

RECLAMATION

Managing Water in the West

Shasta Dam Fish Passage Evaluation

Public Scoping Report



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List of Abbreviations and Acronyms

CEQ	Council on Environmental Quality
CVP	Central Valley Project
EIS	Environmental Impact Statement
ESA	Endangered Species Act
NEPA	National Environmental Policy Act
NMFS BO	National Marine Fisheries Service's 2009 Biological Opinion on the Long-term Operation of the CVP and SWP
NOI	Notice of Intent
Reclamation	Bureau of Reclamation
RPA	Reasonable and Prudent Alternative
SDFPE	Shasta Dam Fish Passage Evaluation
Steering Committee	Interagency Fish Passage Steering Committee
SWP	State Water Project

Shasta Dam Fish Passage Evaluation

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1.0 Introduction

This report documents the scoping activities that occurred for the Shasta Dam Fish Passage Evaluation (SDFPE). The U.S. Department of the Interior, Bureau of Reclamation (Reclamation), the National Environmental Policy Act (NEPA) lead agency, is planning to prepare an Environmental Impact Statement (EIS) to address the near-term actions identified under Action V in the National Marine Fisheries Service's 2009 Biological Opinion on the Long-Term Operations of the Central Valley Project (CVP) and State Water Project (SWP) Reasonable and Prudent Alternative (RPA). Accordingly, Reclamation held public scoping meetings to obtain public and stakeholder input and to comply with environmental regulations.

1.1 Scoping Purpose and Process

Scoping is generally defined as “early public consultation,” and is one of the first steps of the NEPA environmental review process. The purpose of scoping is to involve the public, stakeholders, Indian tribes, and other interested agencies early in the environmental compliance process to help determine the range of alternatives to be evaluated, the potential environmental effects, and possible mitigation measures to be considered in an environmental document. The results of scoping help to guide an agency's environmental review of a project.

As part of the scoping process, agencies often conduct public meetings. While scoping is not limited to this form, public meetings do allow interested persons to listen to information about a proposed project or action and express their concerns and viewpoints to the implementing agencies. During scoping meetings, the lead agency generally outlines the proposed project, defines the area of analysis, proposes issues to be addressed in the environmental compliance document, and solicits public comments. An agency also establish a scoping comment period to accept scoping comments submitted in writing. Scoping comments are considered by the agency during the formulation of alternatives and the scope of the environmental issues to be addressed in the environmental impact analyses.

1.2 Applicable Regulations

Scoping is required by Federal regulations. The scoping requirements for NEPA are outlined below.

1.2.1 National Environmental Policy Act

NEPA regulations (40 Code of Federal Regulations [CFR] 1501.7) require scoping to determine the scope of the issues to be addressed in the environmental review and to identify significant issues. According to NEPA, scoping should occur early on in the environmental review process and should involve the participation of the affected parties.

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The lead Federal agency of the proposed action is required to:

1. “Invite the participation of affected Federal, State, and local agencies, any affected Indian tribe, the proponent of the action, and other interested persons (including those who might not be in accord with the action on environmental grounds);
2. Determine the scope and the significant issues to be analyzed in depth in the EIS;
3. Identify and eliminate from detailed study the issues that are not significant or have been covered by prior environmental review narrowing the discussion of these issues in the statement to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere;
4. Allocate assignments for preparation of the environmental impact statement among the lead and cooperating agencies, with the lead agency retaining responsibility for the statement;
5. Indicate any public Environmental Assessments and other Environmental Impact Statements that are being or will be prepared that are related to but are not part of the scope of the impact statement under consideration;
6. Identify other environmental review and consultation requirements so the lead and cooperating agencies may prepare other required analyses and studies concurrently with, and integrated with, the Environmental Impact Statement; and
7. Indicate the relationship between the timing of the preparation of environmental analyses and the agency’s tentative planning and decision making schedule” (40 CFR 1501.7).

Public involvement activities are required by the Council on Environmental Quality (CEQ) regulations that state: “Agencies shall: Make diligent efforts to involve the public in preparing and implementing their NEPA procedures” (40 CFR 1506.6(a)). Public scoping meetings help to satisfy this requirement.

