Comments from State Agencies and Responses

This section contains a copy of comment letters from State government agencies listed in Table 3-5 and responses to their comments.

Table 3-5. State Agencies Providing Comments on Draft Environmental Impact Statement

Abbreviation	Agency
CDFW	California Department of Fish and Wildlife
NCRWQCB	North Coast Regional Water Quality Control Board

California Department of Fish and Wildlife

CDFW

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Northern Region Office
601 Locust Street
Redding, CA 96001
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

December 5, 2016

Julia Long
U.S. Bureau of Reclamation
Northern California Area Office
16349 Shasta Dam Boulevard
Shasta Lake, CA 96019

Subject: Comments on Draft Environmental Impact Statement, Long Term Plan to Protect Adult Salmon in the Lower Klamath River

Dear Ms. Long:

The California Department of Fish and Wildlife (Department) respectively submits our comments on the subject draft Environmental Impact Statement (EIS) for your review. We have provided general and specific comments noted by section, page and line number. The Department believes the subject draft EIS is a valid tool for protecting the health of returning adult salmonids in the lower Klamath River during the action period (August-September), and we generally support the proposed alternative (Alternative 1). Full Departmental support for the EIS and proposed actions are subject to our comments being addressed in the final EIS. CDFW-1

General Comments

1. The triggers for potentially implementing the preventative actions (lower Klamath River flow and temperature, disease level, harvest metrics, and fish density) are described in the document. The Department concurs these are appropriate metrics for evaluating potential for a disease outbreak. The document describes these metrics as they relate to preventative flow actions in quantitative and qualitative terms, but is vague on when preventive flow actions will be actually implemented. The document denotes: *"Preventative flow actions will be implemented when one or more of the criteria are met."* One of the main criteria is when flows in the lower Klamath River are less, or are projected to be less, than 2,800 cfs. This criterion is cited in several places throughout the document, and it is unclear if this criterion alone will trigger preventative flow releases. CDFW-2

   The document also describes *"adaptive management"* and consultation with Klamath Basin tribes and agencies to inform the preventative flow action process. The document needs to clarify this in further detail, providing more specific process elements, otherwise it may be interpreted a minimum flow standard will be implemented regardless of all the other criteria listed or agency/tribal consultation for triggering preventative flows.

   For example, flows may drop below 2,800 cfs during the action period and all other indicators, particularly incidence of the *Ichthyophthirius multifiliis* (ich) pathogen,

Conserving California's Wildlife Since 1870

may not be at criterion levels for flow implementation. Does this document imply that flow will be augmented regardless of other triggers? What will be the adaptive management process interpreted, and used in the decision making process? How will agency/tribal consultation be initiated, interpreted, and ultimately used in the decision making process?

Because of the large degree of uncertainty regarding the pathogenicity of ich due to various environmental conditions and the potential for negative ecological consequences associated with abnormally high summer/fall Trinity River flows, the Department recommends that a lower Klamath River minimum flow standard (based on Trinity River augmentation flows only) is not warranted at this time.

CDFW-2 (contd.)

2. The document minimizes its discussion of potential ecological consequences of releasing large atypical volumes of water from Lewiston Dam at a time when historical flows would have been a fraction of the proposed releases. The document goes into specific detail describing impacts to Central Valley water operations and biological resources, all of which appear minor (i.e., less than 5% difference between the No Action Alternative) but devoted little to direct or potential impacts to the Trinity River water operations and biological resources. The ecological impacts described, biological impacts to yellow legged frogs, western pond turtles, and loss of spring Chinook Salmon spawning production due to redd dewatering are listed, however, other concerns the Department has voiced were not addressed. These include premature run-timing of spring and fall Chinook Salmon, decreased egg fertility rates at Trinity River Hatchery, and hybridization of spring and fall Chinook Salmon due to changes in run and spawn timing.

CDFW-3

   The Department presented data on these issues at a technical team meeting of the Long Term Fall Flow Group on July 25, 2016. The data presented, while not entirely conclusive, did indicate potential negative ecological consequences to releasing large volumes of water at a time of year, historically and evolutionarily, the Trinity River flow levels would be at their lowest. For this reason, the Department advocates that summer flow augmentation should be used judiciously when necessary, if at all, and should be based on more than a lower Klamath River minimum flow standard, should involve agency/tribal real-time consultation and adapt based on new and improved information as it relates to understanding infection rates and disease manifestation of ich in salmonids.

3. The document does not adequately describe State statutory authority. Section 3406(b) of the Central Valley Project Improvement Act (CVPIA) provides the Secretary of Interior shall operate the Central Valley Project (CVP), including the Trinity River Division (TRD), to meet all obligations under State and federal law (Central Valley Project Improvement Act, 106 Stat. 4706). State law requires that the TRD be operated in compliance with the State common law public trust doctrine

CDFW-4

and California Fish and Game Code (FGC) Section 5937. FGC section 5937 reads in part:

> *"The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam."*

CDFW-4 (contd.)

Additionally, the California Endangered Species Act (CESA) is not included in the biological resources section under the header of "Regulatory Environment and Compliance Requirements."

4. The comparative modeling performed to analyze water temperature and storage effects in the Sacramento Basin based on the two identified alternatives (as compared to the No Action Alternative) demonstrates very small differences or impacts in terms of percent change. The modeling performed generally does not include any precision estimates. One could conclude any predicted changes may be within the margin of error for the models and both alternative actions would be insignificant as they relate to CVP operations. Additionally, as cited in the document, the modeling does not account for unique operational changes which may ameliorate reservoir storage or water temperature issues on a case by case basis. Specifically, Sacramento River flows released downstream of Keswick Dam under Alternative 1 would be similar to the No Action Alternative with most months of the year changing less than 1%, with the exception of a decrease of 2% in dry years, and 4% in September of critical years. Once again, the difference could be solely model error and would be insignificant as it relates to CVP operations.

CDFW-5

Furthermore, this change in flow rate may have no positive effect on salmonid egg incubation survival. The fisheries agencies involved in upper Sacramento River fisheries management recently provided empirical evidence water temperature management in the upper river is not driven by the quantity of flow release, rather the temperature of the water being discharged from Keswick. Furthermore, in dry and critically dry water years during these months, water from the TRD can be warmer and require cooler Shasta Project water to meet Sacramento River water temperature requirements.

CDFW-6

Specific Comments

1. **ES-4, line 9.** This section indicates that preventative base flow augmentation will occur if any of the conditions are met. This, in essence, is a minimum flow requirement for August and September (if flows are less than 2,800 cfs) and disregards disease prevalence or other conditions which need to be present for a mortality event. The following section describes coordination with the Long Term Plan

CDFW-7

technical team, but does not indicate if this body can use current information to recommend (or not) base flow augmentation. The term "coordination" needs to be clarified (see General Comment 1). It could be reworded to say: *"Initiate **consultation for** preventative base-flow augmentation from Lewiston Dam when one or more of the following conditions occur:"* CDFW-7 (contd.)

2. **ES-4, line 21.** Refers to fish harvest metric presented above. No such metric is shown or described. CDFW-8

3. **1-15, line 1.** The following should be added at line 15: *"In addition, Section 3406(b) of the CVPIA provides that the Secretary shall operate the CVP, which includes the TRD, to meet all obligations under State and federal law. State law requires that the TRD be operated in compliance with the State common law public trust doctrine and FGC Section 593.7"* (See General Comment 3). CDFW-9

4. **2-3, line 10.** See Specific Comment #1 and General Comment #1. CDFW-10

5. **2-3, line 23.** See Specific Comment #2. A fish harvest metric is not identified in the bulleted conditions. CDFW-11

6. **2-4, line 1.** This reference and others throughout the document cite low level infections of ich as being less than 30 ich per gill arch. More precise definitions and specific scientific literature citations to accurately describe what low, medium or high levels of ich infection are needed. Also, the uncertainty of ich pathogenicity and *"normal background"* levels of ich make these designations very subjective. CDFW-12

7. **2-5, table 2-1.** Projected adult fall Chinook Salmon run-size (Pacific Fisheries Management Council - March) should be added to the March through May time period. This preseason forecast will help identify magnitude of potential loss and can contribute to the severity of fish crowding that could occur. CDFW-13

8. **7-1, line 10.** Both California Environmental Quality Act and CESA (FGC § 2050 et seq.) should be mentioned in this section since the proposed actions may impact the environment on publicly owned lands and may affect a state listed species (Coho Salmon). CDFW-14

9. **7-12, line 12.** The National Marine Fisheries Service status review for Klamath Mountain Province steelhead groups summer and fall-run together as a stream maturing ecotype. Winter-run steelhead is separated as an ocean maturing type. Department data is consistent with this designation (i.e., do not group fall-run steelhead with winter-run steelhead). CDFW-15

If you have questions or comments, please contact Wade Sinnen at 707-822-5119 or wade.sinnen@wildlife.ca.gov.

Sincerely,

Neil Manji
Regional Manager

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Responses to Comments from California Department of Fish and Wildlife

CDFW-1: Please refer to Master Response "General Comment."

CDFW-2: In the Executive Summary and Chapter 2, "Description of Alternatives" of the Draft EIS, text on page ES-4 (lines 9-10, and 19-21) and page 2-3 (lines 10-11 and 21-23) has been revised to clarify that Reclamation, in coordination with the LTP Technical Team, will initiate preventive base flow augmentation in consideration of flow levels, thermal regime, fish densities, and Ich infestation levels in the lower Klamath River. See Chapter 4, "Errata" of the Final EIS.

As described in Chapter 2, "Description of Alternatives" (page 2-3) in the Draft EIS, Reclamation will implement all of the flow augmentation components (preventive base flow augmentation, preventive pulse flow, and emergency pulse flow augmentation) in coordination with the LTP Technical Team. Text on page ES-6 (lines 21-25) and page 2-6 (lines 30-34) of the Draft EIS has been revised to further clarify that refinement of trigger criteria for flow augmentation components will be done in coordination with the LTP Technical Team.

CDFW-3: Reclamation appreciates CDFW participation as a cooperating agency, and the presentation concerning potential effects of Trinity River flow releases on spring and fall Chinook Salmon run timing made at the workshop. Reclamation considered this information in the development of the Draft EIS. While this issue is of great concern to Reclamation, as it should be for all of the cooperating resource managers, because the CDFW presenters described this issue as a preliminary analysis that is subject to ongoing evaluation, it has been explicitly included as one of the important elements of the additional monitoring and research efforts of the action alternatives. Table 2-2 and Table 2-3 in Chapter 2, "Description of Alternatives" of the Draft EIS includes further monitoring and research of any inadvertent and unanticipated adverse effects on asynchronous migration cues and timing of any affected salmon runs.

CDFW-4: -CVPIA-3406(b) affirms Reclamation's responsibilities to meet applicable State and Federal law, but does not create any additional requirements to meet State law that is not already applicable to Federal agencies in general and Reclamation specifically. As you are aware, actions by Federal agencies are not subject to California Environmental Quality Act (CEQA) or California Endangered Species Act (CESA) by statutory definition. See California Public Resources Code Section 21000 and Fish and Game Code Section 2050 – 2115.5.

CDFW-5: As described in Chapter 4, "Fisheries Modeling" in the Analytical Tools Technical Appendix in the Draft EIS (see pages 4-2 to 4-5), SALMOD and Interactive Object-Oriented Salmon Simulation (IOS) results are affected by uncertainty in model inputs (described in Chapter 4, "Surface Water Supply and Management" and Chapter 5, "Surface Water Quality"). SALMOD results are intended to be used as a comparative tool to evaluate relative change in salmon production between alternatives, and to identify general positive or negative change. While the input data (flow and water temperature) may differ by less than 5 percent between alternatives, those differences are incorporated into the fisheries' models, and may result in significant changes in survival. This is why it is important to use the fisheries model results as an index simply for alternative comparisons rather than using them as actual population estimates.

CDFW-6: Water temperature, moving downstream from Keswick Dam, is a combination of the water temperature of the Keswick release, flow rate of Keswick release, and meteorological conditions. The temperature modeling includes all three of these factors. The water temperature of the Keswick release is a function of inflow temperature from Shasta Lake, not Shasta Dam release temperature, because of heating or cooling in the reach from Shasta to Keswick and inflow from the Spring Creek tunnel.

Results from both SALMOD and IOS show that changes in fish survival are significantly more affected by changes in water temperature than by flow. Additionally, as seen in real-life, small changes in water temperatures can have substantial effects on egg survival.

CDFW-7: In the Executive Summary and Chapter 2, "Description of Alternatives" of the Draft EIS, text on page ES-4 (lines 9-10 and 19-21) and page 2-3 (lines 10-11 and 21-23) has been revised to clarify that Reclamation, in coordination with the LTP Technical Team, will initiate preventive base flow augmentation in consideration of flow levels, thermal regime, fish densities, and Ich infestation levels in the lower Klamath River. As described in Chapter 2, "Description of Alternatives" on page 2-3, Reclamation will implement the three flow components in coordination with the LTP Technical Team. See Chapter 4, "Errata" of the Final EIS.

