

Siskiyou County Water Users



August 13, 2015

Mr. Paul Zedonis
Northern California Area Office, Bureau of Reclamation
16349 Shasta Dam Boulevard
Shasta Lake, CA 96019.

Re: Federal Registry Notice
DEPARTMENT OF THE INTERIOR
Bureau of Reclamation
[RR02312000, 15XR0680A3,
RX.04167000.6000000,]

Notice of Intent re Klamath River

Gentlemen,

Siskiyou County Water Users Association has been an advocate for many years on an environmental review of the Klamath Basin Watershed specifically to determine the river water supply requirements through the use of the measuring stations. We hasten to point out a very important fact namely, that the Klamath has seven major reaches in the river hydrography. You cannot impact one without affecting the other reaches of the river. The key measuring stations from Links Dam and below the Scott River to meet the minimum mandatory uses as identified in the Bi-State Compact Treaty dated in 1957. Prior to that date the river basin was managed by two commissions, (the California Klamath River Commission and the Oregon Klamath River Commission). That was initially the designation of the Upper Basin from the Lower Basin.

We suggest you use the appropriate designation as shown above as the Upper Basin water supply is significant to your EIS objective to protect the adult Salmon population. You should know that Articles 2, 3 Etc. of the Treaty identify the priority of water uses as identified in the Compact and Siskiyou Flood Control and Water Conservation District believe that Action Projects such as the one you propose should be compatible for riverine Salmon regardless of where they are during their adult migration and fingerling travels. The 2002 die off and fifteen years of data and research suggest that the entire river supply and water temperatures are critical factors in protecting the Salmon from diseases resulting from improper storage, and low flows coordination between tribes and agencies.

There are 13 measuring stations along the Main Stem of the Klamath for measuring flows, temperature and turbidity which can provide guidance for researchers, EIS authors and operators in regard to managing the waters of the river. Five of these stations operate as major determinants of the process to control and adjust the in stream flows. These will serve to enhance the evaluation of proposed projects and resultant actions or inaction as the case may

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support. Further they serve to allow the enhancement of the six water use priorities of the Klamath Bi-State Compact.

The supply of water to the river system begins with the inflow from four major rivers above the Upper Klamath Reservoir. During a normal water year these rivers supply roughly 800,000 Ac. Ft. annually into the first of seven major supply reservoirs. There is a USGS measuring station for the Wood and the Williamson river discharges. The first use release is Links Dam which send river water supply to the BOR project area and to the Keno Dam at the Lake Ewanna storage reservoir for the Main Stem of Klamath River flows.

The Links measuring station and the Keno measuring station identify the beginning of the Klamath River flows. The provisions contained in the Klamath Compact require that the flows must be equal to or greater than 1200 cfs, if all of the downriver priority of uses is to be met.

The third Measuring station is at the California Oregon State line. It is specified in the Bi-State Compact that flows must be equal or greater than 2240 cfs to achieve the reserved and dedicated rights identified in Appendix 89 of the California Water Code.

The fourth measuring station is located at the entrance to Copco Lake and it dictates the flow levels and adjustments necessary to assure the releases at Iron Gate Dam are properly calibrated.

The fifth measuring station earmarked specifically for anadromous fish migration to Iron Gate Dam hatchery at river mile 195.8. Litigation pursued by the CF&G and the people of Siskiyou County specified a minimum mandated flow from June to October of 1800 cfs at the footing of the dam.

The next two measuring stations located at the outlets of the Shasta and Scott rivers add to the harmonics of the river and contribute to the minimum fish passage flows for almost 60 river miles until the 106 tributaries supplied by the Klamath National Forest enter the flow picture.

It is paramount to understanding the full picture to be aware of the five water year types which have been identified in connection with the Klamath River watershed. These five types include the following designation "Very Wet (VW); Wet (W); Normal (N); Dry (D); and Very Dry (VD).

The Klamath watershed is an upside down watershed. The furthestmost point inland is the location of the warmest water. The river as it winds its way to the ocean becomes increasingly colder as a result of passing through geography populated by high mountains and cold water feeding streams. The Klamath River is a federally designated "warm water river".

The loss of evapotranspiration from river mile 140 to the Upper reaches of the Wood, Sprague, Sycan and Williamson rivers are referred to as the arid lands of the watershed where annual precip range from 12 to 17 inches annually and yet containing in California 500,000 acres of fertile lands and depending on water supply to them require pumps, canals and storage. Within

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that arid land base are 63 water storage facilities. Clair Engle Lake and Lewiston send 62% of their storage to the Trinity River, the rest exported to the Sacramento Valley for domestic, irrigation and power generation.

To maintain the harmonic flows of the river there are many flow support projects that should be identified and be implemented as part of your EIS/EIR review to meet the identified lower basin requirements of the stated objectives for instream flows.

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These are the projects we have referred to above can be listed as the following:

1. Daily review and regulation of five of the measuring stations to achieve maximum flows April through October.
2. Test water quality and temperatures of the upper 60 miles of the river and of Lake Euwana and Upper Klamath Lake using truck and haul of migrating Salmon collected at Iron Gate.
3. Exercise with Siskiyou County implant of existing reserved water right of 60,000 acre feet in Iron Gate dam. This will be to distribute water in Shasta Valley to facilitate habitat and irrigation.
4. Repair Dwinnell Dam which has subsurface leaks allowing additional storage in the reservoir feeding Shasta River. This will raise the storage capacity from 35,000 Ac Ft to 55,000 Ac Ft. This will improve that habitat and serve to assist in water quality improvements.
5. Install a new measuring station at Big Springs Creek on the Shasta River side to provide flow control of cold water flowing into Dwinnell.
6. Implement the Department of Water Resources study for Scott River including the study and s repair of 33 stream flow main dam in the Middle Ruffey and Eddy areas of the Cascade Range.
7. Utilize the 1987/1988 Research of the KNF and restore the 22 habitat types as identified.
8. Need to monitor the gill net harvesting of migrating Salmon. These are so effective that they serve to reduce the availability of migrating Salmon.
9. Insure that the identified aims of the 1992 Reaffirmation of the Bi-State Compact are implemented and carried forward.
10. Assist the request for budget needs for the Compact Commission so that they can conduct business as was envisioned in its formation by the founding fathers (Collier, Lathrop et al) allow them to carry out the role which the Compact has developed for them.
11. Reexamine the Shasta Indian Bypass tunnel as originally designed to allow Salmon to reach the areas above Iron Gate and Copco with a volitional access system.
12. Reintitute the hi mountain water supply system which has been allowed to deteriorate in order to provide much needed water into the aquifer over a prolonged period of time. They can provide 3,400 acre feet annually to the Scott River.

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This currently proposed project by BOR is too limited in scope. The EIR/EIS needs to look at the entirety of the Klamath River Basin and the water feeding systems. These were examined extensively in Bulletin 83 (1960) developed in conjunction with the Department of Water Resources and a large array of scientists and water hydrology experts. This represents the most comprehensive investigation of the entire northern water system. The current proposed project has an opportunity to reinvigorate and substantiate the role of the Bi-State Compact. Funds we understand are available to carry out this achievable effort.

This report which we hope you will take to heart and examine is prepared in part by a science advisor to Siskiyou Water Users with over 26 years of experience managing water resources in the National Forest. In addition we have utilized the services of our Civil Engineer resident on our board. The National Academy of Science shares with us that there have been far too many attempts to piece meal the effort to provide a cohesive and complete view of the Klamath River and its tributaries and the role they play in the cyclical nature of Salmon population. We fervently hope that the Bureau will undertake a much larger role with vision in regards to the announced purpose of the study which to reiterate we feel is much to narrow.

Sincerely yours

A handwritten signature in blue ink, appearing to read "Richard Marshall".

Siskiyou County Water Users Assoc.
Richard Marshall, President

CITY OF REDDING



777 Cypress Avenue, Redding, CA 96001-3396

P.O. Box 496071, Redding, CA 96049-6071

August 20, 2015

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

SUBJECT: Comments on the Proposed Scope of an Environmental Impact Statement Scope for Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River

Dear Mr. Zedonis:

The City of Redding (Redding) appreciates the opportunity to provide comments to the Bureau of Reclamation (Reclamation) on the proposed scope for an Environmental Impact Statement (EIS) to evaluate the effects of the "*Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River*" (Long-Term Plan). As a Settlement Contractor, nearly half of Redding's domestic water supply comes from the Sacramento River through its municipally-owned water utility. Additionally, Redding's municipally-owned electric utility receives over 8 percent of the hydroelectric output from the Central Valley Project (CVP), which accounts for approximately 30 percent of the City's yearly power supply. Any efforts that may affect the Redding's water supply reliability or hydroelectric supply are of significant concern to the City and its residents.

Redding is supportive of maintaining the health of the Trinity & Klamath River fisheries; however, we believe the proposed Long-Term Plan fails to adequately justify the criteria and necessity for any additional water released above that which was authorized in the Trinity River Record of Decision (ROD). 1

The impact of the proposed release on the entire CVP system must be thoroughly addressed including impacts to the Sacramento River temperature and Delta salinity thresholds as related to Sacramento River flows and diversions. California has enacted stringent greenhouse gas and drought reduction goals; the proposed action must address the impacts of this release on the CVP water and power users who are subject to these state mandates. 2 3

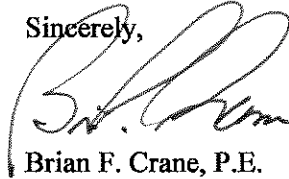
Reclamation states in the Long-Term Plan that it has a statutory obligation to release 50,000 acre-feet of water to Humboldt County and that no compensation will be owed to water or power users for releasing water requested by Humboldt County. If water is released for fishery augmentation and enhancement, 4



consideration must be given to CVP water and power users and the effects to foregone power allocations, regardless of the Proviso used to create those flows. Reclamation must address the impact from their proposal on all water and power losses caused by flows from Trinity Reservoir in excess of the Trinity Record of Decision and not just that above 50,000 acre-feet. While we appreciate Reclamation's commitment to compensate power users for all lost power generation in 2012, 2013, and 2014, Reclamation has not yet provided CVP power customers with this compensation.

We look forward to working with you as you continue to work through the development of the EIS.

Sincerely,



Brian F. Crane, P.E.
Director of Public Works



Barry Tippin
Electric Utility Director

BH:mk

L:\Correspondence\McClain\082015\TrinityLongTermPlan.wpd

c: Brian Crane, Director of Public Works

Barry Tippin, Electric Utility Director

Jon McClain, Assistant Director of Public Works

Elizabeth Hadley, Legislative & Regulatory Program Supervisor

8/20/2015

TO: David Murillo, Mid-Pacific Regional Director, USBR

FROM: Dr. Joshua Strange, Stillwater Sciences, josh@stillwatersci.com

RE: Comments on Draft Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River and Scope of Analysis for NEPA

As part of the call for public scoping comments for NEPA analysis for the USBR's "Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River", I have reviewed the USBR's April 2015 Draft. Herein I provide my independent comments on this draft and for scope of NEPA analysis. It is very encouraging to see the USBR moving forward with developing a long-term planning document that recognizes the importance of flows and proper flow management to protect fish health in the lower Klamath River. I applaud the leadership on these issues and the attempt to use of the best-available science as your agency strives to strike a balance between competing water demands that allows for productive irrigated agricultural without sacrificing salmon runs and associated dependent communities and economies. That being said, I am very concerned that the latest draft does not reflect the best available science, does not adequately capture the events of 2014, nor appears to be have been at all responsive to valid comments made to the December Draft. Specifically, I have described the following major areas from improvements in the plan in my comments below, which need to be properly addressed in the scoping process. Please feel free to contact me, or have your staff contact me, if I can be of any further assistance.

1. The however, it is concerning that it does not reflect the best available science nor appears to be have been at all responsive to valid comments made to the December Draft.
2. The plan needs to follow the best available science and accurately mirror previous recommendations as opposed to mixing and matching and mis-representing previous recommendations. For example the plan states: "*Recognizing that criteria will evolve, at this writing Reclamation will consider whether flow augmentation is necessary when the fall Chinook in-river run size is projected to be 170,000 or greater **and** flows in the lower Klamath River are forecast to be 2500 cfs or lower.*" Never have any recommendations been made to have a combination of large run size AND low flows as a trigger for planning augmentation. The recommendation has always been to plan augmentation when flows are projected to fall below 2,500 cfs, and the to further buffer flows with larger run-sizes forecasted to be \geq the 2002 run size of 170,000.
3. However, one of the lessons from the Ich outbreak of 2014 and run size dynamic, is the need to buffer flows in the face of run-size forecast uncertainty by increasing the minimum flow target to 2,800 from 2,500 cfs regardless of run size. Simply put there is not enough run size forecast certainty to use pre-season run size forecast as a decision tool for flows targets. Given that facts and that an outbreak occurred in 2014 with a flow of 2,500 cfs whereas the flow target should have been 2,800 cfs, it is logical that the minimum flow target should be 2,800 cfs regardless of pre-season run size forecasts. For example, if 2,800 cfs had been maintained in the lower Klamath River for the full 4 week target period, then the Ich outbreak may have been prevented without the need for the amount of water that was released. Again, preventing Ich outbreaks is more effective and water efficient than trying to interrupt an outbreak once it has started.

