RECLAMATION

Managing Water in the West

Finding of No Significant Impact

2015 Lower Klamath River Late-Summer Flow Augmentation from Lewiston Dam

FONSI-15-04-NCAO

Recommended by: _____ Date: 8/20/15

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Background

In accordance with Section 102(2)(c) of the National Environmental Policy Act of 1969 (NEPA), as amended, the Bureau of Reclamation has prepared an Environmental Assessment (EA) for a flow augmentation action in support of adult salmon in the lower Klamath River to avert a fish die-off in 2015. The EA is dated August, 2015, and is attached and incorporated by reference.

In August and September 2002, a large fall run of Chinook salmon (estimated 170,000) returned to the Klamath River, when flows in the lower Klamath River averaged only 2,000 cubic feet per second (cfs). There was a subsequent outbreak of two deadly fish pathogens, *Ichthyophthirius multifiliis* (Ich) and *Flavobacterium columnare* (Columnaris). This outbreak resulted in a substantial number of premature (prior to successful spawning) adult salmonid deaths. The U.S. Fish and Wildlife Service (USFWS) estimated the number of adult salmonid deaths at 33,500 (Guillen 2003), including an estimated 344 coho salmon listed as threatened under the Endangered Species Act (ESA). Predictions of large runs of fall-run Chinook salmon to the Klamath River Basin coupled with drier than average conditions prompted Reclamation to release augmentation flows in 2003, 2004, 2012 and 2013. Evidence of an imminent die-off event prompted Reclamation to again release flows in 2014. River flows in 2015 are anticipated to be equally low to those experienced in 2002, the year of the large fish die-off. Ich has already been discovered (July 22, 2015) in a tributary of the lower Klamath River. In order to avert a fish die-off event in 2015 Reclamation's Proposed Action includes supplemental flows of up to 88 TAF from Lewiston Dam to augment flows in the lower Klamath, flush parasites present in the system, encourage fish to move upstream, and to improve water quality and temperature for the fish (to reduce stress and thus disease susceptibility).

Alternatives Including Proposed Action

No Action Alternative

Under the No Action Alternative, Reclamation would not release additional flows to avoid a fish disease outbreak and subsequent fish die-off, from Lewiston Dam in late summer 2015. Current late-summer releases from Lewiston and Iron Gate Dams would remain consistent with the Record of Decision for the Trinity River Mainstem Fishery Restoration (TRMFR) EIS/EIR (USFWS *et al.* 2000) and the 2013 National Marine Fisheries Service (NMFS) and USFWS biological opinion addressing operation of Reclamation's Klamath Project, respectively. Reclamation provided a pulse flow (five days of increased flow including ramping up and down) in support of the Hoopa Valley Tribe's Boat Dance Ceremony as is customary in odd numbered years.

Predicted accretions are very low. Under the No Action Alternative forecasted flows in the lower Klamath River (U.S. Geological Survey [USGS] Site #11530500; Klamath near Klamath gage [KNK]), based on the 90 percent exceedance from the California-Nevada River Forecast

Center, would be approximately 2,000 cfs in the second half of August and through September (not including the Ceremony pulse flow from Lewiston Dam).

Proposed Action

The Proposed Action that was provided for public review was modified based on comments and other information received. The Proposed Action includes a preventative flow augmentation and an emergency component in the unlikely event of a disease outbreak. The preventative flow augmentation would begin when the cumulative harvest of Chinook salmon in the Yurok Tribal Fishery in the estuary area meets or exceeds a total of 7,000 fish, but no later than August 22 if the fish metric is not met sooner. The target flow rate is 2,800 cfs at the USGS gage located in the lower Klamath River near Klamath (KNK). Flow augmentation is to continue through September 20. A preventative pulse flow could occur in the first two weeks of September based on the presence of Ich and the associated timing of the fall-run Chinook salmon entry to the lower Klamath River. The need for an additional emergency release is not anticipated, but could be trigged in the event that the preventative measures are not sufficient.

Comments on the EA

Comment letters were received from California North Coast Regional Water Quality Control Board, County of Humboldt, Northern California Power Agency, San Luis & Delta-Mendota Water Authority together with Westlands Water District, California Department of Fish and Wildlife, Humboldt Area Foundation, Trinity Lake Revitalization Alliance, The Nature Conservancy, Yurok Tribe, Hoopa Tribe, California Water Impact Network, and e-mails/calls were received from members of the public, hereinafter referenced as Commenters. Each of these letters/communications presented comments regarding analysis in the EA, or stated certain opinions regarding the use of Trinity Reservoir water to augment flows on the lower Klamath River in support of adult salmon in 2015. Reclamation considered these comments in its consideration of its decision approving 2015 flow augmentation; below is a discussion of the substantive issues raised regarding the analysis and how it was used in Reclamation's decision.