CDFW-8: In the Executive Summary and Chapter 2, "Description of Alternatives" of the Draft EIS, text on page ES-4 (lines 9-21) and page 2-3 (lines 10-23) has been revised to clarify that Reclamation, in coordination with the LTP Technical Team, will initiate preventive base flow augmentation in consideration of flow levels, thermal regime, fish densities, and Ich infestation levels in the lower Klamath River. Based on input from the LTP Technical Team, fish harvest data may be used to help understand potential fish densities in the lower Klamath River. In coordination with the LTP Technical Team, additional fish density metrics will be developed as part of the monitoring and research component of the action alternatives. See Chapter 4, "Errata" of this Final EIS.

CDFW-9: Please refer to the response to comment for CDFW-4.

CDFW-10: Please refer to the responses to comments for CDFW-2 and CDFW-7.

CDFW-11: Please refer to the response to comment for CDFW-8.

CDFW-12: As described in Chapter 2, "Description of Alternatives" on page 2-4 (lines 5-6), disease sampling and confirmation of disease findings for low-level Ich infections would follow methods as described in the *2013 Fall Flow Release Recommendation Memorandum* by USFWS and NMFS. As described in Chapter 2, "Description of Alternatives" on page 2-7, Reclamation, in coordination with the LTP Technical Team, may refine these trigger criteria.

CDFW-13: Table 2-1 in Chapter 2, "Description of Alternatives" (page 2-5) includes assessment of environmental conditions. This assessment would include information from Pacific Fisheries Management Council on projected adult fall-run Chinook Salmon run size.

CDFW-14: Please refer to the response to comment for CDFW-4.

CDFW-15: In Chapter 7, "Biological Resources – Fisheries" of the Draft EIS, text on page 7-12 (lines 14-39) has been revised to conform the characterization and phenotypic identification of the Klamath Mountain Province Evolutionarily Significant Unit (ESU) fall-run steelhead as being a component of the summer-run race, not the winter-run race of steelhead as is the convention of the CDFW and NMFS. The *References* section of Chapter 7, "Biological Resources – Fisheries" was also revised to incorporate bibliographic citations for Busby et al. (1994) and National Research Council (NRC) (2004) to support these text revisions. See Chapter 4, "Errata" of this Final EIS.

North Coast Regional Water Quality Control Board

California Water Boards

North Coast Regional Water Quality Control Board

NCRWQCB

December 5, 2016

Julia Long
US Bureau of Reclamation
Northern California Area Office
16349 Shasta Dam Boulevard
Shasta Lake, CA 96019

Dear Ms. Long:

Subject: Comments on the Draft Environmental Impact Statement for the Long-Term Plan to Protect Adult Salmon in the Lower Klamath River

Thank you for the opportunity to provide comments on the U.S. Bureau of Reclamation's (Reclamation) draft environmental impact statement for the *Long-Term Plan to Protect Adult Salmon in the Lower Klamath River* (draft EIS). The North Coast Regional Water Quality Control Board (Regional Water Board) is charged with the mission of protecting water quality and supporting the beneficial uses of waters of the state in the North Coast Region. Fishery related beneficial uses for the Klamath River and its tributaries identified in the Water Quality Control Plan for the North Coast Region (Basin Plan) include water contact and non-contact recreation, commercial and sport fishing, protection of endangered species, warm and cold freshwater habitat (including migration and spawning), Native American culture, and subsistence fishing. NCRWQCB-1

Regional Water Board staff fully supports the goal of the draft EIS, which seeks to reduce the likelihood of a fish die-off in the lower Klamath River. The effects of the flow releases proposed under the project alternatives are substantial and can be consistent with the mission of the Regional Water Board. Concurrently, Reclamation is also balancing the effects of the different alternatives on a variety of factors such as aquatic species, tribal resources, restoration objectives, Central Valley water deliveries, hydropower generation, Trinity and Sacramento River water temperatures, and ground water resources and ground water quality.

The draft EIS specifies several triggering mechanisms – taken alone or together - that will dictate whether emergency pulse or augmentation flows will occur. The draft EIS would be improved if it described how often these triggers are expected to occur and to provide information on how often any or all of the triggers had been met in the past. Additionally, with the continued climatic variability projected by climate change, the draft EIS would be improved by providing additional information regarding the changes in the frequency of triggering events that are expected to occur over time.

NCRWQCB-2

Regional Water Board staff recommends development of a variable flow augmentation strategy based on different threat scenarios. The draft EIS provides a somewhat rigid response to triggering events: 1-day emergency pulse flows of 5,000 cubic feet per second (cfs); 5-day emergency pulse flows of 5,000 cfs; and 2,800 cfs augmentation flows. Staff questions whether a more diverse set of emergency pulse and augmentation flow ranges is warranted given different threat conditions. A wider range of flow responses may allow managers more options to respond to threats, while better balancing impacts.

NCRWQCB-3

Based upon a review of the project benefits and environmental consequences detailed in the draft EIS, Regional Water Board staff believes that implementing flow releases as specified in Alternative 1 may result in the greatest benefit to the Klamath and Trinity River fisheries. Although the draft EIS seeks to minimize fish die-offs in the lower Klamath River, many of those same fish are expected to migrate upstream into the Trinity River system and other tributaries to the Klamath River, and therefore the actions proposed under the draft EIS are expected to affect conditions basin-wide.

In addition to providing a methodology for addressing emergency situations in the lower Klamath River, Alternative 1 also maintains the current flow releases dedicated to the Trinity River Restoration Program (TRRP), as established in the 2000 Record of Decision (ROD). The ROD set variable flow releases for five water year types to mimic more natural flows, allow for geomorphic changes of the impacted reach below Lewiston Dam, and to support restoration activities.

NCRWQCB-4

Under Alternative 2, the draft EIS evaluates changing the ROD to modify the amount of water released from Lewiston Dam for the TRRP. The draft EIS states that the greatest change is expected to occur during critically dry years when additional water is retained in Lewiston Dam and Trinity Lake reservoirs. As stated in the Draft EIS, "*the main differences between the alternatives are the effects on Central Valley Project (CVP) water deliveries, temperature effects in the Trinity and Sacramento Rivers, and the effects to hydropower generation.*" Based on our review of the draft EIS, Regional Water Board staff is concerned about the potential effects that changing the ROD variable flow releases would have on the restoration objectives of the TRRP. Additionally, under Alternative 2, it is not clear how Reclamation would expect to manage/modify ROD flows during multiple successive critically dry years, or if the success criteria and goals for TRRP would be achieved under these Alternative 2 conditions.

Under both flow augmentation alternatives, the Draft EIS does not clearly articulate how pulse and emergency flow releases will be implemented in coordination with the TRRP. As stated in the draft EIS "*...restoration actions are occurring in the 40-mile restoration reach between Lewiston Dam and the confluence with the North Fork Trinity River (TRRP 2014). The mechanical channel rehabilitation includes construction of bar surfaces, floodplain lowering and reconnection, side channel construction, and removal of fossilized riparian berms that had been anchored by extensive woody-vegetation root systems that confined the river. Following mechanical rehabilitation, the altered areas have been re-vegetated to support native vegetation.*" Annual restoration activities rely on the predictable late summer low flows of the managed system to conduct this work within the floodplain, especially at low elevations. Both project alternatives would raise flows and hence water elevation during this late summer timeframe, potentially inundating freshly restored areas or areas in the process of restoration. This may cause localized turbidity discharges at these sites that may exceed numeric water quality objectives for turbidity during a time of year that traditionally exhibits very low turbidity. This elevated turbidity would likely be localized to just downstream of the restoration site(s) but have the potential to mobilize sediment in those areas. Close coordination with the TRRP staff, early notification of late summer flow releases, and use of adaptive management may allow staff and contractors to avoid and minimize impacts to restoration activities and potential localized sediment impacts. A detailed description of how these activities will be coordinated under both flow augmentation scenarios would be useful, as would potential measures to mitigate impacts associated with achievement of the goals of the TRRP. NCRWQCB-5

The Basin Plan's Interim Action Plan for the Trinity River (Action plan, pages 4-6.00 through 4-8.00 of the Basin Plan) established seasonal temperature water quality objectives that apply downstream of Trinity and Lewiston Reservoirs (NCRWQCB 2011, the draft EIS incorrectly states the objectives are set forth in SWRCB Water Right Order 90-5). As described, the Action Plan forms the basis for a collaborative approach to the management of fishery resources and attainment of the water quality objectives in the Trinity River. Although the proposed project seeks to prevent a fish die-off and thereby protect fishery related beneficial uses, analysis presented in the draft EIS reflect there may be times when implementing flow releases under either of the two proposed alternatives could result in temporary exceedances of the Basin Plan temperature objectives during certain water years. However, the projected exceedances of the temperature water quality objectives are minimal and are not expected to cause adverse effects to Trinity River salmonids. Modeled projections of possible temperature exceedances would remain at or near "optimal rearing conditions" for coho salmon as established for the Klamath River Total Maximum Daily Load (Carter 2008). NCRWQCB-6

As described in the Regional Water Board's *Policy in Support of Restoration in the North Coast Region* (Resolution No. R1-2015-0001), the intent of a restoration project is to correct a water quality problem or condition, which is causing or threatens to cause, a detrimental effect on an aquatic ecosystem and beneficial uses (NCRWQCB 2011). Although the flow augmentation actions being evaluated under the draft EIS may result in

temporary exceedances of water quality objectives, the impacts are intended to be temporary in nature, with the purpose of providing a net benefit to water quality and beneficial uses. Thus, the Regional Water Board supports an adaptive management approach to avoid or minimize temporary exceedances of water quality objectives while implementing the selected project alternative.

NCRWQCB-6 (contd.)

Regional Water Board staff appreciate that the draft EIS acknowledges that climate change may affect water quality conditions and that the modeling done to assess project alternatives incorporated the potential effects of climate change into the analysis. As stated previously, the draft EIS would be improved by providing additional information regarding the changes in the frequency of triggering events that may occur under future climatic variability.

NCRWQCB-7

Staff is encouraged to see the identification of the Klamath Fish Health Assessment Team (KFHAT) as one of the sources of information that Reclamation will use to inform the need for flow releases, and that information and updates on potential flow releases and fishery conditions will be shared directly with KFHAT. Given KFHATs ability to provide timely information on water quality and fish disease conditions, its role in helping provide information to Reclamation will allow for adaptive management and aid in determining if and when to release supplemental flows from Lewiston Dam.

NCRWQCB-8

Regional Water Board staff recommends that the draft EIS discuss potential impacts of the project alternatives on sediment and mercury conditions as they relate to the following 303(d) listings: 1) sedimentation/siltation in the Trinity River, and 2) mercury in Trinity Lake. In particular, the document should discuss whether implementation of project alternatives will have any potential impact on sediment (such as turbidity) in the Trinity River as compared to the no project alternative. The draft EIS should also evaluate whether alterations of lake level pursuant to the project alternatives will have impacts on mercury and mercury methylation in Trinity Lake and any potential downstream impacts. It may be that there are no potential impacts to mercury, but that should be generally addressed in the document.

NCRWQCB-9

Regional Water Board staff emphasizes that although the flow-augmentation alternatives presented in the draft EIS may be an effective solution for addressing emergency conditions in the lower Klamath River, they do not address the symptomatic water quality problems originating from the middle- and upper-Klamath River and Upper Klamath Lake. Restoration of the health, structure and function of the Klamath River has the potential to eliminate the need for emergency supplementation of water from the Trinity Lake reservoirs. We look forward to continuing to collaborate with Reclamation and other stakeholders towards that outcome, by promoting the actions that support recovery of the beneficial uses of the Klamath River and its tributaries.

NCRWQCB-10

If you have further questions please contact Katharine Carter at Katharine.Carter@waterboards.ca.gov or 707-576-2290.

Sincerely,

for Shin-Roei Lee
2016.12.05
14:28:32 -08'00'

Matthias St. John
Executive Officer

161205_CSC_dp_CommentsUSBR_TrinityEIS

cc: Tom Howard, State Water Board, Tom.Howard@Waterboards.ca.gov

References:

Carter, K. 2008. Effects of Temperature, Dissolved Oxygen/Total Dissolved Gas, Ammonia, and pH on Salmonids. Appendix 4 in Final Staff Report for the Klamath River Total Maximum Daily Loads (TMDLs) Addressing Temperature, Dissolved Oxygen, Nutrient, and Microcystin Impairments in California the Proposed Site Specific Dissolved Oxygen Objectives for the Klamath River in California and the Klamath River and Lost River Implementation Plans. March 2010. State of California. North Coast Regional Water Quality Control Board.