Further the plan should be edited to clearly reflect the events of 2014 regarding run-size, which included prediction by Dr. Joshua Strange that the 2014 run size forecast was grossly underestimating the true run size that would return. Omitting this gives the appearance of bias.

4. Another lesson from the Ich outbreak of 2014, is the need flush the river of some theronts and any lingering fish residing in thermal refuges prior to arrival of fall Chinook salmon run and to explore periodic summer pulsed flows to help keep background levels of Ich low prior to the arrival of the fall run. Brief but sufficiently large pulsed flows in the summer would help by preventing late-spring and summer run Chinook salmon from being stuck in the lower Klamath River in thermal refugia during periods of water temperatures in excess of their upper thermal limits to migration (mean daily temperatures > 22°C; Strange 2010). The poor river conditions and Ich infections during the late spring/summer appeared to be a contributing factor to the Ich fish kill in 2002 and the Ich outbreak in 2014.
5. The “hangover effect” hypothesis should be described and accounted for, as I have detailed in my memo on August 17th 2015.
6. A further lesson from recent events the importance of lowered water temperatures. This is in part due to the effect of cooler water temperatures on Ich development rates and the number of replications possible, the importance of which may have been underestimated given its significance for the shape of the exponential growth curves once an outbreak initiates (i.e., colder water temperature will decrease the slope of the parasite infection exponential growth curve for the population and within an individual fish, which could mean the difference between a mass mortality event or not).
7. Another aspect of the temperature dynamics is the thermal heating problems at Lewiston Dam, which compromises the thermal benefits of protective releases and constrains water volumes available due to flow through needs at Lewiston to prevent heating. As part of non-flow alternatives for the long-term, removal of Lewiston Dam to solve these temperature problems should be included as a non-flow action to improve and protect the temperature benefits of protective releases.
8. While flow releases are the indeed the only viable tool in the short-term, the long-term plan should discuss the most promising tool for the long-term, which is removal of the Klamath hydroelectric dams. Removal of Klamath hydroelectric dams as an action that is likely to have significant benefits to fish health in the lower Klamath River, including the risk of an Ich outbreak, by reducing potentially stressful toxic blue-green algae (*Microcystis aeruginosa*), concurrent infections with myxosporidian pathogens (*Ceratomyxa shasta*, *Parvicapsula minibicornis*), and adult salmon residence time in the lower Klamath River for Klamath stocks by removing the thermal lag on autumn cooling from these reservoirs (Bartholow et al. 2005) to re-create a decreasing longitudinal thermal profile as fall run Chinook salmon migrate up the Klamath River. This thermal lag is the leading hypothesis as to why Klamath fall stocks delay to such an unusual extent in the lower Klamath River (Strange 2012), which greatly increases the risk of a disease outbreak by increasing the exposure duration to such fish to any Ich parasites that are present. While higher flows will help to interfere with Ich’s ability to find and infect fish and potentially flush parasites out to the ocean, it does not result in decreased residence time of fall run Chinook in the lower Klamath River (Strange 2012). The only promising way to do that is to remove the Klamath hydroelectric dams, resulting in restoration of a decreasing longitudinal thermal profile as fish migrate upstream, an outcome that can only be tested by dam removal.

The reduced thermal lag in seasonal cooling would also decrease Ich development rates in any infected fish as they continued to migrate up the Klamath River. In combination, these predicted effects of dam removal would significantly reduce the risk of Ich outbreaks even in severe drought years and could have prevented previous outbreaks. As such, the long-term plan should clearly state this hypothesis and the importance of removing these dams on schedule without delay as part of a plan to protect fish health.

9. The plan should be broadened to encompass fish health considerations and protective measures in the lower Klamath River for all life-stages, times of year, and salmon species within an adaptive management framework.
10. The plan would benefit need to for more enforceable/mandatory minimum timelines and preventative actions.

Literature Cited

Bartholow, JM, SG Campbell, and M Flug. 2005. Predicting the thermal effects of dam removal on the Klamath River. *Environmental Management* 34: 856–874.

Strange, JS. 2010. Upper thermal limits to migration in adult Chinook salmon: evidence from the Klamath River Basin. *Transactions of the American Fisheries Society* 139: 1091–1108.

Strange, JS. 2012. Migration strategies of adult Chinook salmon in response to diverse environmental conditions in the Klamath River Basin. *Transactions of the American Fisheries Society* 141: 1622–1636.

From: [REDACTED] on behalf of [KlamathLTP, BOR SLO](#)
To: [REDACTED]
Subject: Fwd: Comments - on long term plan for protecting Adult Salmon in the Lower Klamath River
Date: Friday, August 21, 2015 9:54:56 AM

----- Forwarded message -----

From: **Werner Hoyt** [REDACTED]
Date: Fri, Aug 21, 2015 at 8:46 AM
Subject: Comments - on long term plan for protecting Adult Salmon in the Lower Klamath River
To: sha-slo-klamath-LTP@usbr.gov
Cc: [REDACTED]

1. The plan does not address the single largest source of fish kill on the Klamath River – The abnormal water surge (pulse) generated for the two week Hoopa Boat festival. Normal water profiles should align to the fall precipitation. The triggering of a “SUMMER” salmon run is a sure method of generating fish kills. 1
2. Methodolgy – No outline of contributing factors with assignments of relative magnitude are presented in the outline. 2
3. Process fails to adhere to the tenants of the 90/10 rule – that is you obtain 90% of the desired effect with 10% of the effort. In this case since the Hoopa boat festival is an artificial event – delaying it until normal fall runoff would be the appropriate means of reaching the desired goal. 3
4. Removal of the Klamath river reservoirs will only aggravate the problem in drought years. In accordance with the early explorers and survey log records of the Klamath River. The Klamath at the confluence of the Shasta River was deemed as fit for neither man nor beast to drink from. Horses refused to drink. Augmentation from this source is not reasonable or feasible. 4
5. Until the fall rains and cooling weather cool the river sufficiently to reduce parasites – all actions which would trigger runs my flow managers should be eliminated – the number one is the pulse of the Trinity with cold water triggering a late summer run when the general Klamath is at its warmest temperature with highest number of parasites. In drought years without the Lewiston reservoir with no snow pack there would not be a source of water for the Hoopa Festival or this proposed flow augmentation program. 5
6. Flow augmentation from the upper Klamath only exacerbates the problems 6
7. Review of history and issues -
 - a. Drought years – inescapable – there will be lower flow rates, with or without Agriculture. There will be increased die offs if BOR continues its August Trinity Releases for the Hoopa Boat Festival. The upper Klamath

system is an arid alkaline volcanic basin. The underlying basis does not change.

b. Sea Temperatures on where the salmon are returning to the coast. They do adjust their migratory patterns

c. Marine mammal populations. The impact of the 6000% increase in Sea Lion Populations on the Northern California Coast since enactment of the Marine Mammals Protection Act.

d. Increased take by off shore commercial fisheries – Salmon are a transpacific fish.

e. Increased take by the Klamath River tribes for commercial harvesting and sales

8. Flow augmentation without a sound review of the overall picture is seeking to implement a solution to the BOR generated summer run (not natural) resulting from the Hoop Boat Festival Pulse. If the runs are returned to their natural order – there is no need for flow augmentation from the Lewiston Reservoir.

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From: [REDACTED] on behalf of [KlamathLTP, BOR SLO](#)
To: [REDACTED]
Subject: Fwd: Lower Klamath Salmon EIS comments from John W. Menke, retired UC professor in natural resources and aware person on the Klamath and Trinity Rivers since 1978
Date: Thursday, August 20, 2015 10:30:01 AM

[REDACTED]
[REDACTED]
[REDACTED]
----- Forwarded message -----

From: **John Menke** [REDACTED]
Date: Thu, Aug 20, 2015 at 8:14 AM
Subject: Lower Klamath Salmon EIS comments from John W. Menke, retired UC professor in natural resources and aware person on the Klamath and Trinity Rivers since 1978
To: sha-slo-klamath-LTP@usbr.gov
Cc: [REDACTED]
[REDACTED]

August 20, 2015 8:15 AM

TO: Whom it May Concern

RE: Comments on BOR Lower Klamath River Salmon EIS

Base-flow in the Trinity River prior to Trinity and Lewiston dams in late-summer and fall was only approximately 125 cfs in average precipitation years (pers. comm. Tom Wesaloh, CalTrout, McKinleyville, CA and according to my colleague Dr. Peter Moyle, UC Davis, Tom is the best fish biologist on the North Coast of CA, and a member of the Lewiston Fish Hatchery Management Committee), and certainly less flow in a dry year like this summer/fall of 2015 as well as last year.

As of August 4, 2015 when I checked the USGS River Flows website, the flow in the Trinity River out of Lewiston Dam was **462 cfs**. Flow in the Trinity River at Trinity Center above Trinity Dam was **29 cfs** showing how low the Trinity River would be without Trinity and Lewiston dams storing water for a dry-year like now, but flow at Hoopa was only **72 cfs**.

- 1) There must be some major diversions going on between Lewiston Dam and Hoopa—likely the marijuana grows we have read about and heard in detail about (see below—after 2), and
- 2) the overly dense riparian plant communities evapotranspiring lots of water along the Trinity River below Lewiston Dam as a result of long-term diversion of Trinity River water to the Sacramento River, sedimentation from Grass Valley Creek and other upper tributary creeks, and deposition of those sediments along the sides of the Trinity River with colonization by willow, alder and conifer trees, making a stepped river edge (Milhous, Robert T. unpublished mimeo, 18pp., Fort Collins Science Center, USGS, Ft. Collins, CO) more like the Shasta River bank shape than the lower Klamath River both of which I know well. These are not my

assessments of the effect of such large diversions but that in an unpublished paper by Milhous sent to me by Tom Shaw, USFWS-Arcata years ago. From the time of Trinity River dams construction in 1962 and 1963, and lack of erosive flows to clean the gravel, cobble and boulder bed and banks of fine sediment material, 81% of all Trinity River watershed output at Lewiston was exported to the Sacramento River.

A shocking number and a shocking effect on the river. The outstanding spawning habitat prior to those dams construction provided sufficient rearing habitat for the king salmon as they were called at that time, but not likely for coho salmon because of lack of beaver pond-like slow-water habitat required for that salmonid. So that artificial plant community may be a significant user of Trinity River water partly explaining the 462 to 72 cfs flows at Lewiston vs. Hoopa during a dry year especially. The first fly fishing trip of my life was to the Trinity River near Lewiston in spring 1978 where the primary big fish caught was a 5 lb brown trout by my expert friend who I am as of last year fishing with again after a 25-year hiatus. The thick riparian vegetation event at that time was a hindrance to access to the stream for backcasting. Certainly the abnormal riparian plant community succession since that time has further increased transpirational demand. We see very large diurnal riparian and evaporative demands during summer and early fall on Shackelford Creek, a tributary to the Scott River, affecting flows to our diversion with recovery overnight but certainly added evaporative losses especially with more winds we have had in recent years seen all over California due to jet stream effects.

After watching a very recent California State Legislative Hearing of the Aquaculture and Fisheries Committee in Sacramento and learning of the massive acreages of marijuana grows, dewatering of small streams, and contamination of same in the North Coast counties of CA, this issue of salmon health in the lower Klamath River is certainly affected by a large number of actions by Man well beyond the pervue of BOR—it is time for the cops. During that Senate Hearing, the Sheriff of Mendocino County stated that since legalization of medical marijuana in 1996 by the voters of California, ‘many 19-21 year-old males in the North Coast Region of California have considered the marijuana business as their only hope of becoming financially well off’!

On that same August 4, 2015 day, flow out of Iron Gate was 900 cfs. Flow in the Shasta River was 38 cfs. Flow in the Scott River was 72 cfs, all from the USGS website.

First summary comment: With so much warm water at Weitchpec coming down the Klamath River, unless more water is saved back in Trinity Lake protecting the cold water deeper down in that lake kept at a much fuller state like it was designed to do to guard against droughts with capacity for 2-year’s runoff, the amount of really cold water needed to cool the large volume in the Klamath River will not be possible. That is a pure physical fact.

