COUNTY OF SISKIYOU
Board of Supervisors

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February 01, 2017

State Water Resources Control Board
Division of Water Rights
Water Quality Certification Program
Attention: Mr. Parker Thaler
P.O. Box 2000
Sacramento, CA 95812-2000

Subject: County of Siskiyou Comments on the *Notice of Preparation and Scoping Meetings for An Environmental Impact Report for the Lower Klamath Project License Surrender*

Dear Mr. Thaler:

The County of Siskiyou would like to provide the following letter, in addition to the public and written statement that we provided at the State Water Resources Control Board (Water Board) public scoping meeting held in Yreka, California on January 26th (attached). We require through this letter that you keep the County, the Board of Supervisors, Siskiyou County Counsel and the Natural Resource Policy Specialist up to date on the progress of this draft Environmental Impact Report, and inform us in an official and timely manner of any future meetings, documents or related activities. We also request that as outlined in Assembly Bill No. 52 (AB 52), the Water Board coordinate with the Shasta Nation who's Traditional Homelands include portions of the Klamath River, which was officially recognized through a Siskiyou County Resolution, to meet the requirements of AB 52 and the California Environmental Quality Act (CEQA). (attached). In addition, the Shasta Nation provided information to the Water Board that there are Native American burial sites, and decorated Shasta Nation Civil War veterans buried under Iron Gate reservoir, which could require special approval from federal agencies, and at the very least extensive archeological review.

We reiterate our concerns about the Water Board's outreach activities regarding public scoping meetings. As we outlined in our statement on January 26th, Siskiyou County was not officially notified of the January 10th meeting until January 4TH, and our County Counsel did not receive notice by mail until January 9th. This is not adequate notice as Siskiyou County strives to keep its public up to date on any activities that would potentially affect the County, and the Board of

Brandon Criss	Ed Valenzuela	Michael N. Kobseff	Lisa Nixon	Ray Haupt
District 1	*District 2*	*District 3*	*District 4*	*District 5*

Supervisors frequently participate and supplies comments on any actions that impact the County. Short notice and limited communication violates, if not the letter, then certainly the spirit, of the law intended to notify and engage the public and solicit active participation. We are requiring that in the future the Water Board make a more concerted effort to keep the public up to date on its future activities and provide enough time for the public to be able to develop and provide ample and thoughtful input.

The Water Board's *Notice of Preparation and Scoping Meetings for An Environmental Impact Report for the Lower Klamath Project License Surrender* (NOP) appears to assume that dam removal is the determined outcome, which would make the environmental document pre-decisional, and would violate the *California Code of Regulations, Guidelines for Implementation of the California Environmental Quality Act*. We demand that the Water Board not make this assumption, and instead meet the needs of all impacted environmental and natural resources, and give due diligence to the people, livelihood, and economy of Siskiyou County. We would also like to point out that in a 2011, vote (Measure G) 80% of Siskiyou County citizen's opposed dam removal, and in a 2016, advisory ballot, 72% of Klamath County citizen's opposed dam removal, which indicates again the statutory requirement for an environmental document that analyzes all viable alternatives.

In the past, environmental documents developed for the now expired Klamath Agreements limited analysis to five miles of the Klamath River, which was inadequate and in no way addresses the total effects and consequences of any proposed action, or meets the requirements outlined under the North Coast Basin Plan (Basin Plan). During the development of this NOP and Environmental Impact Report (EIR), the area of analysis must consider the entire Klamath River system, its tributaries (including the Trinity River), surrounding areas, and local communities, including Siskiyou County; to meet requirements under CEQA and the Water Board's Basin Plan.

However, the Water Board only has jurisdiction over those lands and waters located in California, and nothing outside of California's borders. This becomes an issue when the Water Board is considering issuing a water quality certification that includes a facility and waterbody located in Oregon. As the Water Board only has jurisdiction within California they do not have the ability to address the entirety of the Klamath, which is an issue when evaluating the environmental impacts of potential actions. In addition, the Supreme Court Decision, Rapanos v. United States and Carabell v. United States, clarifies the authority and jurisdiction of the Clean Water Act for Navigable Waters of the United States, which is to fall under the US Army Corps of Engineers and the federal Environmental Protection Agency. These court decisions direct those federal agencies to exercise their regulatory authority over waters of the United States. These decisions are further clarified in the "Civiletti Memorandum" (43 Op. Attorney General 197(1979)". We ask the Water Board how they legally intend to complete a comprehensive and inclusive environmental document, and make a determination, on actions that include infrastructure and waters outside of their jurisdiction?

As we have outlined numerous times in past correspondence, the County would like to address the

multiple potential consequences that would result from removal of the four lower dams on the Klamath River.

- *Water Quality* - Currently, eight Total Daily Maximum Load's (TMDL's) have been adopted for Klamath Basin waters, by the Oregon Department of Environmental Quality and the Water Board; and at least four technical TMDL's have been implemented by the Environmental Protection Agency. These TMDL's outline the attainment of water quality standards for dissolved oxygen/organic enrichment, nutrients, temperature, pH, ammonia, microcystin/chlorophyll-a, and sediment. In coordination with the requirements set forth by these TMDL's, water quality standards must be attained for each TMDL pollutant (Siskiyou, 2011). The impacts analysis of the Water Board's EIR must make clear that under the No Action Alternative, and any of the other Alternatives, water quality standards for the categories listed above, and under a range of conditions, will be attained. The EIR must assess whether dam removal will significantly impact or inhibit attainment of water quality standards, and if not removing the dams will actually cause the same outcome, and what effect proposed actions will have on baseline conditions above and below the dams. We would like to point out that in previous environmental analysis these documents failed to account for the attainment of water quality standards outlined under the TMDL's.
- *Sediment* - Although the Water Board has briefly analyzed sediment issues in previous documentation, there has been no adequate investigation into the 20-30 million cubic yards of sediment that is trapped behind the dams. We are requiring that the Water Board investigate the impacts of releasing these sediments in the event that the dams are removed, and both the short and long-term impacts that would result. Potential consequences that must be addressed, in addition to any others, include;
    - raising the bed height of the Klamath River by several feet through release of sediment (which would affect water quality, water temperature, and fisheries habitat),
    - trapping fine grained sediment within the gravel beds below the dams such that it will take large flood events to rework this sediment to a native state suitable for benthic habitat conducive to healthy salmonid fisheries in these reaches,
    - deposition of polluted sediment into the riverbed and overbank sediment deposits depending on the timing and form of reservoir drawdown,
    - polluting the mouth of the estuary with a large quantity of neutrally buoyant organic waste particles which contain the majority of toxins in the reservoirs (Brownfield Partners, 2008),
    - release of noxious weed seeds and the release of predatory fish (such as Perch) downriver,
    - and polluting the river in such a way that salmonids do not have a spawning area that is relatively free of sediment.

- *Flooding* - The potential for catastrophic floods, either during dam removal activities, or thereafter; with no way to control flows should the dams be removed. These floods would also alter the stream bed and alter the habitat for fish species. Previous environmental documents used the Federal Emergency Management Agency's average daily flow as a flood indicator, rather than peak river flows. This is incorrect and irresponsible as peak flows are higher, and very often significantly higher, than average daily flows, and these peak flows are the ones that will most greatly affect river communities. The impact of peak flood events would be greatly affected by dam removal as these events would occur at a greater capacity and approximately 10 hours sooner than under current conditions (Office of County Cousel, 2011).
- *Property value loss, tax loss, and loss in school funding* – Evaluation and investigation into these issues in previous environmental documents has been preliminary and inadequate, although these consequences would have very real and lasting impacts to Siskiyou County. As a rural County that often struggles financially, funding that is provided to our local schools is vital to the people and children within the County. Specifically, Hornbrook Elementary School District would suffer by removal of the dams, as their primary source of funding is supplied through PacifiCorp assessments on the Unitary Roll ($800,000 per year). Property value appraisals and tax revenue to the County have been based on hypothetical assumptions that the land underlying the lakes would be restored to its native condition with full access to a free-flowing river. In actuality, if the dams are removed, mud flats will dominate the landscape for decades, and will have immediate and severe impacts to property values. We request that a separate section of the EIR be devoted to property value loss, property tax loss, and school funding loss. These will be significant impacts to Siskiyou County, and should be included in the list set forth in Attachment 1 of the NOP. The Water Board should work closely with the Siskiyou County Assessor's Office to ensure that accurate facts are obtained and an appropriate scope of analysis is used for these impacts. They can be reached at 530-842-8036, or assessor@co.siskiyou.ca.us.
- *Inability for controlled flow or pulse flow events* - Over the last several years, water has been released from behind Copco Dam to initiate Klamath River pulse flows to help improve water quality and fisheries habitat during the summer months. If the dams are removed, this water would not be available at the critical time needed, and would have to come from Upper Klamath Lake storage, which would impact agricultural and wildlife refuge deliveries in the Klamath Basin. Analysis into the potential long-term effects of the inability to provide these flows must be completed in any environmental documents concerning the Klamath River.
- *Fire Protection* – During fire events, agencies and firefighters rely on Copco Lake and the Klamath River to provide crucial assistance in firefighting activities. Helicopters and water tenders regularly draw water from the lake and river to assist in fire suppression, which generally occurs during the summer months when flows in the river would be minimal and Copco Lake water storage would no longer exist if the dams are removed.

- *Other impacts to fisheries health and population* - Previous environmental analysis developed by the Department of the Interior relied on findings of the Coho Salmon and Steelhead Expert Panel to evaluate the removal of the four dams, and summarized that dam removal "would result in a modest increase in coho salmon population compared with existing conditions." However, the Expert Panel actually stated that the "difference between the Proposed Action *(dam removal)* and current conditions is expected to be small." This is especially true for the ten years following dam removal, after which "moderate" responses by coho salmon "are possible." But this possibility might happen only "if the KBRA *(now expired)* is fully and effectively implemented...", a result which the Expert Panel had considerable doubt about. In addition, the Expert Panel found that even with full and correct implementation of the KBRA, there is a "high uncertainty" about the actions necessary to truly make a difference for coho salmon and the possibility of moderate responses by coho salmon to dam removal (Office of County Cousel, 2011).
    - It is extremely important to point out that there are an additional eighty-five creeks and rivers from Iron Gate to the mouth of the Klamath River, and over 400 miles of spawning habitat that contribute to the Klamath River system and fisheries health. For example, water that enters the Klamath from the Shasta and Scott rivers is lower in temperature, high in quality, and provides huge benefits to Klamath River water. Lastly, other actions that impact the fisheries system need to be addressed, such as the undisclosed tribal treaty fishing activities that occur near the estuary and reduce the number of fish that migrate upstream; and other similar activities carried out on the Klamath and its tributaries.
    - The Water Board should evaluate other methods to address health concerns for salmonids (Ich and C.shasta), which include suction dredge mining. Activities very similar to suction dredge mining have recently been used in other river systems to stir up compacted river beds to address fish disease concerns and provide a better spawning ground for fish species (Game, 2016). As the Water Board is currently looking into lifting the ban on suction dredge mining in California, this would be an important activity to consider.

We would also like to make reference and incorporate as comments the November 21, 2011, letter and supporting documentation submitted to the Department of the Interior and California Department of Fish and Wildlife from the Office of County Counsel, Siskiyou County. In this documentation you will find unanimously approved resolutions from the City of Yreka, City of Dorris, City of Etna, City of Montague, City of Weed, and Town of Fort Jones; all requesting a thorough and balanced environmental review process concerning the Klamath River dams, and opposing actions that would result in irresponsible adverse impacts to the local area and people.

As requested in the NOP, Siskiyou County would like to provide the following alternatives for consideration. Siskiyou County emphatically supports alternatives to dam removal, especially those

set forth in Section 2.3.1 of the 2007 Federal Energy Regulatory Commission Environmental Impact Statement (EIR), and Section ES.6.4 of the 2012 KHSA EIS/EIR, dealing with fish passage. Siskiyou County is happy to provide additional information at the Water Board's request and to assist in any way to further develop these alternatives. In addition, it is the legal responsibility of the Water Board under the CEQA to "provide public agencies and the public with detailed information about the effect which a proposed project is likely to have on the environment... list ways which the significant effect of the project might be minimized; and... indicate alternatives to such a project." Pub. RES. Code §1061.

- *Trap and Haul* – Trap and Haul has been utilized for other dams in the West, north and south of the Klamath River, where installing a fish ladder is not practical. Trap and Haul would include fish being transferred by specialized tankers to be released back into the Klamath River upstream of the dams.
- *Unassisted Volitional Anadromous Fish Passageway Alternatives to Dam Removal* – This alternative would include fish passageway around Iron Gate and Copco dams, which would prevent destruction of Shasta Nation cultural and archeological artifacts, maintain flow control, maintain hydro-electric power for 70,000 homes, maintain flood protection, protect property owners, and maintain tax and property values, among other benefits.
- *Tunnel Unassisted Anadromous Fish Passageway Including the Gravity Flow: Klamath – Shasta Import Project (John C. Boyle Reservoir to the Shasta Valley)*and *Tunnel Unassisted Anadromous Fish Passageway Including the Pressurized Flow: Klamath-Shasta Import Project (Iron Gate Reservoir to the Shasta Valley)*– These alternatives include the above mentioned Fish Passageway, with a diversion structure at J.C. Boyle reservoir to gravity flow 60,000 acre-feet of Siskiyou County state reserved water right from the Klamath River to the Shasta Valley (Gravity Flow). The pressurized flow alternative would require pumping with the point of diversion at Iron Gate Reservoir. Both of these options would allow cooler Shasta River water to remain instream to be released into the Klamath River.

