA:

Draft Action Specific Implementation Plan - April 2004

NOAA Fisheries BO and FWS BO - June 2005

Adaptive Management:

Draft Adaptive Management Plan - September 2001

Revised Draft Adaptive Management Plan - April 2004

R-9. Modification of the Coleman NFH Barrier Weir.

Scott Hamelberg was the contact for this issue.

February 2009: Construction completed.

History

October 2008 Returning fall Chinook salmon utilized the new ladder into Coleman NFH. A number of modifications remain to be completed on the project. Reclamation's Willows Construction Office is in the process of initiating the transfer of the new facilities to the USFWS Coleman Fish Hatchery.

January 2008 Upstream Fish Ladder. In August, the primary and auxiliary upstream river ladder floors (slabs) and walls were placed. In September, the Coleman National Fish Hatchery (NFH) Project Leader expressed concern about the difference in elevation between the slab (invert) of the upstream ends of the primary and auxiliary river ladders and the existing stream bed. The stream bed is higher and may allow rocks, silt, and/or debris to enter the ladder. Also, the future bar rack on the upstream end of the existing fish ladder may catch debris that may be difficult to remove by hand. These concerns were relayed to Reclamation's Technical Service Center (TSC) design team for investigation. On December 10, 2007, Reclamation's Technical Service Center (TSC) provided a proposed remedy using a combination of grading of the stream bed and stop logs in the river ladder to minimize the conditions for bed load to enter the ladder. These remedies are within the existing project design and specification.

Construction Information Line. Also in October, the toll-free construction information line was updated to provide general info about construction activities and help address

History

- construction-related questions about the subject project. The phone number for construction info is: 800-742-9474 (press 2 for info on various programs, then press 1 for Fish Barrier Weir). To help ensure that our agencies "speak with one voice," please refer interested parties to this number.
- November 2007 Temporary Diversion Channel. In August, the construction contractor completed ahead of schedule a major portion of the work on the south side of Battle Creek that was originally scheduled for 2008. The temporary diversion channel was partially excavated and the riprap weirs and rock berms were constructed within the diversion channel.
- Cofferdam. On September 18, the cofferdam subcontractor completed removal of the portable cofferdam that allowed dewatering for construction of the primary and auxiliary river ladder. There were no visible signs of turbidity in Battle Creek during the cofferdam removal. Based on water quality monitoring by Reclamation and the contractor, there have been no violations of turbidity limits to date.
- 2007 Salmon Festival. On October 20, 2007, Reclamation participated in the Salmon Festival at Coleman National Fish Hatchery, which drew an estimated 15,000 visitors. Reclamation answered visitors' questions about and exhibited recent photographs of the ongoing construction (see attachments). Reclamation believes that the public responded positively to the project display and in-progress construction visible to the public.
- Section 7, Endangered Species Act Compliance. The construction contractor has scheduled some in-stream activities in May 2008, outside of the in-stream work period (June 1 through September 30). The action agency, Coleman NFH (USFWS), requested re-initiation of section 7 formal consultation with the goal of receiving an amended biological opinion from the National Marine Fisheries Service (NMFS) to allow in-stream activity in May 2008, ahead of the June to September work period. The contractor proposes to cross equipment through the stream on 1 day in May in preparation for starting work on the south side of the creek on June 1.
- July 2007 The Service and Reclamation anticipate that major construction activities will begin by mid-May 2007. In-stream construction is confined to June 1 through September 30.
- Bald Eagle. On April 4, Reclamation's avian biologist consultant completed the 14-day pre-construction raptor monitoring required for Endangered Species Act compliance for the Federally-listed as a threatened bald eagle. The monitoring results indicate that the bald eagle nest in the project vicinity is progressing normally.
- Info Line. Reclamation's toll-free construction info line is: 800-742-9474. Info will be updated as construction progresses.
- Budget. In March and April 2007, Reclamation briefed the Service on the project's cost growth and advised the Service to secure an additional \$1.95 million. The cost growth is primarily due to a 1-year schedule delay and increases in cost of: construction; construction materials; design and post-award construction support; and conservation measures to protect the bald eagles.
- Biological Opinion. On March 26, National Marine Fisheries Service issued their amended biological opinion (BO). As addressed in the amended BO, the construction contractor plans to use 3 portable, free-standing cofferdam systems (instead of spawning gravel) to divert Battle Creek flows away from the construction of the ladders and upstream and downstream of the temporary diversion channel.