In my professional opinion having carefully watched actions since 1992 on the Klamath River watershed, the BOR, NMFS and others have gotten themselves into an unsolvable dilemma relative to the lower Klamath River salmon. In taking so much water away from agriculture and the Klamath Refuges in the Upper Klamath Basin for both the sucker fishes many years ago and more recently augmented flows out of Iron Gate Dam (latest NMFS B.O.), it is physically impossible to have enough cold water in drought years especially to cool the lower Klamath River without taking special action (see below).

During Governor Kitzhaber’s first term he asked my former student Hal Salwasser, while he

was Dean of Forestry at Oregon State University, to review the first USFWS Sucker Fish Biological Opinion recommending keeping Upper Klamath Lake fuller than previously with the Link Dam (not one of the KBRA/KHSA removal targets). In a phone conversation with Hal 4 or 5 years ago, Hal told me he told Kitzhaber that he got to so-and-so page, he used page-145 for a number to indicate to me he had read all of the B.O., and that all the empirical data (that is hard data, not models) indicated no benefit from doing so. But then reference was made by USFWS authors to a sucker fish model by a young assistant professor at Cornell University, New York, that showed benefits from keeping the lake fuller. In retrospect it is clear to me that this was the first step to trying to take virtually all the water away from agriculture and re-establish Tribal sovereignty to the open-space lands of the Upper Klamath Basin.

When I shared this professional review by Hal with Richard Whitman (Kitzhaber's Natural Resource Advisor) at the first Wyden/Kitzhaber KBRA/KHSA Senate facilitation meeting for want of a better descriptor of that committee effort in Klamath Falls at the Oregon Institute of Technology conference room a couple of years ago during the first break, and said it was too bad Hal had retired. Whitman's response was a big smile!

Hal was really a wildlife biologist but he was trained in the University of California, School of Forestry and Conservation and took most of the forestry courses, served as a teaching assistant, and that was while I was a new assistant professor in that program so I knew him well. I served on his Ph.D. dissertation committee and helped him in the field on deer habitat relationships research, and in fact we are within 3 months of the same age. Hal always appreciated the dynamic simulation modeling training I provided in a graduate course at UC Berkeley having just finished a Ph.D. in range systems ecology at Colorado State University where outstanding computer modeling training was a very important opportunity in that curriculum. In fact it was the greatest opportunity to learn dynamic simulation modeling of natural rangeland systems ever offered. What I taught in that modeling course other than the technical aspects of building and applying models is that models should never be used for management control, only as a learning device and teaching device since garbage-in produces garbage-out and not necessarily because of the formulation but also the weak parameterization of the mathematical representations of key processes. In complex ecological systems there are too many unknowns to ever use such a model for making decisions.

Empirical replicated research methods with hypothesis formulation, sampling design with rigorous methodology, and testing of findings with statistical assessment to put standards on criteria used for rejection of false hypotheses—this is the scientific method and any deviation from that method more often than not leads to bad decisions that don't result in successful management strategies in the case of complex natural resource systems. Only after hypotheses stand the multiple testing by independent parties does a hypothesis or series of hypotheses lead to theory development which leads to the truth about aspects of any subject. More than anything else I have observed complete abuse of models being used for management control. This is a very telling symptom of corrupted science which has run wild since 1993 and my moving from academia to applied ecology to now a rancher for 22+ years. I recognize this perverse activity often in agencies.

And in the case of dams removal on the Klamath River the corruption peaked with the Whistleblower Action by Dr. Paul Houser, Science Integrity Officer for BOR and USDI. When Paul exposed that USDI Secretary Salazar 'just wanted those dams out' and was willing to put out a bogus press release to the public stating something like there is a 94%

chance of a fishery improvement on the Klamath River with removal of four dams, it was clear to me that Paul had exposed the corruption. Based upon significant digits alone Paul could see this statement could not have been made by the Expert Scientific Panel. Putting that 4 after the 9 in 94% showed precision that could not possibly be real and justified. I attended those Expert Science panel meetings and spoke to several of the scientists and they in no way ever came to that conclusion. The really stinking part was Kira Finkler (formerly with Trout Unlimited, same outfit that CDFW's latest Director Charlton Bonham came from as one of their attorneys), Paul's boss directing him to not send her an email of his evaluation of that press release she told him that she 'did not want anything traceable to his professional judgement'. Finkler told Houser he was 'not being a team player'. Paul immediately did and was fired for it. This event will outlast all other pieces of history in the outright failure of agency loyalists to flow agendas of higher ups in our socio-political condition. Such politics should have NO role in natural resources management!

In 1996 my wife and I sold our first red angus bull to a long-term resident living in Seiad Valley who first went to work for the Forest Service in Happy Camp in 1933; Walt Robinson told us that as a young boy he could walk across the Klamath River near Seiad most summers without getting his feet wet (albeit he may have been recalling the 1930s drought, where like the Great Plains the Yreka rainfall record shows a period of years of drought). Now being an agriculturalist myself for 22+ years in Siskiyou County, after a background of 10-years of college and serving as a UC professor for 25-years through 1998, and studying the continuing attempts to kill Upper Klamath Basin agriculture as well as Shasta Valley agriculture, agency and court actions have created a quandry for the lower Klamath River salmon and steelhead. The habitat has been destroyed by 'kindness of idiots' and money hungry NGOs with willingness-to-be-led, and weakly trained agency personnel. Agencies have even coined a human classification of stakeholders to foster decisions from far away urban areas and can't even hold a public meeting for this EIS process in Yreka. So we have selective use of outsider uneducated people relative to natural resources management and otherwise naive segments of our society facilitating corruption of NEPA processes.

I fly fished the Klamath River every Labor Day weekend from 1978-88, from 16-miles downstream of Weitchpec at Johnson's Bar where we camped and paid an Indian for the site to camp, down as far as the confluence with Blue Creek. I and my friend with his 20-foot sled and 90 hp jet outboard motor caught an average of 60 steelhead per day up to 6 lbs on brindle bug flies, 30-foot shooting-head sinking lines, and I had the best 10-years of fly fishing of my life and am now 70-years of age. We very occasionally hooked a 6-10 lb coho salmon and because it fought so hard we ate them rather than wasting them, otherwise we were catch-and-release fishers from the Davis Fly Fishers. We also fished what we called the Gorge, the last mile of the Trinity River, to catch some really active steelhead in the large cold pools just above Weichpec to begin our three-day activities each year. The so-called half-pounder steelhead at that time were better fishing than my later and somewhat overlapping fishing of Christmas Island for bonefish, the Florida Keys for tarpon, the Skeena, Tseax and Nass Rivers of British Columbia, as well as the Henry's Fork of the Snake River and Madison Rivers of Idaho and Montana, respectively, for rainbow and brown trout.

The problem for the salmon in the lower Klamath River is that the flow out of Iron Gate is way too high. BOR should be desiccating the edges of the Klamath River like Nature always did to reduce polychaete worm habitat from Iron Gate to the mouth of the Scott River, filling the Klamath Refuges for ducks and geese each coming winter, providing more water to the Tulelake Irrigation District and quit stopping use by Off-Project irrigators above Upper

Klamath Lake—just too much water coming out of Iron Gate Dam! It is impossible to cool such a large volume of water in the Klamath River at Weitchpec with Trinity River water at such flows in dry years that are becoming common in the cycle of weather we have been having.

The problem is, the government is trying to harm the Upper Klamath Basin agricultural producers because of politics so they are taking their water away but harming the fishery in the process because they have to send their ag water to the ocean.

CDFW, DWR and BOR do the same wasting program with the Trinity River water once it gets to the Bay Delta.

Second comment: The beginning of salmon season on the Klamath River watershed is set far too early increasing the likelihood of salmon diseases and kills associated with promoting the need for promotional Boat Dances and too early ramp ups of flow to meet the Hoopa stakeholder demands for fish to catch, eat and sell and fostering salmon diseases and kills unnecessarily. That 'time immemorial' Boat Dance celebration and request for higher flows was questioned by Tom Wesaloh when I spoke with him. He added that myth in his opinion as a corollary to the Hoopa's desire for greater flows even after the 2000 ROD set base flows at the 450 cfs minimum. It is my strong hypothesis that the first year of those directed higher flows in 2002 is what led to the salmon kill that year. Clearly if 125 cfs was sufficient for such Boat Dances in the past, certainly 450 cfs should be sufficient you would think, is what he told me (pers. comm.) probably 15 years ago at the same time he told me of the pre-dams base flow in the Trinity River. I have always found it suspicious that such a celebration would only take place every other year and not on even-numbered years since the kill. Since when would Indians want to wait two years for celebrating fish returns that occur every year.

Last year we witnessed a ramp up of Iron Gate Dam releases of relatively cold water flows for the first time in very early July, making for the largest salmon escapement into the Klamath River estuary ever witnessed by Mike Coopman, one of the best long-term fishing guides on the lower Klamath River and his father before him. I fished with him once and he knows his trade! He had never seen so many salmon in the river so early (first week of July!). A resident near Copco Community Center observed the boost in flows out of Iron Gate Dam and alerted me prior to my speaking with Mike and him witnessing so many salmon—he was over visiting our joint friend Ken Berryhill while Ken was on call for fires with his cat on his truck outside the Fort Jones, CalFire Office and Fire Station. At that time in mid-July 2014, I surmised a new effort for another salmon kill was in preparation, but when the Log and Happy Camp Fires created so much smoke and reduced heating by the sun on the Klamath River water I suspected that attempt failed for that reason.

During earlier too-early ramp ups I was called by our California DWR Watermaster Joe Scott in late-August one year when Joe told me in no uncertain terms, 'they are going to cause another kill John'! He always watched flows like a hawk. After that I had close communication with a Trinity River Restoration Task Force woman who had taken Peter Moyle's course at UC Davis where I worked for the last 20 years of my career. She was quite open with me about Boat Dances and ramp ups. I then communicated via email with the California Department of Fish and Game Northern Region Fisheries Manager Steve Turek via Jim Whelan, our local Scott Valley fish biologist, about 'false triggering' of salmon to escape from the ocean into the estuary not due to natural freshets from rain events. The Yuroks said no but Turek said yes it was happening in his judgment. The stakeholders appear under every

stone on these fish matters! Fishermen by their very nature are exaggerators and liars! How big was that fish showing outstretched arms?

During the second Wyden/Kitzhaber Senate facilitation of KBRA/KHSA meeting at OIT in K Falls, I shared with the committee that Mike Coopman had told me that the previous year the government asked the Indians if they could please take 200,000 salmon that year and the Indians' response was that they could only handle 70,000 fish. This shows clear indications that salmonid rearing at the Lewiston and Iron Gate hatcheries must reduce their production to not stress populations of returning spawners many years. Trying to max our ocean catch has serious pitfalls in rivers.

So my Third Comment: Too many salmon and steelhead are being reared at Lewiston and Iron Gate fish hatcheries. Work by pathologist Jerri Bartholomew and her students have shown disease transfer from spawned out salmon to healthy fish—just remember that steelhead are multi-year spawners and can be vectors of disease to future returning salmonids. And given natural hypereutrophic conditions of the Klamath River, so frequent over shoots in returning salmon numbers is a set-up for more fish kills. Unless some sort of solarization program is instituted in summer with greatly reduced flows out of Iron Gate Dam (August would be best), the interaction of these prevalent native diseases will rear its ugly head too often and unnecessarily. The ocean fishermen don't need such an artificially high rearing program now that we see clearly that Nature's Pacific Decadal Oscillation is a primary driver of salmon abundance both in the Pacific Ocean and the Klamath and Trinity River watersheds.

I began fishing as a boy on the American River outside downtown Sacramento above Watt Ave. Bridge, a mile to two miles upstream, in 1952 prior to Folsom (1948-56) and Nimbus (1952-55) dams construction. It was a warm water fishery with catfish, perch, occasional pike, and late-fall king salmon runs like you would not believe—all caught with my new Michell 300 spinning reel, the new fishing invention at that time after abandoning our cane rods with line tied to the end of two-piece 10-12 foot rods using liver, steak or worms as bate on mainly catfish—just like Tom Sawyer and Huckleberry Finn. I would barely be able to handle two 15-18 lb salmon holding by the gills in each hand riding my bicycle home about 1 mile with the tails worn off a bit before finishing the ride home and a salmon dinner for our family. The freshet of river flows from fall rains triggered those fish to come up the Sacramento/San Joaquin Rivers to above the city of Sacramento to the American River confluence and about 10 miles to my backyard. Same was true on the Sacramento prior to Shasta Dam construction (1938-45) according to an older red angus breeder friend in Redding who happened to be on the construction team that built part of the delivery system for transferring Trinity River water to the Sacramento River involving Lewiston and Trinity Dams. He likewise has seen way too early salmon runs on the Sacramento River since Shasta Dam construction.