Scope of the Action

The action analyzed in the draft EA was Reclamation's proposed release of up to 83 TAF (target flow 2,500 cfs at KNK) of water out of Lewiston Dam in the late summer of 2015 in support of adult salmon in the lower Klamath River. The draft EA presented multiple triggers that would inform Reclamation on when to begin releases and if and when to institute an additional emergency flow release. These triggers were in part based on a 2013 joint memorandum from the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS).

Numerous comments were received regarding components of the Proposed Action (i.e., flow target rates, triggers for release, duration of flow, and pulse variations), as well as comments that the description of the Proposed Action was unclear. The general consensus from commenters

was a request for an increased target flow rate of 2,800 cfs, and for preventative flow rates to begin directly after the Hoopa boat dance Ceremony. Comments were also received requesting an additional pulse flow in the second week of September with the ability to release an additional emergency pulse flow in the event indicators point toward a disease outbreak.

In response to these comments, Reclamation modified the Proposed Action to reflect some of the requested changes based on technical merit. The new memorandum from the USFWS dated August 10, 2015, contained new information which was used in this decision. Notably, the target flow rate has been increased from 2,500 to 2,800 cfs at the KNK gage. Additionally, the preventative flow augmentation release would commence by August 22 to meet the target flow (2,800 cfs) in the lower Klamath River, if the fish harvest metric above is not met. The duration of flow augmentation is to remain the same, continuing through September 20. Increasing the flow from Lewiston Dam to meet a target of 2,800 cfs in the lower Klamath River is anticipated to reduce average daily water temperatures to below 23ºC that may otherwise inhibit adult upstream migration (USFWS 2015).

Additionally, due to the heightened alert for this year with the recent and continued low level infections of Ich observed, a three-day preventative pulse (including ramping up and down) peaking at 5,000 cfs in the lower Klamath River has been added to the Proposed Action and may be implemented when:

- the peak of fall run migration (first or second week of September) is identified in the lower Klamath River as indicated by tribal harvest, and
- low level infections of Ich (less than 30 Ich per gill) is found on three fall-run adult salmon (of a maximum sample size of 60) captured in the lower Klamath River in one day during the first or second week of September. Sampling and confirmation would follow the methods as described in NOAA and USFWS (2013). The benefit of the pulse is to enhance flushing/dilution of the river of parasites when the bulk of fall run adults are likely to be the lower river. This flow would also further improve water quality and help facilitate movements of adult salmon. If triggered, the preventative pulse flow may further avert the need to apply the emergency criteria.

Implementation of both the preventive flows and the preventive pulse flow would be within the Proposed Action volume of 51 TAF.

An emergency component has been maintained in the final EA; however, it has been reduced to a maximum five-day response and kept at 5,000 cfs, as opposed to seven days of 5,000 cfs. Again this change was made based on new technical information provided during or following the public review period and the experience of implementing an emergency flow in 2014. Specifically, this criterion was changed based on the duration of the 2014 emergency flow release (USFWS 2015).

In response to comments, clarity has been added to the description of the Proposed Action. Triggers for both the preventative and emergency flows have been better defined. The use of "and/or" has been eliminated from the description.

San Luis & Delta Mendota Water Authority and Westlands Water District suggest that Reclamation is required to prepare an EIS to analyze the Proposed Action for several reasons including the fact that Reclamation has prepared EA's for very similar actions in successive years. Commenters suggest that this constitutes a long-term program that must be analyzed in an EIS prior to any additional flows being released. Commenters also suggest that Reclamation understands this because we have begun preparation of a long-term EIS. While Reclamation has initiated development of an EIS (the Notice of Intent was published in the Federal Register July 14, 2015), environmental conditions have generated growing concern for a potential large scale 2015 fish die-off. While inclusion of the 2015 Action in the Long-Term EIS would be preferable, there is not sufficient time to do so. It is entirely appropriate to assess impacts of the decision before us in an EA, and to prepare a FONSI if approving the action does not constitute a significant impact on the environment. Because Reclamation has yet to complete the long-term EIS, we have prepared an EA to assess the impacts from release of up to 88 TAF from Lewiston Dam in late summer of 2015.

Authority and Water Rights

Commenters questioned Reclamation's authority to release augmentation flows in support of fish in the lower Klamath. Reclamation has established authority to release flows on the Trinity River. Comments regarding the Humboldt County contract for 50 TAF of water were also received questioning the applicability of this action given its use to benefit the health of fish and wildlife on the river and not for human consumption. For a more thorough response and discussion of authority and water rights refer to Appendix A: Discussion of Legal Authority for 2015 Late-Summer Trinity Augmentation Flows.

Alternatives Eliminated

There was one Alternative Action considered, but ultimately eliminated from further review. Specifically this was a release of flow on the Klamath River via Iron Gate Dam. Commenters questioned the validity of this elimination from the lack of extensive justification and recent increases provided to Klamath water users. In response to this Reclamation has added additional explanation in Section 2.3 of the EA. Limited supply and the lower quality water that comes out of Iron Gate Dam is presently believed to be less effective at ameliorating environmental conditions of the lower Klamath River.