To reiterate, it is Siskiyou County's expectation that there will be a fair and complete analysis of all environmental consequences throughout this environmental process, for the entire impacted Klamath River system. We appreciate the opportunity to provide these comments and will stay actively involved throughout the process and will continue to provide meaningful input. If you have any questions please contact Elizabeth Nielsen, Siskiyou County Natural Resource Policy Specialist at 530-842-8012, or by email at enielsen@co.siskiyou.ca.us.

Sincerely,

Michael N. Kobseff, Chair
Board of Supervisors

cc: US Department of the Interior
cc: Federal Energy Regulatory Commission
cc: California Governor Jerry Brown
cc: Assembly Member Brian Dahle
cc: Congressman Doug LaMalfa
cc: Ted Gaines
cc: Rural County Representatives of California
cc: California State Association of Counties
cc: National Association of Counties
ATTN: Kevin Cann

Works Cited

Brownfield Partners, E.-P. (2008). *Preliminary Review of the Klamath River Dam and Sediment Investigation.* Denver: Brownfield Partners.

Game, I. D. (2016, November 23). *Idaho Department of Fish and Game*. Retrieved January 28, 2017, from Dredging Effort to begin at Wilson Springs: https://idfg.idaho.gov/press/dredging-effort-begin-wilson-springs

Office of County Cousel, C. o. (2011, November 21). Comments on Klamath Facilities Removal Draft EIS. Yreka, California.

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Tuesday, January 17, 2017

SISKIYOU COUNTY BOARD OF SUPERVISORS STATEMENT TO THE STATE WATER RESOURCES CONTROL BOARD REGARDING THEIR *NOTICE OF PREPERATION AND SCOPING MEETINGS FOR AN ENVIRONMENTAL IMPACT REPORT FOR THE LOWER KLAMATH PROJECT LICENSE SURRENDER*

The Siskiyou County Board of Supervisors would like to provide the following oral and written statement regarding the Water Boards notice of public scoping meetings in preparation of the Environmental Impact Report (EIR). In addition, the Board of Supervisors will be providing formal written comments by February 1st, 2017, in response to the *proposed* Notice of Preparation.

First, it seems that public notification of the original January 10th meeting was very limited, even within the County in which it is taking place. The Board of Supervisors was informed of the meeting by an individual who read about it on a local environmental group's webpage in late December 2016. We did not receive official notice from the Water Board until January 4, 2017, although it appears the notice was first sent out to certain people and groups on December 22, 2016. This short notice and limited communication violates, if not the letter, then certainly the spirit, of the law intended to notify and engage the public and solicit active participation. Unfortunately, this is not the first time situations like this have occurred. The County of Siskiyou deserves and demands adequate notice, at the earliest possible date, of all future public meetings.

Siskiyou County is concerned with the economic and environmental consequences that would impact the County if the four Lower Klamath River Dams were transferred to and removed by the Klamath River Renewal Corporation. To address a few of these concerns, the County continues to reiterate that the 20-30 million cubic yards of sediment that has collected behind the Dams, and would be released down the Klamath River after dam removal, has not been adequately evaluated to address the adverse local and environmental impacts. Over the last several years, water has been released from behind Copco Dam to initiate Klamath River pulse flows to help improve water quality and fisheries habitat during the summer months. If the Dams are removed, this water would not be available at the critical time needed, and would have to come from Upper Klamath Lake storage, which would impact agricultural and wildlife refuge deliveries in the Klamath Basin. Other issues include the potential for catastrophic floods, either during dam removal activities, or thereafter; and property value loss in the areas around Iron Gate and Copco Dams, which Siskiyou County estimates would be several million dollars. As part of the environmental process, it is the

Brandon Criss	Ed Valenzuela	Michael N. Kobseff	Lisa Nixon	Ray Haupt
District 1	*District 2*	*District 3*	*District 4*	*District 5*

Water Board's responsibility to fully address these issues, impacts to Siskiyou County and impacts to Klamath River water quality.

In the past, when the Klamath Basin Restoration Agreement and Klamath Hydroelectric Settlement Agreement were being developed, environmental documents limited the analysis area to a five mile stretch of the Klamath River, which was inadequate and in no way addresses the total effects and consequences of Dam removal. During any environmental process concerning the Klamath River, the area of analysis needs to consider the entire river system, surrounding areas, and local communities, including Siskiyou County. We also raise the issue that this would be difficult to do as the Water Board does not have any jurisdiction beyond California, which raises the question as to the legal ability of the Board to analyze impacts for a Dam located in Oregon, and waters originating in Oregon. Nevertheless, any deviation from full analysis would be in violation of *Title 14, Chapter 3 of the California Code of Regulations, Guidelines for Implementation of the California Environmental Quality Act.* In relation to this, the Water Board's documents outlining the process for water quality permit certification seem to assume that Dam removal is the determined outcome, which would make the environmental document pre-decisional, and would again violate the Code of Regulations. We are requesting that you not make this assumption, and that you meet the needs of all impacted environmental and natural resources, and give due diligence to the people, livelihood, and economy of Siskiyou County.

To reiterate, it is Siskiyou County's expectation that there will be a fair and complete analysis of all environmental consequences of the proposed Section 401 Certification, for the entire impacted Klamath River system. O*nly* if the Water Board thoroughly and transparently identifies, analyzes and determines whether possible mitigation measures are feasible, and would render identified impacts less than significant – and we submit that this is not possible - can the Water Board approve the requested 401 water quality certification. The California Environmental Quality Act, and interpreting case law, makes clear that proceeding without meeting these requirements would be an improper abuse of the Water Board's discretion in acting on this proposed project.

Thank you for the opportunity to make this statement on behalf of Siskiyou County. As indicated, we will submit more formal and detailed comments, particularly concerning the significant adverse environmental impacts to occur, as the *proposed* EIR progresses.

Michael N. Kobseff, Chairman
Siskiyou County Board of Supervisors

COUNTY OF SISKIYOU

Resolution No. 16-220

RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SISKIYOU, CALIFORNIA, ADOPTING MAP OF "THE TRADITIONAL HOMELANDS OF THE SHASTA PEOPLE"

WHEREAS, The Shasta People do hereby request consideration on this date of September 13, 2016, by the Siskiyou County Board of Supervisors in adopting the map labeled "The Traditional Homelands of the Shasta People, and;

WHEREAS, Defined under Assembly Bill 52 the designated boundary of the map is the archaeological, cultural, and sacred places significant in tribal cultural traditions, heritages, and identities of the Shasta People, and;

WHEREAS, Production of this map fulfills requirements of California Assembly Bill 52 approved by Governor Brown on September 25, 2014, and;

WHEREAS, The map will be on file with the Native American Heritage Commission in Sacramento, the California Historical Resources Information System in Chico, California, the Klamath National Forest in Yreka, the Shasta-Trinity National Forest in Redding, as well as other pertinent agencies, and;

WHEREAS, The Shasta People also request that this map will be referenced for all future consultation and cultural resource processes, and;

WHEREAS, This map is to be referenced until such time ongoing research illuminates an expansion of Shasta settlement patterns, and;

WHEREAS, Any new and substantiated evidence will be incorporated onto a revised map and will be provided to the Board, and;

WHEREAS, The Shasta People wish to express their deepest appreciation to Brian Daniels, Ph.D., Anthropologist, who has performed valuable research and has assisted the Shasta People for almost two decades. He is well versed in Shasta culture and has provided extensive knowledge throughout the research process.

SISKIYOU COUNTY
RESOLUTION
No. 16-220

NOW THEREFORE, BE IT RESOLVED, that the Siskiyou County Board of Supervisors adopts the map titled "The Traditional Homelands of the Shasta People". The County of Siskiyou will refer to this map as the delineated traditional homelands for the archaeological, cultural, and sacred places significant in tribal cultural traditions, heritages, and identities of the Shasta People.

The foregoing resolution was adopted at a regular meeting of the Board of Supervisors of the County of Siskiyou, State of California, held on the 13th of September, 2016, by unanimous vote:

AYES: Supervisors Kobseff, Haupt, Criss, Valenzuela and Bennett
NOES: NONE
ABSENT: NONE
ABSTAIN: NONE

Grace Bennett

ATTEST
COLLEEN SETZER, COUNTY CLERK

By: Wendy Deis
Deputy

Grace Bennett, Chair
Siskiyou County Board of Supervisors

Traditional Homelands of the Shasta People

Township and Range

1:430,000

9/13/2016

Shasta Boundary

4 2 0 4 Miles

Thomas P. Guarino
County Counsel

Dennis M. Tanabe
Deputy County Counsel

Paula L. Baca
Deputy County Counsel

Dana L. Barton
Deputy County Counsel

Office of County Counsel
COUNTY OF SISKIYOU

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Rita Haas
Executive Assistant

Diana Midkiff
Paralegal/Deputy Public Guardian

Stacey L. Clough
Legal Office Coordinator

November 21, 2011

Elizabeth Vasquez
Bureau of Reclamation
U.S. Department of the Interior
2800 Cottage Way
Sacramento, CA 95825

Gordon Leppig
California Department of Fish and Game
619 Second Street
Eureka, CA 95501

Dear Ms. Vasquez and Mr. Leppig:

On behalf of the County of Siskiyou, City of Yreka, City of Dorris, City of Etna, City of Montague, City of Weed, and the Town of Fort Jones, we are submitting the attached comments on the Klamath Facilities Removal Draft Environmental Impact Statement/Environmental Impact Report ("EIS/EIR"). The Resolutions of each of the Cities and the Town joining in these Comments prepared by the County of Siskiyou are attached as Appendix 1. The Comments are attached as Appendix 2.

The Proposed Action to remove four dams along the Klamath River will have direct and immediate consequences for the County, the Cities, and the Town (collectively the "Commenters"). Three of the four dams are in the County of Siskiyou. The citizens of the County will bear the burdens of the adverse environmental, economic, and social consequences of the Proposed Action.

A close reading of the EIS/EIR demonstrates that the Proposed Action cannot go forward. The EIS/EIR admits that in far too many cases the effects of the Proposed Action will be significant and adverse, often making existing environmental problems worse. Contrasted with these admissions are the conclusions of Expert Panels appointed by the Department of the Interior which concluded that the benefits claimed for the Proposed Action are not likely or small.

Compounding these problems is the fact that the EIS/EIR incorrectly and inadequately examines the impacts of the Proposed Action, glossing over or ignoring key data, and makes conclusions that have no supporting data. Often, the EIS/EIR simply fails to analyze key issues, some of which have impacts that, according to the Expert Panels, could not only render the claimed benefits of the Proposed Action moot, but could make environmental problems in the Klamath River Basin worse.

The National Environmental Policy Act ("NEPA") and the California Environmental Quality Act ("CEQA") demand better. These statutes require a full and complete analysis of the environmental effects, including the social and economic effects, of a proposed action. They require a thorough analysis of alternatives, mitigation plans, and cumulative effects. None of this is done in the EIS/EIR.

To satisfy NEPA and CEQA, there must be a hard look at the environmental consequences of a proposed action so the decision maker can make an informed decision. Here, the EIS/EIR is so lacking in analysis that a decision maker cannot make an informed decision. Not only has the EIS/EIR not taken the required hard look at the issues, but far too often it has taken no look at all.

For these reasons, and the reasons set forth in the attached Comments, the Commenters urge that the EIS/EIR be withdrawn and be redone so that it meets the legal and substantive standards of adequacy. To rely on the EIS/EIR as presently constituted would be arbitrary and capricious and not in accordance with law.

Sincerely,

Thomas P. Guarino
County Counsel
County of Siskiyou

George J. Mannina, Jr.
of Nossaman LLP

APPENDIX 1

RESOLUTION NO. 2939

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF YREKA JOINING IN EIR/EIS COMMENTS OF THE COUNTY OF SISKIYOU

WHEREAS, the Department of the Interior has recently released the Klamath Facilities Removal Public Draft Environmental Impact Statement/Environmental Impact Report; and,

WHEREAS, this Report will be used to inform the Secretarial Determination in conjunction with the Klamath Hydroelectric Settlement Agreement (KHSA) and the Klamath Basin Restoration Agreement (KHSA); and,

WHEREAS, the City of Yreka is in opposition to a determination that would result in the removal of the Klamath hydroelectric facilities; and,

WHEREAS, due to the lack of resources and other economic limitations, it is to the benefit of the City if it is allowed to participate in the comments of the County of Siskiyou,

NOW, THEREFORE, BE IT RESOLVED that the City of Yreka joins in the comments to be filed by the County of Siskiyou with respect to the Draft EIR/EIS involving the Klamath dams.