History

- Schedule. Construction contract award: February 1, 2007; Mobilize on-site: April 25, 2007; Major construction activities begin: May 14, 2007; Work in water window: June 1 through September 30 of any year ; Construction completion: February 2009.
- May 2007 On February 1, 2007, Reclamation's Mid Pacific Region awarded the contract for the construction of the Service's Fish Barrier Weir & Ladder Modification at Coleman National Fish Hatchery (NFH) to Gracon Corporation.
- Sept 2006 In June 2006, the Service and Reclamation, as co-lead Federal agencies under NEPA, signed a FONSI based on the Environmental Assessment (EA) for the Fish Barrier Weir and Ladder Modification at Coleman NFH. On September 12, Reclamation issued a solicitation for proposals from interested contractors for construction of the subject project. It is anticipated that major construction activities would begin in the spring of 2007. In-stream construction is confined to June 1 through September 30 of any year.
- May 2006 The Service and Reclamation, as co-lead Federal agencies under NEPA, have released a Draft Environmental Assessment (EA)/Draft FONSI for the Fish Barrier Weir and Ladder Modification at Coleman NFH. On April 6, 2006, the Draft EA/Draft FONSI was made available to the public for a 30-day public comment period. These documents are available online at http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=2148.
- The first Draft EA and Draft FONSI for this proposed action were made available for public review and comment in June 2004. The March 2006 Draft EA provides updated information since the issuance of the first Draft EA. The construction contract is scheduled to be awarded in Summer 2006.
- July 2005 USFWS anticipates that \$6.5 million will be obligated for the project by Sept 2005.
- June 2005 Current project requires \$6.55 million amendment on top of \$1.6 million that was secured in 2000 for a total of \$8.1 million. A NEPA document (draft EA) was completed and put out for review in 2004. A CEQA document (IS/ER) is currently available for public comment on the CALFED website (GBCWWG can comment on this doc--comment period closes June 3, 2005). A BA was being prepared to submit to NOAA Fisheries--now it has been decided that an ASIP is required. Timeline for ASIP completion is under development. Design team is meeting regularly a project design is at 50%. Schedule - Construction contracts need to be awarded in early '06 for construction to begin in Jun 06. Need midyear 2005 funding decision by CBDA to keep on schedule for construction. Project completion date = early 2008.
-

R-10. Substantial losses of juvenile salmonids occur as a result of the lack of proper screening of Orwick Diversion.

Naseem Alston and Tricia Parker were the contacts for this issue.

Status as of December 2014: Until recently, the screen on the Orwick diversion did not meet many of the NMFS screening criteria. It was often overtopped by high flows and screen panels were often removed completely allowing entrainment of juvenile salmonids. The bypass system on the Orwick screen also was inadequate; instead of returning screened fish back to the main channel of Battle Creek, it emptied into a side channel that was dry throughout much of the year. These impacts have caused increased stress and mortality of listed salmonids that were entrained into the diversion.

The fish screening facilities on the Orwick diversion have recently been retrofitted to meet the NMFS fish screening criteria. Two separate actions occurred to improve the effectiveness of the screen and improve survival of juvenile salmonids that enter the Orwick diversion. In 2006, a 600 foot bypass pipe was installed to return fish back to the main channel of Battle Creek, and in 2007 a headgate water control structure was installed. The headgate's intention is to prevent the screen from being overtopped by high flows. The new bypass pipe replaces an inadequate pipe so that at all times during the year, juvenile salmon and steelhead should be maintained in a wetted environment from the time that they are diverted from the mainstem Battle Creek until the time that they are returned to Battle Creek via the bypass pipe.