Environmental Justice Analysis

San Luis & Delta Mendota Water Authority, Westlands Water District, and Trinity Lake Revitalization Alliance submitted comments identifying potential impacts associated with

Environmental Justice under the Proposed Action. Language to Section 4.4.2 was added to address these comments. Transbasin diversions from Lewiston make up a small fraction of CVP water, and the potential reduction in these diversions in 2016 as a result of the Proposed Action are largely unknown at this time. It is anticipated to have only minor impacts on low-income and/or minority populations (e.g., migrant workers, farm laborers, etc.) who depend on CVP water allocations.

Socioeconomic Analysis

The Yurok Tribe voiced concerns over inadequate discussion of impacts to the Tribe both in Socioeconomic Resources and Indian Trust Assets sections. San Luis & Delta Mendota Water Authority, Westlands Water District, and Trinity Lake Revitalization Alliance also commented on inadequacy of the Socioeconomic Resources and Environmental Justice sections. Language has been added to the final EA to address these comments. Under the No Action Alternative there is potential for impacts to tribal communities as well as fishery-related industries on the Trinity River, Klamath River, and ocean salmon fishing in the Pacific Ocean.

Under the Proposed Action minor impacts to water users in the Sacramento River Basin are possible, from potentially reduced CVP allocation. In the unlikely event the emergency flows are released, and if the current severe drought continues, there may not be enough water in Trinity Reservoir to release transbasin diversions to the Sacramento River Basin. This could in turn reduce allocations to CVP water contractors. However, the level of any such reduction is uncertain due to the lack of accuracy in water supply forecasts, extent of drought conditions, and corresponding operations of the Central Valley Project, of which Trinity Reservoir is but one component. Minor impacts to business and property owners surrounding Trinity Reservoir are also anticipated under the Proposed Action due to a reduction in water elevation.

Public Trust Assets

The California Department of Fish and Wildlife submitted a comment regarding inclusion of a Public Trust Assets section under Affected Environment and Environmental Consequences. The Proposed Action would benefit Public Trust Assets, and Reclamation does not see the need to discuss impacts to Public Trust Assets under the No Action Alternative more than what is already discussed under Environmental Justice and Socioeconomic Resources. Potential impacts to the salmon ocean fishery has been added to the discussion under Environmental Justice and Socioeconomic Resources (see Sections 4.4.1 and 4.5.1) as it was not previously mentioned in the draft EA released for public review. A discussion of Indian Trust Assets remains in the EA as mandated for all Federal agencies under the Department of the Interior.

Water Resources

San Luis & Delta Mendota Water Authority and Westlands Water District submitted comments questioning impacts to water storage looking forward into 2016 stating: "Likely impacts in 2016

include lower initial 2016 allocations in February to certain CVP contractors, and delays in increased allocations as the year progresses." Discussion of water storage in Trinity Reservoir under the Proposed Action has been expanded on in Section 4.1.2.1, to include water storage projections under both the 90 percent exceedance should the drought continue and under more median conditions using the 50 percent exceedance values. If, in the unlikely event the full 88 TAF were to be released, the quantity and timing of diversions from the Trinity River Basin to the Sacramento River Basin could be altered and there may be a resulting reduction in allocations. This potential for a reduction in allocation is uncertain, as at this time, there are no reliable estimates of the available water supply in 2016.

Biological Resources and Endangered Species Act Section 7 Compliance

San Luis & Delta Mendota Water Authority and the Westlands Water District questioned Reclamation's compliance under section 7 of the ESA, as well as compliance under the Magnuson-Stevens Act (MSA).

We have complied with section 7 of the ESA as detailed in the EA. Section 7 of the ESA requires Federal agencies, in consultation with the Secretary of the Interior (through the Fish and Wildlife Service) and/or Commerce, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

The Proposed Action would not affect any federally-listed threatened or endangered species under the jurisdiction of the USFWS. Therefore, there is no need to consult with USFWS pursuant to the ESA.

For federally-listed threatened and endangered species under the jurisdiction of the Secretary of Commerce (through NMFS), Reclamation concluded that because the proposed action is contemplated within the drought exception procedures as described in the 2009 NMFS Biological Opinion (BiOp) it will not result in violation of the incidental take limit in the NMFS 2009 BiOp, nor jeopardize the continued existence of the listed species, or destroy or adversely modify their designated critical habitats. NMFS concurred in this determination by letter dated August 20, 2015.

Reclamation is currently in consultation pursuant to section 7 of the ESA with NMFS for coho salmon in the Trinity River Basin as documented in a letter and accompanying Biological Review submitted to NMFS on August 12, 2015. Based on the analysis provided in the Biological Review and the information contained in this EA, Reclamation has determined that the proposed action will not violate section 7(d) of the ESA in that the proposed action would not constitute an irreversible or irretrievable commitment of resources which would have the effect of foreclosing the formulation or implementation of any RPA measures which would violate section 7(a)(2) of the ESA.