BE IT FURTHER RESOLVED that the City of Yreka authorizes a copy of this Resolution to be provided with the comments of the County of Siskiyou and filed concurrently therewith as evidence of the adoption of the County's comments as the comments of the City.

PASSED AND ADOPTED this 3rd day of November, 2011, by the following vote:

AYES: FOSTER, MCNEIL & SIMMEN
NOES: NONE
ABSENT: Bicego & MERCIER
ABSTAIN: NONE

Rory McNeil,
Mayor of the City of Yreka

APPROVED AS TO FORM:

Mary Frances McHugh, City Attorney

Attest:
Elizabeth E. Casson, City Clerk

\\GOLDNUGGET\USERS\MARYFRANCES\MY DOCUMENTS\DOCUMENTS_WATER\FALL CREEK\SECRETARIAL DETERMINATION KHSA-KBRA\CITY OF YREKA RESOLUTION RE JOINDER KLAMATH FACILITIES REMOVAL PUBLIC DRAFT EIS-EIR.DOC

RESOLUTION 11-23

**RESOLUTION OF THE CITY OF DORRIS
JOINING IN EIR/EIS COMMENTS
OF THE COUNTY OF SISKIYOU**

WHEREAS, the Department of the Interior has recently released the Klamath Facilities Removal Public Draft Environmental Impact Statement/Environmental Impact Report; and,

WHEREAS, this Report will be used to inform the Secretarial Determination in conjunction with the Klamath Hydroelectric Settlement Agreement (KHSA) and the Klamath Basin Restoration Agreement (KHSA); and,

WHEREAS, the City of Dorris is in opposition to a determination that would result in the removal of the Klamath hydroelectric facilities; and,

WHEREAS, due to the lack of resources and other economic limitations, it is to the benefit of the City if it is allowed to participate in the comments of the County of Siskiyou,

NOW, THEREFORE, BE IT RESOLVED that the City of Dorris joins in the comments to be filed by the County of Siskiyou with respect to the Draft EIR/EIS involving the Klamath dams.

BE IT FURTHER RESOLVED that the City of Dorris authorizes a copy of this Resolution to be provided with the comments of the County of Siskiyou and filed concurrently therewith as evidence of the adoption of the County's comments as the comments of the City.

PASSED AND ADOPTED this 7th day of November, 2011, by the following vote:

AYES: Clontz, Barkman, Hurst, Baldwin, Smith
NOES: None
ABSENT: None
ABSTAIN: None

DATED: 11/7/2011

CITY OF DORRIS

Liz Clontz, Mayor

ATTEST:
Shelly L. Fehr, City Clerk

RESOLUTION NO: 820-2011

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ETNA JOINING THE EIR/EIS COMMENTS OF THE COUNTY OF SISKIYOU

WHEREAS, the Department of the Interior has recently released the Klamath Facilities Removal Public Draft environmental Impact Statement/Environmental Impact Report; and

WHEREAS, this Report will be used to inform the Secretarial Determination in conjunction with the Klamath Hydroelectric Settlement Agreement (KHSA) and the Klamath Basin Restoration Agreement (KHSA); and,

WHEREAS, THE City of Etna is in opposition to a determination that would result in the removal of the Klamath hydroelectric facilities; and,

WHEREAS, due to the lack of resources and other economic limitations, it is to the benefit of the City if it is allowed to participate in the comments of the County of Siskiyou,

NOW, THEREFORE, BE IT RESOLVED the City Council of the City of Etna joins in the comments to be filed by the County of Siskiyou with respect to the Draft EIR/EIS involving the Klamath dams.

BE IT FURTHER RESOLVED that the City of Etna authorizes a copy of this Resolution to be provided with the comments of the County of Siskiyou and filed concurrently therewith as evidence of the adoption of the County's comments as the comments of the City.

I HEREBY CERTIFY that the foregoing resolution was passed and adopted by the City Council of the City of Etna at a special meeting thereof held on October 24, 2011 by the following vote:

Ayes: Duguay, Martin, Prather, Seward & Stein
Noes: None
Absent: None
Abstain: None

Mike Duguay, Mayor

ATTEST:

Pamela Russell, City Clerk

RESOLUTION NO: 12-07

RESOLUTION OF THE CITY OF MONTAGUE
JOINING IN EIR/EIS COMMENTS
OF THE COUNTY OF SISKIYOU
IN OPPOSITION TO A DETERMINATION
THAT WOULD RESULT IN DAM REMOVAL

WHEREAS, the Department of the Interior has recently released the Klamath Facilities Removal Public Draft Environmental Impact Statement/Environmental Impact Report; and,

WHEREAS, this Report will be used to inform the Secretarial Determination in conjunction with the Klamath Hydroelectric Settlement Agreement (KHSA) and the Klamath Basin Restoration Agreement (KHSA); and,

WHEREAS, the City of Montague is in opposition to a determination that would result in the removal of the Klamath hydroelectric facilities; and,

WHEREAS, due to the lack of resources and other economic limitations, it is to the benefit of the City if it is allowed to participate in the comments of the County of Siskiyou,

NOW, THEREFORE, BE IT RESOLVED that the City of Montague joins in the comments to be filed by the County of Siskiyou with respect to the Draft EIR/EIS involving the Klamath dams.

BE IT FURTHER RESOLVED that the City of Montague authorizes a copy of this Resolution to be provided with the comments of the County of Siskiyou and filed concurrently therewith as evidence of the adoption of the County's comments as the comments of the City.

PASSED AND ADOPTED this 3rd day of November, 2011, by the following vote:

AYES: Hammond, Robustellini, Benson, Keller, and Singelton
NOES:
ABSENT:
ABSTAIN:

ATTEST:

Janie Sprague
Janie Sprague, City Clerk

CITY OF MONTAGUE:

John Hammond
John Hammond, Mayor

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RESOLUTION NO. 27-2011

A RESOLUTION OF THE CITY OF WEED
JOINING IN EIR/EIS COMMENTS
OF THE COUNTY OF SISKIYOU

WHEREAS, the Department of the Interior has recently released the Klamath Facilities Removal Public Draft Environmental Impact Statement/Environmental Impact Report; and,

WHEREAS, this Report will be used to inform the Secretarial Determination in conjunction with the Klamath Hydroelectric Settlement Agreement (KHSA) and the Klamath Basin Restoration Agreement (KHSA); and,

WHEREAS, the City of Weed is in opposition to a determination that would result in the removal of the Klamath hydroelectric facilities; and,

WHEREAS, due to the lack of resources and other economic limitations, it is to the benefit of the City if it is allowed to participate in the comments of the County of Siskiyou,

NOW, THEREFORE, BE IT RESOLVED that the City of Weed joins in the comments to be filed by the County of Siskiyou with respect to the Draft EIR/EIS involving the Klamath dams.

BE IT FURTHER RESOLVED that the City of Weed authorizes a copy of this Resolution to be provided with the comments of the County of Siskiyou and filed concurrently therewith as evidence of the adoption of the County's comments as the comments of the City.

I HEREBY CERTIFY the foregoing resolution was introduced and adopted at a regular special meeting of the City Council held the 10th day of November, 2011 by the following vote, to wit:

AYES: COUNCIL MEMBERS Broomfield, Hall, Palfini, Pearce, and Sutton.
NOES: None
ABSENT: None
ABSTAIN: None

/s/ Dave Pearce
Mayor, City of Weed

ATTEST:

/s/ Deborah J.Salvestrin
City Clerk, City of Weed

State of California)
) ss
County of Siskiyou)

I hereby certify the foregoing Resolution No. 27-2011 is a true and correct copy of the original adopted by the City Council on November 10, 2011.

Deborah J. Salvestrin
City Clerk, City of Weed

Dated: November 10, 2011

Resolution 999

RESOLUTION OF THE TOWN OF FORT JONES
JOINING IN EIR/EIS COMMENTS
OF THE COUNTY OF SISKIYOU

WHEREAS, the Department of the Interior has recently released the Klamath Facilities Removal Public Draft Environmental Impact Statement/Environmental Impact Report; and,

WHEREAS, this Report will be used to inform the Secretarial Determination in conjunction with the Klamath Hydroelectric Settlement Agreement (KHSA) and the Klamath Basin Restoration Agreement (KHSA); and,

WHEREAS, the Town of Fort Jones is in opposition to a determination that would result in the removal of the Klamath hydroelectric facilities; and,

WHEREAS, due to the lack of resources and other economic limitations, it is to the benefit of the City if it is allowed to participate in the comments of the County of Siskiyou,

NOW, THEREFORE, BE IT RESOLVED that the Town of Fort Jones joins in the comments to be filed by the County of Siskiyou with respect to the Draft EIR/EIS involving the Klamath dams.

BE IT FURTHER RESOLVED that the Town of Fort Jones authorizes a copy of this Resolution to be provided with the comments of the County of Siskiyou and filed concurrently therewith as evidence of the adoption of the County's comments as the comments of the City.

PASSED AND ADOPTED this 7th day of November, 2011, by the following vote:

AYES: Mc Culley, Berck, Smith, Tasem, Berry
NOES: none
ABSENT: none
ABSTAIN: none

Tom McCulley, Mayor

ATTEST:

Linda Romaine, City Clerk

APPENDIX 2

THE KLAMATH FACILITIES REMOVAL ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

COMMENTS OF THE COUNTY OF SISKIYOU, CITY OF YREKA, CITY OF DORRIS, CITY OF ETNA, CITY OF MONTAGUE, CITY OF WEED, AND TOWN OF FORT JONES

November 21, 2011

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On September 21, 2011, the Department of the Interior ("DOI") released for public comment the draft Klamath Facilities Removal Environmental Impact Statement/Environmental Impact Report ("EIS/EIR"). These Comments by the County of Siskiyou, City of Yreka, City of Dorris, City of Etna, City of Montague, City of Weed, and Town of Fort Jones review the legal, factual, and analytical issues associated with the EIS/EIR.

I. INTRODUCTION AND SUMMARY

The County of Siskiyou, each City, and the Town are uniquely impacted by the action proposed in the EIS/EIR, the removal of four dams along the Klamath River ("Proposed Action"). Three of the four dams are in the County of Siskiyou. The environmental, economic, and social consequences of the Proposed Action will fall most heavily on the people of Siskiyou County. The citizens of the County, its cities, and its towns, as well as the natural resources in the County, will bear the brunt of the adverse consequences that will flow from a decision to remove the dams.

These Comments document extensive flaws in the EIS/EIR. However, these Comments identify only the most glaring errors, omissions, and legally inadequate aspects of the EIS/EIR. Because the EIS/EIR and its accompanying technical materials reflect inconsistent assumptions and contain inconsistencies between methodologies and actions analyzed, we expect we have not uncovered all of the flaws in the EIS/EIR. In addition, because the EIS/EIR defers substantial portions of the analysis to some later National Environmental Policy Act ("NEPA") and/or California Environmental Quality Act ("CEQA") document, the EIS/EIR does not provide a complete or comprehensive assessment of the impacts of the Proposed Action. The EIS/EIR meets neither the spirit nor the letter of the law.

More importantly, from a practical perspective, the EIS/EIR fails to provide sufficient, or even the most basic, information necessary to enable a decision maker and stakeholders to

adequately compare and contrast project alternatives, and to make informed policy decisions regarding implementation of the Proposed Action. At a minimum, the EIS/EIR should, but does not provide adequate information to enable the Lead Agencies and stakeholders to determine:

- whether, on balance, removal of the four Klamath River facilities is reasonably likely to result in credible and measureable environmental benefits that would not be achieved by implementation of the dozens of existing, legally mandated, and enforceable habitat restoration and water quality management measures specified in: (a) the PacifiCorp Habitat Conservation Plan; (b) the Upper Klamath Lake Drainage Total Maximum Daily Loads ("TMDLs") and the Upper Klamath River and Lost River TMDLs (collectively, the "Oregon TMDLs"); (c) the Klamath River TMDLs, Lower Lost River TMDLs, Scott River TMDLs, Shasta River TMDLs, and Salmon River TMDL (collectively the "California TMDLs); (d) the National Marine Fisheries Service 2010 Biological Opinion; (e) the CDFG Code Section 5927 in-stream flow mandate for tributaries to the mainstem Klamath River; (f) the mitigation and monitoring plan for the 2007 FERC EIS; and (g) those provisions of the Klamath River Basin Restoration Agreement ("KBRA") that are *not* conditioned upon implementation of the Klamath Hydroelectric Settlement Agreement ("KHSA"), which measures (contrary to assumptions of the EIS/EIR alternatives analysis) must be implemented regardless of the implementation of the KHSA; and
- whether, on balance, removal of the four Klamath River facilities is reasonably likely to achieve environmental benefits that outweigh (a) the adverse socioeconomic impacts of the Proposed Action, (b) the numerous short term (0 to 2 years) and long term (2 to 50 years) significant adverse environmental impacts associated with the

Proposed Action, and (c) the substantial risk that many of the short term significant adverse environmental impacts, and some of the "insignificant" adverse environmental impacts, will actually result in long-term, substantial negative impacts on the ecology of the Klamath River watershed.