An observation of our now-retired Livestock Farm Advisor Dan Drake while doing fish research with UC Cooperative Extension fish biologist Lisa Thompson at UC Davis on the Shasta River coho salmon, and others have noticed as well, is that the Chinook salmon have been entering the Shasta River to spawn earlier and earlier over the last 20 years. Watermaster Joe Scott observed that too-early runs on the Shasta River were being used as ammunition against Shasta Valley agriculture by the Salmon River Restoration Council folks at Sawyers Bar. Associated issues on the Shasta River led to the Klamath Riverkeeper's lawsuit and settlement costing irrigation water users in Shasta Valley excessively high per

acre-foot irrigation water charges to pay the attorney fees of both sides of the suit—sue-and-settle!

Final comment: Stop the artificial false triggering of salmon to escape from the ocean too early before Nature would have done so. Don't try any more of this late August triggering just to meet the CDFW salmon season openers—those guys don't have a clue what should be done. They even referred maxillary bone clipping as fin clipping in maiming all the reared coho and steelhead since about 1994 at both Lewiston and Iron Gate Fish Hatcheries and running video weirs blocking many salmon and steelhead spawners from returning to their rearing grounds in the Scott River watershed! Stop the artificial ramp ups. BOR, please develop strategic year-long water release plans to promote October returns, not July returns for God's and the fishes' sake.

4

Use agriculture's ability to sequester phosphorus from the naturally high P water and sediment content soils and parent materials from the Upper Klamath Basin. Do some good for ducks and geese for a change. Go ahead and cut PacifiCorps power production a bit each summer to solarize otherwise too much polychaete worm and disease vector habitat along Klamath River edges.

In 2014, 65,000 steelhead were transferred from lower Shackelford Creek when that creek became naturally disconnected due to lack of snow pack and runoff showing the tributaries of the Scott River are teaming with productivity right in my backyard. Likewise the estimated 200,000 coho juveniles reared in Emigrant, lower Mill and Shackelford Creeks in 2010 and witness by Larry Lastelle, Mr. Coho Salmon, clearly shows natural productivity of even listed salmonids in the Klamath River watershed is alive and well, just highly influenced by natural drought cycles and hot summers.

Use science not politics!

5

Thank you for this opportunity to comment. The situation is a mess currently, but the potential is extremely high without really any additional cost to the taxpayers.

John W. Menke, A.A., B.S., M.S., Ph.D.
Fort Jones, CA

From: [REDACTED] on behalf of [KlamathLTP, BOR SLO](#)
To: [REDACTED]
Subject: Fwd: Salmon Survival Comment to BOR – 8/06/15
Date: Friday, August 14, 2015 11:52:58 AM

[REDACTED]
[REDACTED]
[REDACTED]
----- Forwarded message -----

From: CHM [REDACTED]
Date: Thu, Aug 13, 2015 at 1:38 PM
Subject: Fwd: Salmon Survival Comment to BOR – 8/06/15
To: sha-slo-klamath-LTP@usbr.gov

I would appreciate conformation that my comments are in the record ---- CHM

----- Forwarded Message -----

Subject: Adult Salmon Survival Comment to BOR – 8/06/15
Date: Wed, 5 Aug 2015 15:03:15 -0700
From: CHM <chm@klamathfallsoregon.us>
To: sha-slo-klamath-LTP@usbr.gov

Attn: Paul Zedonis;

What happens in the Upper Klamath Basin has critical impact down river. I have been very disappointed with the lack of depth of consideration of additional storage and improved water quality as it impacts aquatic and terrestrial life. There seems to be a pervasive failure to recognize the fact that freshwater is the most important element in the survival of all terrestrial species, fresh water salmon habitat included, and the world and the nation are well on their way to critical shortages.

1/2

With this as essential guiding principle, a much broader inquiry into alternative mitigating solutions must be undertaken, to wit:

The eutrophic escalation of a dying upper Klamath Lake must be minimized and offset. To do this the surface area must be drastically reduced by the dikeing off of shallower areas such as Hanks Marsh, Howards Bay, the entire upper West side toward Rocky Point and North to Cherry Creek, and the restoration of the recently removed dikes in the Tulana Farms area and South of the Williamson River estuary. The Klamath River above Keno and below Lake Ewana should be contained to reduce surface area in the Miller Island and Rat Club areas west of US 97. Reducing

3

the surface area substantially reduces evaporation and increases flow movement through the lake and river. Dredging of the lake to raise the level of land in the diked off areas will result in a deeper and hence cooler body of water and the creation of productive additional agricultural lands that should be irrigated with highly efficient modern systems rather than saturated by flood as has been the custom in the past.

Additional areas of storage need to be considered and developed.

1. The Boundary Dam proposal on Lost River.
2. Consideration of a deep lake created in the Bly basin of the Sprague River drainage by the construction of a dam at the Beatty narrows.
3. Consideration of expansion of Clearlake and development of water supplies thereto from subterranean sources in the hundreds of unoccupied square miles south and east. These wells could be powered by solar cells floated on the Clearlake surface and a portion of the water could be siphoned to the West into lower Tule Lake Basin.

Native American cultural heritage considerations are being overemphasized when it comes to restoration of the sucker species. Today's Native American buys their food at Walmart or Safeway just like the rest of us; cultural significance of sucker fish can be preserved in artificial habitat just as their baskets, bowls, arrowheads and other artifacts are preserved in museums. In contrast, economic viability and self-sustainability of the tribes should be a major factor of consideration. To a degree the viability of salmon populations plays into this economic element and they should be entitled to an interest in increased agricultural production acreage created by the extensive dikeing of Klamath Lake and river.

As to the existing dams, upgrade of fish passage has been considered and found to be exorbitantly expensive. Perhaps it would be worthwhile to investigate the functionality of water driven dam face fish elevators in contrast to fish ladders.

© C. H. McMillan III – 1444 Pacific Terr. Klamath Falls, OR – 97601 - ph#541/884-1876



PO Box 751
Somes Bar, CA 95568
(530) 627-3311
info@klamathriver.org

August 20, 2015

David Murillo
Mid-Pacific Region, Regional Director
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

Re: Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River

Dear Mr. Murillo:

Thank you for the opportunity to comment on the Draft Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River (Plan). Proper management of Trinity River flows will be critical to the recovery of Klamath Basin fisheries.

The underlying premise of the Plan – to establish triggers for flow augmentation to prevent fish die-offs – fails to address BORs obligations under state and federal law. We request that BOR adopt a long-term plan within one year that is consistent with its Tribal Trust obligations and each of the laws described below. 1

The Trinity River Act of 1955 directed the Secretary of Interior to “preserve and propagate” the fish and wildlife resources of the Trinity River. The same act reserved 50,000 acre-feet of water per year for Humboldt County and downstream water users. Humboldt County’s water right shall not be counted toward BORs existing obligation for fishery protection. 2

The Trinity River Basin Fish and Wildlife Restoration Act of 1984 requires the Secretary of Interior to implement a management program that will restore and maintain fish and wildlife populations in the Trinity River basin to “levels approximating those which existed immediately before” construction of the Trinity River Project.¹ 3

The 2000 Trinity River Record of Decision affirms that, from the inception of Trinity River Division, Congress directed the Department of Interior 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.”² 4

¹ <http://www.gpo.gov/fdsys/pkg/STATUTE-98/pdf/STATUTE-98-Pg2721.pdf>

² <http://odp.trrp.net/FileDatabase/Documents/Trinity%20River%20Record%20of%20Decision%2012-19-00.pdf>

BOR is bound by the federal Endangered Species Act to manage Trinity River flows in a manner that prevents the take of listed species. According to the California Department of Fish and Game, more than 300 adult coho salmon died during the 2002 fish kill.

5

The Public Trust Doctrine to preserves the public's right to recreation, fishing, and navigation on the Trinity River.

6

California Water Code limits the export of Trinity River water to surplus flows only (Water Code Sections 11128, 10505, and 11460).

7

California Department of Fish and Game code section 5937 requires dam operators to release enough water to keep downstream fisheries in "good condition."

8

We request that the BOR adopt a long-term plan to manage Trinity River flows in a manner consistent with the aforementioned laws.

Sincerely,



Konrad Fisher, Executive Director

Marshall Ranch
PO Box 187
Fort Jones, CA 96032

August 19, 2015

Mr. Paul Zedonis
Northern California Area Office, Bureau of Reclamation
16349 Shasta Dam Boulevard
Shasta Lake, CA 96019.

Re: Federal Registry Notice
DEPARTMENT OF THE INTERIOR
Bureau of Reclamation
[RR02312000, 15XR0680A3,
RX.04167000.6000000,]

Notice of Intent re Klamath River

Dear Mr. Zedonis,

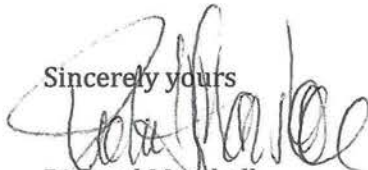
As a rancher in Siskiyou County we pay close attention to issue affecting rivers and streams throughout Siskiyou County including the aquifer. The current proposal by BOR is insufficient to examine the impact on the entire river system and its tributaries. The Klamath with its seven distinct reaches must be evaluated as a whole system.

The impacts in one area cause impacts throughout the system. Utilizing water from Siskiyou County's system without offering or conducting a thorough investigation replete with a public hearing in Siskiyou County is inappropriate at best and probably flaunts the law under either CEQA or NEPA. Siskiyou County has 68% of the shoreline of the Klamath River and three of the four major dams located on the Klamath.

Many of us are knowledgeable about the major fish kill caused by the BOR, which resulted from pulsing the water out of Trinity to attract the Salmon in the estuary to enter the river system in order to fulfill the Hoopa Salmon festivities; then shutting off the water leaving them hi and dying. In fact if you go back to 1955 you will find a lawsuit on just this point except in that case BOR caused the death of approx. 1,900,000 Salmon. The lawsuit is referenced 45Cal. 2d 455 in 1955.

We raise our voices to object to the BOR circumventing the process which would require a full EIR EIS for the Klamath River". It is our considered opinion that the hearing is being subverted by the proposed BOR project analysis. We invite the BOR to reconsider this process.

Sincerely yours



Richard Marshall

BRIAN L. MORRIS
COUNTY COUNSEL

DENNIS M. TANABE
DEPUTY COUNTY COUNSEL

DANA L. BARTON
DEPUTY COUNTY COUNSEL

NATALIE E. REED
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STACEY L. CLOUGH
LEGAL OFFICE COORDINATOR

LORI A. HEIE
SENIOR LEGAL SECRETARY

Office of County Counsel
COUNTY OF SISKIYOU

P.O. Box 659 • 205 Lane Street
Yreka, California 96097

August 18, 2015

David Murillo
Regional Director
Mid Pacific Regional Office
Bureau of Reclamation
2800 Cottage Way
Sacramento CA 95825-1898

Re: Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River

Dear Mr. Murillo:

Siskiyou County and the Siskiyou County Flood Control and Water Conservation District (“Siskiyou County”) are pleased that the Bureau of Reclamation has committed to the preparation of an Environmental Impact Statement to evaluate the effects of the Long-Term Plan for Protecting Adult Salmon in the Lower Klamath River.

The indefinite operation of the Klamath Irrigation Project and the Trinity River Division of the Central Valley Project mean that the natural hydrographs of the Klamath River watershed have been permanently sacrificed to the reality and impacts of those two projects. In any management regime for the Klamath River watershed, the Bureau of Reclamation must recognize the importance of communication and coordination between operation of the two projects. 1

The entire Klamath Basin faces continual water supply demands to support all beneficial uses of water and to mitigate impacts of the Bureau’s facilities. The continued operation of the two projects underlines the ongoing need for improvement and repair of existing storage facilities as well as the critical need for new storage development in both the Upper Klamath Basin as well as in the Scott River and Shasta River watersheds.

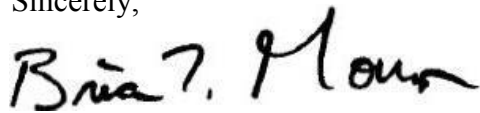
Siskiyou County also notes that for the past two summers water has been available for release from Iron Gate Reservoir and Copco Lake for the benefit of fish flows in the middle and lower Klamath River. Siskiyou County continues to strenuously oppose any contemplated removal of these facilities due to the loss of storage capacity and for many other reasons. 2

Finally, Siskiyou County has previously expressed concern about the unintended consequences of large, unnatural, late-season releases of water on the Trinity River. These releases have the potential to send migration cues to anadromous fish headed for destinations higher in the watershed before wet weather arrives to provide necessary habitat conditions. 3

David Murillo
August 20, 2015
Page Two

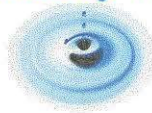
We look forward to a detailed environmental analysis of any proposed operations for the Trinity River Division, including consideration of how those operations will be coordinated with the Bureau's upstream facilities.

Sincerely,

A handwritten signature in black ink that reads "Brian L. Morris". The signature is written in a cursive style with a large, stylized "B" and "M".