History

September 2006	Northstate Resources has been hired to complete the environmental permitting. Iron Mountain General Engineering has been hired to construct the bypass pipe. Construction was completed during the fall of 2006.
March 2006	<p>Multiple partners are working together (Mr. Orwick, DFG, BLM, NMFS, USFWS) to improve fish passage and survival at the Orwick diversion. Funds to remedy two of the issues with the current fish screen (no bypass and no control over diversion flows) have been attained from the Anadromous Fish Restoration Program (AFRP). \$180,000 of fiscal year 2006 AFRP funds have been designated to construct a properly functioning bypass pipe on the fish screen and an automatic headgate structure to control inflow at the mouth of the canal. This project is Action Four in the AFRP plan (USFWS 2001).</p> <p>During the summer and fall of 2005, a significant effort was made by the above listed partners to re-engineer the rock weir that was built across Battle Creek at the Orwick diversion. Several alterations were made to the weir in the fall of 2005, with the intent of improving fish passage past the weir and minimizing the geo-fluvial impacts of the weir on the Battle Creek channel. The true test of the new design will be how it stands up to high winter and spring flows. A re-evaluation of the structure will be conducted following the spring runoff.</p>
June 2005	<p>This has been a long standing issue and this diversion has been on the NMFS law enforcement "top 10 list" of potential take violators at unscreened or poorly screened diversions for some time. There is also the more recent issue of the construction of a large rock weir that was built in Battle Creek to facilitate diversion of water into the Orwick ditch. This structure was constructed without ESA compliance and with no incidental take authorization.</p> <p>In conjunction with these issues there have been periodic efforts to acquire the water rights to this diversion for environmental purposes and shut the diversion down all together. Efforts towards this goal have been made by BLM and DFG, and most recently by the Environmental Water Program under CALFED.</p> <p>NMFS law enforcement has recently initiated an ESA investigation. Our special agents and engineers have been out at the site several times collecting evidence such as flow measurements and photographs of threatened steelhead entrained in the diversion.</p>

- R-11. Complete the Restoration Project Biological Opinions. (Formerly part of Issue 8.1).**
- i. Restoration Project Implementation:** Naseem Alston was the contact. The Biological Opinion for 'Restoration Project Implementation' was completed, and NOAA

Fisheries transmitted the Biological Opinion to USBR on June 22, 2005. The BO can be downloaded from: http://swr.nmfs.noaa.gov/sac/myweb8/webpages/biol_opinions.htm

History

June 2005 This BO has been through editorial/technical review and Sacramento section 7 coordinator review. It is currently being revised in accordance with these reviewer's edits and comments. It has been suggested (and seems likely) that the Long Beach section 7 coordinator will wave review of this BO and that it will go directly to the NMFS Regional Director for final approval. Once this BO has final approval from Long Beach and is ready for signature, it will be provided to Reclamation as a draft for review by Reclamation and whomever they wish to provide it to (the workgroup?). Final revisions will then be made to the BO and it will be signed and issued to Reclamation.

On June 2, 2005 a draft of the USFWS Biological Opinion was sent out for review to the GBCWWG by Mary Marshall. On June 3, 2005 a draft of the incidental take portion of the NOAA Fisheries Biological Opinion was sent out for review to the GBCWWG by Mike Tucker.

- ii. **Monitoring Plan Biological Opinion:** Naseem Alston was the contact. Status as of January 10, 2006: A Biological Opinion is not necessary for the Battle Creek Restoration Program monitoring plan. NOAA Fisheries will handle the monitoring plan under section 10 or section 4D.

- R-12. **There are misconceptions of the differences between the alternate actions in the Restoration Program EIR/EIS. (e.g. better understanding of the ramifications from the 8-dam alternative)**

Status as of January 24, 2012 – RESOLVED

Mary Marshall is the contact. Status as of January 10, 2006: The Restoration Project Draft July 2003 EIS/EIR (in Chapter 3) provides a complete description of the project alternatives. The Restoration Project February 2005 Draft Supplemental EIS/Revised EIR and the July 2005 Final EIS/EIR (in Chapter 3) provides information on the 8 dam removal alternative and describes why it was eliminated from further consideration as a project alternative.

- R-13. **Land management activities in the Battle Creek watershed need to be compatible with goals of the restoration project.**

Status as of January 28, 2014 – RESOLVED

The GBCWWG as of January 28, 2014, recommended that the Public Lands portion of this issue (identified as issue 7.a. in Jan 2014), be moved to resolved and that the remaining concerns for issue 7.a would be retained in the issue tracking document as two separate issues as follows:

- 7.a.1. Concern about sediment delivery from roads negatively impacting Battle Creek streams
- 7.a.2. Concern about sediment delivery from land uses negatively impacting Battle Creek streams

i. Public: National Forest System (NFS) lands:

Melanie McFarland is the contact for Lassen NFS lands; status as of January, 2014.

The primary (perceived) issue is, providing goods and services via multiple-use land management activities, consistent with restoration goals for anadromous fish downstream.