A revised EIS/EIR must be prepared to address the deficiencies and provide the information needed to determine if the claimed environmental benefits of the Proposed Action outweigh the likely significant adverse social, economic, and environmental impacts of the Proposed Action. Only by circulating a corrected and much expanded document will the EIS/EIR provide adequate information on environmental impacts, alternatives, and mitigation measures with which all stakeholders can evaluate the alternatives and decision makers can act.

II. THE ENVIRONMENTAL EFFECTS ANALYSIS IN THE EIS/EIR

This section will examine the most serious issues for adequacy of the analysis in the EIS/EIR regarding the effects of the Proposed Action.

A. The Legal Framework

1. NEPA

In reviewing the legal adequacy of an environmental impact statement ("EIS"), courts hold federal agencies to rigorous standards. In a landmark administrative law case, the Supreme Court held agencies must take a "hard look" at the environmental issues associated with a proposed action. *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402 (1971). *See also Maryland National Capital Park and Planning Commission v. United States Postal Service,* 487 F.2d 1029 (D.C. Cir. 1973). This "hard look" doctrine has been applied to NEPA. *Kleppe v. Sierra Club,* 427 U.S. 390, 411 (1976). *See also All Indian Pueblo Council v. United States,* 975 F.2d 1437 (10th Cir. 1992); *Tongass Conservation Society v. Cheney,* 924 F.2d 1137 (D.C. Cir. 1991). To meet this standard, an EIS may not contain vague, general, or conclusory reasoning.

Silva v. Lynn, 482 F.2d 1282 (1st Cir. 1973). The court in *Sierra Club v. United States Army Corps of Engineers,* 701 F.2d 1011, 1029 (2d Cir. 1983) (citations omitted), summarized the applicable standard as follows:

> [T]he ... [EIS] must set forth sufficient information for the general public to make an informed evaluation ... and for the decisionmaker to "consider fully the environmental factors involved and to make a reasoned decision after balancing the risks of harm to the environment against the benefits to be derived from the proposed action." [The EIS gives] assurance that stubborn problems or serous criticisms have not been "swept under the rug."

At a minimum, the "hard look" doctrine "encompasses a thorough investigation into the environmental impacts of an agency's action and a candid acknowledgment of the risks that those impacts entail." *National Audubon Society v. Department of the Navy,* 422 F.3d 174, 185-186 (4th Cir. 2005) (citations omitted). The Council on Environmental Quality ("CEQ") regulations implementing NEPA reflect these standards. Those regulations require that an EIS be "analytic" and not conclusory. 40 C.F.R. §1502.2(a).

The environmental consequences of a proposed action that are subject to NEPA analysis include the direct and the indirect effects of the action. 40 C.F.R. §1502.16(a) and (b) and §1508.8. The effects to be examined include "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." 40 C.F.R. §1508.8. An effects analysis in an EIS must contain an adequate compilation of relevant information that is sufficiently complete to allow informed decision making by the decision maker. *See e.g., National Resources Defense Council v. United States Forest Service,* 421 F.3d 797 (9th Cir. 2005); *Sierra Club v. United States Army Corps of Engineers,* 701 F.2d 1011 (2d Cir. 1983).

2. CEQA

Under CEQA, the purpose of an Environmental Impact Report ("EIR") is to "alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Laurel Heights Improvement Ass'n v. Regents of the Univ. of California,* 47 Cal.3d 376, 392 (1988) ("*Laurel Heights 1*"). Thus, an EIR must "provide public agencies and the public with *detailed* information about the effect which a proposed project is likely to have on the environment ... list ways which the significant effects of the project might be minimized; and ... indicate alternatives to such a project." Pub. Res. Code §1061 (emphasis added). *See also,* Cal. Code Regs. tit. 14 ("CEQA Guidelines") §15002; *Laurel Heights 1*, 47 Cal.3d at 392. The agency must make a good faith effort at full disclosure. CEQA Guidelines §15151.

An EIR must provide a degree of analysis and detail about the project's environmental impacts such that a decision maker can make intelligent judgments in light of the environmental consequences of the decision. CEQA Guidelines §15151. It is essential that the project is adequately described and that existing setting information is complete. *County of Inyo v. City of Los Angeles,* 71 Cal.App.3d 185, 199 (1977). Both the public and decision makers need to fully understand the implications of the choices that are presented related to the project, the mitigation measures, and the alternatives. *Laurel Heights Improvement Ass'n v. Improvement Ass'n v. Regents of the Univ. of Cal*., 6 Cal.4th 1112, 1123 (1993) ("*Laurel Heights II*").

An EIR must address a proposed project's "significant effects on the environment." Pub. Res. Code §21100(b)(l); *see also* CEQA Guidelines §15126(a) (the EIR "shall identify and focus on the significant environmental effects of the proposed project.") A significant effect on the environment is defined as "a substantial, or potentially substantial, adverse change in the environment." Pub. Res. Code §21068; *see also* Pub. Res. Code §21100(d). The EIR must

identify both direct and indirect significant effects. CEQA Guidelines §15126.2(a). The EIR should encompass both short-term and long-term effects. *Id.* Identification of a project's significant environmental effects is one of the primary purposes of an EIR and is necessary to implement the stated public policy that agencies should not approve projects if there are feasible mitigation measures or project alternatives available to reduce or avoid the environmental impacts. Pub. Res. Code §§21002, 21002.1(a). CEQA requires a finding that a project may have a significant effect on the environment if the "possible effects of a project are individually limited but cumulatively considerable" where "'cumulatively considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects ... current projects, and ... probable future projects." Pub. Res. Code §21083(b)(2); CEQA Guidelines §15130 (b)(1).

B. The Effects Analysis

The remainder of this Part will examine the analysis in the EIS/EIR of the direct and indirect effects of the Proposed Action to determine if the EIS/EIR provides an impacts analysis that meets the applicable legal standards under NEPA and CEQA. As will become clear, the EIS/EIR does not meet these standards.

1. Improper Definition of Existing Conditions, the Proposed Action, the No Action Alternative, and Alternative 4

Before proceeding further, however, it is important to clearly identify the environmentally beneficial measures and activities that are reasonably likely to proceed regardless of whether the Proposed Action is implemented. As acknowledged in the EIS/EIR, such measures and activities, to the extent they are reasonably foreseeable or likely to occur, must be considered a part of the existing environmental conditions. CEQA Guidelines

§§15126.6(e)(2) and (3). Failure to consider such activities and measures results in an inaccurate determination of the relative environmental benefits and risks of the Proposed Action.

a. The Klamath Basin Restoration Agreement

The implementation of the KBRA is incorporated into, and is an integral part of, the Proposed Action. The EIS/EIR clearly states that "the KBRA is a component of the Proposed Action." EIS/EIR at 3.3-138. *See also id.* at 2-19 (the Proposed Action "would include ... the implementation of the KBRA...."); *id.* at 3.3-75 (the Proposed Action "includes the implementation of the KBRA.")

At the same time, however, the EIS/EIR fails to recognize that certain elements of the KBRA are reasonably expected to occur in the foreseeable future if the Proposed Action is not approved. By law, these elements should be considered part of the existing conditions under the No Action Alternative and Alternative 4. The EIS/EIR offers a variety of explanations for considering the KBRA as part of the Proposed Action, while incorrectly ignoring the fact that a significant number of the KBRA measures will be implemented even if dam removal does not occur. As a legal matter, these actions must be included in the analysis of existing conditions.

In an attempt to justify its incorrect application of law, the EIS/EIR states the Proposed Action includes implementation of the KBRA because the environmental restoration activities and water quality management actions under the KBRA will not occur, or alternatively might not continue, or alternatively might not occur as quickly, in the event that the removal of the Klamath facilities and implementation of the KHSA do not proceed. EIS/EIR at ES-3, ES-21, 2-13-18, and 3.2-35. However, the KBRA is a legally binding agreement enforceable by the parties, and is distinct and separate from the KHSA and from Klamath facilities removals. *Id.* at ES-2, ES-4. Further, implementation of many of the environmental restoration and water quality improvement obligations and measures of the KBRA is either already occurring, or their

implementation is not conditioned upon implementation of the KHSA and from Klamath dam removals. *Id.* at ES-3. It is factually incorrect to assume in evaluating the Proposed Action and other Alternatives that no KBRA actions will occur in the absence of dam removal. Instead, the implementation of many of KBRA measures are reasonably expected in the foreseeable future. Those actions should be included in the description of the No Action Alternative, which must reflect actual conditions as well as conditions that would be reasonably expected to occur in the foreseeable future if the Proposed Action were not approved. 40 C.F.R. §§1502.16 and 1508.7; CEQA Guidelines §§15126.6(e)(2), 15126.4(a)(2), and 15130(c). In addition, analysis of all other Alternatives that do not preclude the implementation of the currently pending and unconditional measures of the KBRA, including Alternative 4, must assume that those measures will be implemented regardless of the Proposed Action.

Furthermore, because the EIS/EIR will result in significant adverse impacts with respect to at least some, and arguably with respect to the majority, of water quality and aquatic environmental parameters, the EIS/EIR by law must, but fails to, assess whether the Proposed Action will actually adversely impact or inhibit the environmental and water quality improvements that would otherwise be achieved under the No Action Alternative pursuant to implementation of the ongoing and unconditional obligations of the KBRA. CEQA Guidelines §§15126.6(e)(3)(B) and (C).

Accordingly, the No Action Alternative and Alternative 4 should reflect and presume the implementation of all ongoing and unconditional obligations of the KBRA. All measures that will actually be implemented regardless of the Proposed Action should be clearly and consistently identified throughout the EIS/EIR. The ongoing and unconditional obligations of the KBRA that should be reflected in the No Action and all other Alternatives appear to include

actions such as resource measures to secure additional water storage in the Basin; retirement of Upper Klamath Lake water uses under Section 15 of the KBRA; creation of additional water storage in the Basin under Section 18 of the KBRA, including the Lake Ranch and Barnes Ranch projects; implementation of fisheries restoration and reintroduction plans under Section 11 of the KBRA; measures to protect environmental water and in-stream flows under Section 20 of the KBRA; measures to manage flows and lake levels to improve the ecological, chemical, physical, and biological processes of the Klamath River Basin surface waters, including improving the status of anadromous and resident fish under Section 20.4 of the KBRA; and measures to protect environmental benefits under Sections 20.5 and 25 of the KBRA by, among other things, implementing water quality improvement measures such as TMDLs and other water quality standards.

In general, the false assumption that no KBRA actions (or only certain already ongoing KBRA actions) will proceed absent the Proposed Action leads to an inaccurate impacts analysis for the Proposed Action, improper comparison of the significance of environmental impacts for the Proposed Action versus other Alternatives, and improper identification of the environmentally preferable alternative because the EIS/EIR:

- overstates the environmental benefits of the Proposed Action by falsely linking all KBRA restoration actions to implementation of Klamath facilities removals pursuant to the KHSA; and
- overstates the adverse environmental impacts of the No Action Alternative and Alternative 4 by failing to recognize that certain KBRA restoration activities will proceed and will enhance the Klamath River Basin regardless of the dam removals.

Most importantly, the potential for the significant adverse impacts of the Proposed Action to preclude, limit or interfere with environmental and water quality improvements that would otherwise occur under the ongoing and unconditional provisions of the KBRA is not analyzed. These errors alone render the EIS/EIR legally insufficient.

b. The California TMDLs and the Oregon TMDLs

Currently, at least eight TMDLs have been fully adopted for Klamath Basin waters by the Oregon Department of Environmental Quality ("ODEQ"), California's North Coast Regional Water Quality Control Board ("NCRWQCB"), and California's State Water Resources Control Board ("SWRCB"),[1] and at least four technical TMDLs have been adopted by EPA. Once any TMDL is fully adopted by a State, the Best Management Practices ("BMPs") and Implementation Measures included in the TMDL, even if only conceptually stated, must, by law, be implemented. 33 U.S.C. §1313(d). Further, ODEQ and the NCRWQCB are obligated to assure the implementation of adopted State TMDLs via a variety of legal mechanisms, including issuance of enforceable Section 402 Clean Water Act permits and conditions, issuance of State law waste discharge requirements or conditional waivers of waste discharge requirements, adoption of Basin Plan amendments, adoption of non-point source management plan/Basin Plan requirements, and/or other similar mechanisms. 33 U.S.C. §1313(d). Further, implementation of fully approved State TMDLs, and particularly the BMPs and other Implementation Measures specified in those TMDLs, must, pursuant to the requirements of the Clean Water Act, attain the water quality standards for each TMDL pollutant. Accordingly, the adopted Oregon TMDLs and California TMDLs, including all TMDL BMPs and Implementation Measures (even if only

[1] While the EIS/EIR does not provide a clear explanation of the status of adoption of each TMDL or set of TMDLs, it appears that U.S. Environmental Protection Agency ("EPA") approval is still pending for only one set of State adopted TMDLs, the Oregon Upper Klamath Lake Drainage TMDLs, and Section 3.2.2.4 of the EIS/EIR indicates that EPA approval of those temperature, dissolved oxygen and pH TMDLs is expected.

conceptually described), must by law be implemented to attain water quality standards in the Klamath River Basin for dissolved oxygen/organic enrichment, nutrients, temperature, pH, ammonia, microcystin/chlorophyll-a, and sediment.[2] 33 U.S.C. §1313(d).