North Coast Regional Water Quality Control Board (NCRWQCB). 2011. Water Quality Control Plan for the North Coast Region. Last amended January 2011.

Responses to Comments from North Coast Regional Water Quality Control Board

NCRWQCB-1: Please refer to Master Response "General Comment."

NCRWQCB-2: As described in Chapter 2, "Description of Alternatives" page 2-2, and detailed in the Analytical Tools Technical Appendix of the Draft EIS, anticipated climate change and sea-level rise have been incorporated into the analyses for the No Action Alternative and action alternatives. Chapter 4, "Surface Water Supply and Management" Figure 4-17, of the Draft EIS (page 4-28) presents the estimated flow augmentation frequency and associated volumes for the three flow augmentation components (preventive base flow augmentation, preventive pulse flow, and emergency pulse flow augmentation). The Analytical Tools Technical Appendix (pages 2-12 to 2-27) provides additional detail on the anticipated frequency of flow augmentation actions (preventive base flow augmentation, preventive pulse flow, and emergency pulse flow augmentation), including descriptions of methods and assumptions. As described in Chapter 2, "Description of Alternatives" (pages 2-5 to 2-7, and page 2-11) of the Draft EIS, the action alternatives provide for potential refinement of the trigger criteria for the flow augmentation actions based on adaptive management concepts. Refinement of the trigger criteria could include changes to the identified timing, duration, and magnitude of flow augmentation components. Please also refer to Master Response "Range of Alternatives."

NCRWQCB-3: Please refer to Master Response "General Comment."

NCRWQCB-4: The Trinity River ROD allows for adjustments to the release schedule to respond to changing conditions and evolving scientific understanding. The Trinity River ROD established an Adaptive Environmental Assessment and Management Program to recommend possible adjustments to the annual flow schedule provided for in the Trinity River ROD, or other measures to ensure that the restoration and maintenance of the Trinity River anadromous fishery continues based on the best available scientific information and analysis. Although Trinity River ROD flows were not originally intended to be used for late-summer flow augmentation releases, the flow augmentation releases under Alternative 2 would directly contribute to the maintenance of the Trinity River anadromous fishery. A larger proportion of Trinity River fall-run Chinook Salmon were lost in the 2002 fish die-off compared to the Klamath River run. Accordingly, returning Trinity River adult salmon are a primary beneficiary of the flow augmentation releases under Alternative 2.

As an implementing agency of the Trinity River Restoration Program and member of the Trinity Management Council, Reclamation fully understands and recognizes the intent and purpose of the Trinity River ROD objectives. Chapter 4, "Surface Water Supply and Management" pages 4-25 to 4-28, and Chapter 2, "Water Operations Modeling" of the Analytical Tools Technical Appendix of the Draft EIS describe that the CalSim II model sequentially evaluates an 82-year modified historical hydrology (water years 1922-2003). This hydrologic data set includes multiple drought periods (e.g., 1928 to 1934, 1976 to 1977, and 1988 to 1994), including successive dry and critically dry years. Accordingly, analyses in Chapters 4 to 14 based on these CalSim II outputs (including reservoir levels, river flows, and reservoir and river water temperatures) reflect these drought periods.

The flow-related objectives of the Trinity River ROD, as presented in the 1999 *Trinity River Flow Evaluation Final Report*, were considered in the development of the effects analyses. In

addition to the impact analyses on effects to Trinity River ROD water temperature objectives described in Chapter 5, "Surface Water Quality," the analyses presented in Chapter 7, "Biological Resources – Fisheries" and Chapter 8, "Biological Resources – Terrestrial" address effects on a number of relevant Trinity River ROD objectives potentially affected by Alternative 2. Specific Trinity River ROD objectives considered in the Chapter 7, "Biological Resources – Fisheries" analysis were listed in Table 7-2 (see pages 7-47 to 7-49), and those considered in the Chapter 8, "Biological Resources – Terrestrial" analysis were described on pages 8-35 and 8-36 of the Draft EIS. Chapters 5, "Surface Water Quality" (pages 5-66 to 5-81) and Chapter 7, "Biological Resources – Fisheries" (pages 7-87 to 7-100) of the Draft EIS describe the effects of Alternative 2 on water temperatures in the Trinity River, including objectives identified in the Trinity River ROD. Chapter 8, "Biological Resources – Terrestrial" (pages 8-41 to 8-43) describes the effects of Alternative 2 on terrestrial resources, including riparian habitats. With respect to geomorphic processes, as described in Chapter 2, "Description of Alternatives" (page 2-10 to 2-12), the duration and magnitude of the spring peak flows would be maintained for extremely wet, wet, normal and dry year types, maintaining flows for geomorphic objectives. As described in Table 8.2 of the *Trinity River Flow Evaluation Final Report* (USFWS and Hoopa Valley Tribe 1999), geomorphic objectives did not include channel bed mobilization or transport as an objective for critically dry years. Accordingly, the reduced duration of spring peak flows (1,500 cfs) in critically dry years under Alternative 2 would not affect the objectives for these geomorphic processes. As described in Chapter 4, "Water Supply and Management" (page 4-34 and 4-77) of the Draft EIS, both Alternative 1 and Alternative 2 would reduce spills in some winter months during wetter year types, although Alternative 1 would have greater reductions in spills than Alternative 2.

NCRWQCB-5: In Chapter 7, "Biological Resources – Fisheries" of the Draft EIS, text on page 7-10 (line 2) has been revised to clarify that any potential instream impacts associated with these ongoing activities are the responsibility of the project proponents, which include the need to plan these activities under a range of flow conditions, including any flows associated with the action alternatives. Although the Draft EIS does not go into detail concerning the coordination of pulse flow activities under the action alternatives with the Trinity River Restoration Program restoration activities in the upper 40 miles of Trinity River, many of the same agencies and tribes, including individuals, are on both the Trinity River Restoration Program and the LTP Technical Team. See Chapter 4 "Errata" of this Final EIS.

NCRWQCB-6: In Chapter 7, "Biological Resources – Fisheries" of the Draft EIS, Table 7-3, on page 7-52, has been revised, including removing the citation for the State Water Resources Control Board Water Right Order 90-5 for Trinity River temperature objectives, and adding a citation for the North Coast Regional Water Quality Control Board (NCRWQCB) Water Quality Control Plan for the North Coast Region. The reference for the NCRWQCB Water Quality Control Plan has been added to the *References* section for Chapter 7, "Biological Resources – Fisheries" on page 7-129 (line 1) in the Draft EIS. See Chapter 4, "Errata" of this Final EIS.

Chapter 5, "Surface Water Quality" of the Draft EIS discusses, in detail, compliance with temperature objectives.

NCRWQCB-7: As described in Chapter 2, "Description of Alternatives" on page 2-2 and detailed in the Analytical Tools Technical Appendix of the Draft EIS, anticipated climate change

and sea-level rise have been incorporated into the analyses for the No Action Alternative and action alternatives. Chapter 4, "Surface Water Supply and Management" Figure 4-17, of the Draft EIS (page 4-28) presents the estimated flow augmentation frequency and associated volumes for the three flow augmentation components (preventive base flow augmentation, preventive pulse flow, and emergency pulse flow augmentation). The Analytical Tools Technical Appendix (pages 2-12 to 2-27) provides additional detail on the anticipated frequency of flow augmentation actions (preventive base flow augmentation, preventive pulse flow, and emergency pulse flow augmentation), including descriptions of methods and assumptions. Chapter 1, "Introduction" (pages 1-1 to 1-8) provides additional information on the frequency of similar flow augmentation actions to date.

NCRWQCB-8: Please refer to Master Response "General Comment."

NCRWQCB-9: Impacts to both sediment and mercury conditions in the Trinity River and Trinity Lake, were considered, but were not discussed in the Draft EIS because they were not anticipated to have significant impacts from the alternatives.

Concerning sediment, the flow requirements, remedial measures and adaptive management specified in the Trinity River ROD were designed with sediment management as a major component. The flows specified in the Trinity ROD include 5-day pulse flows of 11,500 cfs in extremely wet, 8,500 cfs in wet, 6,000 cfs in normal, 4,500 cfs in dry, and 1,500 cfs in critically dry years. Chapter 2 "Water Operations Modeling", pages 2-19 to 2-27 describe the methodology used to develop the preventive and emergency pulse flows for inclusion into the CalSim II simulations and subsequent analysis. The resulting volumes are summarized in Table 2-8 "Summary of Preventive Base Flow Augmentation, Preventive Pulse Flow and Emergency Pulse Flow Augmentation Volume by Water Year" and Table 2-9 "Preventive Base Flow Augmentation for the 1922-2003 Period by Hydrologic Year Type" The alternatives include preventive and emergency pulse flows of 5,000 cfs for one and five days respectively and maintain ramping rates for flow changes from the Trinity ROD. The preventive and emergency pulse flows would be larger than the Trinity ROD pulse flows in only 3 years of the 83 year analysis period, in all other years a similar or larger Trinity ROD required pulse flow would have been made without the project. Because the preventive and emergency pulse flows are within the routine operational flow range, and are similar or smaller in 80 of the 83 year analysis period they are not expected to significantly affect sedimentation.

Concerning mercury, at this time environmental conditions (e.g., seasonality, land-use practices, fire events, storms, etc.) that are related to mercury conditions in Trinity Lake are unknown. A Trinity Lake TMDL addressing mercury is expected in 2019, but preliminary findings are unavailable at this time (see Table 5-2). Operations under Alternative 1 or 2 are not expected to significantly affect mercury availability in Trinity Lake (e.g., alternative operations are not expected to contribute to low DO conditions that may enhance methylmercury production).

NCRWQCB-10: Please refer to Master Response "General Comment."

Comments from Regional and Local Governments, Agencies, and Interest Groups and Responses

This section contains copies of comment letters (and selected accompanying attachments) from the regional and local governments, agencies, and interest groups listed in Table 3-6 and responses to their comments.

Table 3-6. Regional and Local Governments, Agencies, and Interest Groups Providing Comments on Draft Environmental Impact Statement

Abbreviation	Agency
KDD	Klamath Drainage District
KID	Klamath Irrigation District
KWUA	Klamath Water Users Association
NCPA	Northern California Power Agency
PAC	Pacific Power, a Division of PacifiCorp
PCFFA	Pacific Coast Federation of Fishermen's Associations et al.
RED	City of Redding
SCWUA	Siskiyou County Water Users Association
SIS1	County of Siskiyou
SIS2	County of Siskiyou
SL&DMWA	San Luis & Delta-Mendota Water Authority
TCCA	Tehama Colusa Canal Authority
TLRA	Trinity Lake Revitalization Alliance

Klamath Drainage District

KDD

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* ALSO ADMITTED IN NEW YORK
* ALSO ADMITTED IN CALIFORNIA
‡ ALSO ADMITTED IN OREGON
† ALSO ADMITTED IN WYOMING
¥ ONLY ADMITTED IN OREGON AND DISTRICT OF COLUMBIA

December 2, 2016

Ms. Julia Long
Bureau of Reclamation
Northern California Office
16349 Shasta Dam Blvd.
Shasta Lake, CA 96019
BOR-SLO-sha-ltpeis-public-comments@usbr.gov

RE: Comments on Draft Environmental Impact Statement for the Long-Term Plan for Protecting Late Summer Adult Salmon in Lower Klamath River

Dear Ms. Long:

This letter provides comments of Klamath Drainage District ("KDD") on the Draft Environmental Impact Statement ("DEIS") for the Long-Term Plan for Protecting Late Summer Adult Salmon in Lower Klamath River ("Plan") dated October 2016. KDD is a drainage district organized under the laws of Oregon and situated just north of the Oregon-California border in the Klamath River Basin. KDD contracts with the Bureau of Reclamation ("Reclamation") for diversion, delivery and drainage of water as part of the Klamath Project. Its member landowners irrigate approximately 28,000 acres with both adjudicated and state permitted water rights. KDD actively coordinates with Reclamation regarding Klamath River flow issues year-round. KDD-1

KDD supports the Preferred Alternative ("Alternative 1") as it is identified in the DEIS, particularly to the extent that Alternative 1 does not require flows from the Klamath Project in excess of the Environmental Water Account ("EWA"), which itself provides for fisheries management. Specifically, Chapter 2 recognizes challenges relating to water temperature that negate any benefit from increased releases from Klamath River Basin sources to decrease Ich epizootic events, or otherwise improve fishery resources. KDD strongly believes KDD-2

{01095866-3}

using Klamath Project and/or KDD water for flow augmentation is not appropriate or scientifically desirable to achieve the purposes of the Plan. KDD-2 (contd)

KDD also notes the absence of any statutory authority that would support use of Klamath Project water for Klamath River flow augmentation. The Klamath Project is authorized only for 1902 Reclamation Act purposes, i.e. the purpose served by related water rights for irrigation. KDD-3

Further, KDD is concerned that the DEIS does not adequately account for, or consider impacts from potential dam removal under the Klamath Hydroelectric Settlement Agreement ("KHSA"), as amended effective April 6, 2016. Klamath River flows, watershed restoration and habitat could all be dramatically impacted by dam removal. Ultimately, those impacts must be evaluated and coordinated under federal environmental processes. KDD-4

In closing, KDD bases its comments on review of the DEIS and public hearing information. Most recently, KDD supervisors attended the hearing in Redding, California, on November 9, 2016. Supervisors also attended a public scoping meeting in Klamath Falls, Oregon, on August 11, 2015. KDD appreciates this opportunity to submit these comments. KDD-5

Respectfully submitted,

CLYDE SNOW & SESSIONS, P.C.