Regarding the MSA, Reclamation has added the following text to the EA:

Reclamation consulted under the Magnuson-Stevens Act (MSA) for the Sacramento River species in the 2009 Biological Opinion (BiOp) and since there was a determination, concurred with by NMFS, that because the proposed action is contemplated within the drought exception procedures as described in the 2009 NMFS BiOp it will not result in violation of the incidental take limit in the NMFS 2009 BiOp, nor jeopardize the continued existence of the listed species or destroy or adversely modify their designated critical habitats no further consultation under the MSA is needed. As to the Coho, the MSA will be conducted as part of the ongoing consultation on the Coho. Additionally, as determined in the EA, Reclamation did not identify any adverse effects from the proposed action on essential fish habitat.
Cumulative Analysis

Comments on the cumulative analysis were received stating the section seemed unfinished and confusing. The Cumulative Impacts Section has been refined to add clarity and eliminate potential confusion.

Proposed Mitigation

Commenters asked that financial compensation be provided to power users for foregone hydropower generation, and to private business and landowners impacted by lowering water levels in Trinity Reservoir. Reclamation will not be financially compensating business and property owners surrounding Trinity Reservoir for implementation of the Proposed Action. Since Humboldt County has made a request for water under its contract with Reclamation, the release of late summer flows under the Proposed Action would be pursuant to the contract and as directed by Section 2 of the 1955 Act. As such, no compensation will be owed to other water or power users for releasing a requested volume to Humboldt County. Impacts caused by the release of augmentation flows are addressed in other sections.

Findings

In accordance with NEPA, Reclamation has found the release of augmentation flows on the Trinity River in late summer 2015 is not a major Federal action that would significantly affect the quality of the human environment. Consequently, an Environmental Impact Statement is not required. This determination is supported by the following factors:

Water Resources: Based on modeling results, implementation of the Proposed Action is not expected to influence temperatures of the water released to the Trinity River or that which may be diverted to the Sacramento River in 2015. The Proposed Action will not change water scheduled for transbasin diversion in 2015. Implementation of the Proposed Action would remove up to 88 TAF from the cold water storage pool within Trinity Reservoir. This would not limit Reclamation's ability to control temperature in the Trinity and Sacramento Rivers in 2015.

Therefore, there are no significant impacts to water resources associated with implementation of the Proposed Action in 2015.

In the unlikely event the emergency flows are released, and if the current severe drought continues, there may not be enough water in Trinity Reservoir to release transbasin diversions to the Sacramento River Basin. This could in turn reduce allocations to CVP water contractors. However, the level of any such reduction is uncertain due to the lack of accuracy in water supply forecasts, extent of drought conditions and corresponding operations of the Central Valley Project, of which Trinity Reservoir is but one component.

Reclamation has increased the target flow rate to 2,800 cfs from the 2,500 cfs used in 2014 (and an added preventative pulse flow) with the intent of avoiding the need for an emergency release and limit the risk of needing additional water. 2014 was the only year an emergency release was required in addition to preventative flows, and it was also the only year that flows lower than 2,800 cfs were targeted. All indications are that implementing a preventative flow rate of 2,800 cfs combined with the preventative pulse flow may avert the need for the additional emergency flows, so the volume of the Proposed Action is anticipated to be limited to 51 TAF. If the drought persists, diversions and allocation may need to be adjusted in order to meet in-basin needs. Under median conditions, Reclamation anticipates only minor impacts to water resources in terms of being able to meet the needs in both the Trinity and Sacramento River Basins. All indications suggest only a 51 TAF release will be required and it is likely the 2015/16 winter will be wetter than the 90 percent exceedance predicts. There are no significant impacts to water resources anticipated in 2015 as a result of the Proposed Action. There are no reliable estimates of the available water supply in 2016.

Biological Resources: Experience and observations from past augmentation actions indicate wildlife species that use riparian corridors along the Trinity and Klamath Rivers will not be impacted. Under the Proposed Action the susceptibility of returning adult fall-run salmonids to diseases that led to the 2002 fish die-off are expected to decrease in the lower Klamath River during late summer of 2015. A reduction of up to 88 TAF from the cold water pool in Trinity Reservoir would not jeopardize cold water resources for immediate use in meeting temperature targets in 2015 for both the Trinity/Klamath River Basins and the Sacramento River Basin. Model data indicates no impacts to winter-run Chinook will be associated with the Proposed Action.