Because State TMDL requirements create legally enforceable plans or programs for attaining water quality standards over time, the implementation of the California and Oregon TMDLs and the attainment of water quality standards for dissolved oxygen/organic enrichment, nutrients, temperature, pH, ammonia, microcystin/chlorophyll-a, and sediment (collectively, the "Pollutants of Concern") must be reasonably expected to occur in the foreseeable future even if the Proposed Action is not approved. Consequently, the impacts analysis of the EIS/EIR must make it clear that under the No Action Alternative and any of the other Alternatives, including Alternative 4, water quality standards for those Pollutants of Concern will be attained. 40 C.F.R. §§1502.16 and 1508.7; CEQA Guidelines §§15126.6(e)(2), 15126.4(a)(2), and 15130(c).

In addition, because the EIS/EIR will result in significant adverse water quality impacts with respect to at least some, and arguably with respect to the majority of the Pollutants of Concern, the EIS/EIR by law must, but fails to, assess whether the Proposed Action will actually significantly adversely impact or inhibit attainment of water quality standards under the No

[2] It should be noted that evidence shows the Klamath River water quality standards underlying the recently adopted Klamath River TMDL (NCRWQCB Resolution Nos. R1-2010-0025 and R1-2010-0026 adopted March 24 2010; SWRCB Resolution No. 2010-0043 adopted September 7, 2010) and the Klamath River TMDL targets adopted for temperature, nutrients, dissolved oxygen, and microcystin are flawed. Contrary to the best available scientific data, and due to the errors and omissions in the technical analysis supporting the Klamath River TMDL, NCRWQCB and SWRCB ("Water Boards") relied on water quality standards and TMDL targets for the TMDL constituents that are unrealistically low, because, for example, the Water Boards (a) failed to distinguish natural background sources of the TMDL constituents, as opposed to point source discharges and anthropogenic sources, (b) improperly overestimated and attributed natural background sources of TMDL constituents to point source discharges and anthropogenic sources, such as power generation and fish hatchery operations within the Hydroelectric Reach, and (c) relied on incorrect assumptions and conclusions regarding water quality that is reasonably achievable in surface waters upstream of the Hydroelectric Reach, and particularly in Upper Klamath Lake. Despite these flaws, the State has determined that the implementation of this TMDL and the other California TMDLs will attain water quality standards for the constituents of concern by the end of the TMDL implementation period.

Action Alternative pursuant to the Oregon TMDLs and the California TMDLs. 40 C.F.R. §§1502.16 and 1508.7; CEQA Guidelines §§15126.6(e)(3)(B) and (C). Because the impacts analysis of the EIS/EIR, including the impacts analyses for the Proposed Action, the No Action Alternative, and Alternative 4, fail to account for water quality improvements and the attainment of water quality standards that legally must occur pursuant to adopted TMDLs, the environmental benefits of the Proposed Action are overstated in the EIS/EIR. At the same time, the adverse environmental impacts of the Alternatives allowing the Klamath facilities to continue to operate, including the impacts of the No Action Alternative and Alternative 4, are overstated. Most importantly, the potential for the significant adverse environmental impacts of the Proposed Action to preclude, limit or interfere with environmental and water quality improvements that would otherwise occur under the fully approved State TMDLs is not analyzed, providing an inadequate basis for any decision maker to determine whether the Proposed Action should be pursued.

2. Other Restoration and Water Quality Improvement Measures

The preceding comments regarding the treatment of legally binding TMDL requirements apply with equal force to all of the habitat restoration and water quality improvement measures set forth in the following legally binding and enforceable documents: (a) the PacifiCorp Habitat Conservation Plan; (b) the National Marine Fisheries Service 2010 Biological Opinion; (c) the CDFG Code Section 5927 in-stream flow mandate for tributaries to the mainstem Klamath River; and (d) the mitigation and monitoring plan for the 2007 FERC EIS (collectively, the "Regulatory Restoration Measures"). The implementation of the Regulatory Restoration Measures can be reasonably expected in the foreseeable future, and all those measures and the anticipated resulting improvements in environmental and water quality must be incorporated into the description of the No Action Alternative, which must reflect actual conditions as well as

conditions that are reasonably expected to occur in the foreseeable future if the Proposed Action were not approved. 40 C.F.R. §§1502.16 and 1508.7; CEQA Guidelines §§15126.6(e)(2), 15126.4(a)(2), and 15130(c). In addition, analysis of all other Alternatives that do not preclude the implementation of the Regulatory Restoration Measures, including Alternative 4, must assume that those measures will be implemented regardless of the Proposed Action. Further, because the EIS/EIR will result in significant adverse impacts with respect to at least some, and arguably with respect to the majority, of water quality and aquatic environment parameters, the EIS/EIR by law must, but fails to, assess whether the Proposed Action will actually significantly adversely impact or inhibit environmental and water quality improvements that would otherwise be achieved under the No Action Alternative pursuant to the implementation of all ongoing and unconditional Regulatory Restoration Measures.

Because the impacts analysis of the EIS/EIR, including the impacts analysis for the Proposed Action, the No Action Alternative, and Alternative 4, fail to account for water quality improvements and environmental benefits that legally must occur pursuant the Regulatory Restoration Measures, the environmental benefits of the Proposed Action are overstated in the EIS/EIR. At the same time, the adverse environmental impacts of the Alternatives allowing the Klamath facilities to continue to operate, including the impacts of the No Action Alternative and Alternative 4, are overstated. Most importantly, the potential for the significant adverse environmental impacts of the Proposed Action to preclude, limit or interfere with environmental and water quality improvements that would otherwise occur under the Regulatory Restoration Measures is not analyzed. Again, this failure by itself, makes the EIS/EIR legally insufficient, providing an inadequate basis for a decision maker to determine whether the Proposed Action should be pursued.

3. The Data Quality Act

It is also important to understand that the EIS/EIR fails to comply with the Data Quality Act. P.L. 106-554, §515. This Act requires federal agencies to establish policies and procedures that ensure the quality, objectivity, and integrity of information distributed and used by the agencies. Office of Management and Budget Circular A-130, which implements the Data Quality Act, forbids agencies from distributing substantive information that "does not meet a basic level of quality." OMB's Circular defines this basic level as requiring that information be accurate and the reasoning behind, and support for, analytic conclusions be clear. As discussed below, the EIS/EIR all too often contains inaccurate and incomplete information. All too often, the EIS/EIR makes analytic conclusions for which the facts and reasoning are not only unclear but non-existent. The EIS/EIR does not comply with the Data Quality Act.

C. Aquatic Resources

"The need for the Proposed Action is to advance restoration of the salmonid fisheries in the Klamath Basin...." EIS/EIR at 1-29. This is the sole basis advanced to justify the Proposed Action. In a remarkable failure of NEPA and CEQA compliance, the EIS/EIR does not analyze many of the critical issues relevant to restoring salmonid fisheries. What analysis does exist demonstrates the Proposed Action will not meet the objective of restoring salmonid fisheries. The purported justification and major objective for the Proposed Action simply does not exist.

1. Coho Salmon

The Southern Oregon/Northern California Coast coho salmon evolutionary significant unit has been designated a threatened species under the federal Endangered Species Act ("ESA"). 62 Fed. Reg. 24,588 (May 6, 1997). Critical habitat was identified in 1999. 64 Fed. Reg. 24,049 (May 5, 1999). The EIS/EIR states the Proposed Action, if combined with the

KBRA restoration actions, is "expected to advance the recovery of federally listed coho salmon." EIS/EIR, Summary of Key Conclusions.

To support this claim, the EIS/EIR relies on the findings of the Coho Salmon and Steelhead Expert Panel established by DOI to evaluate the Proposed Action, including the KBRA. According to the EIS/EIR, the Expert Panel concluded the Proposed Action "would result in a modest increase in the coho salmon population compared with existing conditions." EIS/EIR at 3.3-106. That is not what the Expert Panel said.

What the Expert Panel did conclude was that the "difference between the Proposed Action and Current Conditions is expected to be small." Klamath River Expert Panel, Final Report, Scientific Assessment of Two Dam Removal Alternatives on Coho Salmon and Steelhead, April 25, 2011 ("Coho and Steelhead Expert Panel Report") at ii. This is "especially" true for the ten years following dam removal. *Id.* Thereafter, "moderate" responses by coho salmon "are possible." *Id.* But this possibility might happen only "if the KBRA is fully and effectively implemented...", *id.*, a result about which the Expert Panel had considerable doubt, and, as noted above, a result that is not inextricably tied to or conditioned upon implementation of the Proposed Action. In fact, the Expert Panel found that even with the KBRA, there is such a "high uncertainty" about the many and various actions necessary to truly make a difference for coho salmon that there is a "low likelihood" of even moderate responses by coho salmon to the Proposed Action. *Id.*[3] The actual statements of the Expert Panel stand in stark contrast to the

[3] In addition to questions about the feasibility and effectiveness of the KBRA raised by the Expert Panel, the EIS/EIR identifies 13 activities that are responsible for the decline of coho salmon. Among those 13, and unrelated to the Proposed Action, are habitat degradation caused by logging, road building, grazing, mining, urbanization, wetland loss, beaver trapping, water withdrawals, and unscreened irrigation diversions. EIS/EIR at 3.3-20. None of those actions is addressed by the Proposed Action. They are only addressed by the KBRA, and, to the extent that KBRA measures are capable of implementation, many of them are ongoing or unconditional obligations that will be implemented regardless of the removal of the Klamath facilities.

characterization in the EIS/EIR that the Expert Panel agreed the Proposed Action "would result" in a "modest increase" in coho salmon populations. Instead, the Expert Panel's conclusions indicate that the Proposed Action may well inhibit any benefit that might result from implementation of the KBRA.

Further undermining the conclusion in the EIS/EIR that the Proposed Action "would result" in positive benefits are the Expert Panel's finding that so much scientific information for an appropriate analysis is missing that there needs to be "further scientific investigation [including] necessary and feasible data collection, analyses, and modeling...." Coho and Steelhead Expert Panel Report at i. The Panel noted its report is no "substitute for scientific analysis of solid data," *id.*, and that further analysis needs to be done before any conclusions can be made about the effect of the Proposed Action on coho salmon. In other words, DOI lacks the information necessary to reach any real conclusions about the merits of the Proposed Action regarding coho salmon, but what is known indicates the benefits of the Proposed Action will be "small."

Reading beyond the unsubstantiated claims in the EIS/EIR, one finds the admission that the most likely scenario under the Proposed Action for coho salmon downstream of Iron Gate Dam is that coho salmon from the Upper Klamath River Population Unit that spawn in the Klamath River and their progeny will suffer "up to 100% mortality" in the dam removal phase due to the effects of released sediment. EIS/EIR at 3.3-107. There are nine coho salmon population units in the Klamath River watershed. *Id.* Thus, during dam removal, the Proposed Action will destroy the entire population within the mainstem Klamath River of one of nine (11%) population units of the threatened coho salmon. *Id.* at 3.3-110. Overall for the entire coho population, the EIS/EIR states the direct mortality could be as high as 18% of smelts in

various population units. *Id.* at 4-77. The EIS/EIR cannot so lightly dismiss such adverse impacts on an ESA protected species.

Indeed, the EIS/EIR admits that if just one year class of coho salmon is eliminated by the Proposed Action, it "could result in a jeopardy decision" under the ESA. *Id.* at 3.3-53. A jeopardy opinion means the action being considered is likely to jeopardize the continued existence of the ESA-listed species. 16 U.S.C. §1536(a)(2). In plain English, the EIS/EIR admits that the sediment impacts of the Proposed Action could, by themselves, jeopardize the continued existence of coho salmon. This admission belies other statements in the EIS/EIR that there is no question but that the Proposed Action will advance the recovery of coho salmon. This admission is also important because, as discussed next, the EIS/EIR has dramatically understated the amount of sediment that will be released into the environment. In fact, if one considers how all of the dam removal issues will affect coho salmon, the conclusions about the impact of the Proposed Action are even more distressing. There is a real possibility that the Proposed Action will jeopardize the continued existence of coho salmon.

Further, the EIS/EIR must, but fails to, evaluate whether such substantial adverse impacts to coho salmon caused by dam removal could preclude the fisheries restoration and other environmental benefits anticipated to result from the expected implementation of the ongoing and unconditional KBRA measures, the Oregon TMDLs, the California TMDLs, and the Regulatory Restoration Measures (collectively the "Foreseeable Restoration Measures"), all of which have been analyzed and determined to benefit the environment.

a. Sediment Discharges

The EIS/EIR dismisses the effects of sediment discharges from dam removal by claiming the impacts will be "short term," ending "within one year." EIS/EIR at 3.3-110. However, the Expert Panel contradicts the EIS/EIR noting the impacts of high sediment concentrations will

persist not for one year but for "the first two years," and that the overall impacts of sediment releases will not be reversed for "decades." Coho and Steelhead Expert Panel Report at 19 and 28. This conclusive finding of the Expert Panel is certainly not acknowledged in the water quality section (or any other section) of the EIS/EIR.