Reagan L.B Desmond
General Counsel for Klamath Drainage District

Cc: KDD Supervisors (via Email);
Jeff Nettleton, Area Manager, USBR; and
David Murillo, Regional Director, USBR

{01095866-3}

Responses to Comments from Klamath Drainage District

KDD-1: Please refer to Master Response "General Comment."

KDD-2: Please refer to Master Response "General Comment."

KDD-3: The *Statutory Authority* section (page 1-15) of Chapter 1, "Introduction" and the Statutory Authority Appendix of the Draft EIS describe Reclamation's authority to implement the action alternatives which would augment lower Klamath River from water stored in Trinity Reservoir. Neither of the action alternatives include using Klamath Project water for flow augmentation actions, therefore, no authority for such releases has been cited. Also please refer to Master Response "Reclamation Authority to Release Flows."

KDD-4: Please refer to Master Response "Removal of PacifiCorp Dams on the Klamath River."

KDD-5: Please refer to Master Response "General Comment."

Klamath Irrigation District

KID

KLAMATH IRRIGATION DISTRICT
6640 KID Lane
Klamath Falls, OR 97603
Phone No. (541) 882-6661 Fax No. (541) 882-4004

December 5, 2016

Transmitted Via E-mail and First Class Mail

Julia Long, Project Manager
United States Bureau of Reclamation
Northern California Area Office
16349 Shasta Dam Blvd.
Shasta Lake, CA 96019
E-mail: BOR-SLO-sha-ltpeis-public-comments@usbr.gov

RE: Comments on Draft Environmental Impact Statement, Long-Term Plan to Protect Adult Salmon in the Lower Klamath River

Dear Ms. Long:

This letter provides the comments of Klamath Irrigation District ("KID") on the Draft Environmental Impact Statement for the Long-Term Plan to Protect Adult Salmon in the Lower Klamath River ("Draft EIS") dated October 2016.

KID-1

KID is an irrigation district located within the Klamath Reclamation Project. KID not only delivers water to lands located within its boundaries but also to other water users located within and outside of its boundaries, including Klamath Basin Improvement District and individual Warren Act Contracts. KID water deliveries sustain more than 50,000 acres of farms and ranches that depend on water from the Upper Klamath Lake/Klamath River system for irrigation. KID submits the following comments regarding the Draft EIS in consideration of the foregoing interests.

KID-2

The action alternatives analyzed in the Draft EIS involve the release or bypass of water from Trinity Reservoir and Lewiston Dam, or the operation or modified operation of facilities located on the Trinity River. (*See* Draft EIS at pp. ES-3, ES-7, 2-2, 2-11.) In the past, the Klamath Project was considered as a potential source of augmentation water. (Draft EIS at pp. 2-13.) However, the Draft EIS does not evaluate the effects of providing flows through the operation of any facilities directly or indirectly associated with the Klamath Reclamation Project and, in fact, dismisses facilities associated with the Klamath Reclamation Project as effective sources of augmentation water. (Draft EIS at pp. 2-13.) Additionally, none of the statutory authorities the Draft Plan and DEIS are predicated upon authorize releases from Upper Klamath

Lake for Klamath River flow augmentation or any other action affecting water supplies available in the Klamath Project. Moreover, the Klamath Reclamation Project is only authorized for 1902 Reclamation Act purposes, which purposes do not include the purpose of providing augmentation water in the circumstances presented here.

KID-2 (contd.)

In recognition of the above, KID requests that section 4.3 of the Draft Plan be revised to eliminate any potential reading suggesting the Klamath Reclamation Project could be considered or looked to as a source of augmentation water. Specific items in section 4.3 needing correction include items E and G under March-May (including elimination of footnote 14),[1] and items B and C under May-June. Overall, the Draft Plan text, in section 4.3 and other sections as applicable, needs to be updated to conform to the action alternatives under review in the DEIS and the relevant statutory authorities.

KID-3

KID also believes Tables ES-1 and 2-1 are in need of correction. Action 2 states, "Reclamation develops projections for lower Klamath River flows through September based on: . . . 2013 USFWS and NMFS Klamath Project Biological Opinion release requirements from Iron Gate Dam . . . ." This is somewhat misleading because Iron Gate Dam releases are not specific flows at specific times. Rather, an environmental water account is calculated and then managed throughout the year. Action 2 should therefore be revised to state as follows: "Reclamation develops projections for lower Klamath River flows through September based on: . . . biological opinion-based flows below Iron Gate Dam . . . ."

KID-4

KID appreciates the opportunity to provide comments on the Draft EIS.

Respectfully submitted,

John Wolf
Manager Klamath Irrigation District

Cc: David Murillo, Regional Director, BOR
Jeff Nettleton, Area Manager, Klamath Basin Area Office, BOR
Jason Cameron, Deputy Area Manager, Klamath Basin Area Office, BOR

[1] Similarly, on page 7 of the Draft Plan, footnote 8 could be eliminated or at minimum the word "will" should be changed to "could."

KID-3 (contd.)

Responses to Comments from Klamath Irrigation District

KID-1: Please refer to Master Response "General Comment."

KID-2: The *Statutory Authority* section of Chapter 1, "Introduction" and the Statutory Authority Appendix of the Draft EIS describe Reclamation's authority to implement the action alternatives which would augment lower Klamath River from water stored in Trinity Reservoir. Neither of the action alternatives include using Klamath Project water for flow augmentation actions, therefore no authority for such releases has been cited. Also please refer to Master Response "Reclamation Authority to Release Flows."

KID-3: As described in the Chapter 1, "Introduction" section *Development of the Long-Term Plan for Protecting Late-Summer Adult Salmon in the Lower Klamath River* on page 1-8 of the Draft EIS, Reclamation started developing the *Draft Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River* (Draft LTP) in 2013. An initial Draft LTP was provided to key stakeholders on December 31, 2014. Based on comments received from stakeholders—including Klamath Project interests—the Draft LTP was revised and released to the public on April 17, 2015. This EIS further refines the flow augmentation actions, processes, and monitoring identified in the Draft LTP. Reclamation does not intend to update or finalize the April 2015 Draft LTP.

KID-4: In the Executive Summary and Chapter 2, "Description of Alternatives" of the Draft EIS, Table ES-1 (on page ES-5) and Table 2-1 (on page 2-5) have been revised per comment. See Chapter 4, "Errata" of this Final EIS.

Klamath Water Users Association

KWUA

KWUA Klamath Water Users ASSOCIATION
Phone (541) 883-8100 ~ Fax (541) 883-8893 ~ 735 Commercial Street, Suite 3000, Klamath Falls, Oregon 97601

December 05, 2016

Via Electronic Mail and First Class Mail

Julia Long, Project Manager
United State Bureau of Reclamation, Northern California Area Office
16349 Shasta Dam Blvd.
Shasta Lake, CA 96019
BOR-SLO-sha-ltpeis-public-comments@usbr.gov

Re: Comments on Draft Long-Term Plan for Protecting Late Summer Adult Salmon in Lower Klamath River and Draft Environmental Impact Statement

Dear Ms. Long:

This letter provides comments of Klamath Water Users Association (KWUA) on the "Draft Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River" dated April 2015 (Draft Plan) and accompanying Draft Environmental Impact Statement dated October 2016 (DEIS).

KWUA is a non-profit corporation whose members are primarily irrigation districts and similar water delivery agencies holding contracts with the Bureau of Reclamation (Reclamation) for the diversion, delivery, and use of water through the Klamath Irrigation Project (Klamath Project). KWUA members operate on more than 170,000 acres in south-central Oregon and northern California, sustaining approximately 1,200 farms and ranches that depend on the Upper Klamath Lake/Klamath River system for water for irrigation. KWUA has, over more than the last decade, communicated with Reclamation in regard to the lower Klamath River flow issues addressed in the Draft Plan. We do not repeat all of that information here, but focus on the DEIS, including as it relates to specific attributes or mechanics of the Draft Plan.

KWUA-1

CORRECTIONS AND CLARIFICATION, AND CONSISTENCY ISSUES

KWUA has identified the need for certain corrections or clarifications, and other matters to provide consistency. In part, this includes updating certain text in the Draft Plan. These comments are not for the purpose of endorsing any action alternative identified in the DEIS, and rather the comments take the DEIS alternatives as provided.

The proposed action (alternative 1) involves release or bypass of water from Trinity Reservoir and Lewiston Dam; the only other action alternative that is analyzed also involves operation or modified operation of facilities on the Trinity River. (See DEIS at pp. ES-3, ES-7, 2-2, 2-11; see also Draft Plan at p. 1 (Scope).) The DEIS thus evaluates effects of these alternative actions and no others. In particular, the DEIS does *not* evaluate potential adverse environmental effects of providing flows through operation of any facilities directly or indirectly associated with the Klamath Project. In fact, the DEIS identifies such action as having been

KWUA-2

eliminated from detailed evaluation and not a subject of analysis. (DEIS at p. 2-13.) Thus, the DEIS cannot serve as the basis for any such action, and, putting aside other legal issues,[1] such action could not be considered absent further NEPA analysis.

KWUA-2 (contd.)

There are, however, certain changes needed to conform to the DEIS's discussion of action alternatives, including an update of the Draft Plan itself. In the past, the Klamath Project was considered as a potential source of augmentation water. This possibility has not been removed from section 4.3 of the Draft Plan, and in fact section 4.3 of the Draft Plan is not consistent with Table ES-1 or Table ES-5 of the DEIS. Section 4.3 of the Draft Plan should be modified to eliminate any potential reading that the Klamath Project could be considered or looked to as an "augmentation source." Items needing correction in section 4.3 include items E and G under March-May (including elimination of footnote 14),[2] and items B and C under May-June. Overall, the Draft Plan text, in section 4.3 and other sections as applicable, needs to be updated to conform to the action alternatives under review in the DEIS.

KWUA-4

Corrections are also needed in Tables ES-1 (DEIS, p. ES-5) and Table 2-1 (DEIS, p. 2-5). In these tables, step 2 states: "Reclamation develops projections for lower Klamath River flows based on: [various factors including] 2013 USFWS and NMFS Klamath Project Biological Opinion release requirements from Iron Gate Dam . . . ." We believe this is somewhat inaccurate and potentially misleading. ESA operations for Iron Gate Dam releases are not necessarily specific flows at specific times. Rather, generally speaking, and although there are identifiable minimums, under current Klamath Project operations an environmental water account (EWA) is calculated and then managed through the year based on the input of federal, state, and tribal biologists, PacifiCorp, and others. The same operation or modified operation may apply in the future. If the proposed approach to the action alternatives in the DEIS is retained, we recommend that the wording in DEIS Table ES-1 and Table 2-1 (as well as the modified section 4.3 in the Draft Plan) be changed to "Reclamation develops projections for lower Klamath River flows based on . . . biological opinion-based flows below Iron Gate . . . ."

KWUA-6

OTHER COMMENTS

The proposed action primarily would threaten water supply impacts to the Central Valley Project (CVP) water and power users, and potentially State Water Project water users. KWUA does not advocate such action or impacts, and urges your consideration of information and comments of those parties that relate to their interests.

KWUA-7

[1] The other legal issues would include the lack of authority for the action. Section 5 of the Draft Plan and the DEIS on page 1-15 state the "Statutory Authority" for the proposed plan. None of the identified statutory authorities would authorize, let alone require, releases from Upper Klamath Lake for Klamath River flow augmentation or any other action affecting water supplies available in the Klamath Project. Further, the Klamath Project is authorized only for 1902 Reclamation Act purposes, and those are the purposes of its water rights. We understand the importance of tribal trust resources and actions consistent with protection of such resources. The Draft Plan does not suggest this is a source of authority however.

KWUA-3

[2] Similarly, on page 7 of the Draft Plan, footnote 8 could be eliminated or at minimum the word "will" should be changed to "could."