Current Status: On lands administered by the Lassen National Forest (LNF) in upper Battle Creek (upstream of the range of anadromy) management activities follow direction contained in the LNF Land and Resources Management Plan (as amended). Management direction includes the “Long-Term Strategy for Anadromous Fish-Producing Watersheds in the Lassen National Forest”. *The long-term strategy (LTS) was developed in collaboration with NMFS and was designed specifically for the protection and restoration of important anadromous fish-producing watersheds of the Lassen NF, including Battle Creek.* The LTS includes Riparian and Watershed Management Objectives, Riparian Habitat Conservation Area (RHCA)s land allocation, Standards and Guidelines, and emphasizes restoration, monitoring, and collaboration.

Special management is implemented for areas adjacent to aquatic habitats, termed Riparian Habitat Conservation Areas (RHCA)s. RHCA)s are land allocations and a key component of the long-term strategy to protect federally listed anadromous fish. *RHCA)s are adjacent to streams and other aquatic habitat where the primary management emphasis is on protecting and where necessary, restoring the condition of the riparian and aquatic habitats. Management actions are tailored to maintain or restore riparian conditions to meet management objectives.*

Lassen National Forest managers also recognize the importance of reducing or eliminating chronic sources of sediment (primarily associated with roads) and enhancing watershed resiliency by reducing the potential extent and/or magnitude of high severity wildfires. To this end, specific actions that have complemented the restoration project include efforts established under partnership between the Battle Creek Watershed Conservancy (BCWC). One component of a CALFED grant awarded to the BCWC was aimed at improving upper watershed conditions to benefit downstream listed anadromous fish and their habitat. Actions have been implemented on National Forest Service lands to reduce or eliminate chronic sources of sediment in headwater tributaries of Battle Creek.

Completed

	Title	Purpose	Status	Responsible	Link
1	Development of the Long-Term Strategy (LTS) for Anadromous-fish producing Watersheds in the Lassen	Provide management direction for national forest system (NFS) lands for the protection and restoration of aquatic and riparian habitat in anadromous fish	Forest Plan amended with LTS 2001/2004 and consulted on with NMFS	USFS	

	National Forest	producing watersheds, including Battle Creek			
2	Cabin Project, Hat Creek Ranger District	Vegetation, fuels, watershed and riparian restoration	Actions implemented (completed ~2011)	USFS	N/A
3	Note: Need to add CALFED funded BCWC/LNF projects (sediment reduction/fuels assessment)				
4	Field trips to the LNF for the GBCWWG	Share information on proposed federal activities designed to meet forest resource management goals and objectives and, to inform interested parties of the opportunity to provide input and feedback during the environmental analysis process. Primary activities shared have focused on maintaining and/or improving watershed health through the treatment of roads (sediment reduction) and vegetation/fuels management.	Hosted in 2006 and 2009	USFS	N/A

Proposed

	Title	Purpose	Status	Responsible	Link
1	Road/stream crossing improvements and restoration (e.g. four sites on the 17 road)	Provide aquatic organism and bedload passage and reduce risk for downstream sediment delivery from potential road crossing failures (4 sites).	Two crossings in final design phases; two crossings in need of survey, design and planning.	USFS	N/A
2	Stevens Authority Funded Project	Fuels Reduction	Environmental analysis (CEQA) to	TCRCD/USFS	N/A

			be completed 2014		
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On-going

	Title	Purpose	Status	Responsible	Link
	Dry Hills Forest Restoration Project, Almanor Ranger District	Vegetation, fuels, watershed and riparian restoration	NEPA completed	USFS	

R-14. Litigation against the Restoration Project may cause further delays and increase costs to construction.

Status as of January 28, 2014 (as per GBCWWG Meeting) – RESOLVED

Mike Berry is the contact. Status as of January 2010: The Sacramento Superior Court found that the Battle Creek Environmental Impact Statement/Environmental Impact Report was legally sufficient and the use of Proposition 50 funds for the project was lawful. Therefore, the project will continue to proceed.

History

January 2008 Background: Project opponents have threatened litigation against the Restoration Project at various times during planning and development phases. Some of the threats were more viable than others.

The July 2005 Restoration Project EIS/EIR was prepared jointly by the State Water Resources Control Board (State Water Board) and the USDO, Bureau of Reclamation (Reclamation). On September 19, 2006 the State Water Board certified the adequacy of the EIS/EIR. Subsequently on October 18, 2006, Case No. 06-CS01520 was filed in Sacramento County Superior Court. Under this case, Outfitters Properties, LLC, Rocky Springs Ranch, LLC v. State Water Resources Control Board of the State of California, the petitioners are purportedly challenging the certification of the EIS/EIR for the Restoration Project.