Brian L. Morris
County Counsel

Siskiyou County Water Users



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August 10, 2015

Mr. Paul Zedonis
Northern California Area Office, Bureau of Reclamation
16349 Shasta Dam Boulevard
Shasta Lake, CA 96019.

Re: Federal Registry Notice
DEPARTMENT OF THE INTERIOR
Bureau of Reclamation
[RR02312000, 15XR0680A3,
RX.04167000.6000000,]

Notice of Intent: To Prepare a Draft Environmental Impact Statement for the Long-Term Plan To Protect Adult Salmon in the Lower Klamath River, Humboldt County, California

AGENCY: Bureau of Reclamation, Department of Interior.
ACTION: Notice of intent and scoping meetings.

The move by the Department of Interior's (DOI) Bureau of Reclamation (BOR) to grant itself unilateral authority to dedicate already allocated waters for what 'in their estimation may' benefit adult salmon is not only illogical and unsubstantiated, it is also illegal. Consistent with DOI's current agenda of resource confiscation, this proposal once again fabricates and obfuscates 'justification' to accomplish that objective. Just a few of the concerns in this proposal are as follows:

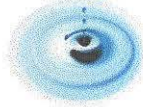
The Environmental Impact Statement that BOR claims it will produce starts out with the pre-conceived determination that the results will 'benefit adult salmon', the preponderance of which are not threatened and none endangered, intentionally creating a new bureaucratic 'directive' power for self-mandated 'protection' of non-endangered species. This hypothetically interpreted 'benefit' involves wasting late summer naturally unavailable water from artificially stored reserves previously retained during excess flows for human benefit. Allowing such an 'objective' to be codified effectively reallocates 'beneficial use' priorities (fish before people) without public process, awareness, or compensation.

Ironically, the plan to 'increase flows' from that reallocated stored source from the upper Klamath is in direct contradiction to BOR's and DOI's bureaucratic push to destroy existing dams thereby removing Klamath stored water retention under the Klamath Basin Restoration Agreement/Klamath Hydroelectric Settlement Agreement (KBRA/KHSA). Perhaps the concept is that if such retention removals fail, this unaccountable authority will set the premise for later demanding retained waters for 'potential future environmental release'.

That act of effective reallocation of beneficial use is detrimental to virtually ALL other beneficial uses with NO proven necessity or statistically significant certainty for preserving fish. These are the same fish proven to be adapted to those documented naturally occurring conditions for thousands of years prior to any intervention from man. Instead, BOR rationale for this self-assigned potential for abuse

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4

Siskiyou County Water Users



of power and directive is 'based' upon the 'likelihood' of 'potentially reducing the severity' that 'could' result in 'future years'.

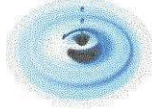
Once again their tactic is to use the much manipulated natural Klamath occurrence of lower river infection (refer to the historical account by Gibbs, 1851) which happened in 2002. The occasional concurrence of short term late summer pattern of high day and high night temperatures in conjunction with high fish return numbers sets the naturally known potential for historically indigenous disease pathogens. That year, combined with several other contributing documented factors unrelated to upper Klamath flows, was such an occurrence. However, while once again artfully worded in their attempt to incite assumption, the fact is the upper Klamath flows occurring during that 2002 short term confluence were NOT unnaturally low. Flows at the time were actually HIGHER than normally occurring at that time of year during many prior years without that same confluence of conditions where little to no infections occurred. In addition, there is NO reliable evidence that simply increasing the water flows within those temperature conditions with available stored water limitations will significantly limit EITHER temperature induced crowding or disease potential. The ONLY thing it is locally known to do is to preemptively signal salmon, waiting for appropriate spawning conditions that increased water is available in up-river tributaries, thus drawing them upstream to spawn in tributaries which are often actually bone dry or non-conductive. This leaves few successful options except for salmon returning to Iron Gate Hatchery. Iron Gate Hatchery is one of the currently most productive hatcheries in the State of California. This hatchery is targeted for REMOVAL under the severely flawed BOR endorsed KBRA/KHSA. Even if the 'basis' of 2002 were true, which it is not, the record salmon run in 2002 conservatively counted at 170,000 fish, compared to the 'estimated' losses (originally extrapolated around 13,000 at the time, media escalated to over 90,000 over the 10 years following, and decreasing back to 33,000 here) still amounts to a high end loss of less than 20%. Strangely, salmon losses in excess of 60% documented due to protected estuary predation at various locations have resulted in Agency conclusions of 'little significant impact' upon spawn returns.

Prior politically pressured water releases in 2003, 2004, 2012, and 2013 by BOR cited 'general observation' of 'no significant disease' 'suggesting' inferred validation of effectiveness with no other explanations considered, when NO similar confluence of 2002 conditions had actually occurred in those years. The 2014 recital of 'explanation' fails to address the naturally occurring temperature patterns and estuary conditions at that time that were far more responsible for preventing significant mortality than any 'likely' BOR releases. However, flows and alternative rationales contradicting BOR's promoted assumptions are simply ignored in their text.

Even more ironic, BOR's typical canned regulatory rhetoric cited within their own prior NEPA 'review' for those flows easily concluding 'no significant impact', never bothered to mention the true economic and life altering effects upon tens of thousands of citizens dependent upon that water intended and retained for their beneficial use that was unilaterally removed, subjecting them to tremendous hardship and loss.

All of the forgoing is however superfluous, as the very act they are considering is illegal. The allocation of water resources on the Klamath operates under the 1957 congressionally approved Klamath Basin Compact. That Compact dictates the beneficial uses, procedures, and authority regarding the Klamath watershed, and under those requirements BOR's attempt at back door confiscation of resources outside the provisions of that Compact is clearly illegal.

Siskiyou County Water Users



The subject BOR proposal once again seeks to extend BOR's authority and agenda-driven non-representative revisionist policy upon the vested public. As such, they have again stepped beyond the realms of reason, proven science, and legality. This proposal should be withdrawn.

Respectively Submitted by:

Siskiyou County Water Users Association

A blue ink signature of Richard Marshall, written in a cursive style.

Richard Marshall
President

A blue ink signature of Rex Cozzalio, written in a cursive style.

Rex Cozzalio
Board Member and Author

Siskiyou County Water Users
357 N. Main Street
Yreka, CA. 96097



Vision. Passion. Community.

**Trinity Lake
Revitalization Alliance, Inc.**
Trinity Center, California

August 19, 2015

Mr. David Murrillo
Regional Director,
Mid-Pacific Regional Office
Federal Office Building
2800 Cottage Way
Sacramento, California 95825-1898
(VIA email sha-slo-klamath-LTP@usbr.gov)

Ms. Erin Curtis
Public Affairs Officer
United State Bureau of Reclamation,
Mid-Pacific Region
2800 Cottage Way
Sacramento, CA 95825
(VIA email sha-slo-klamath-LTP@usbr.gov)

RE: Comments on the draft *April 2015 Long-term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River*

Dear Mr. Murrillo,

The Trinity Lake Revitalization Alliance (TLRA) submits the following comments into the record of the U.S. Bureau of Reclamation's (Reclamation) *April 2015 Long-term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River* (Draft Plan).

TLRA is a community-based, all-volunteer non-profit corporation representing approximately 795 property owners, 500 residents, and 7 forest communities that are adjacent to Trinity Reservoir north of Trinity Dam and 5 Trinity Lake marina businesses.

TLRA is opposed to the Draft Plan to release up to 83,000 acre-feet (AF) from the Trinity River Basin/Trinity River Division (TRD) to supplement flows in the lower Klamath River for the perceived need to "protect" salmon. 1

In the revised plan, Reclamation should focus on an equitable, consensus-based plan interactively co-developed with all stakeholders. The revised plan must not be biased toward political, high-level pressure by special interest groups, and the plan must be anchored in proven science, not speculation. As is, the Draft Plan is unlawful, unsupported, and damaging to Trinity County. 2

The following are our priority Draft Plan issues:

I. The Draft Plan document title is biased and expresses an option that is leading 3

The title of the Draft Plan assumes that there is agreement that the late summer salmon are in danger and in need of "protection." To solicit a fair, unbiased review of available options and alternatives, the document title should not present a single-sided view.

A better title would be *Long-Term Plan for Late Summer Flow Augmentation of the Lower Klamath River*.

II. To reach true consensus on a long-term plan that addresses the problems on the Lower Klamath and that can weather litigation, the Plan must be designed by an interactive, inclusive team that represents all river, water, and fishery stakeholders.

After flow augmentation litigation in 2013, Reclamation invited stakeholders to a Lower Klamath Flow Augmentation Workshop on December 19, 2013 at the Red Lion Inn in Redding, CA. This was the first time in decades that a wide breadth of stakeholders met in person to discuss river and reservoir management and options.

Although the beginning of the meeting was awkward and there were times of vast disagreement, there were good ideas and a respectful understanding of stakeholder goals and needs.

One request that had the agreement of almost everyone at the Workshop was for the entire Klamath Basin to be managed by one Reclamation unit and managed as an integrated system since actions on the Trinity River influences actions on the Klamath, and vice versa.

At the time, Reclamation acknowledged the positive progress of understanding that came from this meeting and suggested that such a forum would be useful when the long-term plan was developed. Most attendees agreed.

However, Reclamation has failed in this commitment and has written a plan from a one-sided view with obvious power user and tribal input only and with no transparency.

The importance of reaching close agreement and letting stakeholders develop a permanent plan of action that affects them directly has obviously been set aside.

It is never good to have one entity spend extensive amounts of time and resources on a plan and only then solicit input because revising the plan, to include the input, adds more time and cost. There is great reluctance to spend more resources on an update. Input after a draft plan is usually given brief acknowledgement with little effort given to a rewrite.

The Plan needs to be a consensus document, starting with the first draft that requires only minor changes going forward.

Yes, having in-person meetings is difficult, time consuming, and emotionally risky. But it is the only option for crafting a plan that will hold up over time and in court.

III. The water volume currently released to the Trinity River, and therefore into the lower Klamath, under the ROD is adequate but mismanaged.

If others believe that there is a need for a late summer augmentation flow, there is water available within each Water Year's ROD release. Just as the TMC "shapes" each year's ROD flows now, ROD water can be held back in the spring and made available in August and September.

It was clearly Congress' intent that the Department of the Interior craft a program to restore the Trinity River fishery. The Secretary of the Interior issued a decision regarding how to meet that directive. That decision is captured in the ROD, thus any water used to address fishery health must come from the water allocated in that decision.

This solution causes no change in damage to Trinity County, Sacramento Basin fisheries, irrigation uses, or other stakeholders.

IV. The proposed augmentation flows significantly change the assumptions and policies under which the current river restoration program operates. Therefore, an EIS for augmentation flow should only be done in conjunction with a refresh of the 15-year old Trinity River Mainstem Restoration EIS/EIR.

6

Since Reclamation and Congress have determined that ROD flows are adequate for fishery restoration, then the Record of Decision should be reviewed and updated to reflect this new issue as well as all other new knowledge and science gained via adaptive management.

Adding 83,000 acre-feet of water at a non-natural time of year to the Trinity and Klamath Rivers significantly impacts the cumulative effect on the fishery and can result in a cumulative negative impact.

This cumulative impact can only truly be vetted in an updated Mainstem EIS/EIR.

V. Any annual augmentation release must be adjusted to the current year's Water Year and reservoir level

7

It is remarkable that the Draft Plan does not include the current year's reservoir elevation and the Trinity River Record of Decision (ROD) Water Year into the augmentation release volume formula.

Water augmentation must be tiered to Water Years, similar to ROD flows, and reservoir level must also be a formula component.

There is a huge difference between releasing 83,000 acre-feet of water in a Wet year with a reservoir elevation of 2,350 feet, compared to a Dry year with a reservoir elevation of 2,223 feet.

It is poor management to set a fixed augmentation amount for all Water Year types and all starting elevations. It is irresponsible to release excessive water in low reservoir carryover years based on a speculative forecast of adequate rainfall to replenish the reservoir for the following spring juveniles, and thereby reduce the cold pool.

VI. The Plan's NEPA study must include a social and economic analysis of the impact of low reservoir levels on Trinity County

8

Although not required until NEPA analysis, the Draft Plan does not even acknowledge the broad negative social and economic impact of increased river flows

to Trinity County. In many years, augmentation releases result in low reservoir elevations that prevent safe reservoir access to the public for recreation.

In our discussions over the last five years with other water stakeholders, we have not found one entity, including the Tribes, that disagrees with TLRA that the impact of the ROD and augmentation flows on lake users and businesses should be mitigated and that Reclamation should find funding to dramatically improve the public's safe access to Trinity Lake by 2019.