KWUA-5

December 05, 2016
RE: KWUA Comments on Draft LTP and DEIS for Protecting Late Summer Adult Salmon in the Lower Klamath River
Page 3

Watershed-based restoration efforts, and improved habitat access, are key factors in providing beneficial conditions for Klamath River salmonids. We encourage Reclamation to support those activities. KWUA-8

Respectfully submitted,

Scott White
Executive Director

cc: David Murillo, Regional Director, USBR
Jeff Nettleton, Area Manager, Klamath Basin Area Office, USBR
Jason Cameron, Deputy Area Manager, Klamath Basin Area Office, USBR

Responses to Comments from Klamath Water Users Association

KWUA-1: Please refer to Master Response "General Comment."

KWUA-2: As described in the Chapter 1, "Introduction" section *Development of the Long-Term Plan for Protecting Late-Summer Adult Salmon in the Lower Klamath River* on page 1-8 of the Draft EIS, Reclamation started developing the *Draft Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River* (Draft LTP) in 2013. An initial Draft LTP was provided to key stakeholders on December 31, 2014, including the Klamath Water Users Association. Based on comments received from the Klamath Water Users Association and other stakeholders, the Draft LTP was revised and released to the public on April 17, 2015. This EIS further refines the flow augmentation actions, processes, and monitoring identified in the Draft LTP. Reclamation does not intend to update or finalize the April 2015 Draft LTP.

KWUA-3: The *Statutory Authority* section of Chapter 1, "Introduction" and the Statutory Authority Appendix of the Draft EIS describe Reclamation's authority to implement the action alternatives which would augment lower Klamath River from water stored in Trinity Reservoir. Neither of the action alternatives include using Klamath Project water for flow augmentation actions, therefore no authority for such releases has been cited. Also please refer to Master Response "Reclamation Authority to Release Flows."

KWUA-4: This EIS further refines the flow augmentation actions, processes, and monitoring identified in the Draft LTP. Reclamation does not intend to update or finalize the April 2015 Draft LTP. Please also refer to comment KWUA-2.

KWUA-5: This EIS further refines the flow augmentation actions, processes, and monitoring identified in the Draft LTP. Reclamation does not intend to update or finalize the April 2015 Draft LTP. Please also refer to comment KWUA-2.

KWUA-6: In the Executive Summary and Chapter 2, "Description of Alternatives" of the Draft EIS, Table ES-1 (on page ES-5), and Table 2-1 (on page 2-5) have been revised per comment. See Chapter 4, "Errata" of this Final EIS.

KWUA-7: Please refer to Master Response "General Comment."

KWUA-8: Please refer to Master Response "General Comment."

Northern California Power Agency

NCPA

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Roseville, CA 95678
(916) 781-3636
www.ncpa.com

December 5, 2016

Ms. Julia Long
Bureau of Reclamation
Northern California Area Office
16439 Shasta Dam Boulevard
Shasta Lake, CA 96019

SUBJECT: "Long-Term Plan to Protect Adult Salmon in the Lower Klamath River; Draft Environmental Impact Statement"

Dear Ms. Long:

Northern California Power Agency (NCPA)[1] appreciates the opportunity to provide comments on the Bureau of Reclamation's (Reclamation) "Long Term Plan to Protect Adult Salmon in the Lower Klamath River; Draft Environmental Impact Statement" (DEIS). NCPA is a non-profit California Joint Powers Agency with 15 members located throughout Northern and Central California. Our Members are preference power customers who, in total, purchase more than 40 percent of the Central Valley Project (CVP) power marketed by Western Area Power Administration. NCPA-1

Reclamation proposes to release "not less than 50,000 acre-feet of water" annually, as needed, to prevent another large scale adult salmonid die-off precipitated by a disease. The DEIS outlines two alternatives to accomplish this task. Alternative 1 proposes using supplemental water for this purpose, while Alternative 2 would utilize existing Record of Decision water to accomplish Reclamation's goals.

NCPA recommends that Reclamation adopt Alternative 2 as its preferred alternative as it would maintain higher storage levels in Trinity reservoir, maintain Trinity River diversions almost entirely to protect the salmonid, and least impact to CVP power customers.

NCPA, however, encourages Reclamation to consider updating the DEIS in the following areas; NCPA-2

- Chapter 9, Table 9-3 entitled, "Hydropower Generation and Energy Use by the CVP" only considers CVP hydropower generation from Calendar Years 2000 – 2012, but should be updated to include the four critical drought years of 2013-2016. The omission of these years overstates the amount of CVP power generated and, thereby, understates the true impacts of Alternatives 1 and 2; and,

[1] NCPA is a nonprofit California joint powers agency established in 1968 to construct and operate renewable and low-emitting generating facilities and assist in meeting the wholesale energy needs of its 15 members: the Cities of Alameda, Biggs, Gridley, Healdsburg, Lodi, Lompoc, Palo Alto, Redding, Roseville, Santa Clara, and Ukiah, Plumas-Sierra Rural Electric Cooperative, Port of Oakland, San Francisco Bay Area Rapid Transit (BART), and Truckee Donner Public Utility District—collectively serving nearly 700,000 electric consumers in Central and Northern California.

NCPA-1 (cont.)

- The analyses in chapter 10 should reflect the state's new 50 percent Renewable Portfolio Standard (RPS) by 2050, rather than the previous 33 percent RPS by 2020. As a result, the analyses fails to fully appreciate California's transition to a power market that will feature only increased availability of renewable resources, such as solar, as a less expensive alternative to the increasingly more expensive CVP power. NCPA-3

NCPA recommends that the DEIS incorporate the recommendations described above, and adopt Alternative 2. NCPA-4 Implementation of either alternative, however, will continue to increase costs for CVP power customers, undermining the value of this important federal resource. NCPA-5

Thank you very much for your consideration.

Sincerely,

JANE CIRRINCIONE
Assistant General Manager
Legislative and Regulatory Affairs

JDC:cp

Responses to Comments from Northern California Power Agency

NCPA-1: Please refer to Master Response "General Comment."

NCPA-2: In Chapter 9, "Hydropower Generation" of the Draft EIS, Table 9-3 (on page 9-7) has been revised to include additional data on net CVP Power generation for calendar years 2013 through 2016. The net CVP power generation values have also been revised for all other years (2000-2012) to reflect the data in Reclamation's annual Central Valley Project Power System Generation Summary reports.

NCPA-3: Chapter 10, "Air Quality, Greenhouse Gas Emissions, and Global Climate Change" of the Draft EIS discusses the existing California renewable portfolio standard (RPS) target of 33 percent renewable energy by 2020 (see page 10-3). In addition to the RPS standard discussed in the Draft EIS, Senate Bill (SB) 350 sets a goal for all retail sellers and publicly-owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030, not 2050 as the commenter suggests.

In Chapter 10, "Air Quality, Greenhouse Gas Emissions, and Global Climate Change" of the Draft EIS, text on page 10-3 (lines 29-30 and 35) has been added to clarify that California has established renewable energy requirements beyond 2020 through the adoption of SB 350. See Chapter 4, "Errata" of this Final EIS.

With regards to California's transition to a power market of increased renewable energy sources, Reclamation recognizes that existing regulations in California, such as RPS, may result in a reduction in fossil fuel use and an increase in renewable energy use in the future. However, to characterize the effects from implementing the action alternatives, the Draft EIS conducted a worst-case greenhouse gas (GHG) emissions analysis under the assumption that all reductions in hydroelectric generation would be supplemented by nonrenewable energy sources (see pages 10-9 and 10-10).

Chapter 9, "Hydropower Generation" (page 9-1) of the Draft EIS describes that CVP generated hydropower is first used to meet CVP operation needs or loads. Any power in excess of CVP project use is offered for commercial sale. Reclamation acknowledges that reductions in hydropower generation through implementation of the action alternatives may affect power costs to power contractors. Power contractors repay costs allocated to power based on their assigned percentage share of the hydropower output of the CVP. Recovery of the Federal investment assigned to power contractors for repayment may be impacted if prices paid for CVP power significantly exceed market power rates over an extended period of time. However, based on a study conducted by Reclamation that considered power rate projections estimated for the three hydrology and power generation scenarios, it does not appear that CVP energy costs will exceed alternative costs of power for a prolonged period of time under current operating conditions, and CVP energy costs will remain competitive and be less expensive than market energy prices (Reclamation 2015).

NCPA-4: Please refer to Master Response "General Comment."

NCPA-5: As described in Chapter 9, "Hydropower Generation" (pages 9-10 to 9-14) of the Draft EIS, CVP hydropower generation would be similar to the No Action Alternative (less than

1 percent change) under implementation of either of the action alternatives. Please also refer to the response to comment for NCPA-3 for additional information on CVP energy costs. See also Master Response "Best Available Information."

Pacific Power, a Division of PacifiCorp

PAC

PACIFIC POWER
A DIVISION OF PACIFICORP

825 NE Multnomah
Portland, Oregon 97232

December 5, 2016

VIA ELECTRONIC MAIL

Ms. Julia Long
Project Manager
U.S. Department of the Interior, Bureau of Reclamation
Northern California Area Office
16349 Shasta Dam Blvd
Shasta Lake, CA 96019

Subject: PacifiCorp Comments on the Draft Environmental Impacts Statement for the Proposed Long-term Plan to Protect Adult Salmon in the Lower Klamath River

Ms. Long:

PacifiCorp is pleased to submit the following comments on the Bureau of Reclamation's (Reclamation) Draft Environmental Impact Statement (DEIS) regarding the proposed implementation of a long-term plan to protect adult salmon in the Lower Klamath River (LTP). We understand that the proposed action includes the release of flow from Lewiston Reservoir on the Trinity River through one of two alternatives. PAC-1

We appreciate that Reclamation considered the feasibility of releases from the Klamath Hydroelectric Project (Project) via Iron Gate dam as an alternative to releases from Lewiston dam. We understand that releases from Iron Gate dam would not have the same temperature benefits as releases from Lewiston dam. The temperature of releases from the Project, depending on the time of year, can be either at, above, or below temperatures that would otherwise occur in the river under a natural, without-dam condition. However, these temperature effects dissipate with distance downstream from the Project such that there is no discernible effect of the Project on river temperatures during the fall period in the location of interest in the Lower Klamath River as described in the LTP. PAC-2

Despite the fact that releases from the Project will not result in temperature benefits, we would like Reclamation to remember that if fish are concentrated in the Klamath River upstream of the Trinity River releases from Iron Gate dam would be the only way to provide additional flows to those fish and possibly address disease transmission or crowding issues even if those flows cannot provide cooler temperatures. PacifiCorp is supportive of taking actions, such as making emergency water releases available from the Project, should disease issues in the Klamath River downstream of Iron Gate dam warrant their consideration. Because these actions require advance planning and coordination, PacifiCorp requests that Reclamation consider this type of action in its LTP so that such releases, if necessary, can occur in a planned manner with the least impact to Project operations, recreational resources enhanced by the Project, ongoing instream flow releases, and Klamath water users. PAC-3

Specific comments are in the table below referenced to page number and line number as appropriate.

1

Comment	Page, Line(s)	Topic	
1	1-11 Line 9	The text provides a summary of the Klamath Hydroelectric Project features. As is noted in the citation, this information was taken directly from PacifiCorp's Klamath Project website (http://www.pacificorp.com/es/hydro/hl/kr.html). However, the DEIS makes one substantial error by stating that "…PacifiCorp manages Upper Klamath Lake for flood control objectives." This is not correct. While PacifiCorp operates Link River dam, it does so at the direction of Reclamation, the dam owner. As is noted in the source information, Reclamation manages the releases from Upper Klamath Lake through Link River dam for a variety of resources and operational objectives – one of which is to provide for flood control in the Klamath basin. The DEIS should be edited to accurately reflect that Reclamation is responsible for flood control in Upper Klamath Lake, and that Reclamation's flood control operations are described in Reclamation's proposed action contained in the Biological Assessment (Reclamation 2012) developed by Reclamation pursuant to its most recent consultation process under the Endangered Species Act.	PAC-4
2	1-11 Lines 18-21	In this and other locations throughout the DEIS, Reclamation may want to update the status of the transfer application which was submitted to the Federal Energy Regulatory Commission (FERC) jointly with the Klamath River Renewal Corporation on September 23, 2016. On this date, the Klamath River Renewal Corporation also simultaneously filed a surrender application with FERC.	PAC-5
3	5-18 Lines 1-9 5-19 Lines 1-3	While sources are not provided with these figures, the text indicates that they were created using data from PacifiCorp's Interim Measure 15 water quality monitoring data. Reclamation should be aware that PacifiCorp is in the midst of a comprehensive review of data quality that may result in changes to data used in these figures. Updated data files will be posted to PacifiCorp's Klamath Hydroelectric Project website when they are available. Reclamation may want to consider including source information for figures presented in the DEIS (for example, see Figures 5-6 and 5-7 on page 5-23) to ensure the reader understands where the data came from.	PAC-6
4	7-107 Line 18	Table 7-26 includes a column entitled "Consideration for Mitigation Measures." It is unclear what this term actually means. Reclamation may want to clarify the meaning of this terminology so the reader is clear if these measures are being proposed as mitigation measures or some other related action.	PAC-7
5	7-109	1. The summary of potential change does not clearly state if the	PAC-8

Comment	Page, Line(s)	Topic
	Line 2	impact is adverse or beneficial and it is left to the reader to interpret. 2. Related to this, the mitigation measures intended to address adverse impacts on Central Valley Chinook appear to rely on implementation of a consultation process with resource management agencies. Mitigation measures typically are required to contain a specific set of actions that reduce the magnitude of an impact when implemented. Reclamation may want to consider presenting the actions that would be taken as part of the consultation process rather than relying on a consultation process to be completed in the future.
6	7-114 to 7-116	The cumulative effects analysis for fisheries does not contain any substantive discussion regarding the cumulative effects of reasonably foreseeable actions, including dam removal, on the mainstem Klamath River fisheries resources in relation to the Proposed Action. For example, the DEIS simply states that "...Klamath River Main Stem [sic] Dam Removal and Hoopa Valley Tribe Watershed Restoration Projects are anticipated to improve or increase available fish habitat" (page 7-115, Line 3). This is the extent of the analysis and as such, it does not appear to adequately address the additive and interactive effects of reasonably foreseeable actions.