High flows associated with the Proposed Action do have the potential to minimally impact coho salmon by creating a stranding potential. Estimated base flow releases from Lewiston Dam, as part of the preventative augmentation flows are anticipated to be from 1,100 to 1,300 cfs. This flow rate typically does not create a stranding hazard, because resulting downstream flows are not high enough to overtop berms. In the unlikely event an emergency flow is released, flows could reach up to 3,500 cfs at Lewiston Dam. Berms throughout the action area would likely be overtopped and juvenile salmonids may distribute themselves into temporarily inundated areas. As flows recede back to a baseline of 450 cfs, these areas could become disconnected, thus stranding the fish. The Trinity River Restoration Program has completed a significant amount of

channel restoration work that has helped to reduce the number of potential stranding locations along the river. Additionally, the potential for stranding will be minimized by implementing conservative flow release changes (ramping rates) that will allow fish to move into the mainstem before connectivity to temporarily inundated areas is lost. Based on the number and location of potential stranding locations and implementation of conservative ramping rates, the proportion of juveniles that may be affected by the Proposed Action is anticipated to be small and will minimally effect the overall freshwater survival of brood year 2014. Based on past augmentation experiences, including 2014 when an emergency flow was released, the benefit to coho as a species from implementation of the Proposed Action outweighs the smaller impact to juveniles.

In the very unlikely event the cold water pool is reduced by 88 TAF and the drought persists, thermal protection of coho salmon in the Trinity River could be negatively impacted. Similarly this unlikely scenario could have a similar impact to winter-run Chinook in the Sacramento River Basin. All indications suggest only a 51 TAF release will be required and likely the 2015/16 winter will be wetter than the 90 percent exceedance predicts.

There are no significant impacts to biological resources associated with the Proposed Action for 2015. No significant impacts are reasonably anticipated in 2016 from implementation of the Proposed Action.

For federally-listed threatened and endangered species under the jurisdiction of the Secretary of Commerce (through NMFS), Reclamation included the proposed action as an amendment to the modifications to the CVP and SWP operations as an update to the Contingency Plan for operation of the CVP and SWP from July through November 15, 2015, in accordance with the RPA and conference opinion on the long-term operation of the NMFS 2009 Coordinated Long-term Operation of the Central Valley Project (CVP) and State Water Project (SWP) BiOp (NMFS 2009 BiOp). This is detailed in the August 14, 2015, letter to NMFS and the accompanying Biological Review. This analysis concluded that because the proposed action is contemplated within the drought exception procedures as described in the 2009 NMFS BiOp, it will not result in violation of the incidental take limit in the NMFS 2009 BiOp, nor jeopardize the continued existence of the listed species, or destroy or adversely modify their designated critical habitats. NMFS concurred in this determination by letter dated August 20, 2015.

Reclamation is currently in consultation pursuant to section 7 of the ESA with NMFS for coho salmon in the Trinity River Basin as documented in a letter submitted to NMFS dated August 12, 2015. Based on the analysis provided in the above referenced Biological Review and the information contained in this EA, Reclamation has determined that the proposed action will not violate section 7(d) of the ESA in that the proposed action would not constitute an irreversible or irretrievable commitment of resources which would have the effect of foreclosing the formulation or implementation of any RPA measures which would violate section 7(a)(2) of the ESA.

Indian Trust Assets: Implementation of the Proposed Action is anticipated to have a positive impact on Indian Trust Assets. This is due to the expectation the Proposed Action will avert a fish die-off Action in 2015, and prevent the impacts of such a die-off on tribal trust fisheries.

Environmental Justice: Positive effects and potential minor negative impacts to low-income and/or minority populations are anticipated under the Proposed Action. Low-income and minority populations in the Trinity and Klamath River Basins are anticipated to be positively impacted by reducing the risk of a large scale fish die-off, while similarly disadvantaged populations in the Sacramento River Basin may experience a slight negative impact if transbasin water diversions are reduced and allocations change. This negative impact is possible, but unlikely. Thus no significant negative impacts to environmental justice are anticipated from implementation of the Proposed Action**.**

Socioeconomic Resources: The Proposed Action is expected to have a positive socioeconomic impact on some and may have a slight negative impact on others. Populations who rely on fisheries are anticipated to see a net positive impact under the Proposed Action. There may be small negative impact to the communities surrounding Trinity Reservoir from lowering water elevations, which becomes compounded if the full 88 TAF is used and the drought persists. This is not anticipated, and the impacts are expected to be minor. Water users who rely on CVP allocations in the Sacramento River Basin may see a socioeconomic impact as a result of the Proposed Action. Again this is compounded in the unlikely event the full 88 TAF is used and the drought persists. This is not anticipated and impacts are expected to be minor. Therefore no significant socioeconomic impacts are expected as a result of implementation of the Proposed Action.

Power Generation: There is no anticipated impact on power generation from implementation of the Proposed Action in 2015. While there could be some lost power generation in 2016 as a result of the augmentation flows, it is very likely use of auxiliary bypasses will be required in 2016 regardless of the Proposed Action. No significant impacts to power generation are anticipated under the Proposed Action.

Global Climate: No greenhouse gases (GHG) would be generated as a direct result of implementation of the Proposed Action. If flow augmentations reduced hydropower generation in 2016, which in itself is unlikely, and power users purchased entirely hydrocarbon generated power instead, there would be associated GHG. If the 51 TAF used in the preventative flow action were unavailable for power generation, this equals approximately 56,100 MWH of foregone power. Generation of this power from a hydrocarbon source might produce approximately 39,581 metric tons of CO_2 equivalent. Even if this were to occur, it is impossible to guess the magnitude and timing of the CO_2 equivalent, but it can be said this would not be a reoccurring event. There are no significant impacts to global climate change associated with the Proposed Action.