The expert panel established by DOI to assess the impacts of the Proposed Action on lamprey also disagreed with the EIS/EIR that high sediment concentrations will be short-lived. The Lamprey Expert Panel concluded there will be "chronically high suspended sediment concentrations" for at least "the first year or two." Klamath River Expert Panel, Final Report, Scientific Assessment of Two Dam Removal Alternatives on Lamprey, January 14, 2010 ("Lamprey Expert Panel Report") at 27. The Lamprey Expert Panel went on to say it is "reasonable to expect that this fine-grained sediment will be remobilized over a period ranging from years to decades." *Id.* at 33.

The significance of this decades-long impact is that the EIS/EIR admits salmonids need spawning areas that are "relatively free" of sediment. EIS/EIR at 3.3-5. Thus, a critical question is whether the amount of sediment released from dam removal will so foul spawning areas that they are not relatively free of sediment. On this point, the EIS/EIR contains no comparative analysis of the actual sediment loads in those decades versus the amount of sediment that tips the balance so that the coho's spawning areas are no longer "relatively free" of sediment. Without this analysis, the impact of sediment releases on coho salmon, and all species, cannot be known – and the EIS/EIR cannot be said to have taken a "hard look" at the effects of the Proposed Action. However, the EIS/EIR does note that the sediment loading downstream of the four dams "would be less than 2 feet." EIS/EIR at 3.11-22 [citation omitted]. A two-foot deposition of sediment does not sound as if it leaves spawning beds "relatively free" of sediment.

It is also significant that the Expert Panel's analysis of the effects of released sediment on coho salmon was predicated on the assumption, based on numbers provided by DOI, that 200,000-300,000 tons of sand will be flushed downstream of Iron Gate Dam. Coho and Steelhead Expert Panel Report at 26. However, the Chinook Salmon Expert Panel concluded, again based on DOI data, that sediment releases would be 300,000-400,000 tons, an amount over 30% greater than considered by the Coho Expert Panel when evaluating the impacts of dam removal. Klamath River Expert Panel, Final Report, Scientific Assessment of Two Dam Removal Alternatives on Chinook Salmon, June 13, 2011 ("Chinook Expert Panel Report") at 21. If the Chinook Expert Panel is correct, the adverse impact of sediment release on the threatened coho salmon and on Klamath River beneficial uses are seriously underestimated even by the Coho Expert Panel and most certainly by the EIS/EIR. But, as discussed next, this error pales in comparison to the reality.

The adverse effects of sediment discharges from dam removal on coho salmon and all fish have been grievously underestimated by the EIS/EIR. Using numbers tucked away in other sections of the EIS/EIR, numbers omitted from the aquatic resources impact section, one finds that the basis upon which the ES/EIR and the Expert Panels assessed the impact of sediment release on aquatic resources was so fundamentally flawed that their conclusions about sediment impacts are wrong by orders of magnitude.

Recall that the Coho and Steelhead Expert Panel Report and the Chinook Expert Panel used first year sediment release numbers of 200,000-400,000 tons based on the data DOI gave the Panels. However, the EIS/EIR admits there are 13.15 million cubic yards of sediment behind the dams. EIS/EIR at 3.3-31. Using the numbers tucked away elsewhere in the EIS/EIR reveals that 8,430,000 cubic yards, or 3,540,600 tons, of sediment could be released in the first year after

dam removal.[4] To put this number into context, the EIS/EIR also admits that the average annual sediment load in the Klamath River is 5,834,091 tons. *Id.* at 3.11-10, Table 3.11-1.

In other words, the assessment by the Expert Panels of the impacts of sediment release (200,000-400,000 tons) is based on estimated sediment releases that are only a small fraction of the actual amount of sediment that could be released. Even more shocking is the statement in the EIS/EIR that the amount of sediment that will be released from dam removal is "relatively small compared to the sediment loading from other existing sources...." *Id.* at 3.6-26. *See also id.* at *See also id.* at 3.2-97, 3.11-22, 4-140. If the annual amount of sediment produced from existing sources is 5,834,091 tons and dam removal will produce up to 3,540,000 tons in the first year, the amount of the release is not "relatively small" compared to the normal sediment load.

To put this release in context, consider the likely result if a regulated party were to apply for a permit to release 3.540 million tons of sediment in a year. And remember that there is still more sediment behind the dams to be discharged after the first year of release. If such a permit application were to be submitted, it would almost assuredly be summarily denied based on the

[4] The EIS/EIR states that first year sediment releases could be up to 65% of the sediment behind J.C. Boyle dam, up to 81% of the sediment behind Copco 1 Dam and up to 38% of that behind Iron Gate Dam. EIS/EIR at 3.6-26. According to the EIS/EIR, the amount of sediment behind each dam is as follows: J.C. Boyle Dam-1,000,000 cubic yards; Copco 1 Dam-7,400,000 cubic yards; Copco 2 Dam-0 cubic yards; and Iron Gate Dam-4,700,000 cubic yards. *Id.* at 3.11-18, Table 3.11-3. Applying the above percentages produces the following first year release numbers in cubic yards: J.C. Boyle Dam-650,000 cubic yards (1,000,000 x 65%); Copco 1 Dam-5,994,000 cubic yards (7,400,000 x 81%); and Iron Gate Dam-1,786,000 cubic yards (4,700,000 x 38%) for a total of 8,430,000 cubic yards. Applying the conversion rate derived from the EIS/EIR of 0.42 tons per cubic yard reveals that up to 3,540,000 tons of sediment (8,430,000 x 0.42) could be released into the river in the first year of dam removal. The 0.42 tons per cubic yard conversion rate is derived from Table 3.11-2. EIS/EIR at 3.11-11. That table shows that the percent of clay in the dam reservoirs is 51.7% of the total deposits. Silt is 34.3% for a total silt and clay volume of 86%. The remaining 14% is sand. According to the April 2011 DOI Report titled Hydrology, Hydraulics and Sediment Transport Studies for the Secretarial Determination on Klamath River Dam Removal and Basin Restoration, the unit weight for silt and clay (*i.e.,* cohesive sediments) is 20 pounds per cubic foot and for sand and gravel (*i.e.,* non-cohesive sediments) 100 pounds per cubic foot. Therefore, (86% x 20 pounds per cubic foot) + (14% x 100 pounds per cubic foot) = 31.2 pounds per cubic foot. Converting 31.2 pounds per cubic foot to tons is by the following formula: (31.2 pounds/cubic foot) x (1 ton/2000 pounds) x (27 cubic feet/one cubic yard) = 0.42 tons/cubic yard.

potential for significant adverse affects on sensitive and ESA listed fish and wildlife, water quality, and beneficial uses. Incredibly, the EIS/EIR determines that such impacts are either less than significant or are potentially significant in the short term but do not require mitigation. *Id.* at 3.2-93.

The facts are that the assessment of sediment impacts associated with the Proposed Action in the EIS/EIR and in the Expert Panel Reports are based on clearly erroneous assumptions. The EIS/EIR, which relied on these assumptions and on conclusions of the Expert Panels to assess sediment impacts, is fatally flawed. To claim the EIS/EIR meets even the minimum standards of adequate analysis under NEPA or CEQA is ludicrous. Not only is there no analysis of the real first year impacts of dam removal, but recall that the Expert Panels stated that the impacts of only 200,000-400,000 tons of released sediment would last for decades. Nowhere does the EIS/EIR examine the long-term effects on species, water quality, or beneficial uses of releasing millions of tons of sediment into the Klamath River.

In addition, the EIS/EIR impermissibly dismisses the adverse short term impacts on species, aquatic resources and water quality by inaccurately stating that the sediment released is only a small fraction of typical sediment loads in the Klamath River, estuary and near shore environment. Not only is that factually incorrect, it is also legally improper to conclude that a project's environmental impacts, particularly those impacts associated with the release of pollutants, are insignificant based solely on the fact that the project contributes only a relatively small amount to an already existing pollution condition. Accordingly, even if it were accurate to characterize sediment releases associated with dam removal as relatively small as compared to existing sediment loads, such an analysis is not a permissible basis for concluding that sediment

impacts are less than significant, particularly when several surface water reaches within the Klamath basin that will be impacted by the sediment releases are already impaired for sediment.

In a vain attempt to argue the KBRA has mitigated for the effects of the increased fouling of spawning beds by sediment, the EIS/EIR points to the KBRA's gravel augmentation plan. However, the Coho and Steelhead Expert Panel Report dismissed the gravel augmentation plan in the KBRA as insufficient, as representing only a "small amount" relative to the overall area affected. Coho and Steelhead Expert Panel Report at 29. And recall that the Panel's assessment of the inadequacy of this mitigation measure was based on the assumption that only 200,000-400,000 tons of sediment would be released in the first year after dam removal, a number somewhat less than the actual 3,540,000 tons. Furthermore, the gravel mitigation measure is a measure likely to be implemented in certain bypasses and river reaches under the KBRA and as a part of other Foreseeable Restoration Measures even if the Proposed Action is rejected.

Finally, contrary to the requirements of NEPA and CEQA, the EIS/EIR fails to analyze or provide any conclusions or information regarding the potential adverse impacts of the Proposed Action on the habitat and water quality improvements that would otherwise be achieved by the implementation of the Foreseeable Restoration Measures. As a result of the completely inadequate analysis of adverse impacts of sediment associated with the Proposed Action, the EIS/EIR does not comply with CEQA and NEPA requirements for impacts analysis, has not assessed or prescribed sufficient mitigation measures for the Proposed Action, and does not have a sufficient basis for making an informed decision regarding implementation of the Proposed Action.

b. Water Temperature

Salmon experience "acute thermal effect" when "mean daily water temperatures begin to exceed 20° C." EIS/EIR at 3.3-33 (citations omitted). Will the Proposed Action improve this

important parameter for coho salmon? The Expert Panel concludes "the net effects ... is [sic] not known...." Coho and Steelhead Expert Panel Report at 30. To evaluate the temperature effect "will require more detailed information..." than is presently available. *Id.* at 32. In other words, there is not enough information to know whether dam removal will make any difference.

Moreover, the Expert Panel found that the important issue for salmon is not the average daily mean temperature, which is the exclusive focus of the EIS/EIR analysis. The Expert Panel points out that fish do not experience average mean daily temperatures. Fish experience hour-by-hour temperatures. It is those temperatures, not mean daily averages, that are key. The Expert Panel then states that while dam removal may lower the average daily mean temperature, the "highest temperatures experienced by the fish ... will increase." *Id.* at 31-32. The EIS/EIR recognizes that temperatures will increase in certain reaches of the Klamath River as a result of the Proposed Action (*see e.g.*, EIS/EIR at 3.2-77, 3.2-79, and 3.2-83), but completely fails to assess the increased temperature variability associated with the Proposed Action, and fails to examine the fish population impact of these increased temperatures caused by dam removal, relying instead on generalized averages that ignore and mask the actual temperature effects of the Proposed Action. Due to the completely inadequate analysis of adverse impacts of temperature changes associated with the Proposed Action, the EIS/EIR has not complied with CEQA and NEPA requirements for impacts analysis, has not assessed or prescribed sufficient mitigation measures for the Proposed Action, and does not have a sufficient basis for making an informed decision regarding implementation of the Proposed Action.

c. Nutrients

The principal water quality problems in the Klamath River basin are high nutrient loads that cause low dissolved oxygen and algae blooms. *Id.* Significantly, the EIS/EIR found that "under the Proposed Action total nutrient concentrations in the Klamath River downstream of

Iron Gate Dam would increase." EIS/EIR at 3.2-101. In fact, the EIS/EIR admits that all of the various models "recognize ... that under the Proposed Action total nutrient concentrations in the Klamath River downstream of Iron Gate Dam would increase." *Id.*

These high nutrient concentrations not only affect dissolved oxygen levels, but they cause increased algae growth. In that regard, the EIS/EIR admits there will be "long-term increases" in harmful river algae that will have a "significant impact." *Id.* at 3.4-15. *See also id.* at 5-100 ("the Proposed Action ... would result in increases in nutrient inputs ... that could increase [algae] biomass; ... this impact would be significant and unavoidable."). In other words, the Proposed Action will not solve the principal water quality problem of nutrient loading that inhibits increased salmon populations. Instead, the Proposed Action will make the problem worse, and will adversely impact, to the point of potentially precluding, the success of the Foreseeable Restoration Measures focused on reducing nutrients.

As to the mitigation plan in the KBRA, the Expert Panel concluded that "drastic reductions in loading from the watershed must accompany local amelioration to be effective." Coho and Steelhead Expert Panel Report at 33. Given that, "it would be premature" to conclude that any nutrient loading problems "will be substantially reduced by KBRA." *Id.* at 33-34.

d. New Spawning Habitat

A critical basis for the EIS/EIR's conclusion that the Proposed Action will help coho salmon is the view that the Proposed Action will open up 45 miles in the mainstem Klamath River and its tributaries and 23 miles of currently inundated reservoirs. EIS/EIR, Summary of Key Conclusions. Reacting to this view, the Expert Panel noted that the existence of both positive and negative effects of the Proposed Action downstream of Iron Gate Dam "prevent[s] the Panel from determining the net beneficial effects" of opening up new spawning habitat. Coho and Steelhead Expert Panel Report at 34. In fact, the Expert Panel concluded "it is

impossible to establish the effects of [the Proposed Action] ... with the information available." *Id.* at 38.