PAC-8 (contd.)

PAC-9

If you have any questions regarding these comments, please contact me at 503-813-6170 or Demian Ebert, Principal Environmental Scientist at 503-813-6625.

Sincerely,

Tim Hemstreet
Project Manager

References

Reclamation, 2012. Final Biological Assessment. The Effects of the Proposed Action to Operate the Klamath Project from April 1, 2013 through March 31, 2023 on Federally-Listed Threatened and Endangered Species. Mid-Pacific Region. December.

Responses to Comments from Pacific Power

PAC-1: Please refer to Master Response "General Comment."

PAC-2: Please refer to Master Response "General Comment."

PAC-3: As described in Chapter 1, "Introduction," to date, large-scale adult salmon die-offs have been limited to the 2002 event on the lower Klamath River. Accordingly, the action alternatives include flow augmentation actions that focus on the lower Klamath River. The returning adult Chinook Salmon targeted by the action alternatives pass through the lower Klamath River before migrating above Weitchpec in their migration. Therefore, targeting the lower Klamath River has the potential to act as a first-response measure in preventing stress to fish before they enter the area upstream from the confluence of the Trinity and Klamath Rivers. Please also see Master Response "Range of Alternatives."

PAC-4: In Chapter 1, "Introduction" of the Draft EIS, text on page 1-11 (lines 8-9) has been revised to clarify that PacifiCorp does not manage Upper Klamath Lake for flood control objectives. Water releases from Upper Klamath Lake through Link River Dam are made by PacifiCorp as necessary to achieve water levels in Upper Klamath Lake, and flows in the Klamath River at Iron Gate Dam are managed as required for operation of the Klamath Reclamation Project and Klamath Hydroelectric Project in compliance with the Endangered Species Act (ESA). Flood control considerations with respect to Upper Klamath Lake are incorporated into the operational regime for compliance with the ESA. In making the required releases, PacifiCorp must take into account downstream diversions from, and discharges into, the Klamath River. To the extent operational flexibility exists beyond these considerations, PacifiCorp adjusts releases from Link River Dam to facilitate hydroelectric power production. See Chapter 4, "Errata" of this Final EIS.

PAC-5: In Chapter 1, "Introduction" and Chapter 2, "Description of Alternatives" of the Draft EIS, text on page 1-11 (line 17) and page 2-2 (line 23) has been updated to reflect the status of the FERC process regarding removal of the four PacifiCorp dams on the Klamath River. In Chapter 2, "Additional Reasonably Foreseeable Projects or Actions" of the Cumulative Effects Technical Appendix of the Draft EIS, text on page 2-4 (line 16) has also been updated to reflect the current status of the project. See Chapter 4, "Errata" of this Final EIS.

PAC-6: In Chapter 5, "Surface Water Quality" of the Draft EIS, text on page 5-18 (line 3) has been added to indicate the provisional nature of the data used for Figures 5-3, 5-4 and 5-5. Figure 5-3 (page 5-18, line 6), Figure 5-4 (page 5-18, line 9) and Figure 5-5 (page 5-19, line 3) in the Draft EIS have all been revised to indicate the source of the data. See Chapter 4, "Errata" of this Final EIS.

PAC-7: Chapter 7, "Biological Resources – Fisheries" of the Draft EIS discusses the environmental consequences (see pages 7-42 to 7-114) and mitigation measures identified specifically for the two action alternatives (see page 7-107 to 7-114). Any or all of these measures may be implemented with either action alternative.

PAC-8: With respect to describing adverse and beneficial effects, Chapter 7, "Biological Resources – Fisheries" of the Draft EIS (see pages 7-58 to 7-107) clearly states how

implementing Alternative 1 and 2 would affect fisheries. The *Summary of Environmental Consequences* section of Chapter 7 (see pages 7-107 to 7-113) summarizes the various effects of implementing the action alternatives.

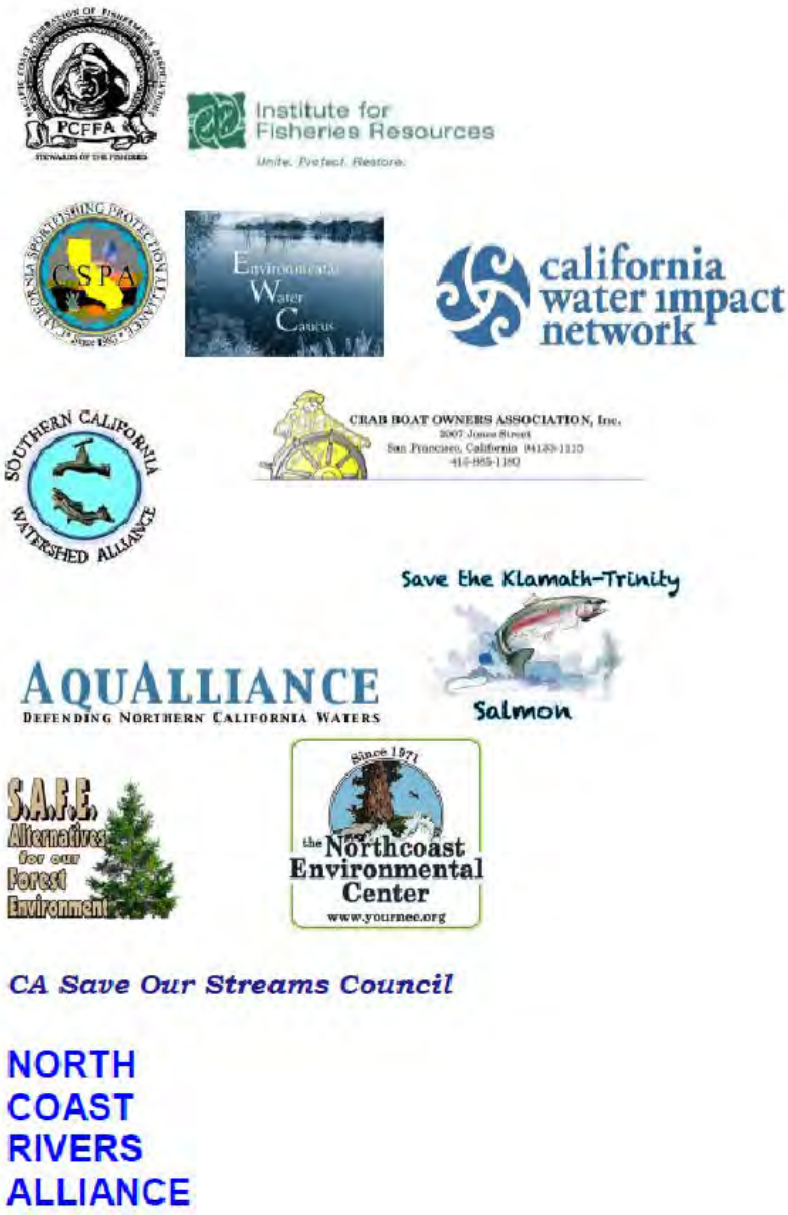
With respect to the comment related to mitigation measures, please see the response to comment for PAC-7.

PAC-9: The Cumulative Effects Technical Appendix of the Draft EIS (page 1-1) describes the NEPA cumulative effects analysis requirements. The cumulative effects analyses focus on the potential impacts to its associated environment resulting from the incremental impact of the proposed action when added to other past, present, and reasonably-foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. The Cumulative Effects Technical Appendix also describes the Klamath River Mainstem Dam Removal (see page 2-4).

Chapter 7, "Biological Resources – Fisheries" of the Draft EIS shows the results of the analysis of the cumulative effects (see page 7-114 and 7-115). Long-term adverse impacts to fish caused by operational changes from the Klamath River mainstem dam removal are not anticipated in the lower Klamath River (DOI and DFG 2012), nor are fisheries' impacts from Alternatives 1 and 2 anticipated on the upper Klamath River. During the removal of the Klamath River mainstem dams, the lower Klamath River would experience an increase in sedimentation and turbidity, although the action alternatives (Alternatives 1 and 2) are not anticipated to have adverse effects fish from sedimentation or turbidity, and therefore, no adverse cumulative effect would occur. In addition, flow augmentation in August and September under the action alternatives may improve water quality through dilution effects. Cumulative effects analysis require disclosure of adverse effects (not beneficial), therefore, the discussion included in the Draft EIS is appropriate.

Pacific Coast Federation of Fishermen's Associations et al.

PCFFA



COMMENTS ON DRAFT EIS FOR LONG-TERM
LOWER KLAMATH RIVER ADULT SALMON PROTECTIONS

5 December 2016

Julia Long
Bureau of Reclamation
Northern California Area Office
16349 Shasta Dam Blvd.
Shasta Lake, CA 96019

Via e-mail to: BOR-SLO-sha-ltpeis-public-comments@usbr.gov

Subject: Draft EIS for Long Term Plan to Protect Adult Salmon in the Lower Klamath River with Trinity Reservoir Water

Dear Ms. Long:

The *Pacific Coast Federation of Fishermen's Associations (PCFFA)* and the *Institute for Fisheries Resources (IFR)*, representing the interests of commercial fishing families coastwide, and also *California Sportfishing Protection Alliance, Environmental Water Caucus, California Water Impact Network, Southern California Watershed Alliance, Crab Boat Owners Association, Save the Klamath-Trinity Salmon, AquAlliance, the Northcoast Environmental Center (NEC), S.A.F.E. Alternatives for our Forest Environment, California Save Our Streams Council*, and the *North Coast Rivers Alliance*, representing multiple public interests and the concerns and interests of our collective tens of thousands of members, are providing these comments for your public record.

PCFFA-1

PCFFA is the west coast's largest trade association of commercial fishing families, and our members make their livings from harvesting seafood, particularly salmon, which come from many rivers on the west coast, but particularly from the Klamath-Trinity river system which once was home to the third largest salmon runs in the continental U.S. The Institute for Fisheries Resources (IFR) is PCFFA's sister organization, dedicated to protecting and preserving the biological basis for our seafood harvests, in this case native salmon runs and their habitat. The other organizations joining us in these comments represent other commercial and sportfishing industry interests as well as many concerned citizens throughout California who are working to protect the Trinity River and its many valuable salmon and steelhead runs from destruction.

The Klamath-Trinity salmon runs are among the most economically important of west coast salmon runs, and the health of these runs affects all west coast ocean salmon harvests in California, Oregon and even parts of Washington, because of weak stock management constraints imposed on that billion dollar fishery when Klamath-Trinity stocks are in such low abundance numbers that they cannot be harvested, even

though intermingling with otherwise much stronger stocks.

In 2006 we saw massive closures of ocean commercial and sport fishing over more than 700 miles of coastline, all the way from Monterey, CA to the WA-OR border. The 2006 ocean fishery closure was driven by exceedingly weak Klamath adult spawning returns that year, which in turn occurred as a direct result of poor flows, poor water quality, cumulative other biological stresses of incoming salmon runs and the resulting massive disease outbreaks in 2002 that killed an estimated 70,000 adult salmon spawners before they could reach their spawning grounds.

That single closure in 2006, triggered by poor water management in 2002, resulting in a massive spawner fish kill, costing our west coast industry an estimated $200 million total in economic losses. We never want to see a repeat of that type of systemic ecosystem collapse again! PCFFA-1

Appropriate flow management in the Trinity River is, therefore, key to avoiding another massive lower Klamath River salmon fish kill like what occurred in 2002, and thus to the fishing industry avoiding another massive economic fisheries closure disaster, like occurred in 2006, driven by weak stocks in the Klamath–Trinity watershed.