CEQ regulations (40 CFR 1508.22, 516 DM 2.3D) require the implementing agency to notify the public that it is preparing an EIS for a project under consideration. Reclamation published a Notice of Intent (NOI) in the Federal Register on Thursday, June 15, 2017. Attachment A of this scoping report includes a copy of the NOI.

2.0 Project Description

This section presents a brief description of the overall SDFPE.

2.1 Shasta Dam Fish Passage Evaluation

The National Marine Fisheries Service's 2009 Biological Opinion on the Long-term Operation of the CVP and SWP (NMFS BO) concluded that the continued operation of the CVP and the SWP were likely to jeopardize the continued existence of four anadromous species listed under the federal Endangered Species Act (ESA): Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*), Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*), California Central Valley steelhead (*Oncorhynchus mykiss*), and the Southern Distinct Population Segment of North American green sturgeon (*Acipenser medirostris*). The NMFS BO sets forth a RPA that if implemented, will allow the CVP and SWP to operate in compliance with the ESA.

RPA Action V requires the U.S. Department of Interior, Bureau of Reclamation, to evaluate the feasibility for the reintroduction of winter-run and spring-run Chinook salmon and steelhead upstream of Shasta, Folsom and New Melones dams. SDFPE is an effort to determine the feasibility of reintroducing winter-run and potentially spring-run Chinook salmon to tributaries above Shasta Dam.

The range of Sacramento River winter-run Chinook salmon has been reduced by Keswick and Shasta dams on the Sacramento River and by hydroelectric dam development on Battle Creek. The need for the action is to comply with RPA Action V, which requires Reclamation to develop and implement a fish passage pilot plan that evaluates the feasibility of reintroducing Chinook salmon into their historical habitat above Shasta Dam. This RPA action was intended to address projections of increased incidences of temperature related impacts to listed anadromous salmonids, and their resulting vulnerability below Shasta Dam. Currently, Sacramento River winter-run Chinook salmon spawning is limited to the mainstem Sacramento River downstream of Shasta and Keswick dams where the naturally-spawning population is maintained by cool water releases from the dams. Central Valley spring-run Chinook salmon spawning occurs primarily in other Sacramento River tributaries. The purpose of the RPA Action V, near-term proposed action, is to determine the feasibility of establishing self-sustaining populations of listed anadromous salmonids above Shasta Dam. The proposed action seeks to complete this near-term evaluation by implementing studies and analyzing aspects of reintroduction including the biological and technological challenges. The near-term studies and associated evaluation would be implemented prior to the determination of the feasibility of long-term reintroduction and potential infrastructure investments that might be required for the long-term action under RPA Action V.

The SDFPE is separated into near-term and long-term actions. As part of the requirements of the RPA, Reclamation, in coordination with the Interagency Fish Passage Steering Committee (Steering Committee), is developing the Pilot Program as an

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adaptive management experiment to evaluate the feasibility of reintroduction of Chinook salmon into historical habitat above Shasta Dam.

The Steering Committee includes the following agencies: USBR, NMFS, USFWS, USFS, DFW, DWR, and SWRCB.

If the near-term actions indicate that long-term fish passage of listed salmonids is feasible and practical to implement, then in accordance with RPA Action V, Reclamation will develop and implement a Long-Term Fish Passage Program, which would require additional environmental documentation.

2.2 RPA Action V - Near-Term Action

Reclamation is focusing the initial near-term goals of re-introducing winter-run and potentially spring-run Chinook salmon upstream of Shasta Dam based on: a) the imperiled status of winter-run Chinook salmon and the resulting urgency to move these fish back into their historical habitats as a means of reducing extinction risk; and b) the good habitat conditions. NMFS requires the use of Federally-listed Sacramento River winter-run Chinook salmon, from the wild in the Sacramento River and/or the Livingston Stone National Fish Hatchery conservation program in order to meet the goals of RPA Action V.