Much has been written since the 2003 augmentation releases about the economic hardship of river and ocean commercial and recreation fishing groups if fish die, and how flows increased a small river recreation industry. Lake recreation accounts for more total overall county revenue than river fishing.

The misconception seems to be that any water releases near the end of summer do not impact lake tourism. Lake tourism starts in March and trails off in October. Houseboating activity spans an even longer timeframe.

Excessive late summer releases from Trinity Reservoir since 2003 have often eliminated the public's ability to freely and safely access the lake surface for recreation. Lake recreation is a year-round activity including many fishing tournaments and pleasure boating during the spring and fall.

Almost nothing has been studied about the impact on communities and people at the flow source. It seems that Reclamation simply adds a few sentences about socioeconomic impacts to the plan to satisfy the document requirements instead of doing a serious, responsible analysis of the impact.

Just as a fish die-off may be "devastating" to the tribal trust fishing, a low lake elevation with no access via boat ramps is devastating to Trinity County tourism and the county economy. Lake tourism and its indirect uplift accounts for many of the unskilled jobs in Trinity County. Lake tourism spins off marina jobs, lodging housekeeping, and service and dining jobs. These jobs are crucial to Trinity County that suffers from 10.5% unemployment and 19.2% poverty.

Extremely limited, unsafe, and difficult access to the reservoir for recreation damages private businesses in the region and all Forest Service camping facilities. The trickle-down effect of low reservoir elevations on the general tourist perception of Trinity County often prevents visitors from choosing Trinity as a vacation destination.

From a business perspective, Forever Resorts at Cedar Stock estimates that in 2014 it cost them \$1,000 per day to "chase the water" by moving mooring docks almost weekly in order to keep boats in the receding water. When the lake reaches 150 feet down, Forever Resorts has to completely disconnect the docks from land and anchor them offshore. This creates an additional cost for the marina to shuttle moorage customers to their boats, and clearly discourages visitors from coming to the lake.

We grant that excessive flow releases in Extremely Wet, Wet, and Normal water years may not always limit safe public access. But any time the reservoir level

reaches 2,310 ft (60 feet down), the preferred Draft Plan flow volume of 83,000 acre-feet pushes the Trinity Center boat facility (the second busiest facility on the reservoir) out of the water. This leaves only one fully public facility usable—Minersville—that is in very poor condition.

If Reclamation implements a late summer flow augmentation, relief must be given to affected businesses and long-term mitigations identified and funded within a reasonable timeframe.

The economic well-being of one stakeholder group should not be achieved on the back of another. Equality and shared risk should be the goal, not political appeasement.

VII. Agreement with current Draft Plan commenters

San Luis & Delta-Mendota Water Authority and Westland Water District. TLRA concurs with all points in the San Luis and Delta-Mendota Water Authority and Westland Water District's comments on the Draft Plan dated January 30, 2015. 9

In particular, we strongly agree that:

- The ROD is the permanent and final authorization for annual water take from Trinity Reservoir. Reclamation lacks authority to make additional releases (Comment I)

The State Water Resources Control Board has indicated that release of Trinity water for late summer flow augmentation is not a permitted use within its water permit and conditions.

- Reclamation must obtain a change in the place of use for the TRD permits before it make future augmentation releases. (Comment III)
- The Draft Plan is based on subjective, unproven science, and uncertainty. (Comment IV).

Reclamation, Trinity Management Council, and Trinity River Restoration Program (TRRP) advocate for the use of sound science in all restoration decisions and projects. However, again, Reclamation is asking the public to trust them, with no scientific backing, that the augmentation flow will prevent a fish die-off.

There is still disagreement among members of TAMWG, TRRP, and TMC about the impact of unnatural flows on the fish. Much more effort should be spent reaching consensus on the issue and understanding if more long-term harm is being done than good.

There is no proven science for the cause of the 2002 Ich outbreak. There was an even larger Ich outbreak on the Upper Klamath River in 2014 with no fish mortality. This proves that there is no true understanding of the factors that caused of the outbreak in 2002.

The 2002 die-off was the first fish kill in the 41 years of Trinity Dam history. Thirty-plus years had lower flows with warmer water than 2002. Historic records show that the 1980s and 1990s, prior to Trinity Record of Decision flows, had much larger fish harvests on average than post-ROD years.

It is reactionary and irresponsible to damage many water stakeholders on a guess. Hope is not a management strategy.

Northern California Power Agency. TLRA agrees with all points in NCPA's letter. In particular, their assessment of authorizing legislation for the Trinity River Diversion clearly shows that Humboldt County's use of 50,000 acre-feet of water may only be for consumptive use. 10

The State Water Resources Control Board has indicated that any use by Humboldt County of 50,000 acre-feet for instream flow purposes is not authorized under its permit and conditions.

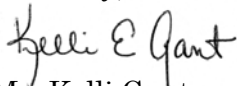
Further, we agree with prior Interior Solicitor opinions that any water due to Humboldt County can be obtained from the ROD flow as it nears the ocean and has served its purpose for fishery support.

VIII. Conclusions

In closing, we ask the Bureau to 11

- Stop band-aiding a symptom of the deeper Trinity and Klamath River crisis --the overall health of the rivers. Manage and fund a detailed and independent science research project to provide data for a sustainable solution.
- Accept a long-term solution crafted by a team of public and private water stakeholders that includes power, irrigation, tribes, and citizens.
- Refresh the Trinity River Mainstem Restoration EIS/EIR to fully analyze the impacts of any late summer river augmentation and to reflect current science and lesson learned in the restoration program.
- Include a complete, truthful social and economic impact analysis in the EIS of how augmentation flows impact non-fish and Trinity Reservoir stakeholders. Identify, fund, and implement in a timely manner economic and recreation mitigations.
- Respectfully manage Trinity Reservoir's limited water as to not cause damage to the people of Trinity County.

Sincerely,



Ms. Kelli Gant, president
Trinity Lake Revitalization Alliance, Inc.

CC: Trinity County Board of Supervisors
Congressman Jared Huffman



651 Commerce Drive
Roseville, CA 95678

(916) 781-3636

www.ncpa.com

August 20, 2015

Mr. Paul Zedonis
Bureau of Reclamation
Northern California Area Office
16349 Shasta Dam Blvd
Shasta Lake, CA 96019

SUBJECT: Comments on the Bureau of Reclamation's Proposed Scoping Plan for the Environmental Impact Statement (EIS) on the Long Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River

Dear Mr. Zedonis:

The Northern California Power Agency (NCPA) appreciates the opportunity to comment on the Bureau of Reclamation's proposed scoping plan for its environmental impact statement (EIS) on the Long Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River (Plan). NCPA and its members purchase in total about 40 percent of the Central Valley Project power marketed by the Western Area Power Administration. Reduced power generation in the CVP system directly impacts our members and adds to their power costs, while many of the CVP costs remain fixed or increasing, even as changes are made to water deliveries. Our initial comments follow:

- The Plan must carefully and thoroughly consider the environmental impacts caused by foregone power generation that will impact all CVP power customers for each acre foot of water released down the Trinity, instead of being utilized in the CVP Sacramento River system. These losses have been estimated by Reclamation to be about 1.1 MWH/AF of water released down the Trinity. These impacts will lead to substantial loss of CVP generation. In turn, CVP customers will need to find and utilize replacement power supplies that will incur additional environmental impacts. In Northern California, the typical marginal power resource is likely to be natural gas fired generation, with resulting GHG emissions, and the need to procure cap and trade compliance instruments. All of these impacts should be included in the EIS since they are certain to occur for each acre-foot of water released down the Trinity. 1
- The loss of CVP power generation can also adversely affect even Project Use pumping, depending upon the overall CVP power resource situation. In several recent years, supplemental purchases of non-hydro power have been required in the late fall/early winter time frames to support Project Use pumping for the CVP. These impacts and their associated environmental impacts must also be included in the EIS. 2
- The EIS needs to analyze and measure all of the effects that will be caused by reduced water deliveries to the Sacramento River system, including but not limited to temperature impacts on the Sacramento and the reduced or constrained ability of Reclamation to meet the California State Water Resources Control Board requirements for the CVP system in the Delta region. Increased Trinity water releases are certain to cause these environmental impacts and they should be included in the EIS. 3

- All Trinity River water releases in excess of Record of Decision (ROD) levels should receive appropriate compensation for power, as noted in Section 6.4 of the April 2015 Draft Long Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River. As Reclamation has noted this can be done by "... modifying the cost allocation for the operation and maintenance component assessed to power users..." (Section 6.4.1, page 29). We remain concerned that the compensation for 2012, 2013 and 2014 has not been provided to power customers. 4
- We also recommend that the EIS take a holistic view of the entire CVP system, and especially the impacts on the Sacramento River system. The EIS should not focus exclusively on Trinity water releases. 5
- Consideration must be given to the impact on the reliability of the California electric grid by altering the water releases. The existing electrical grid has been reliant on the power produced historically and the recent additions of renewable energy have made hydro generation more critical. The risk of outages and actual outages have significant impacts to traffic, health and safety, and commerce. The EIS should properly consider these impacts. 6

As the EIS is prepared, we will provide further comments. In summary, we are concerned that the current scope of the EIS has not properly included the extensive and broad impacts on CVP power customers that will be caused by each acre foot of water released down the Trinity. 7

Sincerely,



RANDY S. HOWARD
General Manager

(916) 781-4200 / 783-7693 FAX

Paul Zedonis
Bureau of Reclamation
Northern California Division
16349 Shasta Dam Blvd.
Shasta Lake, CA 96019
sha-slo-klamath-LTP@usbr.gov

Subject: Comments on Long Term Plan for Protecting Adult Salmon
in the Lower Klamath River

1. The proposed release of water from Trinity Reservoir is exactly what caused the 2002 die off above the confluence of the Trinity and Klamath Rivers. The release of cold water from Trinity Reservoir to the Lower Klamath River in 2002 triggered pre-spawn adults that hydrologic conditions were right in the Klamath River – *it's time to head up river to spawn*. What they did not know is that hydrologic conditions of the Klamath River were altered by Bureau of Reclamation (B.O.R) and not natural. The Klamath River flow above the confluence was low and warm and not supportive to a normal spawn run. *Surprise!* This is without a doubt what caused the die off; mismanagement of flows by Bureau of Reclamation. 1
2. The raising of Upper Lake in 2001 for the benefit of the Short Nose Sucker was proven to be negative to the Suckers and a *failed experiment*. This created an unnatural environment for the Suckers and created a crisis for the farmers and ranchers who signed up under the Klamath project. They were without their contracted water that caused over a thousand farm and ranch casualties (from forced sales, foreclosures, and bank repossessions). Again, mismanagement of flows by Bureau of Reclamation. 2
3. Record Chinook salmon runs were recorded in 2014 in the mid Upper Klamath River below Iron Gate Reservoir during extreme drought condition. Late summer releases from Copco 3

1 Reservoir created instream river flows to support this record run. This one incident shows the benefits for keeping the Klamath River Dams in place.

4. Point is that present conditions in the Klamath River, with the dams and fish hatchery in place, have been very conclusive to benefit anadromous fish habitat for much of recent history until the introduction of the KBRA, KHSR and B.O.R. mismanagement of river flows.
5. Coho salmon are cold-water anadromous fish with their primary habitat within 30 miles of the coast where the water quality is more ideal for Coho. Coho were transported from Cascadia Creek, Oregon in the early 1900's and introduced to the Lower Klamath River. They are not indigenous to the Klamath River and should not be listed under the ESA.

RECOMMENDATION

- A. Keep the Klamath River Dams and Iron Gate Fish Hatchery in place. The dams provide the following:
 1. Cool water for the continued operations of Iron Gate Fish Hatchery that releases 7 million anadromous fingerlings into the Klamath River yearly.
 2. Clean hydroelectric power for 70,000 homes.
 3. Reduces peak flood flows by 25%.
 4. Reduces algae blooms in the Lower Klamath River.
 5. Reduces river temperatures in the Lower Klamath River.
 6. Contains river transported sediments from the Upper Basin.
 7. Can provide CDFW minimum instream flows of 700 cubic feet per second (cfs) during drought conditions for a 3-month period given a complete Klamath River shut off above the dams.

Environmentalists are pushing to a “natural” environment. (California Natural Resources Agency, supported by the EPA.) Under natural conditions and flows in the Lower Klamath during this drought period there would be little or no flow. Thank God for the Klamath River Dams and the capability for late summer instream flow releases.

Keep historic flows and operations the same in the Klamath Basin as they were prior to the introduction of dam removals, (the KBRA & KHSA and “multi-party settlement agreements”). **Keep the dams!** The removal of the Klamath River Dams will remove the Iron Gate Fish Hatchery and allow 20 Million cubic yards of contaminated sediments to be washed down river, which would decimate the Klamath River and salmon runs for an unknown period of time, maybe forever.