We have reviewed the 2016 *Draft Environmental Impact Report (DEIS) for the Long Term Plan to Protect Adult Salmon in the Lower Klamath River*. We support Alternative 1. In the event that the full 50,000 acre-feet of Humboldt County Central Valley Project contract water is not used, we recommend that it be carried over into the next water year to be used for winter augmentation flows to increase Chinook production in the mainstem Trinity River. PCFFA-2

Our Coalition Has the Following Specific Comments:

Overall, we find the Draft EIS to be well-written and very informational for decision makers and the public. In general, there are minimal or zero impacts to various resources, including the Central Valley Project, State Water Project, the Sacramento San Joaquin Delta and San Joaquin Valley reservoirs and operations. We support selection of Alternative 1 because it would provide the most benefits to the Trinity and Klamath river fisheries with minimal impacts to other resources.

Consistency With Existing Laws:

The proposed action is consistent with federal and state mandates to protect, preserve, propagate and restore the Trinity River's fisheries as described below: PCFFA-3

The unique protection afforded the Trinity River, its fisheries and water is embodied in State and federal law. The special legal status of the Trinity River, and the federal

mandate to do no harm to its salmon runs, has been expressed in numerous legal opinions, court decisions and administrative actions at both the State and federal level. This special status creates a priority for the use of Trinity River water for Trinity River fisheries and other in-basin uses that is legally superior to any other use of CVP water outside of the Trinity River basin.

Federal Laws and Policies:

The *Trinity River Act of 1955* (PL 84-386) "directed and authorized" the Secretary of Interior to "preserve and propagate" the fish and wildlife resources of the Trinity River.

Another provision in the *Trinity River Act of 1955* reserved 50,000 acre-feet for Humboldt County and downstream water users that is embodied in a 1959 water contract between the Humboldt County Board of Supervisors and the Bureau of Reclamation that is separate from fishery flows. A recent Solicitor's Opinion has reaffirmed this long-standing separate water right.

The Trinity River Basin Fish and Wildlife Restoration Act of 1984 (PL 98-541) clarified the above language from the 1955 Trinity River Act to mean "...restoring fish and wildlife populations in the Trinity River basin to a level approximating that existed immediately before the construction of the Trinity River division."

PCFFA-3 (contd.)

Under the Tribal Trust Doctrine, and the federally reserved fishing rights of the Hoopa Valley and Yurok Tribes there, is a property right associated with the flows of the Trinity River. These rights date back "10,000 years or time immemorial," making them senior to any water rights obtained by the Bureau of Reclamation for the Central Valley Project.

The Central Valley Project Improvement Act, P.L. 102-575 (CVPIA) acknowledged the difference between the Trinity River and Central Valley streams by having separate fishery restoration goals for each basin.

The primacy of the waters of the Trinity River for use in the Trinity River basin is explained in a 1979 Interior Solicitor's Opinion by Leo Krulitz on the water contract and drought shortage provisions with the Grasslands Water District:

> "...in authorizing the Trinity River Division in 1955, Congress specifically provided that in-basin flows (in excess of a statutorily prescribed minimum) determined by the Secretary to meet in-basin needs take precedence over needs to be served by out of basin diversions."

Federal Clean Water Act Section 303 approval by the United States Environmental Protection Agency (USEPA) of Trinity River Water Quality Objectives in 1992 constituted establishment of a federal water quality standard that all federal agencies,

including the Bureau of Reclamation must comply with. USEPA also stated in their approval that Trinity River diversions to the Sacramento River are a controllable factor in the protection of the Trinity River and have harmed the Trinity River.

The 2000 Trinity River Record of Decision (ROD page 17) clearly stated as follows:

> "From the inception of the TRD, Congress directed this Department to ensure the preservation and continued propagation of the Trinity River's fishery resources and to divert to the Central Valley only those waters surplus to the needs of the Trinity Basin."

State Laws and Policies:

The Trinity River's fisheries also have protections under the concept of the Public Trust Doctrine, as expressed in the Mono Lake Opinion (*National Audubon Society vs. Alpine County Superior Court*). "The public trust…is an affirmation of the duty of the state to protect the people's common heritage of streams, lakes, marshlands and tidelands…." – Supreme Court of California, 1983.

The Area of Origin and Watershed Protection Statutes under California law also contain a priority for in-basin uses compared to out of basin uses. The waters of the Trinity River are subject to California's Watershed Protection, Area of Origin and County of Origin Statutes (WC Sections 10505, 11128 and 11460 *et seq.)* that limit the export of its waters to surplus flows only.

PCFFA-3 (contd.)

Water Code Section 11128 specifically applies the watershed protection and county of origin statutes to the Bureau of Reclamation's Central Valley Project, which includes the Trinity River Division.

The California Department of Fish and Game (DFG), in its 22 June 2004 comments on the Supplemental EIS/EIR for the Trinity River Mainstem Fishery Restoration Program (attached), stated that impacts to listed species in the Central Valley and Delta as a result of increased Trinity River flows (and decreased Trinity exports to the Sacramento River) are not a "significant impact" requiring mitigation under the California Environmental Quality Act. DFG cited California's watershed protection and area of origin statutes as the rationale for the determination that the priority for Trinity River water is within that basin:

> "In California, the controls put in place governing a single source of water supply from two separate basins, requires needs for beneficial uses in the basin of origin be met first -- then needs can be supplied for the other basin."

The North Coast Regional Water Quality Control Board and the California State Water Resources Control Board approved Trinity River temperature objectives in 1991, which were approved by USEPA in 1992.

Daily Average/ Reach	Period	/ River
60°F	July 1 - Sept. 14	Lewiston Dam to Douglas City Bridge
56°F	Sept. 15 - Oct. 1	Lewiston Dam to Douglas City Bridge
56°F	Oct. 1 - Dec. 31	Lewiston Dam to confluence of North Fork Trinity River

The concept of doing no harm to the Trinity River is also manifested in Water Right Order 90-05 (WRO 90-05), which contained a term and condition prohibiting harm to the Trinity River as it relates to the export of Trinity River water to the Sacramento River for temperature control on the Sacramento River.

PCFFA-3 (contd.)

State Water Resources Control Board Permitting:

As indicated in a 10 August 2012 letter from the California State Water Resources Control Board, no water right permit amendments are necessary to release water from Lewiston Dam into the Trinity River.

California Environmental Quality Act (CEQA) Not Required:

Any potential impacts to resources outside of the Trinity River basin should not be considered significant impacts under CEQA, according to the attached 22 June 2004 letter from the California Department of Fish and Game. Given that no permit amendments are required from the State Water Resources Control Board or other agencies, there is no state or local agency action here to trigger CEQA.

DEIS Fails To Mention 2000 Biological Opinion From National Marine Fisheries Service:

PCFFA-4

Chapter 4, Surface Water Supply and Management should at least make mention of the 2000 Biological Opinion by the National Marine Fisheries Service, particularly the requirement for a 600,000 AF minimum cold water pool in Trinity Lake on September 30 or 400,000 AF with reconsultation and powerplant bypasses.

Trinity River Diversions To The Sacramento River Warm The Sacramento River During Summer And Early Fall:

PCFFA-5

We disagree with the statement on page 4-14, lines 26-27 that Trinity River diversions to

the Sacramento River help cool the Sacramento River. It may be true during cool spring months but once summer and early fall arrive, heated Trinity water coming into Keswick Reservoir from Whiskeytown Reservoir through the Spring Creek Tunnel can be 3-5 degrees F warmer than Shasta Dam releases and harmful to Sacramento River salmonids. Fortunately, the temperature analysis accurately predicts no significant impacts to Sacramento River temperatures from implementation of Alternatives 1 and 2. The analysis also shows minor benefits to storage in San Luis and Folsom reservoirs in critically dry years as a result of Alternatives 1 and 2.

PCFFA-5 (contd.)

DEIS Fails To Identify Weaverville CSD's Trinity River Diversion:

The DEIS fails to mention the Trinity River diversion by the Weaverville Community Services District located immediately downstream of the Highway 299 bridge in Douglas City. Fortunately, there are no impacts to municipal or domestic water supplies in the Trinity River from implementation of the action alternatives (page 6-3, lines 7-9).

PCFFA-6

The DEIS Fails To Identify Lack Of Cold Water In Shasta Lake Is A Key Spawning Success Factor For Sacramento River Chinook:

The fisheries section fails to identify that Reclamation's exhaustion of cold water reserves behind Shasta Dam was responsible for loss of 95% of the winter-run Chinook in 2014 and 2015. (Page 7-21, lines 28-31).

PCFFA-7

We Dispute That The Shasta Dam TCD Enabled Access To Additional Cold Water:

The Shasta Dam Temperature Control Device (TCD) is touted as a salmon saving device (pp. 7-33, lines 5-6). It is actually a device to mitigate the loss of hydropower. Prior to the Shasta Dam TCD, cold water was provided to salmon through bypassing the Shasta Dam Powerplant. This resulted in a significant loss of hydropower, but the fish were fine. Claims that the TCD allows access to additional cold water within the dead pool are greatly exaggerated. The TCD leaks and tarps were attached to it in 2015 to reduce the leakage. One benefit of the TCD is to release warmer water during late winter and spring in order to conserve cold water resources, particularly during wetter years.

PCFFA-8

Consideration Of Flow Releases Above The Klamath Confluence With The Trinity River:

The action alternatives will encourage the movement of all salmon that use the Klamath River, not only the Trinity River salmon, yet no recommendations for flow releases from above the confluence on the Klamath side are mentioned despite comments from the public that brought up this issue. Even higher flows that are not as cool as the Trinity could be useful in the mid-Klamath. Controlling water diversions and setting flow criteria in the Scott and Shasta Rivers, and mid-Klamath creeks, could help realize the goal of better quality water in this area. Furthermore, reducing diversions from cold water tributaries in

PCFFA-9

the Upper Basin could help cool off Upper Klamath Lake and other reservoirs.

Ways to control, and cumulative impacts, from the juvenile fish disease *C. shasta* is not addressed in this document beyond the mention that the disease exists. Over the last 5 years this disease, which is often fatal, has infected up 95% of juvenile salmon in the river and killed up to 70% of fish. Science shows *C. shasta* is caused by poor water quality (warm water and nutrients create habitat for the juvenile host) and can be controlled by pulse flows. Furthermore, recent studies have shown that cold water refugia is also refugia from *C. shasta* infections. Followup analysis should discuss the release of flows to lower infections rates during the spring and late summer months when the infection is at its height and address the cumulative impacts of all fish diseases. This plan should include flushing spring flows and higher flows in key refugia areas in the Klamath. How both diseases impact endangered coho salmon should be addressed in this follow up analysis. Allowing the majority of Chinook salmon smolts to die or become ill should not be an option.

PCFFA-9 (contd.)

CONCLUSION:

Based on the Interior Department's Tribal Trust and other legal obligations to preserve, propagate, protect and restore Klamath-Trinity salmon and steelhead fisheries, as well as the minimal impacts to other resources, the Bureau of Reclamation should adopt Alternative 1 to prevent another disaster like the 2002 Lower Klamath River fish kill.

PCFFA-10

We look forward to your response.

Sincerely,
Glen H. Spain
Glen H. Spain
Northwest Regional Director
Pacific Coast Federation of Fishermen's Associations (PCFFA)
and the Institute for Fisheries Resources (IFR)
Respond To: PCFFA/IFR Office, PO Box 11170,
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Responses to Comments from Pacific Coast Federation of Fishermen's Associations et al.

PCFFA-1: Please refer to Master Response "General Comment."

PCFFA-2: Please refer to Master Response "General Comment."

PCFFA-3: Please refer to Master Response "Reclamation Authority to Release Flow."

CVPIA 3406(b) affirms Reclamation's responsibilities to meet applicable State and Federal law, but does not create any additional requirements to meet State law that is not already applicable to Federal agencies in general and Reclamation specifically. As you are aware, actions by Federal agencies are not subject to CEQA or CESA by statutory definition. See California Public Resources Code Section 21000 and Fish and Game Code Section 2050 – 2115.5.

The *Regulatory Environment and Compliance Requirements* section in Chapter 5, "Surface Water Quality" of the Draft EIS includes information on the California State Water Resources Control Board and the Regional Water Quality Control Board's authority under the Clean Water Act, Porter-Cologne Water Quality Control Act, and the Regional Water Quality Control Board Basin Plans (see pages 5-1 and 5-2).

PCFFA-4: In Chapter 4, "Surface Water Supply and Management" of the Draft EIS, text has been inserted on page 4-6 (line 33) to clarify that Trinity Lake operates with a target minimum storage of 600 thousand acre-feet (TAF) to preserve cold water for release to the Trinity River; however, this target may be reduced in dry and critically dry water years if determined to be required by Reclamation, USFWS and NMFS. This is consistent with the 2000 Biological Opinion by NMFS for the *Trinity River Mainstem Fisheries Restoration EIS/R*. See Chapter 4, "Errata" of the Final EIS.