Reclamation has prepared a Draft Pilot Implementation Plan and an unpublished Preliminary Draft Environmental Assessment for the proposed action. In addition, a habitat assessment was conducted of the mainstem reaches of the Upper Sacramento River and McCloud River as part of the development of the Pilot Implementation Plan. The assessment found good habitat conditions in both watersheds. The Pilot Program includes multiple pilot studies intended to be conducted on a short-term basis to answer questions regarding feasibility of a Long-term Fish Passage Program. The Preliminary Draft Environmental Assessment included analysis of two alternatives; introduction of Federally-listed endangered winter-run Chinook salmon and potentially spring-run Chinook salmon to the Upper Sacramento River and McCloud River in different years and the introduction of Federally-listed endangered winter-run Chinook salmon and potentially spring-run Chinook salmon to both the Upper Sacramento River and the McCloud River at the same time. Additional alternatives may be identified during the scoping process, and potential environmental effects of all alternatives will be evaluated in the EIS. The results of the proposed action will facilitate a determination as to whether it is feasible or practical to implement a full-scale and long-term reintroduction of listed anadromous fish in the watershed above Shasta Lake.

3.0 Scoping Meetings

Reclamation held two public scoping meetings in June of 2017, regarding preparation of an EIS for the SDFPE. The first meeting was held in Sacramento, California, on Tuesday, June 27, 2017, from 2:00 p.m. to 4:00 p.m. The second meeting took place in Lakehead, California, on Wednesday, June 28, 2017, from 6:00 p.m. to 8:00 p.m.

Approximately 55 people attended the two meetings, including members of the public, landowners, elected officials, and representatives from public agencies.

3.1 Scoping Meeting Notification

Reclamation published a NOI in the Federal Register (Vol. 82, No. 114, Thursday June 5, 2017), as required by NEPA.

To publicize the meetings, Reclamation published a press release notice and a NOI in the Federal Register. In addition, Reclamation contacted and informed approximately 261 interested parties on the status of the activities for the SDFPE.

Print ads displaying the time, date, and location of the scoping meetings were published in local area newspapers including the main sections of the *Record Searchlight* and the *Sacramento Bee*.

A press release was distributed by Reclamation on June 13, 2017, to Reclamation's media lists, other newspapers and media outlets in the SDFPE area. Updated information on the scoping meetings was also posted to the SDFPE website (<https://www.usbr.gov/mp/BayDeltaOffice/shasta-dam-fish-pass.html>).

Attachment A of this scoping report contains a copy of the NOI and the press release distributed by Reclamation.

3.2 Staff

Table 3-1 is a list of agency staff in attendance during the public scoping meetings.

Table 3-1. Agency Staff at Scoping Meetings

Staff	Affiliation
David Mooney	Reclamation
Janice Pinero	Reclamation
John Hannon	Reclamation
Joanne Goodsell	Reclamation
Carolyn Bragg	Reclamation
Benjamin Nelson	Reclamation
Luke Davis	Reclamation

Staff	Affiliation
Louis Moore	Reclamation
Fernando Ponce	Reclamation
Jonathan Ambrose	NMFS

3.3 Scoping Meeting Format and Content

Meeting participants were greeted at the door and asked to sign in. All names were entered into a distribution list for the exclusive purpose of keeping participants up-to-date on future activities, meetings, and project information.

Both public meetings began with a PowerPoint presentation by Reclamation. The presentation explained the purpose of the meeting, provided a history of the SDFPE, presented an overview of the key components of the SDFPE, and described the public scoping process. Following the presentation, participants were able to walk around the room and discuss the project with Program staff members for the “open house” portion of the meeting. Three stations with displays were set up and included:

1. Project Process and Timeline,
2. Background, and
3. Cultural Resources Information.

A staff person was available to each station to talk with the public and answer questions related to the project or overall Program. A Spanish-speaking interpreter was present at both meetings. Copies of the PowerPoint presentation, and station displays are provided in Attachment B.

Meeting participants were invited to provide verbal and written comments during and after the public presentation. Participants were invited to submit written comments on the provided comment cards. A court reporter attended both meetings to record all verbal comments.