On March 14, 2007, the California Department of Fish and Game (DFG) filed CEQA Findings and a Notice of Determination in regard to a Funding Decision on the Restoration Project. Subsequently, on April 12, 2007, Case No. 07-CS00462 was filed in Sacramento County Superior Court. Under this case, Outfitters Properties, LLC, Rocky Springs Ranch, LLC v. State Water Resources Control Board of the State of California, the petitioners are purportedly challenging the certification of the EIS/EIR, certain funding decisions and/or conditions, and compliance with CEQA (in various aspects) for the Restoration Project. The respondents to this case are the State Water Board and its Executive Officer, and the California Department of Fish and Game (DFG), and its Director.

The litigation process associated with addressing these lawsuit filings could cause considerable delays and substantial cost increases to the Restoration Project.

Solutions: The litigation process is proceeding. This is likely outside the ability of the GBCWWG (watershed group) to resolve. Landowners have identified several actions which might reduce the potential for litigation on their part. These actions are not acceptable to Federal and State agencies due to incompatibility with the project purpose, increased environmental impacts, additional cost and significant project delays which would result by implementing landowner alternatives. The GBCWWG should continue their outreach program outlining the benefits from this project to the community. Many local businesses are already benefiting from the increased trout

population as a result of higher interim flows in Battle Creek. These benefits will be jeopardized by lengthy litigation.

R-15. Coleman NFH Biological Opinion has not been completed.

Status as of March 18th, 2014, (as per GBCWWG Meeting) – RESOLVED

Naseem Alston and Jim Smith are the contacts.

NMFS finalized and signed the biological opinion and it is available at: <https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts> by searching for keyword “Coleman” and downloading the pdf.

FWS completed the updated 2011 Coleman National Fish Hatchery Complex Biological Assessment (BA) and submitted to the NMFS on July 27, 2011. The FWS also provided a draft Biological Opinion to NMFS. ESA consultation discussions between NMFS and USFWS occurred through 2012 and 2013.

History

Feb 2014	NMFS finalized and signed the biological opinion and it is available at: https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts by searching for keyword “Coleman” and downloading the pdf.
Jan 2014	ESA consultation discussions between NMFS and USFWS occurred through 2012 and 2013.
July 2011	FWS completed the updated 2011 Coleman National Fish Hatchery Complex Biological Assessment (BA) and submitted to the NMFS on July 27, 2011. The 2011 BA and the 2001 BA are posted at http://www.fws.gov/redbluff/he_reports.aspx The FWS also provided a draft Biological Opinion to NMFS. NMFS is currently reviewing both documents.
Jan 2011	In early 2009, after a continuing lack of available NMFS staffing prevented the finalization of the Biological Opinion (BO) for the Coleman NFH, the FWS Regional Director and NMFS Southwest Regional Administrator agreed that the FWS would assist in the development of a hatchery BO. The FWS is conducting staff work to generate a draft BO for NMFS review and consideration. Because almost nine years had elapsed since the completion of the June 2001 BA, the FWS is also updating the BA to include new information and analyses in order to complete a draft BO. The updated BA and a draft BO are expected to be submitted to NMFS in the spring of 2011.
Jan 2006	The Coleman NFH BO is in final Sacramento Section 7 coordinator review (step (2) shown below).
June 2005	The BA was submitted June 2001 to NOAA Fisheries. Shirley has been reviewing this document. There is no estimated date of when this will be completed. There is a legal requirement that the BO be issued in 135 days. The existing BO is ongoing until a new BO is issued. There is no real issue with the ongoing BO other than from an agency perspective of take. From the GBCWWG perspective it is important

to know how the opinion of NOAA Fisheries. Scott – this is an important issue because FWS made a BA and a lot of people were waiting for an opinion from NOAA fisheries on what impact operation of Coleman NFH has. Has some impact on credibility of the Government with the stakeholders.

The latest draft of the Coleman NFH Biological Opinion has been submitted for initial editorial/technical review. Remaining steps include: (1) completion of editorial/technical review and inclusion of edits; (2) completion of final Sacramento section 7 coordinator review and inclusion of edits; (3) completion of final Long Beach section 7 coordinator review and inclusion of edits; (4) and final approval and signing of biological opinion.