Respectively Yours:

Jerry Bacigalupi

Jerry Bacigalupi P.E.

[REDACTED]

[REDACTED]

DOUG WHITSETT

State Senator

DISTRICT 28

KLAMATH, LAKE, CROOK & PORTIONS
OF JACKSON & DESCHUTES COUNTIES

900 Court St NE S-311

Salem, OR 97301

503.986.1728



GAIL WHITSETT

State Representative

DISTRICT 56

KLAMATH & LAKE COUNTIES

900 Court St NE H-474

Salem, OR 97301

503.986.1456

OREGON STATE LEGISLATURE
900 COURT ST NE SALEM, OREGON 97301

Wednesday, September 02, 2015

Paul Zedonis
Bureau of Reclamation
Northern California Office
16349 Shasta Dam Blvd
Shasta Lake, CA 96019

Dear Paul,

We are writing this letter in support of the Klamath Soil and Water Conservation District and Klamath Basin Water Advisory Committee's comments regarding the Environmental Impact Statement on the Draft Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River.

As you are well aware, the Klamath Basin and its residents have been subjected to prolonged drought conditions. The artificial scarcity created by politically motivated policies have caused undue hardship to the region's agricultural industry, as well as an overall erosion of quality of life and potential prosperity.

A proper balance must be achieved in order to satisfy the various environmental and economic interests that are involved in these issues. We feel that the local KLWCD and KBWAC officials who submitted their comments have done so in good faith and are representing the values of the community at large. We strongly urge you to take them into consideration.

Feel free to contact either of our legislative offices with any comments, questions or concerns that you may have, or if you need any additional information from us.

Sincerely,

Senator Doug Whitsett
Senate District 28

Representative Gail Whitsett
House District 56

From: [REDACTED] on behalf of [KlamathLTP, BOR SLO](#)
To: [REDACTED]
Subject: Fwd: Preliminary comments of Lower Klamath River draft plan
Date: Wednesday, August 12, 2015 9:26:31 AM

[REDACTED]
[REDACTED]
[REDACTED]
----- Forwarded message -----

From: Sen Whitsett [REDACTED]
Date: Tue, Aug 11, 2015 at 9:59 PM
Subject: Preliminary comments of Lower Klamath River draft plan
To: "sha-slo-klamath-LTP@usbr.gov" <sha-slo-klamath-LTP@usbr.gov>
Cc: [REDACTED]

Mr. Zedonis,

This evening's comments are more related to the handout and oral information provided at this evening's meeting in Klamath Falls at the Shiloh Inn. I will make further comments when I have fully read The Draft Plan.

The handout totally neglects to mention the significant mitigation for lost habitat upstream of the dams that is afforded by the fish hatcheries. 1

The handout makes the statement that up to 90 percent of the Trinity River flow was exported each year. It is my understanding that the Trinity and Lewiston Dams are capable of diverting up to 80 percent of the flow from the upper 20 percent of the Trinity River watershed. 2

Following the September 2002 fish die-off in the lower Klamath River, I made a concerted, prolonged and unsuccessful effort to obtain necropsy reports and related pathology reports on salmonids that died on the River. The presence of disease organisms and lesions is only anecdotal evidence of the cause of death in the absence of appropriate pathology confirmation. 3

The handout goes on to state that timed fall releases of water during low flow years coincided with "no significant disease or adult mortality" Yet it was my understanding that Mr Zedonis stated during the Klamath open house that signs and lesions of Ich were so prevalent in the 4

fall of 2014 that biologist were amazed that the fish did not die.

Once again, the observation that fish did not die during the years of high water releases during seasonal low flows is anecdotal and does not prove causation.

Moreover, releases of cold water seasonal flows from the Trinity Reservoir would not be possible without the presence of the stored cold water behind the dam. Moreover, the same is true regarding flows in the main stem Klamath River. Late fall seasonal flows out of Upper Klamath Lake prior to the construction of the Link River Dam were minimal at best.

No mention of the significant impact of ocean conditions and habitat on salmonid life cycle was mentioned in either the handout material or the oral presentation. To what extent may we expect the Draft EIS to address ocean habitat conditions and how they may affect Klamath River salmonids?

What does the term “associated environmental justice” mean and how will it be “analyzed” in the EIS?

Finally, given how few documented facts appear to actually be known regarding the River and its salmonids, what data do you plan to use to calibrate your predictive mathematical models?

Best regards

Sen. Doug Whitsett, Doctor of Veterinary Medicine

Oregon Senate District 28 including the entire Klamath River watershed in Oregon.

(541) 891-6109

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[Petitioning Bureau of Reclamation, Northern California Area Office Paul Zedonis.](#)

Stop Klamath Fish Kills and Restore the Klamath and Trinity Rivers

[Regina Chichizola](#) [United States](#)



You're a decision maker on Regina's petition.

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[Regina Chichizola](#)

[United States](#)

94

Supporters

The Bureau of Reclamation (BOR) is currently taking comments on the Lower Klamath River Long Term Plan and will be having public meetings in Arcata, Calif. on Aug. 5 at 5:30, Weaverville, Calif. on Aug. 6 at 5:30, Klamath Falls, Ore. on Aug. 11 at 5:30 and Sacramento, Cal. on Aug. 12 at 5:30. The BOR is proposing to release water from the Trinity River under certain conditions during drought years in order to avoid Klamath River adult fish kills. This is a necessary step in the right direction, however the BOR is not addressing the facts that up to 100% of the juvenile salmon in the Klamath River are dying during drought years, conditions on the Klamath River above it's confluence with the Trinity River are deplorable, and that continued water exports are diminishing the Trinity River reservoirs, which warms water. It is time for the BOR to commit to providing the water salmon need in the Klamath River.

The National Academy of Sciences has stated that Klamath River management cannot be successful until the watershed is managed as a whole. This plan is a step in the right direction, however it is little more than a band-aid, while heavily subsidized farmers continue to de-water much of the upper Klamath River, the Trinity River, and many of the Klamath's Tributaries during drought and non-drought years.

The BOR can save the Klamath Salmon and stop Klamath River fish kills by; 1.) Releasing more water into the Trinity River and providing for cold water storage for the river by reducing water exports from reservoirs, 2.) Restoring flows in the Scott and Shasta rivers, which are currently almost de-watered every year, 3.) Providing more clean water to the mainstem Klamath basin, even if that means Klamath farmers have to reduce water use during drought and low water years, and have to deal with toxic tail water run-off from their flood irrigation, 5.) Move forward with Klamath dam removal, and 6.) Restore wetlands, which naturally filter water in the Klamath River.

Written comments will be accepted at the scoping meetings or may be mailed to Paul Zedonis, Bureau of Reclamation, Northern California Area Office, 16349 Shasta Dam Blvd., Shasta Lake, CA 96019 or emailed to sha-slo-klamath-LTP@usbr.gov. Written comments must be received by close of business Thursday, Aug. 20, 2015. For more information, please contact Zedonis at 530-275-1554 (TTY 800-877-8339).

Letter to

Bureau of Reclamation, Northern California Area Office Paul Zedonis,
Stop Klamath Fish Kills and Restore the Klamath and Trinity Rivers

Dear Secretary of Interior Sally Jewell and Project Manager Paul Zedonis,

I am writing to ask that the Lower Trinity Long Term Plan look at a broader array of alternatives and solutions to avoid Klamath River fish kills, and that the plan aims to

Document 1587

recover salmon species, as it is the BOR's Tribal and Public Trust obligations. The Klamath salmon support California's three largest Tribes along with the entire West Coast commercial salmon fleet. Past Klamath River fish kills, and shortages, have lead to Oregon and California salmon fishing shut downs, and widespread food shortages for Klamath and Trinity River communities.

The release of Trinity water to avoid Klamath River fish kills over the last couple of years has been a step in the right direction and we thank you for taking action. However large-scale water exports from Trinity River has lead to low carry over storage in the Trinity reservoirs, and large scale juvenile salmon kills on the Klamath River and toxic river conditions continue.

The plan should focus on restoring the Klamath Salmon and analyze the following solutions: The BOR can save the Klamath Salmon and stop Klamath River fish kills by; 1.) Releasing more water into the Trinity River and providing for cold water storage for the river by reducing water exports from reservoirs, 2.) Restoring flows in the Scott and Shasta rivers, which are currently almost de-watered every year, 3.) Providing more clean water to the mainstem Klamath basin, even if that means Klamath farmers have to reduce water use during drought and low water years, and have to deal with toxic tail water run-off from their flood irrigation, \ 5.) Move forward with Klamath dam removal, and 6.) Restore wetlands, which naturally filter water in the Klamath River.

It is time to look at real solutions to this issue and not just short term band-aids. We thank you for this effort but it is not enough. We agree with the National Academy of Sciences that it is necessary to look at the Klamath watershed as a whole. Save the Klamath Salmon!

Thank you,
Updates

-
1. 2 months ago
Petition update

[BOR Decides to Only Provide Half of the Fow Needed to Stop a Klamath Fish Kill This Year](#)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

----- Forwarded message -----
From: **Seth Naman - NOAA Federal** <seth.naman@noaa.gov>
Date: Mon, Sep 14, 2015 at 11:53 AM
Subject: Comments on Klamath long term plan
To: "Zedonis, Paul A" <pzedonis@usbr.gov>

Paul,

I sent these comments to Hum Co but I don't ever think I sent them to you. I know they're late, but if still possible please include them in our comments on the long-term plan. thanks,

Seth

Protection of the returning adult salmon has been and should be at the forefront of ways in which the county could utilize this water. However, I'm hopeful there will be years in the future where the water will not be warranted because of normal or above normal precipitation. In these years I suggest that the county could utilize the water in the winter to help mimic a more natural flow regime in the winter months for rearing juvenile salmon and to help make what are now hydrologically stagnant winter flows more ecologically beneficial to the river and organisms in the river. Static winter flows have been identified in the NMFS SONCC coho salmon recovery plan, as well as numerous peer-reviewed journal articles as problematic for rearing juvenile salmon (I have a more detailed write up with references if you could use that).

I've thought about the logistics of how this could work:

1. Humboldt County could ask that Reclamation make the water available annually, from June 1, to May 31 of the following year.
2. If no fall flow augmentation, or minimal fall flow augmentation is utilized between June 1 and Oct 1, then the remainder of the water would be available after that date to help mimic rainstorms and snowmelt that create high flow events, when flows at Lewiston Dam would normally be at the minimum of 300 cfs for the majority of the year. A group of agency and tribal staff would determine the best use for the water during the winter months.
3. The clock would reset on June 1, and there would be no carryover of the water, as is typically a concern of Reclamation's.

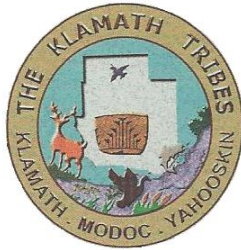
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[REDACTED]

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The Klamath Tribes

Mr. Paul Zedonis
Supervisory Natural Resource Specialist
Northern California Area Office
16349 Shasta Dam Blvd
Shasta Lake, CA 96019

October 26, 2015

Scoping Issues for the Environmental Impact Statement for the Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River

Dear Mr. Zedonis:

The Proposed Action and Purpose statements for the EIS were presented to the Klamath Tribes by BOR staff in an informational meeting on October 5, 2015, along with an explanation of the EIS process. Prior to the Oct 5 informational meeting, the US had not consulted with the Klamath Tribes on this EIS. We left the meeting with the following understanding. First, this EIS is slated to be finished and a ROD issued sometime during the summer of 2016, with the schedule being driven by a court-order. Second, the EIS will focus on how Trinity River flow regimes can be managed during the August-September period to influence conditions in the lower Klamath River, although we note with concern that neither the proposed action nor the statement of purpose as presented to us constrain the scope of the EIS in this manner. Third, a major reason why the Klamath Tribes have not been previously consulted is because this process is focused solely on management of the Trinity River.

We offer the following for consideration in preparation of the EIS.

Proposed Action

As stated in the October 5, 2015 presentation to the Klamath Tribes:

- The proposed action is to increase lower Klamath River flows to reduce the likelihood, and potentially reduce the severity, of any fish die-off in future years due to crowded holding conditions for pre-spawn adults, warm water temperatures, and presence of disease pathogens.
- The purpose of the proposed Federal action is to reduce the likelihood of an Ich epizootic event that could lead to an associated fish die-off in future years.