Cultural Resources: The Proposed Action would allow for water releases through existing facilities. No new construction, ground disturbing activities, or changes in land use would occur.

Since the Proposed Action has no potential to affect historic properties, no cultural resources would be impacted as a result of the Proposed Action.

Indian Sacred Sites: The Proposed Action would not inhibit access to or ceremonial use of an Indian Sacred Site, nor would the Proposed Action adversely affect the physical integrity of such sacred sites. Therefore, no Indian Sacred Sites would be impacted as a result of the Proposed Action.

Floodplains: No construction, dredging or other modification of regulated water features would be associated with the Proposed Action. No permits under the Clean Water Act would be needed. The Proposed Action only includes providing controlled reservoir releases that are within the normal operational envelope. Floodplains would not be impacted by the Proposed Action.

Land Use: There are no changes in land use anticipated from implementation of the Proposed Action. The magnitude and timing of the augmentation flows are well within the range of historic flows resulting from rainstorms and other meteorological events. No changes in land use near the rivers will be required as a result of changing water levels. There are no anticipated impacts to Land Use associated with the Proposed Action.

Cumulative Impacts: Reclamation reviewed the cumulative impacts for the Proposed Action for several resource areas including Water Resources, Biological Resources, Indian Trust Assets, Environmental Justice, Socioeconomic Resources. There were no significant cumulative impacts identified for these resource areas and therefore there are no cumulative impacts.

Appendix A: Discussion of Legal Authority for 2015 Late-Summer Trinity Augmentation Flows.

A. Trinity River Division Act

Construction of the Trinity River Division (TRD) of the Central Valley Project (CVP) was authorized by the Act of August 12, 1955 (P. L. 84-386) (Act). In section 2 of the 1955 TRD Act, Congress directed that the operation of the TRD should be integrated and coordinated with the operation of the CVP, subject to two conditions set forth as distinct provisos in section 2 of that Act. The first of these two provisos states that the Secretary of the Interior is authorized and directed to "adopt appropriate measures to insure the preservation and propagation of fish and wildlife" including certain minimum flows in the Trinity River deemed at the time as necessary to maintain the fishery. The second proviso directs that not less than 50,000 acre-feet of water shall be released and made available to Humboldt County and other downstream users.[1]

The recently released Solicitor's Opinion, M-37030, concludes that each of the two provisos in section 2 of the TRD Act are "separate and independent limitations on the TRD's integration with, and thus diversion of water to, the CVP" and that the two provisos may "require separate releases of water as requested by Humboldt County and potentially other downstream users pursuant to Proviso 2 and a 1959 Contract between Reclamation and Humboldt County."[2] M-Opinion 37030 at 2. Formal opinions of the Solicitor are binding on the Department of the Interior and its bureaus.

Section 2 of the TRD Act and, in particular, proviso 1 of section 2 was the subject of the recent decision by the District Court for the Eastern District of California in *San Luis Delta Mendota Water Authority v. Jewell*, 52 F. Supp 3d 1020 (E.D. Cal. 2014) regarding the fall flow augmentation in 2013. In that decision, the court concluded that proviso 1 was limited in scope to the Trinity River basin and did not provide authorization for the Secretary of the Interior to implement the 2013 flow releases to benefit fish in the lower Klamath River. *Id*. at 1063. The court also noted that remand was not appropriate because the focus of Plaintiffs' complaint was the completed 2013 flow releases.[3] The District court did not enter an order enjoining any further releases after 2013, and in 2014 the court did not enjoin flow releases.

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[1] Reclamation's water permits from the State of California includes the following condition:

"Permittee shall release sufficient water from Trinity and/or Lewiston Reservoirs into the Trinity River so that not less than an annual quantity of 50,000 acre-feet will be available for the beneficial use of Humboldt County and other downstream users."

Condition 9.

[2] The 1959 water delivery contract between Reclamation and Humboldt County includes the following:

"The United States agrees to release sufficient water from Trinity and/or Lewiston Reservoirs into the Trinity River so that not less than an annual quantity of 50,000 acre-feet will be available for the beneficial use of Humboldt County and other downstream users."

Contract, Article 8.

[3] The decision of the district court is currently on appeal to the Ninth Circuit Court of Appeals.