The court reporter hired to document the scoping meeting in Sacramento on June 27, 2017 was unable to successfully produce a report from the meeting as the file was corrupted. Reclamation received notice of this issue and utilized Reclamation staff’s notes to capture the public comments that were made verbally during the meeting. A copy of the notes were sent to each commenter for their review and comment prior to the closing of the comment period. The commenters who responded with additional edits or comments to those captured during the scoping meeting were updated and are included in the scoping comment report matrix (Attachment C). Copies of the meeting transcripts for the Lakehead scoping meeting are available in Attachment C.

4.0 Scoping Comments

Verbal and written comments were accepted by Reclamation during both scoping meetings. Additionally, Reclamation accepted written comments through mail, e-mail, and fax, throughout the scoping period of June 15, 2017, through September 28, 2017. Reclamation received a formal request from the public requesting additional time to comment on the scope of the draft EIS. The scoping period was reopened on August 29, 2017 and closed on September 28, 2017.

A copy of all scoping comments can be found in Attachment C (including Lakehead meeting transcripts and all written comments received at the scoping meetings and during the comment period). A total of one hundred and sixty two (162) written and verbal comment documents were received during the scoping period.

The public agencies, individuals, and nongovernmental organizations that provided written comments are presented in Table 4-1 and Table 4-2, respectively.

Table 4-1. List of Public Agencies That Provided Comments

State	Regional and Local
California State Water Resources Control Board – Diane Riddle, Assistant Deputy Director, Division of Water Rights	Northern California Power Agency, Randy S. Howard, General Manager

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Table 4-2. List of Individuals and Nongovernmental Organizations that Provided Written Comments

Name
Andrea Vyeniolo, Mount Shasta, CA
Ana Holub, Weed, CA
Donald Alley, CA
Paige Connell, CA
SteGaryphan C. Volker, Berkeley, CA
Caleen Sisk, Redding, CA
Peter Louis Woiwode, CA
Charlie Love, CA
Raven Stevens, Mount Shasta, CA
Janice Gloe, Oakland, CA
Camellia Lee, CA
Bob Fisher and Steve Hearst, Sacramento, CA
Robert Weese Duhh, Redding, CA
Jeanne France, Whitmore, CA
Gary Mulcahy, CA
Nikolas Lane Gillian, CA
Kim Deocampo, CA
Amanda Ford
James Stone, CA
Patrick Porgans, CA
Lupita Torres, CA
Dan Bacher, CA
Frank Martinez IV, CA
David Martinez
Sabrina Roche, Shasta, CA
Patricia R. Osborn + 131 signatures, Mount Shasta, CA
Peter B. Moyle, CA

4.1 Comment Summary

This section presents a summary of the comments received during the scoping process. If a similar comment was received from multiple participants, the comments were combined and reported as one comment. The full contents of the comments are included in Attachment C.

4.1.1 Fisheries and Habitat Related Comments

- Use New Zealand Chinook for reintroduction of salmon above Shasta Dam into the McCloud River.
- Studies of wild fish before dams were built were never done

- If New Zealand DNA proves winter-run then Winnemem Wintu need a commitment that those fish will be used for reintroduction to the McCloud River
- New Zealand Chinook are wild and disease-free unlike salmon from Livingston Stone National Fish Hatchery
- Introduced salmon will not be the only fish caught in the traps - describe how much stress will be put on the fry to select or separate and remove the fry from the trap.
- Existing conditions in much of the McCloud appear suitable for reproduction and rearing of a small population of winter-run Chinook salmon. The best site appears to be at Ah-Di-Na because of accessibility, proximity of spawning habitat, and cool summer temperatures.
- A reintroduction program to create even low numbers of redds would require a larger population of winter-run Chinook to exist below Shasta Dam to support removal of so many spawning adults.
- The abundance of trout of diverse size classes in the river suggests that rearing habitat may be close to saturation.
- Slow trout growth indicates they might benefit from salmon carcasses
- Climate change = Salmon must return to their traditional spawning grounds in the McCloud River and its glacial waters.