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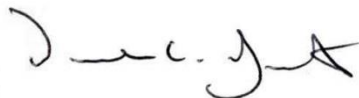


The Klamath Tribes request that these statements be changed as follows:

- The proposed action is to use water stored in Trinity Reservoir during August and September to increase lower Klamath River flows under specific circumstances to reduce the likelihood and severity of fish kills due to crowded holding conditions for pre-spawn adults, warm water temperatures, and outbreaks of the diseases Ich and columnaris. 1
- The purpose of the proposed Federal action is to use water stored in Trinity Reservoir during August and September to reduce the likelihood of significant mortality of anadromous fish in the lower Klamath River resulting from epizootics of Ich and/or columnaris. 2
- As an editorial aside, the term “fish kill” should be used instead of the term “die-off”. Fish kill is the correct terminology in fisheries science. 3

It is essential to constrain the scope of this EIS to the use of Trinity River water, if BOR is to meet their timeline. Obviously, water from the Klamath River upstream of the Trinity River confluence could be managed in ways that could influence the lower Klamath River during August and September. However, if use of water from the Klamath River is considered for such purposes in this EIS, then the analytical scale of the EIS becomes very large and complex, and it would be impossible to maintain the specified schedule. This is true because changes in the flow regime for August and September would cascade through the complex water management scheme upstream of Iron Gate Dam, which would in turn require analysis of alternative year-round management schemes for Upper Klamath Lake and its endangered suckers, deliveries to the Klamath Reclamation Project, and the National Wildlife Refuge complex. In addition to the complicating factors associated with consideration of water rights of those diverting water, and of the instream water rights of the Klamath Tribes, the EIS would have to interact with the current joint Biological Opinion on the operation of the Klamath reclamation Project. The net effect of considering alternatives that would include changes to Klamath-side water management in the present EIS would be to expand the scope of the EIS to include year-round water management within the entire Klamath River basin. 4 5

Sincerely,



Donald C. Gentry, Chairman

cc: Klamath Tribal Council

Larry Dunsmoor, Water Management Liaison, Klamath Tribes

Will Hatcher, Natural Resources Director, Klamath Tribes

Ed Case, Acting General Manager, Klamath Tribes

Therese Bradford, Klamath Basin Area Office Manager, BOR

Laurie Sada, Klamath Falls Fish and Wildlife Office, Field Supervisor



Karuk Tribe-Scoping Comments on the Environmental Impact Statement (EIS) in support of Reclamation’s decision or determination regarding the approval of the Long-Term Plan for Protecting Late summer Adult Salmon in the Lower Klamath River.

November 13, 2015

Examine Hatchery Management Effects

1

An EIS should examine effects of Trinity River Hatchery management and production goals as it relates to production of Chinook salmon including Spring Chinook salmon. It’s long been recognized that large hatchery operations can have effects on fish disease either directly or indirectly. Fish disease outbreaks are common at hatcheries and could have impacts beyond the hatchery environment into the river system. More indirect impacts include saturation of the river environment with un-naturally high densities of fish, both adult returns and juvenile out-migrants. Hatcheries also contribute to weaker population level resiliency of salmon stocks which could add to fish disease problems far away from the hatchery given that hatchery fish are mixing with wild fish at the larger scale.

Consider Spring Chinook Health and Migration Conditions

2

Migration and summer holding Spring Chinook are the first salmon to enter the river and could be vectors for fish disease outbreaks if migration conditions and water quality and quantities are not adequate for their wellbeing during the summer months leading up to the main Fall Chinook migration. The EIS should consider a range of actions designed to protect all Chinook life history type, including both Spring and Fall Chinook Salmon. Summer flow releases could be an action which prevents disease from taking hold among spring run chinook and preventing spread to the larger fall run.

Expand the Scope to include more sources of water

3

Expand the scope to include analysis of flow increases from all sources of water flowing into the Lower Klamath River water. While the Trinity River and the upper Klamath River are major sources of water during the late summer and early fall, there could be smaller gains from tributaries such as the Shasta River where smaller reservoirs exist and diversions could be curtailed to increase river flows.

Cumulatively, some amount of water could be added to the Lower Klamath River under some type of buyback program in coordination with water users within the Shasta River or other middle Klamath River Tributaries.

Alternative influences on water temperatures, smoke and fires

4

We recognize that water temperature is a leading factor affecting fish disease in the Lower Klamath River therefore advocate for alternative actions to cool the river system. During the past three years (2013, 2014 and 2015) of dry and drought conditions there have been wildfires and smoke extensively

within the Klamath Basin. The effect of smoke inversions are something that has been observed but not thoroughly investigated, but worth looking at for possible benefits to water temperature.

Furthermore, the effects of smoke are presumably more during dry years when similar meteorological conditions are likely to also have negative impacts on water temperatures. Fire suppression is typically the first response to wildfire outbreaks due to the high risk to property damage caused by fire. The Klamath and Trinity Rivers both originate in large wilderness areas where little human property exists and risks from wildfire are low. Given the remote geography of the region and opportunity to let forest fires burn, more consideration should be given to allowing wildfires to run their course when opportunities exist to do so safely.

Trinity River Flow Augmentation Effects to upper Klamath River Chinook

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The EIS should examine the effects to Klamath River Chinook stocks destined for the middle and upper Klamath River and tributaries. Cool water in the Lower Klamath does not always mean cool water for reaches above the Trinity River therefore the EIS should carefully look at the long term and short term effects on other stocks of Klamath River salmon and steelhead.

Other means of protecting Lower Klamath Chinook

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Fishing pressure from recreational fisheries and tribal fisheries presumably adds an unknown level of stress to migrating Chinook salmon. Certainly there is more evidence that fishing within cold water refuges located in the Lower Klamath has negative effects on salmon holding in those locations. The EIS should consider actions within its scope that include working with State and Tribal fisheries regulators to ensure better protections for migrating and holding Chinook salmon. Additionally, protections could include spatial closures at creek mouth thermal refuges and at the river estuary. Perhaps the largest thermal refuge is the Pacific Ocean where closures could assist fish moving between the ocean and estuary zone.

Expansion of fish health monitoring and effectiveness monitoring

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The EIS could consider the effects of fish disease sampling with in additional locations above the Trinity River. Adult fish disease sampling such as examination for Ich is lethal where the fish must be killed upon capture. At this point, samples are derived from existing tribal fisheries and at hatcheries, but this has caused large data gaps within the middle reaches of the river. The EIS could examine the impact of sampling adult chinook from middle reaches around Orleans, Happy Camp and Beaver Creek. Sampling with terminal gear such as gill nets could be implemented as a means to collect samples. Public and tribal concerns would need to be addressed through some type of informative process.

Competing Fish Needs Analysis

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We realize there are competing needs for water not only for water users, but for fish species. The Klamath Basin has multiple salmon species and other non-salmon fish species that are sensitive to water quality and quantities. The same is true for the Sacramento River where much of the Trinity River flow is diverted. With competing needs for limited amounts of water, there should be a clear understanding of

limitations caused by competing needs for water. Listed species within the Sacramento system presumably would take precedent over non listed species on the Klamath/Trinity River side and therefore a clear understanding of what limitations exists should be examined in the final EIS.

Tribal Impacts

In accordance with Reclamation's Indian Trust Asset Policy and NEPA Handbook Procedures to Implement Indian Trust Asset Policy, Tribes should be invited to submit their own cultural impacts sections of the EIS as the Tribes themselves are obviously the experts in this regard. Impairments to fisheries result in a loss of self-reliance, culture, and economic opportunities for Tribes.



YUROK TRIBE

190 Klamath Boulevard • Post Office Box 1027 • Klamath, CA 95548

Date: October 26, 2015

To: Paul Zedonis, Northern California Area Office, Bureau of Reclamation

Cc: David Murillo, Mid-Pacific Regional Manager, Bureau of Reclamation

From: Dave Hillemeier, Fisheries Program Manager, Yurok Tribe

Re: Yurok Tribal Comments Regarding EIS Scoping for April 2015 Draft Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River

The comments below are in response to the Bureau of Reclamation's scoping process currently underway to develop an Environmental Impact Statement (EIS) for a long-term strategy to protect the health of migrating adult salmon in the Lower Klamath River. These technical comments should be considered as supplemental to comments provided by the Tribal Council and staff at a public meeting held at the Yurok Tribal office in Klamath on October 12th, as well as the January 29, 2015 comments provided by the Yurok Tribe in response to the draft plan titled *Draft Long-Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River*.

As you are aware, the fish kill of 2002 happened within the boundaries of the Yurok Reservation. This event had devastating effects upon Yurok People; including social, psychological, cultural, economic, and subsistence impacts. In light of these devastating impacts the fish kill had upon our people, the importance of the fishery resource to the Yurok Tribe, and the technical expertise the Yurok Tribe has to offer, we've requested that the Tribe be granted "Co-lead" status for the development of the EIS that is currently being drafted. Please consider the comments we've submitted previously, as well as those listed below, as concepts to be expanded upon as we work with BOR as a Co-Manager during the drafting of the EIS.

- A basin-wide comprehensive plan needs to be developed, one that restores the ecological function of the entire Klamath-Trinity Basin. This plan needs to be based upon water management solutions from throughout the Basin, including managed tributaries under federal, state, tribal, and local jurisdictions.
- Protecting fish in the Klamath-Trinity basin should not be precluded by management decisions made regarding the use of Trinity River water in the

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Central Valley. Priority should be given to protect the Yurok Tribes trust fisheries resources in the Trinity River, with Trinity River water. Specifics regarding the need for supplemental flows in the Lower Klamath River within a given year are often not known until mid-late summer, well after decisions regarding the export of Trinity River water to the Central Valley are made. When making Central Valley water management decisions that affect Trinity water such as annual water allocations to CVP water contractors, Drought Contingency Planning, and/or updates to the Sacramento River Temperature Management Plan; managers should assume that flows supplemental to 2000 Trinity River Record of Decision annual water volumes will be needed in the Lower Klamath River to protect fish health in the late summer/fall. Prior to committing Trinity River water diversions to the CVP, the Bureau of Reclamation must ensure adequate water storage will be preserved in Trinity Reservoir in anticipation of the need to provide supplemental flow later in the summer.

4

- Prior to exporting Trinity River water to the Central Valley, the Bureau of Reclamation should ensure that adequate Trinity Reservoir storage is preserved to meet in-basin needs first, including; 2000 Trinity River ROD flows, spring/summer water temperature targets for juvenile salmon and steelhead, fall water temperature targets identified in WR 90-5 for spawning and incubation, as well as adequate water volume for potential supplemental flow releases to protect late summer adult salmon in the Lower Klamath River.
- The EIS should include measures to uphold Reclamation's requirement to meet the non-discretionary terms and conditions of the mitigation measures to the reasonable and prudent measures of the Trinity River ROD, including; to be prepared to bypass power production at Trinity Dam by making use of the auxiliary by-pass outlets on Trinity Dam as needed, as well as modification of the export schedule of Trinity Basin diversions to the Sacramento River (ROD Appendix C).
- In its current form, the long-term plan has no provision for multi-year water management planning, only annual management. The EIS should include a process for comprehensive multi-year water planning so that the needs of Trinity fish can be met in future years. Drought typically occurs in sequential years, such as the ongoing drought that has now reached its fourth year. Excessive water exports of Trinity water to the CVP in consecutive years, have resulted in low annual end-of-September storage, and currently alarmingly low current FY 2015 carry-over storage in Trinity Reservoir levels. Excessively low Trinity Reservoir carry-over

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storage levels, followed by below normal winter precipitation may preclude protection of Trinity River fish in future years.

- The use of Trinity River water to meet the needs of Trinity River fish populations for Tribal trust and ESA purposes must be a priority over meeting the needs of fish outside the Trinity Basin. For example, it is not acceptable to sacrifice the water needs of Trinity River fish so that Trinity water can be used to sustain ESA listed Sacramento River fish. Reclamation should evaluate and implement alternatives to more conservatively manage Shasta Reservoir storage, and upgrade and improve temperature control infrastructure devices (e.g. Shasta TCD, Whiskeytown Reservoir temperature control, Keswick releases) to meet Sacramento River water temperature requirements, rather than relying on Trinity River diversions through Carr Tunnel to meet water temperature objectives for listed Sacramento River Winter-run Chinook salmon. 7
 - Several factors may warrant consideration when deciding whether to supplement Lower Klamath flows to protect adult salmon health; including, but not limited to adult fish abundance, fish migration behavior, lower Klamath River discharge, in-river water temperature, climatic patterns, and fish disease prevalence. We recommend that during the development of the EIS, technical staff of Co-managers develop a matrix to guide consideration of such factors based upon previously applied management criteria, and newly acquired scientific knowledge to assist managers in determining the appropriate use of supplemental flows within a given year. 8
- 9

Much has been learned regarding how to minimize fish disease of adult salmon in the Lower Klamath since the fish kill of 2002, however many scientific questions remain. We recommend that a rigorous adaptive management based research and monitoring program be established to better understand factors affecting fish disease and development of management strategies to minimize the risk of fish disease in future years. This adaptive management based approach will incorporate the most current and best available science to guide and evaluate the water management and other actions that are implemented to protect late summer adult salmon in the Lower Klamath River. 10