As discussed in more detail in the Solicitor's Opinion, the 1955 Act and its legislative history support the view that the Act authorizes the Proposed Action to augment flows in the lower Klamath River to protect fish migrating through this area to the Trinity River. *See* M-Opinion 37030 at 9-13. The two provisos in section 2 of the 1955 Act were included specifically to protect the interests of downstream entities, ensuring that the interests of those downstream from the Project all the way to the ocean would be protected from the impacts of the Project.[4] The legislative history specifically shows that, prior to the passage of the 1955 Act, in-basin users became concerned that the construction of the TRD would deprive them of their needs, and they thus sought to ensure that only water that was "surplus" to the needs of the downstream interests in the Trinity and lower Klamath River basins would be exported to the Central Valley.[5]

In a similar vein, the district court in its decision in *Tehama Colusa Canal Authority v. Interior*, 819 F. Supp 2nd 956 (2011), *aff'd* 721 F.3d 1086 (9th Cir. 2013), held that Congress can expressly provide for in-basin priority of water over the export of that water for general use by the CVP. The court noted that one purpose of the Trinity River division is "to transport Trinity River water to the Sacramento River," but then specifically cited proviso 2 of the 1955 Act as a limitation on this authority. *Id*. at 982.

The court concluded that the 1955 Act:

> Demonstrate[s] that Congress knew how to create a preference in the allocation of CVP water for an area when it wanted to do so. The [1955] Act prioritizes 50,000 acre feet of CVP water to Humboldt County. Congress created an express legislative priority for use of CVP water with particularized statutory language applicable to the Trinity River Division Unit.[6]

Id. This analysis is consistent with the analysis and conclusions in the Solicitor's Opinion, which supports the use of proviso 2 of section 2 of the TRD Act for the release of water from Trinity Reservoir for beneficial use to Humboldt County and other downstream users below Trinity Reservoir. The use of Trinity Reservoir water for fishery purposes is a beneficial use of water that is consistent with Proviso 2 of Section 2 of the TRD Act, the contract between Reclamation and Humboldt County and the Trinity Division water rights. The Solicitor's Opinion also recommended that Reclamation conduct "an appropriate level of analysis" in response to a request to release Trinity Reservoir water pursuant to Proviso 2 to consider the proposed use of the water and any other requirements or limitations that may apply to such release. There is thus, no absolute requirement that a specific quantity of water must be released

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[4] *See, e.g.* S. Rept. No. 1154, 84th Cong., 1st Sess. (1955), p. 5 ("An asset to the Trinity River Basin, as well as the whole north coastal area, are the fishery resources of the Trinity River. The development of the Trinity River was planned with a view to maintaining and improving fishery conditions.")

[5] The bill reported by the House committee, H.R. 4663, emphasized:

> That there is available for importation from the Trinity River, water that is surplus to the present and future water requirements of the Trinity and Klamath River basins, and that surplus water, in the amount proposed in the Trinity River division plan, can be diverted without detrimental effect on fishery resources.

House Rept. No. 602, 84th Cong., 1st Sess. At 4 (May 19, 1955).

[6] The court also discussed a similar limitation on the integration of the New Melones Division of the CVP in its authorizing legislation.

in any given year, rather the quantity and timing is based on the "appropriate level of analysis." Further, the Solicitor's Opinion states "a release made under Proviso 2 may also be part of the long-term management strategy regarding instream flows in the lower Klamath River." M-Opinion 37030 at 15.

B. The Trinity River Basin Fish and Wildlife Management Reauthorization Act of 1995

The Trinity River Basin Fish and Wildlife Management Reauthorization Act of 1995 ("1995 Reauthorization Act"), Pub. L No. 104-143, 110 Stat. 1338 (which was enacted after the CVPIA and does not cite that statute) is among the statutes that may also provide authority for the augmentation flow releases.

The district Court in *SLDMWA v. Interior*, suggested that Reclamation could have relied on the 1995 Reauthorization Act as authority to make the augmentation releases. *SLDWMA* at 1061-62. The court also implied that this statute is not limited in the same manner as the court had interpreted the 1955 Act, and instead serves as "an acknowledgement that rehabilitation of fish and wildlife in the Trinity River Basin may require rehabilitation of fish habitat in the lower Klamath River." *Id*.

The 1995 Reauthorization Act modified the Trinity River Basin Fish and Wildlife Management Act of 1984, adding an additional subparagraph to Section 1 of that Act that states:

> (5) Trinity Basin fisheries restoration is to be measured not only by returning adult anadromous fish spawners, but by the ability of dependent tribal, commercial, and sport fisheries to participate fully, through enhanced in-river and ocean harvest opportunities, in the benefits of restoration.

The 1995 Act also modified the last subparagraph in Section 1, altering it to include a reference to the aiding ocean populations and the resumption of commercial and recreational fishing activities. The revised subparagraph (7) states:

> (7) the Secretary requires additional authority to implement a management program, in conjunction with other appropriate agencies, to achieve the long-term goals of restoring fish and wildlife populations in the Trinity River Basin, and, to the extent these restored populations will contribute to ocean populations of adult salmon, steelhead, and other anadromous fish, such management program will aid in the resumption of commercial, including ocean harvest, and recreational fishing activities.