As described in Table 2-1 CalSim II Modeling Assumptions (on page 2-8), in Chapter 2 "Water Operations Modeling" Analytical Tools Technical Appendix in the Draft EIS, the water supply simulation modeling implemented a target Trinity Reservoir end-of-September minimum storage of 600 TAF (i.e., Table 2-1 specifies "Trinity EIS Preferred Alternative (600 TAF as able)"). However, under the No Action Alternative and action alternatives, Trinity River reservoir levels drop below this identified end-of-September target, particularly in critically dry years.

PCFFA-5: In Chapter 4, "Surface Water Supply and Management" of the Draft EIS, text on page 4-14 (lines 26 to 27) has been modified per the comment. The temperature of the inflow into Keswick Reservoir from the Spring Creek tunnel exhibits the same seasonal variation and comparison to Shasta Dam release temperatures as described in the comment. As the output from the temperature modeling was used in all subsequent modeling and analysis, this effect is properly included in the fishery impact analysis presented in Chapter 7, "Biological Resources – Fisheries." See Chapter 4, "Errata" of the Final EIS.

PCFFA-6: In Chapter 6, "Groundwater Resources/Groundwater Quality" of the Draft EIS, text on page 6-3 (line 9) was revised to include the Weaverville Community Services District, as this agency has an infiltration gallery on the Trinity River. An additional revision was made by striking the Lewiston Valley Water Company (LVWC) because the Lewiston Community

Services District (LCSD) purchased LVWC, which is now part of LCSD and operates under the LCSD name. See Chapter 4, "Errata" of the Final EIS.

PCFFA-7: In Chapter 7, "Biological Resources – Fisheries" of the Draft EIS, text on page 7-21 (line 29) was revised to include additional discussion on the importance of flow and water temperature to winter-run Chinook Salmon. See Chapter 4, "Errata" of the Final EIS.

PCFFA-8: Chapter 7, "Biological Resources – Fisheries" of the Draft EIS accurately describes the Shasta Dam Temperature Control Device (TCD) and its ability to provide cold water for downstream fisheries (see page 7-32). The Shasta Dam TCD provides increased flexibility over the use of spillway outlets. The dam's spillway outlets only occur at three elevations, 950 feet, 850 feet, and 750 feet. The TCD allows for selective water withdrawals at four elevations, including upper gates (elevation 1,000 feet to 1,045 feet), middle gates (elevation 900 feet to 945 feet), pressure relief gates (elevation 800 feet to 827 feet), and a lower-level intake at elevation 720 feet. Due to the increased number of outlets, and the larger range of elevations that the TCD can withdraw from compared to the dam outlets, the TCD provides greater flexibility in managing the cold water pool within Shasta Lake and greater flexibility in meeting downstream temperature objectives for fisheries.

PCFFA-9: As described in Chapter 1, "Introduction," to date, large-scale fish die-offs have been limited to the 2002 event on the lower Klamath River. Accordingly, the action alternatives include flow augmentation actions that focus on the lower Klamath River. The returning adult Chinook Salmon targeted by the action alternatives pass through the lower Klamath River before migrating above Weitchpec. Therefore, targeting the lower Klamath River has the potential to act as a first-response measure in preventing stress to the fish before they enter the area upstream from the confluence of the Trinity and Klamath Rivers.

As described in Chapter 1, "Introduction" of the Draft EIS (page 1-8), the Purpose and Need for this action is specific to reducing the likelihood, and potentially reducing the severity, of any Ich epizootic event that could lead to an associated fish die-off in future years. Reclamation appreciates that basin-wide ecosystem issues persist, including concerns regarding *C. shasta* infections in juvenile salmon in the Klamath River Basin. Reclamation recognizes that it is important to address fish diseases when managing salmon protection and recovery efforts in the Klamath Basin, as summarized in Chapter 7, "Biological Resources – Fisheries" (pages 7-14 to 7-17) of the Draft EIS, and as reflected by Reclamation's ongoing support and involvement with the fish health monitoring and research that occurs each year in the Klamath Basin. The interaction of river flows, water temperature, and parasite infectivity rates of salmon in the Klamath River is dynamic, and virulence of *C. shasta* is acknowledged to be generally higher at lower flows and warmer temperatures.

For the purposes of the impacts analysis presented in the Draft EIS, disease processes—including that for *C. shasta*—are assumed as a factor affecting survival and growth of juvenile salmon, which, in combination with a variety of factors, is related to flow-dependent habitat and water temperature suitability. Trinity River origin outmigrant juvenile salmon are known to be infected by the myxozoan parasite *C. shasta* in the lower Klamath River; however, it is observed that infection rates are far lower in this reach than for Klamath River juvenile salmon originating in reaches upstream from the Trinity River confluence. The differential effects of the alternative

actions analyzed are disclosed in the impacts section of Chapter 7, "Biological Resources – Fisheries" of the Draft EIS, which distinguishes that Alternative 2 would result in a reduction of suitable to marginal salmon smolt rearing and outmigration conditions for Trinity River juvenile salmon for up to two weeks in the spring, as compared to Alternative 1 and the No Action Alternative.

Please also see Master Response "Range of Alternatives" and Master Response "Scientific Support for Flow Augmentation."

PCFFA-10: Please refer to Master Response "General Comment."

City of Redding

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November 16, 2016

Julia Long
Bureau of Reclamation
Northern California Area Office
16349 Shasta Dam Blvd.
Shasta Lake, CA 96019

SUBJECT: Support for Alternative 2 in the "Long-Term Plan to Protect Adult Salmon in the Lower Klamath River; Draft Environmental Impact Statement"

Dear Ms. Long:

The City of Redding (Redding) appreciates the opportunity to provide comments on the Bureau of Reclamation's (Reclamation) "Long-Term Plan to Protect Adult Salmon in the Lower Klamath River; Draft Environmental Impact Statement" (Klamath DEIS). Redding has provided comments on Reclamation's annual proposals thus far that have included requests for the development of a long-term plan so that those entities who are directly affected from these additional releases can adjust their businesses accordingly. As such, Redding thanks Reclamation for allowing it to be an integral part in the development of this proposal.

As a Settlement Contractor, nearly two-thirds of Redding's domestic water supply comes from the Central Valley Project (CVP) through the City's municipally-owned water utility. Additionally, Redding's municipally-owned electric utility receives over eight percent of the hydroelectric output from the CVP, which accounts for approximately 30 percent of the City's annual power supply. Any efforts that may affect Redding's water supply reliability or hydroelectric generation are of significant concern to the City and its residents. RED-1

Reclamation is proposing to release not less than 50,000 acre-feet of water annually, if needed, to prevent a disease outbreak. The Klamath DEIS outlines two alternatives to accomplish this task. Alternative 1 proposes using supplemental water for this purpose, while Alternative 2 would utilize existing Record of Decision water to accomplish Reclamation's goals.

Redding fully supports Reclamation's commitment toward the prevention of a disease outbreak in the Lower Klamath and appreciates all the work that has gone into developing a three-step process for its implementation based on real-time monitoring to ensure the proposed action is done in a way that makes the most efficient use of CVP water. Redding commends Reclamation's commitment to adaptive management, which is a foundation of the Trinity ROD.

Redding recommends Reclamation adopt Alternative 2 as its preferred alternative. This alternative would undoubtedly accomplish Reclamation's goals, while providing the least impact to CVP water and power customers. Reclamation's mantra of adaptive management for the Trinity encourages modifications to the annual flow schedule to benefit the restoration goals as more knowledge is gained on ways to encourage ecosystem health and, in fact, the hydrograph that Reclamation adopts each year is now far different that what is outlined in the ROD. Alternative 2 is simply an additional adjustment to Reclamation's overall adaptive management program.

It cannot be ignored that Alternative 2 would maintain higher storage levels in Trinity Reservoir, maintain Trinity River diversions almost entirely, and ensure that the impact on hydropower generation is minimal. Bypassing key CVP hydroelectric power plants could cost CVP power users roughly $4 million per year in replacement power generation. That said, Reclamation has erred in the Klamath DEIS on its analysis of the impacts of this proposal to greenhouse gas emissions. The Klamath DEIS assumes a California goal of achieving 1990 levels by 2020; California has since enacted an even stronger mandate through the passage of Senate Bill 32 (SB 32) in September 2016, which requires the state to achieve a reduction of 40 percent below the 1990 level by 2030. SB 32 further amplifies the importance of hydropower's carbon-free status. The Klamath DEIS neglects to include the cost impact to CVP power customers who must purchase carbon allowances, which could conservatively cost up to $250,000 annually. RED-1 (contd.) RED-2

Redding appreciates the tremendous effort Reclamation has expended in the development of the Klamath DEIS. Redding believes the adoption of Alternative 2 can satisfy all stakeholder interests while minimizing environmental impact and meeting the intentions of the proposed action. Redding looks forward to continuing to work with Reclamation toward the development of its final decision. RED-3

Sincerely,

BRIAN F. CRANE, P.E.
Director of Public Works
(530) 245-7155

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Electric Utility Director
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c: Congressman Doug LaMalfa
David Murillo, Regional Director, USBR
Frederico Barajas, Deputy Regional Director, USBR
Don Bader, Area Manager, Klamath Basin Area Office, USBR

Responses to Comments from City of Redding

RED-1: Please refer to Master Response "General Comment."

RED-2: Chapter 10, "Air Quality, Greenhouse Gas Emissions, and Global Climate Change" of the Draft EIS discusses applicable Federal and State regulations used to evaluate the action alternatives (see pages 10-2 to 10-4). Text on page 10-3 (lines 10-11, 21, 25-26, 33-34, 39 and 42) and page 10-4 (lines 4-6) in the Draft EIS has been added to clarify that California SB 32 was signed into law and established new State goals for reducing statewide GHG emissions by 40 percent below 1990 levels. See Chapter 4, "Errata" of this Final EIS.

Although SB 32 was not included in the Draft EIS, GHG emissions associated with the action alternatives were evaluated in the context of compliance with the current 2014 Scoping Plan and the various programs contained within it (see page 10-3 and 10-4). The 2014 Scoping Plan considered California's cap-and-trade program as well as compliance with the State's RPS for purposes of reducing statewide GHG emissions to 1990 levels by 2020 (see page 10-4). The cap-and-trade program established a threshold of 25,000 metric tons of carbon dioxide equivalents per year (MT CO_2e/year) for which facilities, such as hydroelectric plants that emit less than 25,000 MT CO_2e/year, would not be required to participate in the declining cap and associated reduction requirements. Emitters that do not meet the established limit would not conflict with the current Scoping Plan goals. The Draft EIS evaluated the action alternatives based on the most current and applicable regulations, the 2014 Scoping Plan and the 25,000 MT CO_2e/year limit in the adopted cap-and-trade program.

Considering the 2030 target of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030, the California Air Resources Board is currently moving forward with an update to the 2014 Scoping Plan to reflect the 2030 target established by SB 32, which will likely also include the cap-and-trade program. Thus, for the same reasons discussed above, stationary emitters that do not conflict with cap-and-trade would also not conflict with future targets set by SB 32.

In addition, and as discussed on page 10-3 of the Draft EIS, hydroelectric energy associated with the action alternatives is not counted as a renewable energy source under the State's RPS. Therefore, when considering the State's ability to meet the GHG reduction targets set by SB 32 and 2030 RPS of 50 percent, hydroelectric generation would still not be counted towards the RPS goals. As such, changes in the net production of hydroelectricity throughout California does not affect the individual utilities and energy providers' ability to meet RPS goals. Because the action alternatives do not trigger cap-and-trade and do not conflict with RPS goals they would not conflict with the Scoping Plan or the State's ability to meet future or interim GHG reduction targets. No further analysis is necessary.

Reclamation acknowledges that reductions in hydropower generation through implementation of the action alternatives may affect power costs for power contractors. Chapter 9, "Hydropower Generation" (page 9-1) of the Draft EIS describes that CVP generated hydropower is first used to meet CVP operation needs or loads. Any power in excess of CVP project use is offered for commercial sale. Reclamation acknowledges that reductions in hydropower generation through implementation of the action alternatives may affect power costs for power contractors. Power contractors repay costs allocated to power based on their assigned percentage share of the

hydropower output of the CVP. Recovery of the Federal investment assigned to power contractors for repayment may be impacted if prices paid for CVP power significantly exceed market power rates over an extended period of time. However, based on a study conducted by Reclamation that considered power-rate projections estimated for the three hydrology and power generation scenarios, it does not appear that CVP energy costs will exceed alternative costs of power for a prolonged period of time under current operating conditions, and CVP energy costs will remain competitive and be less expensive than market energy prices (Reclamation 2015).

RED-3: Please refer to Master Response "General Comment."