4.1.2 Additional information/analysis Related Comments

- Introduced salmon will not be the only fish caught in the traps - describe how much stress will be put on the fry to select or separate and remove the fry from the trap
- Describe the studies that will be done to determine the effect of the genetics. Complete genetics testing and evaluate the effectiveness of different genetic sources of salmon.
- Explain how the investigation for the long-term fish passage program would occur.
- Explain how the feasibility of the near-term actions will be considered and decided on by the Steering Committee. Need to describe and establish how the studies will be measured to determine the feasibility for the Long-term Fish Passage Program. This should include an analysis of the number of adult winter-run Chinook that return in comparison with other reasonable alternatives.
- Need to analyze the cost and results of reducing the salmon mortality rate in the Delta compared with the costs and results of reintroducing salmon above Shasta Dam.
- Need to estimate the efficacy, measured in dollars per increased adult returning winter-run Chinook.
- Need to analyze the CVP power and water rate impacts that could be incurred by the EIS near-term studies and the potential long-term reintroduction.
- Need to analyze the cumulative impacts of the EIS near-term studies and the potential long-term actions in conjunction with other programs being considered by Reclamation

to improve returns of the winter-run Chinook (including re-initiation of consultation on the CVP and SWP operations, State Water Resources Control Board's proposed updates to the Water Plan, and CVPIA actions).

- Reintroduction program should meet the ten criteria outlined by Lusardi and Moyle (2017) and should proceed cautiously making sure all the requirements for success can be met before it is established.
- Analyze trap and haul methods thoroughly – trap and haul has never been successful.
- Caution on the reliance outcomes of reintroduction efforts in the Pacific Northwest - they are of limited value as the conditions affecting those river systems differ substantially from conditions affecting the McCloud.
- Evaluation needs to answer - how much a Shasta Dam trap and haul program would contribute to returning adult Chinook salmon and to maintaining or increasing the total Chinook population in comparison to alternative conservation strategies - Evaluation should incorporate Moyle's paper.

4.1.3 Cultural, Environmental Justice, and Indian Sacred Sites Related Comments

- There should be a way to include Winnemem Wintu on the Steering committee. They know more about the area and would be able to assist in bringing back the salmon to the proposed historical areas as the RPA requires.
- Need to describe the timeline of both the 106 and the NEPA process - how do they coincide? Explain the 106 process and how those determinations would be used in the planning process for the EIS process.
- Project would be risking foreclosure of the project if the project were to proceed without completion of the 106 process.
- Reclamation has over 60 sites and historic properties eligible for the National Register within the project area and need to be acknowledged.
- Reclamation needs to complete the necessary work to figure out the implications of their activities, not the Winnemem Wintu.
- Federal government is not in a position to decide whether or not something is sacred.
- Reclamation might not be the right agency, given its long term bias against the Winnemem Wintu and history of conflict, in particular around the McCloud River. McCloud River might not be the right river for the pilot studies.
- Need to use culturally appropriate monitoring methods to not disturb any cultural resources.
- Winnemem Wintu need to be on the steering committee.
- New Zealand fish are the only fish that the Winnemem Wintu would be ok with reintroducing into the McCloud River.

- There will be significant negative, long lasting and adverse impacts to Winnemem cultural resources, historic properties, many bio-cultural resources, and the TCP. No valid conclusions can be drawn about the significant impacts of the proposed action.
- Currently the proposed action is a violation of NEPA and CEQ requirements, which mandate consideration of the impact of a plan on cultural resources.
- Drilling into the ground and using screw traps will have an impact. Traditional fishing methods such as dip nets and weirs would not.
- Environmental Justice needs to be thoroughly addressed
- Indian sacred sites of the Winnemem Wintu need to be considered – they are everywhere in the area.