Regarding habitat access above Iron Gate Dam, the Expert Panel concluded the Proposed Action "will allow for a small increase in coho ... but information is currently insufficient for providing quantitative estimates." *Id.* at 40. However, the Expert Panel did note that the "potentially lower flows during the fall" caused by dam removal "may reduce the ability of coho to migrate through the mainstem in order to reach spawning areas in tributaries...." *Id.* at 35.

While DOI and the EIS/EIR trumpet the benefit of a free flowing river and the related access to new habitat, the experts appointed by DOI to assess this argument found the available information insufficient to support any conclusions about the effects on coho spawning of increasing access to habitat. But there is one aspect of increased habitat that has very serious implications for coho salmon – and this issue, like so many others, is ignored in the EIS/EIR.

The EIS/EIR forecasts a significant increase in the redband trout population due to dam removal. EIS/EIR at 3.3-127. Redband trout are a major predator of juvenile salmon. Because of that, the Chinook salmon Expert Panel found that predation from increased redband trout population could have the effect of "reducing or cancelling" the benefits to salmon that the EIS/EIR claims will result from increasing salmon access to habitat. Chinook Expert Panel Report at 17. In a major failing, the EIS/EIR ignores the impact of increased redband trout predation on any potential increase in salmon populations, notwithstanding the fact that DOI's expert panel concluded such predation could cancel the alleged benefits of dam removal for salmon. And recall that the sole justification for the Proposed Action is to benefit salmon.

e. Thermal Refugia

For many issues affecting coho salmon spawning success and survival, the Coho and Steelhead Expert Panel found we simply do not have enough information to reach any

conclusion as to whether the Proposed Action will benefit salmon. Regarding the effects of providing thermal refugia on the productivity, capacity, and habitat connectivity for coho, the Expert Panel found the Proposed Action "will likely" increase the availability of thermal refugia but the extent to which that will benefit the productivity of coho salmon "is not known." Coho and Steelhead Expert Panel Report at 43.

f. Ecosystem Function

As to improving natural ecosystem functions, the Expert Panel found there "is insufficient information available" to answer how the Proposed Action compares to the status quo. *Id.* at 51.

g. Disease

Regarding how the Proposed Action differs from the status quo with respect to the incidence and impact of disease, the Expert Panel concluded "[t]he information available is insufficient to determine the net overall effects of the Proposed Action." *Id.* at 51. However, the Expert Panel notes that a "possible consequence" of dam removal will be to spread fish borne disease upstream of the removed dams which now act as a barrier. *Id.* at 53-54. Not only may the geographic range of the disease expand, but, as discussed in Parts II.C.2.b and II.C, the EIS/EIR admits the Proposed Action will make the disease problem worse by increasing the habitat for disease carrying worms.

h. Food Availability

The Expert Panel notes the potential for coho to gain access to additional habitat means increased competition for food in those habitats. However, according to the Expert Panel, "the food aspects of ecosystem function ... have not been rigorously analyzed to date." *Id.* at 51. In other words, the EIS/EIR has failed to consider a critical environmental issue, interspecies interactions. As noted above regarding redband trout predation, these interspecies interactions,

ignored in the EIS/EIR, have the potential to negate the benefits the EIS/EIR asserts will flow from dam removal.

i. Conclusion

The EIS/EIR fails to meet even the minimum standards for acceptable NEPA or CEQA analysis. At the outset, reliance on the Coho and Steelhead Expert Panel Report is misplaced because the EIS/EIR mischaracterizes the Expert Panel's conclusions. While the EIS/EIR claims the Expert Panel validates the conclusion that dam removal "would result" in a modest increase in coho populations, the Expert Panel actually said there is a "low likelihood" of any such increases. Coho and Steelhead Expert Panel Report at ii. In fact, the Panel said the difference between the status quo and the Proposed Action "is expected to be small...." *Id.*

Equally important, the Expert Panel repeatedly affirms that so much information is missing, information essential for proper analysis, that no meaningful conclusions can be made about the alleged benefits of dam removal. In a biting criticism, the Panel notes that its "statements are no substitute for further scientific investigation" and cautions that "its statements not be used in lieu of doing the necessary and feasible data collection, analyses, and modeling...." *Id.* at i. Indeed, the Expert Panel concludes that what is needed is "scientific analysis of solid data." *Id.* at iii. The inescapable conclusion is that the EIS/EIR, based on the same information as was before the Expert Panel, is so devoid of the necessary facts and analysis that reliance on the EIS/EIR as an adequate environmental analysis is arbitrary and capricious.

It is also important to step back and to look at the larger picture. The facts are that the Expert Panel convened by DOI to examine the impact of the Proposed Action on coho salmon rejected the fundamental premise advanced to support the Proposed Action. The EIS/EIR states the need for dam removal is to restore salmonid fisheries. With respect to coho salmon, the

Expert Panel concluded the Proposed Action will not even adequately protect the resource, let alone the fisheries.

Any reliance on the Expert Panel to justify the Proposed Action is misplaced for another significant reason. Although the EIS/EIR identifies five alternatives, the Expert Panel was told to ignore three. One need look no farther than the title of the Expert Panel Report: "Scientific Assessment of Two Dam Removal Alternatives on Coho Salmon and Steelhead." The Report states unequivocally that the Panel was asked to evaluate only "two alternative scenarios," the status quo and dam removal. *Id.* at 1. Other alternatives, such as Alternative 4, were cast aside. Yet, the EIS/EIR relies on the Expert Panel as validating DOI's view that the Preferred Alternative of dam removal is superior to all other alternatives as to coho salmon. That reliance is misplaced because the Expert Panel examined only two of the five alternatives.

2. Chinook Salmon

Chinook salmon is the second salmon species whose restoration is used to justify the Proposed Action. The EIS/EIR concludes that dam removal, combined with actions to be taken under the KBRA, will increase median annual production of adult Chinook salmon by 81.4%. EIS/EIR, Summary of Key Conclusions. To support this claim, the EIS/EIR turns to the Expert Panel appointed by DOI to evaluate the impact of the Proposed Action on Chinook salmon. The EIS/EIR characterizes the Expert Panel as finding that the Proposed Action will be a "major" step forward that will provide a "substantial increase in the abundance of naturally spawned Klamath River Chinook salmon...." EIS/EIR at 3.3-94.

As was the case with the Coho Salmon Expert Panel, the EIS/EIR misstates what the Chinook Expert Panel said. Regarding the alleged "substantial" increase in Chinook salmon, the Expert Panel defined the term "substantial" somewhat differently than what is represented in the EIS/EIR. What the Panel actually said is "[t]he term 'substantial' should be understood here to

mean a number of fish that contributes more than a trivial amount to the population." Chinook Salmon Expert Panel Report at 7, n.3. The Panel then said they expected a possible total increase of just 10% in the average number of natural spawners. *Id.* This is several orders of magnitude below the 81.4% increase claimed in the EIS/EIR. Equally important, the Expert Panel stated that the possibility of gains actually equaling 10%, an amount 72% less than that claimed in the EIS/EIR, is itself questionable. The Expert Panel states it is not suggesting that a 10% number "is a likely increase or a minimum increase that is expected." *Id.* That is because "the nature of the uncertainties precludes attaching a probability" to any prediction. *Id.* at 7.

Not only does the Expert Panel not say what the EIS/EIR claims it says, but the Expert Panel disputes the conclusions in the EIS/EIR about the percentage increase in Chinook salmon populations. That the Expert Panel rejects DOI's position about the benefits of the Proposed Action for Chinook salmon is made abundantly clear by examining what the Expert Panel actually said as to the impact of dam removal on nine factors the Expert Panel said must be addressed if there are to be gains in Chinook salmon numbers. An analysis of the actual effects of dam removal on each of those factors shows just how tenuous, and incorrect, are the claims in the EIS/EIR.

a. Water Quality

The first of the nine factors is water quality. Here, the Expert Panel notes that any benefit of the Proposed Action in reducing nutrient loads and thermal inputs could occur only "if" the KBRA provides otherwise unavailable funding for the implementation of Total Maximum Daily Loads ("TMDL"). Chinook Expert Panel Report at 9. Given today's federal budget climate, that is a major, and perhaps insurmountable, "if." Moreover, the Expert Panel found that "the major Proposed Actions" in the KBRA for addressing water quality "are unlikely to provide substantial improvements in water quality...." *Id.* Why is it "unlikely"? Because "the magnitude of the

proposed solutions may not match the scope and extent of the water quality problem." *Id.* at 10. For example, the principal KBRA proposed actions to reduce nutrient loads, wetland rehabilitation and riparian vegetation to capture nutrients, would require the creation of 18,000 hectares (44,479 acres) of wetlands, 78% of the area of the Upper Klamath Lake or about 40% of the entire area of irrigated agriculture in the Upper Klamath Lake basin. The Expert Panel concludes this as simply not feasible. *Id.* at 11. This conclusion finds significant support in the EIS/EIR which admits that dam removal, when coupled with the planned restoration efforts, will result in a gain of only "approximately 184 acres" of riparian habitat. EIS/EIR at 3.3-56.

Not only is the proposed mitigation likely to be ineffectual but, as noted above in Parts II.C.1.c and II.G.2, the EIS/EIR admits that dam removal will actually increase harmful nutrient loads, making the water quality problem worse, not better.

The Expert Panel found that after controlling nutrient loads, the next major water quality issue is high water temperatures. As to the likelihood of controlling water temperatures through the KBRA's proposed actions, the Expert Panel concluded that it too "seems infeasible." Chinook Expert Panel Report at 11.

In other words, as to water quality, the first critical component for improving Chinook spawning, even "if" the KBRA is 100% funded, the benefits of the Proposed Action are "unlikely" to be large because the actions proposed in the KBRA are not feasible. More importantly, the Proposed Action will make the problem worse. As the EIS/EIR admits: "The Proposed Action ... would result in increases in nutrient loads; ... this impact would be significant and unavoidable." EIS/EIR at 5-100. This finding is somewhat inconsistent with the EIS/EIR statement that the Expert Panel determined the Proposed Action would be a "major" step forward for Chinook salmon abundance.

b. Disease

Disease is the second major factor that must be addressed to increase Chinook numbers. The Expert Panel noted that the "overall success" of the Proposed Action for Chinook salmon hinges "to a large degree" on disease reduction. Chinook Expert Panel Report at 13. As to how the Proposed Action would address this factor, the Panel concluded that "uncertainty about these aspects is very high." *Id.* Uncertainty is high not only because the proponents of dam removal have not done the necessary research to permit true analysis, but also because a reduction in the food supply for disease causing worms "seems like a remote possibility." *Id.* In fact, the population of disease causing worms is likely to increase because the EIS/EIR admits the river algae (periphyton) biomass will increase under the Proposed Action largely due to increases in nutrient loads. *See* Part II.D of these Comments. A significant component of this river algae is the species *Cladophora* which provides important habitat for the worms that are host to fish killing parasites. EIS/EIR at 3.4-5 and 3.4-8. Thus, the net result of the Proposed Action is to increase the habitat for, and the population of, disease carrying worms.

Uncertainty, the absence of necessary research, a remote possibility of progress, and increasing the habitat for disease carrying worms do not sound like statements that comport with the EIS/EIR claim of a "major" step forward under the Proposed Action. In fact, the Expert Panel found that a possible outcome of dam removal is that the disease issue, now made worse, will simply move upstream to other areas where spawning aggregations occur. *Id.* at 13. This concern was echoed by the Coho and Steelhead Expert Panel Report which also reported that dam removal could simply "spread infection upstream of the dams...." Coho and Steelhead Expert Panel Report at 53.

c. Colonization

The Chinook Expert Panel's treatment of the other key factors for improving Chinook spawning numbers is equally critical of the EIS/EIR conclusions. As to the third factor, the actual ability of Chinook salmon to colonize the Upper Klamath Basin, the Expert Panel notes that Chinook salmon migration is influenced by low dissolved oxygen. Chinook Expert Panel Report at 14. Reviewing the Proposed Action, including the KBRA, the Expert Panel concludes it is "uncertain" if the low oxygen problem in the Klamath River can be improved and, "[w]ithout solving the water quality problems, a fully self-sustaining run of fall Chinook salmon to the upper basin is unlikely." *Id.* at 14-15. Recall that the Expert Panel found it "unlikely" the Proposed Action will successfully address the water quality problems and the EIS/EIR admits the Proposed Action will make existing water quality problems worse, and fails to analyze the degree to which it will impede the habitat and water quality improvements that would otherwise result from implementation of the Foreseeable Restoration Measures.

d. Harvest Levels

Regarding the fourth factor, impact of fishery harvests, while the EIS/EIR projects an increase in harvest opportunities, the Expert Panel said "harvest levels may need to be reduced for at least several years" in order to permit the measures in the Proposed Action to take effect. *Id.* at 16. Whether these harvests can ever be increased seems to depend on the success of the Proposed Action in improving water quality ("unlikely," "infeasible"), controlling disease ("a remote possibility"), and re-colonization of the Upper Klamath Basin ("unlikely").