R-16. The NMFS Central Valley Chinook Salmon & Steelhead Recovery Plan has not been completed.

Naseem Alston is the contact.

Status as of January, 2014: The Recovery Plan is expected to be finalized in early 2014. The purpose of the Recovery Plan is to provide strategic guidance and specific actions that will lead to the removal of winter-run and spring-run Chinook salmon and steelhead from the Federal List of Endangered and Threatened Wildlife. Within the document are species-specific recovery criteria which will need to be met in order for recovery efforts to be successful. These criteria cannot be achieved without viable populations of all three species in Battle Creek, making the watershed an essential part of the Chinook salmon and steelhead recovery in the Central Valley.

History

Dec 2014	Status as of December, 2014: July 2014, NOAA Fisheries released the Recovery Plan for Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, and California Central Valley steelhead. The recovery plan draws on the expertise of the Central Valley Technical Recovery Team, agency co-managers, and many public entities and individuals dedicated to recovering these fish. It is based on a sound scientific foundation and is a key decision-making resource for improving and sustaining the health of California's natural environment. Access at: http://www.westcoast.fisheries.noaa.gov/protected_species/salmon_steelhead/recovery_planning_and_implementation/california_central_valley/california_central_valley_recovery_plan_documents.html
Jan 2011	The public draft Central Valley Recovery Plan for winter-run Chinook salmon, spring-run Chinook salmon, and CV steelhead is available to the public at: http://www.westcoast.fisheries.noaa.gov/protected_species/salmon_steelhead/recovery_planning_and_implementation/california_central_valley/california_central_valley_salmon_recovery_domain.html
June 2005	NMFS' CENTRAL VALLEY RECOVERY PLANNING PROCESS Brief Overview of Process and History of CV TRT The Southwest Region (SWR) of NOAA's National Marine Fisheries Service

(NMFS) has engaged in the recovery planning process for all salmonid ESUs in California. Modeled after the recovery planning framework developed by the Northwest Region (NWR) of NMFS, recovery planning areas (referred to as domains) are defined by ESU boundaries. For the Central Valley (CV), the boundaries of the winter-run and spring-run Chinook salmon and CV steelhead ESUs define the CV recovery planning domain. The foundation of this framework is based in the NOAA Technical Memorandum “Viable Salmonid Populations and the Recovery of Evolutionarily Significant Units”, June 2000. This technical report supports the concept of four criteria or parameters (known as VSP criteria) to meet when attempting to recover listed salmonid populations: abundance, productivity, diversity, and spatial structure. This report can be accessed at http://santacruz.nmfs.noaa.gov/ESA/salmonids/esa_docs/index.php. The planning process is devised in two phases – technical (phase 1) and planning/implementation (phase 2); there is often overlap between the two phases, thus phase 2 does not have to wait for completion of phase 1 to initiate some of the early planning activities. Phase 1 is initiated through the appointment of a technical recovery team (TRT). Each TRT has been selected through a nomination and independent peer review process that seeks individuals with strong scientific backgrounds in salmonid biology, along with specialized experience related to the respective geographic domain. Phase 2 is viewed as largely a policy/management exercise that calls upon the expertise of the TRT and is managed and directed by individual recovery coordinators in each domain. Additional information regarding recovery planning in California, including domain-specific products produced and status review information can be found at <http://santacruz.nmfs.noaa.gov/ESA/salmonids/trt/index.php>

R-17 Winter Chinook Re-Introduction Implementation Plan

Jason Roberts (CDFW) is the contact.

Status as of February 27, 2017 – RESOLVED, per Doug Killam

Status as of January 2017, provided by Doug Killam, CDFW. The [Battle Creek Winter-Run Chinook Salmon Reintroduction Plan](#) has been completed.

History

Feb 2016	Provided by Doug Killam, CDFW. The CDFW has contracted with ICF to develop and write a plan for introducing winter-run into the North Fork of Battle Creek. This process is in progress and a plan that is a template for implementation will be delivered to CDFW by end of 2016 or earlier. Funding for the implementation/construction of facilities, etc., for the chosen re-introduction strategy will then need to be identified before construction, planning and contracting can commence.
Dec 2014	The Department has issued a notice of intent to award a contract to a consultant to complete this task. Anticipate contract to be awarded in February 2015 and work to be completed by August 2016.
March 2014	The multi-agency/stakeholder BCFMP TAC recommended that the winter-run reintroduction plan (WRRP) be a connected but separate document from the Fish Management Plan (FMP) due to the level of detail that will be

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necessary to include in the WRRP. The decision of the TAC was to first focus on completing the WRRP, prior to the FMP. The TAC has been meeting regularly, however CDFW has had a recent shift in staffing which has left this position uncertain, and therefore the timeline for completion of the WRRP is uncertain.