4.1.4 Hatchery Related Comments

- Need to consider the impact of releasing hatchery fish into areas that are wild - consider genetically appropriate fish in the Upper McCloud and Upper Sacramento Rivers like introducing wild spring-run and winter-run Chinook salmon - if they are found to be genetically compatible or genetically similar to the ones that have been there before.
- Hatchery fish have diseases, genetic diseases, and they don't spawn. Straying is increased due to the hatchery process as the fish lack the knowledge of where their spawning ground is. The EIS needs to analyze the impact/s that reintroduction of hatchery fish could have on wild salmon.
- Stock from small genetic pool of wild and hatchery raised will cause more risk for genetic mutation and disease.
- Winter-run from 60 broodstock and 198 winter-run in 1991; they are genetically connected.
- Production at Livingston Hatchery needs to be ramped up.
- Should utilize Keswick tailwaters to raise and release fish and have a better improvised fish catch and release system at Keswick - possible having a trap like at Coleman right at the hatchery.
- 30+ years Livingston Hatchery = zero success, constant decline of winter, spring and fall run Chinook. Do not use any salmon derived from captive broodstock of winter-run salmon at the Livingston Stone Hatchery in the pilot study.
- Livingston needs to produce 10,000 fish for ten years for these fish to come off the ESA list. That's never been achieved, never, not even in the 30 year closure that's already in the river now.
- Genetic pool and diversity of the Livingston Stone Fish hatchery salmon and mainstem Sac River salmon has resulted in one ESU. The reintroduction of Chinook into historical areas should not utilize the same genetically deficient stock from Livingston Stone.
- No genetic mutations = no hatchery fish.

4.1.5 Project Alternatives Related Comments

- No Action needs to include the Winnemem Plan that is already undergoing study.
- The No Action alternative might be the best option.
- Utilize the existing tributaries for fish bypass of the dams.
- Need to include the Winnemem Wintu Salmon Restoration Plan as an alternative in the EIS.
- Increase Livingston Hatchery production and make them naturally spawn in the river - use natural spawning fish for reintroduction above Shasta Dam.
- Consider volitional passage.
- EIS should consider alternative conservation strategies for Chinook in order to provide insight into the best strategies for improving Chinook population abundance and resilience.
- Recovery of winter-run need to be directed at strategies that = less risk and more cost effective.
- Reclamation should prioritize actions that are more likely to yield successful results (reintroduction by volitional passage together with downstream habitat improvements).
- Need to expand the efforts on the mainstem of the Sacramento River and on certain other reaches where opportunities exist for enhancement and/or creation of fish habitat that supports volitional passage of winter-run opportunities to advance the recovery of winter-run Chinook. Alternatives should include - Restoration Actions on Lower Clear Creek - alterations to the creek could now provide habitat for winter-run, Completion of Battle Creek Project - funding for this action could be used to complete the current restoration project at Battle Creek, Downstream Habitat Management and Restoration - could use resources for this effort to expand on current projects within the delta (CA Waterfix), Focus on salmon strongholds - Alternatives should prioritize needed conservation and restoration actions in the strongholds rather than implement the high-risk reintroduction measures set out in the 2009 BO.
- Need to consider conducting studies in areas above McCloud Dam – the Lakin Dam area.
 - The Lakin area has significant advantages in ecology, (holding habitat, spawning/incubation habitat, rearing habitat, conditions for juvenile migration, estimated spawner capacity, water temperature, water supply reliability, flow variability, predation, resource competition, disease, food, ability to foster life history diversity, and resilience to climate change), Stakeholder/Landowner, Regulatory Implementation, and Physical Implementation.
 - It has far better access and important habitat attributes, and fewer limitation of the lower river sites (i.e., area not subject to ravaging flood flows, far fewer predators, better spawning and rearing habitat).
 - Trap and haul would be most effective from the above site/Lakin area.