The 1995 Act also expanded the reach of the authorized fishery restoration activities, amending Section 2(a)(1)(A) so that it states:

> (a) Subject to subsection (b), the Secretary, in consultation with the Secretary of Commerce where appropriate, shall formulate and implement a fish and wildlife management

> program for the Trinity River Basin designed to restore the fish and wildlife populations in such basin to the levels approximating those which existed immediately before the start of the construction referred to in section 1(1) and to maintain such levels. . . . Such program shall include the following activities:
> (1) The design, construction, operation, and maintenance of facilities to –
> (A) Rehabilitate fish habitats in the Trinity River between Lewiston Dam and Weitchpec *and in the Klamath River downstream of the confluence with the Trinity River.*

Both the House and Senate noted that this change was intended to authorize restoration activity in the Klamath River below the confluence with the Trinity River. S. Rpt. 104-253, 104th Cong. (1996) ("This section authorizes restoration activity in the Klamath River below its confluence with the Trinity River . . ."); H.R. Rpt. 104-395, 104th Cong. (1995) ("Section 3 also authorizes restoration activity in portions of the Klamath River . . .").

The Act also amended section 3 of the 1984 Act to add a new subsection (d), stating:

> (d) Task Force actions or management on the Klamath River from Weitchpec downstream to the Pacific Ocean shall be coordinated with, and conducted with the full knowledge of, the Klamath River Basin Fisheries Task Force and the Klamath Fishery Management Council, as established under Public Law 99-552. The Secretary shall appoint a designated representative to ensure such coordination and the exchange of information between the Trinity River Task Force and these two entities.

In addition, the 1995 Act added a section that states:

> Sec. 5. – Nothing in this Act shall be construed as establishing or affecting any past, present, or future rights of any Indian or Indian tribe or any other individual or entity.

In the October 1, 2014 Decision and Order, Judge O'Neill suggested that Reclamation could rely on the 1995 Act as authority to make releases to benefit the lower Klamath River, particularly because the addition of language to section 2(a)(1)(A) implied that the Act's focus was broader than just the Trinity River basin.

Section 4 of the 1984 Act, which was amended by the 1995 Act, included an authorization of appropriations for design and construction under the management program to be formulated under section 2 "to remain available until October 1, 1995," and an authorization of appropriations for operations, maintenance, and monitoring under the management program for each of the fiscal years in the 10-year period beginning on October 1, 1985. The 1995 Act extended the authorization in section 4(a) to October 1, 1998, and extended the authorization for operations, maintenance and monitoring for an additional 3 years, or a total of 13 years after the period beginning in 1985.

The 1995 Act also added an additional subsection (i) to section 4 to the 1995Act, stating:

(i) Beginning in the fiscal year immediately following the year the restoration effort is completed and annually thereafter, the Secretary is authorized to seek appropriations as necessary to monitor, evaluate, and maintain program investments and fish and wildlife populations in the Trinity River Basin for the purpose of achieving long-term fish and wildlife restoration goals.

The program authorization set forth in section 2 is long-term, or permanent, general grant of authority despite the established expiration term for the authorization for appropriations and provides in general authority "[s]uch other activities as the Secretary determines to be necessary to achieve the long-term goal of the program" which include actions to restore habitat in the lower Klamath River such as the proposed fall flow releases.

C. The Fish and Wildlife Coordination Act

The FWCA provides the Secretary with broad authority "to provide assistance to, and cooperate with, Federal, State, and public or private agencies and organizations" to take actions for the "protection, rearing, and stocking of all species of wildlife, resources thereof and their habitat, in controlling losses of the same from disease or other causes." 16 U.S.C. § 661. The Bureau of Reclamation has been delegated authority under the FWCA to take "actions, directly or by providing financial assistance… regarding the construction and/or continued operation and maintenance of any Federal reclamation project" to among other things "improve instream habitat." Departmental Manual, 255 DM 1.

The FWCA provides authority for Reclamation to take actions that result in habitat improvements such as releases of water to improve habitat for the fish in the lower Klamath River below its confluence with the Trinity River. This authority is discretionary. The delegation of authority to Reclamation under the FWCA specifies that any actions taken under this delegation must be related to habitat that is affected by a Reclamation Project. (Reclamation is authorized to conduct activities for the improvement of fish and wildlife habitat associated with water systems or water supplies affected by Reclamation projects, including but not limited to fish passage and screening facilities at any non-Federal water diversion or storage project within the region; Reclamation Manual 6.f.(2) [from 255 DM 1.1.B.)

The Proposed Action provided in the EA is authorized by the FWCA because the construction and operation of the Trinity River Division affected the average annual flow in the Trinity River and the Klamath River below its confluence. The flow augmentation improves that habitat.

D. CVPIA

CVPIA §3406(b)(1) provides that the Secretary shall make all reasonable efforts to address "other identified adverse environmental impacts of the Central Valley Project not otherwise specifically enumerated in [3406(b)]." Reclamation could conclude that the CVP has adversely impacted the lower Klamath River. Since the TRD is part of the CVP, this section applies to the Trinity River.

E. Tribal Trust Obligation

The trust responsibility to protect the tribal fishing rights provides a supplementary authority for the action.