The BCFMP team has focused on a developing a matrix of winter-run restoration methodologies to help inform implementation for reintroducing winter run to the new habitat in Battle Creek once the restoration project is complete. Due to the complex nature of reintroducing a listed endangered species into a new habitat the team decided that the plan details should include: permitting, broodstock collection methods, agency roles, funding sources, and designs and costs for equipment and possible facilities for reintroductions.

At the TAC meeting 2/6/14, CDFW expressed that they were willing to assist with the development of the WRRP and FMP but didn't want to be the lead agency solely responsible for completion of these plans. This was of concern to the TAC, which requested that CDFW staff communicate this concern to their management. CDFW is currently working on a response to this concern.

January, 2010	No further action is anticipated until restoration is closer to completion. Mike Berry sent out an administrative draft of the Winter Run Chinook Salmon feasibility study in late December 2005. The administrative draft incorporated comments received from the May 16, 2005 initial draft.
June 2005	The initial draft has been completed by CDFG staff and is currently being reviewed internally. A draft was released through email to the working group on the May 16, 2005. Comments to this initial draft need to be sent to Mike Berry.

R-18 The Coleman NFH Adaptive Management Plan has not been completed

Status as of March 21 2017, (as per GBCWWG meeting) – RESOLVED

Kevin Niemela (USFWS) and Trang Nguyen (USBR) are the contacts.

Status as of January 2017:

The final Coleman National Fish Hatchery Adaptive Management Plan was completed in November 2016. The document is available at <https://www.usbr.gov/mp/battlecreek/cnfh.html>.

Monthly status updates and related CNFH AMP documents are available at <https://www.usbr.gov/mp/battlecreek/cnfh.html>

History

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| Mar 2016 | <ul style="list-style-type: none">• A Public Draft CNFH AMP Review is occurring from March 1 – May 2, 2016.• A draft Integrated BCRP and CNFH Adaptive Management MOU is included as an appendix of the Public Draft CNFH AMP.• A Draft CNFH AMP Public Meeting is scheduled for March 15, 2016.• The Final CNFH AMP is anticipated in December 2016. |
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History

Jan 2015	<p>The Battle Creek Salmon and Steelhead Restoration Project (BCRP) Adaptive Management Plan (AMP) was completed in 2004 and a Coleman National Fish Hatchery (CNFH) AMP is in development. Adaptive management is needed for CNFH to address “scientific uncertainties” that underlie all aspects of Battle Creek fisheries management, including the interactions between the BCRP and CNFH. Adaptive management is the preferred methodology for incorporating uncertainties into decision making.</p> <p>Overall, 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. Through the CNFH AMP, responsible agencies and stakeholders will gain an improved understanding of the Battle Creek watershed that will enable them to better assess whether an alternative management approach to managing the CNFH would achieve the goals and objectives of both the BCRP and the CNFH. The CNFH AMP will complement the BCRP AMP and together, the two plans will form an integrated and cooperative framework for adaptive management in Battle Creek.</p> <p>A first internal draft of the AMP document was completed in March 2013, followed by an independent science panel review in April-May 2013. The Cramer Fish Sciences (CFS) continues to work with the Technical Advisory Committee (TAC) to develop the CNFH AMP and incorporate several of the Science Panel recommendations, including quantitatively modeling the anadromous life-cycle and incorporating an integrated watershed monitoring plan. The TAC is also working on developing an Integrated BCRP and CNFH Adaptive Management Team Charter. An administrative draft is planned for summer 2015 and a public version will be released in winter 2016; the final CNFH AMP is anticipated to be completed in December 2016. The full history for this issue can be found in Appendix A.</p>
Jan 2013	<p>A contract was awarded in March 2012 to Cramer Fish Sciences (CFS) for facilitation and development of a CNFH AMP. A public scoping meeting was held in May 2012 at the Red Bluff Community Center for public inputs and additional public outreach occurred in July 2012 with the Tehama Board of Supervisors. The CFS team with assistance from the Technical Advisory Committee, which is comprised of technical representatives from various resources agencies and non-agencies, has recently completed the first draft of the CNFH AMP. The document is currently in review and will be revised for an independent science panel review in March/April 2013. A public draft will be released in November 2013 for the public comments and a final CNFH AMP is anticipated to be completed in May 2014.</p>
Jan 2012	<p>The solicitation for the Request for Proposal for development of the Coleman National Fish Hatchery Adaptive Management Plan was posted in December 2011 and closed January 2012. The proposal evaluation process is expected in late January or early February 2012. Contract Award is anticipated by end of February 2012.</p>
Jan 2011	<p>Agreement was reached on the content of the SOW in November 2010, and Reclamation is moving forward with a request for proposals process to award a contract to develop the CNFH AMP. Contract award is anticipated around July 2011.</p>
July 2011	<p>Contract Award is anticipated by the beginning of September 2011.</p>
Jan 2010	<p>Reclamation received State Funding for CNFH AMP development in July 2008. Since the CNFH AMP will be developed via a contract, a Statement of Work (SOW) was drafted in August 2008. The SOW has gone through a few rounds of review and comment and is close to being finalized. (The Statement of Work is needed for the procurement process to receive proposals and eventually award a contract.)</p>
Nov 2006	<p>Once a funding decision is made on the Restoration Project, we can move forward with this plan.</p>
Jun 2005	<p>In February, 2004 the California Bay-Delta Authority Science Program held a public meeting to report on the findings of a Science Panel Review of the effects of Coleman National Fish Hatchery (Coleman NFH) on the recovery of anadromous salmonids in the Battle Creek watershed. The Panel concluded that the operation of the Coleman NFH may pose</p>