- The amount of expanded habitat in the Lakin area is significant as is the potential population expansion.
- A habitat assessment to determine the distribution of potentially suitable habitat and an estimate of spawner capacity of the Lakin area can be readily conducted.
- When flows exceed 500 to 1,000 cfs it is expected that the fish collection netting will need to be removed and the primary collection would occur at the head of reservoir location. Juvenile winter and spring-run Chinook emigrate during the first fall-winter pulse flows, which are nearly always far in excess of the 500-1,000 cfs equipment limit. This problem would be extremely rare at the Lakin area.
- The Lakin area would be far more effectively monitored by both direct observation and electrofishing than the other proposed areas.
- The uncertainty of the duration that juvenile salmon will occur in any of the proposed accessible study reaches would be limited in the Lakin area.
- Although the Lakin area is technically immediately upstream of the historic upper limit of salmon, the upper site provides ideal historic habitat with a significant chance of success.
- Monitoring - fish telemetry conditions would be optimal at the Lakin area. Ground and drone surveys can be readily carried out at the Lakin area.
- UC Davis/Caltrout Review – Lakin area best satisfies all ten factors in the review.

4.1.6 Funding Related Comments

- Need to include the likely annual costs and total multiyear costs for the proposed efforts of the reintroduction of New Zealand Chinook (This near-term EIS study and long-term reintroduction plan estimates).
- Need to include how Reclamation will fund and allocate costs for the long-term fish passage program.
- Need to include the costs of doing the EIS near-term feasibility studies, including how the costs will be allocated to the Central Valley Project purposes.
- If funding is disproportionately spent on this fish passage action then the EIS must indicate which fisheries programs will not receive funding or have funding deferred because of this proposal.
- Funding thus far on this is too much. Funding should be spent on building a fishway so the salmon can swim in and out of their wildlife habitat area.

4.1.7 Schedule Related Comments

- The studies should continue through the duration of their entire life-cycle. Salmon take 4-8 years to return back to their place of spawning.

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- Every year that salmon are denied access to the eleven miles of historically essential spawning habitat along the McCloud River the viability of the species is reduced. The required deadlines have not been met and further delay is unacceptable.
- Postpone the near-term EIS studies until genetic analysis of Chinook salmon in New Zealand have been genetically tested for their winter-run characteristics.
- Reintroduction of salmon into the McCloud River needs to be done now but only with the winter-run New Zealand salmon stock that has the genetic diversity to actually strengthen the species as a whole.

4.1.8 Land Use Comments

- Need to address landowner issues and NMFS 10(j) development concerns
- Section 10(j) rule and safe harbor type protection for private landowners - Safe harbor is a voluntary agreement process where landowners, water users, etc.... have to come in and ask to be part of a safe harbor agreement.

4.1.9 Construction Comments

- Need to evaluate volitional passage
- Remove Keswick and Shasta Dams
- Downstream conditions - Delta pumps, delta cross channel, and Georgiana slough are the biggest fish killers in the system. Downstream conditions should be focused on for the evaluation of success of the project.
- Cold water gates at Keswick or Shasta have been an issue for 10 + years and need to be fixed in order to regulate cold water releases.
- Need to fix the cold water device on Shasta Dam so cold water can be utilized during drought years
- Need to remove all obstacles that are fish blocking and diversion need to be screened off.
- Need to restore river side channels

4.1.10 Surface Water and Flow Related Comments

- All activities within water (juvenile collector or anchored box) need to asses if a water quality certification is needed/required.
- EIS should identify how the project will comply with water quality objectives included in the Water Quality Control Plan. The EIS should include how the project may interact with the potential new requirements and existing requirements.
- Describe alteration of flows to support reintroduction of Chinook.
- Describe PG&E diversions and agreement on flow in river that would be required.
- Need more fresh water flows out into the system for fish survival.

4.1.11 Future RPA Action V Long-term Related Comments

- Need to stop stocking brown trout in the river to allow the salmon to take their place again.
- Cannot measure wild salmon success and survival when using hatchery fish in a river system that is closed off.
- The analysis needs to describe the likely annual costs and total multiyear costs for the proposed Long-term Fish Passage Program, including how Reclamation will fund and allocate these costs.

Shasta Dam Fish Passage Evaluation

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Attachment A

**SCOPING MEETING
NOTIFICATION**

(See attachment)

Shasta Dam Fish Passage Evaluation

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Attachment B

**SCOPING MEETING
MATERIALS**

(See attachment)

Shasta Dam Fish Passage Evaluation

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Attachment C

SCOPING COMMENTS

(See attachment)

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