History

significant risk to the recovery of anadromous salmonids in Battle Creek. A key tenet of the Panel's conclusion is that scientific uncertainties underlie all aspects of Battle Creek fisheries management, including interactions between the Restoration Project and the Coleman NFH. In recognition of these uncertainties, the Panel recommended that adaptive management be used to guide the hatchery decision making process for those operations that may affect the restoration project.

In April 2004 the Restoration Project PMT developed a proposal to request CBDA funding for the development (\$240,000) and implementation (\$1,000,000) of an adaptive management plan for the Coleman NFH (Coleman AMP). The Coleman AMP would be closely coordinated with the Restoration Project AMP and would lay out a strategy to monitor, study, and assess hatchery operations that may affect the achievement of goals of the Restoration Project. A funding decision by CDFG is anticipated at the same time as that for the Restoration Project.

Residents and landowners in the Battle Creek watershed and members of the GBCWWG support the development and implementation of the Coleman AMP as a means to investigate and address scientific uncertainties surrounding potential impacts of Coleman National Fish Hatchery on restoration of the Battle Creek watershed.

Deleted Issues

D-1. There is inconsistent implementation of agency policy. – Deleted, per group decision on January 24, 2012.

The contact person for this issue is unclear. Status as of June 10, 2005: This issue has been raised during previous Battle Creek Working Group meetings by Serge Birk regarding discussions concerning passage of steelhead above the Coleman Fish Hatchery barrier weir. Serge was not present during the issue identification meetings. The GBCWWG needs to spend additional time better identifying this issue.

D-2. There are unknown implications from the interaction of natural- and hatchery-origin fish. – Deleted, per group decision on March 18th, 2014.

Jim Smith is the contact. Status as of January, 2012: This issue is linked to Issue "Value of hatchery vs. natural/wild fish" and somewhat to Issue "Coleman Hatchery Adaptive Management Plan".

History

June 2005	<p>The primary role of the GBCWWG on these issues should be to monitor and support new and ongoing research, share new information as it becomes available, and understand how it may or may not relate to Coleman NFH and Battle Creek restoration. In recent years, a great deal of research has been conducted coast-wide into investigating the interactions between natural and hatchery-origin salmon and steelhead. This research is usually looking at questions related to effects that are either ecological or genetic. Examples of ecological effects include predation, competition/displacement and disease transfer. Genetic effects would include hybridization and loss of diversity between populations, loss or gain of within population diversity, and overall fitness difference between hatchery and wild fish. Although much research has been completed and has been used to modify hatchery practices, uncertainty still remains and research continues. This issue is broader than the scope of the GBCWWG but is still a concern as it relates to the operations at Coleman NFH and Battle Creek restoration. As new research is completed, the results of those findings should be considered as they related to Coleman NFH.</p>
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