While the EIS/EIR predicts increased harvest levels approximating 50%, the Expert Panel says harvest levels may need to be reduced. Equally important, returning harvest levels to current rates, or expanding them, depends on a series of "unlikely" events and "remote" possibilities.

e. Other Factors

Regarding the fifth factor that must be addressed to increase Chinook numbers, the intermixing of natural and hatchery fish, the Expert Panel notes the proposed closure of Iron Gate Hatchery eight years after dam removal "could" increase the survival rate of naturally spawning Chinook by eliminating interbreeding. *Id.* at 17. However, in a related matter, the impact on commercial and recreational harvest levels of eliminating the hatchery is never analyzed in the EIS/EIR.

The sixth factor that must be addressed to increase Chinook salmon populations is the negative impact on juvenile Chinook caused by redband trout predation. Recall the statement by the Expert Panel that the Proposed Action is projected to increase redband trout populations and that a larger redband trout population means increased predation on juvenile salmon. This is a critical point not only for Chinook salmon but also for coho salmon. In fact, the Chinook Expert Panel concluded increased redband predation could have the effect of "reducing or cancelling the benefits to Chinook salmon due to expansion of habitat." *Id.* at 17. In other words, the claims in the EIS/EIR about the advantages of new salmonid habitat could be moot because of trout predation on salmon. Conspicuously absent from the EIS/EIR is any analysis of the effects of changes in interspecies interactions that will result from the Proposed Action. Instead, the EIS/EIR inappropriately and incorrectly treats each species as an independent silo – ignoring the issue of redband trout predation.

As to the effects of climate change, the seventh factor, the Expert Panel can only point to unknown impacts. *Id.* at 18-19. However, regarding the next factor, the impact of changed river flows, the Expert Panel saw positive and negative impacts, concluding the "net effect ... is unknown." *Id.* at 20. However, as noted in Part II.C.1.b above, the Proposed Action will likely make the problem of high water temperatures worse.

Finally, as to sediment loading, the ninth factor, and a factor discussed in more detail in the coho salmon section above, the Expert Panel noted dam removal will involve the release of "considerable amounts of sand" which may "reduce the quality of some spawning habitat." Further, "it is likely to take more than a decade" for these effects to be reversed and it is possible the fall Chinook run could be "overwhelmed" for some period. *Id.* at 21. The EIS/EIR fails to account for this possibility. And recall that the Expert Panel's analysis was based on estimates of sediment releases that were abysmally low. In fact, the Expert Panel assumed sediment releases that are only any small fraction of the amount that will be released in the first year along. *See* Part II.C.1.a. If the amount of sediment release on which the Expert Panel based its finding that Chinook salmon could be "overwhelmed" for some period of time is only a fraction, 11.3%, of the actual number, then the inescapable conclusion is Chinook salmon will be overwhelmed – and the EIS/EIR fails to consider, let alone analyze, the true impact of sediment release on these salmon.

f. Conclusion

A careful review of the analysis in the Chinook Salmon Expert Panel Report belies the statements in the EIS/EIR that the Proposed Action will be a "major" improvement causing "substantial" gains in Chinook salmon populations. Not only does the Expert Panel say that by "substantial" it means an increase that is "more than a trivial amount," but the Expert Panel estimates the "possible" Chinook salmon population increase to be on the order of 10%, far less than the 81.4% claimed in the EIS/EIR. Equally important, the Expert Panel states that even this number is uncertain because the "uncertainty about the likely outcomes of the Proposed Action is large...." Chinook Expert Panel Report at 21. The uncertainty is large because the Expert Panel's assessment of the effect of the Proposed Action on the nine elements necessary to improve Chinook salmon numbers revealed that the effect of the Proposed Action on these nine

factors is "unknown," "unlikely," and "remote." Further, in some cases such as water quality the Proposed Action makes the problem worse. Equally important, because of the increased predation of redband trout on salmon, it is possible that the alleged advantages of the Proposed Action for salmon will be moot, or even negative. All of this caused the Expert Panel to call the Proposed Action as to Chinook salmon "an experiment." *Id.* at 22. Recalling that the need for the Proposed Action stated in the EIS/EIR is to restore salmonid populations, the Expert Panel established by DOI clearly rejects the premise that the Proposed Action will achieve that objective.

Finally, as was the case with the coho review panel, the Chinook review panel was asked to evaluate only two alternatives, the status quo and dam removal. *Id.* at 4. The other alternatives were never analyzed, a clear violation of the purpose and intent of NEPA and CEQA.

3. Steelhead Trout

The same panel of experts that examined the effects of the Proposed Action on coho salmon examined its effects on steelhead trout. That analysis is contained in the same report covering coho salmon. The conclusions of the Coho and Steelhead Expert Panel regarding coho salmon discussed above apply with equal force regarding steelhead and need not be repeated here. Therefore, this section will focus only on the unique steelhead findings not common to coho salmon.

Recall the Expert Panel concluded that the difference between the Proposed Action and the status quo regarding coho salmon "is expected to be small...." Coho and Steelhead Expert Panel Report at ii. For steelhead, the Expert Panel said it was more optimistic the Proposed Action "could" result in larger numbers. *Id.* However, "could" is far different than "would." The claim in the EIS/EIR that the Expert Panel concluded the Proposed Action "would" result in

increased steelhead numbers is inconsistent with what the Expert Panel actually said. EIS/EIR at 3.3-112.

The EIS/EIR states the steelhead population will increase because "steelhead would be able to access a substantial extent of new habitat...." *Id.* However, the Expert Panel did not characterize any newly available habitat as "substantial." Instead, the experts said dam removal would allow for only "a small extension (likely 10-20 percent) of spawning and rearing" habitat. Coho and Steelhead Expert Panel Report at 18. *See also id.* at 40. As to the actual effect of this new habitat availability on steelhead numbers, the Expert Panel stated the "information is currently insufficient for providing quantitative estimates." *Id.*

Equally important, the Expert Panel said any positive benefits from increased access to habitat depend on whether steelhead "can successfully complete their life cycles." *Id.* at 41. One of the factors inhibiting life cycle completion is predation by other fish. *Id.* at 42. As noted above, predation by an expanding redband trout population is a serious problem ignored in the EIS/EIR. This is a significant failure of analysis in the EIS/EIR because, as the Expert Panels noted, predation arising from interspecies conflicts could cancel the alleged benefits of the Proposed Action. *See* Part II.C.1.d. Further, the Coho and Steelhead Expert Panel found that habitat expansion raises important issues of competition for food and space and these aspects of ecosystem competition "have not been rigorously analyzed to date." Coho and Steelhead Expert Panel Report at 51.

The Expert Panel then found that the short-term effects of sediment release from dam removal would be "especially injurious" to adult steelhead. *Id.* In considering this assessment of the adverse impacts of sediment, recall that this Expert Panel assumed an amount of sediment release that is 30% less than that identified by the Chinook Expert Panel. *Id.* at 18. And recall as

discussed in Part II.C.1.a that both of these estimates of sediment release are off by thousands of percent.

Even with the grossly understated impacts of sediment release on steelhead, the EIS/EIR admits that under the most likely to occur scenario up to 36% mortality is predicted for winter run adult steelhead as a result of dam removal. EIS/EIR at 3.3-113. Moreover, the EIS/EIR predicts that the most likely scenario from dam removal will result in up to 52% mortality for one and two year old juveniles in the mainstem Klamath River. *Id.* Given that the EIS/EIR understates the amount and impact of sediment release, even the worst case scenario where the EIS/EIR predicts 71% mortality for adult steelhead and for one and two year old juveniles, understates the reality. *Id.* at 3.3-118. These numbers do not comport with the alleged beneficial effects of dam removal.

Finally, the Coho and Steelhead Expert Panel confirms that the information relied on in the EIS/EIR is simply too incomplete to be the basis for informed decision making. For example, the Panel concludes that the extent to which thermal refugia will benefit steelhead "is not known." Coho and Steelhead Expert Panel Report at 43. Similarly, improved habitat conditions may occur for steelhead but the "net effects on abundance are unknown." *Id.* at 46.

Once again, the benefits of dam removal claimed to exist in the EIS/EIR are not substantiated by the Expert Panel or even by the EIS/EIR. And once again, the Expert Panel was told to examine the environmental effects of only two of the five alternatives identified in the EIS/EIR.

4. Redband Trout

The EIS/EIR states the Proposed Action will expand the total distribution of redband trout. EIS/EIR, Summary of Key Conclusions. For support, the EIS/EIR turns to yet another expert panel report titled Klamath River Expert Panel, Final Report, Scientific Assessment of

Two Dam Removal Alternatives on Resident Fish, April 10, 2011 ("Resident Fish Expert Panel Report"). The EIS/EIR characterizes this Expert Panel as concluding redband trout abundance "could increase significantly" under the Proposed Action because "the habitat improvements associated with KBRA implementation, including water quality and quantity and riparian corridor improvements and protection, are anticipated to increase trout productivity...." EIS/EIR at 3.3-127.

On this point, recall that the Chinook Expert Panel fully addressed the issues of water quality and riparian corridor improvements. That panel determined the actions proposed in the KBRA to improve water quality are "unlikely to provide substantial improvements in water quality...." Chinook Expert Panel Report at 9. As to riparian corridor improvements, the Chinook Expert Panel found the KBRA plan is not feasible. *Id.* at 11. Also recall, as discussed in Part II.C.1.c of these Comments, the EIS/EIR admits the Proposed Action will make existing water quality problems worse. The bases set forth in the EIS/EIR for concluding the Proposed Action will significantly increase the trout population are without support.

The Resident Fish Expert Panel added its own criticism about assertions of improved habitat for redband trout. This Expert Panel agreed dam removal will increase free-flowing water habitat by 43 miles. Resident Fish Expert Panel Report at 77. However, in considering whether this will make any real difference to redband trout, the Panel found the "quality of this habitat ... has not been carefully evaluated." *Id.* In other words, we simply do not know. Moreover, from what we do know, the quality of these 43 miles is suspect because 22-23 miles are now under reservoirs, four miles have been adversely affected by dewatered flows, and 17 miles have been adversely affected by daily fluctuating flows. *Id.*

In sum, the impact of the Proposed Action on redband trout is not known because the EIS/EIR has not done the required analyses. What we do know says habitat improvements are unlikely and not feasible. The basis upon which the EIS/EIR concludes there will be significant increases in the redband trout population is without foundation. The EIS/EIR provides no reasonable basis to evaluate the effects of the Proposed Action, let alone conclude that the effects will be positive. However, as discussed above, if the EIS/EIR is correct about redband trout population increases, the implications for salmon under the Proposed Action are extraordinarily significant because trout predation of salmon could cancel all of the benefits to salmon alleged to exist because of dam removal.

5. Lost River Sucker and Shortnose Sucker

The Lost River sucker and the shortnose sucker are listed as endangered under the ESA. 53 Fed. Reg. 27,130 (July 18, 1988). They are also listed as endangered under the California Endangered Species Act. These two sucker species are found primarily in lakes upstream of the dam removal sites and the majority of spawning occurs in tributaries above those lakes. Resident Fish Expert Panel Report at 9. Therefore, the EIS/EIR concludes that the difference in habitat value between the status quo and the Proposed Action "would not be substantive." EIS/EIR at 3.3-126. The Resident Species Expert Panel confirms this assessment stating "[d]am removal is not likely to change this species' range and abundance...." Resident Species Expert Panel Report at 66.

6. Green Sturgeon

The southern green sturgeon is classified as threatened under the ESA. 71 Fed. Reg. 52,300 (Oct. 9, 2009). The EIS/EIR concludes southern green sturgeon "are not expected to be affected by the Proposed Action." EIS/EIR at 3.3-123. The northern green sturgeon also "would not be affected by the Proposed Action...." *Id.*

7. Bull Trout

Bull trout are listed as threatened under the ESA. 64 Fed. Reg. 58,910 (April 8, 1999). The best the EIS/EIR can say is that the Proposed Action offers some "promise" for increasing bull trout abundance. EIS/EIR 3.3-129. However, recall that the EIS/EIR claims the Chinook salmon population will experience an 81.4% increase. EIS/EIR, Summary of Key Conclusions. Recall also the EIS/EIR states dam removal will increase steelhead numbers. EIS/EIR at 3.3-112. These are significant statements because the EIS/EIR admits that Chinook salmon and steelhead prey on bull trout fry and juveniles. *Id.* at 4-70. There is no analysis in the EIS/EIR of the effects of this increased predation. If the EIS/EIR is correct as to the population growth of Chinook salmon and steelhead, then the conclusion in the EIS/EIR that dam removal offers some "promise" for the bull trout is not supportable without explanatory analysis – of which there is none.

8. Lamprey

The EIS/EIR states "the Proposed Action could increase Pacific lamprey production by up to 14 percent." *Id.* at 3.3-120, citing the Lamprey Expert Panel Report. What the Expert Panel actually said as to the Upper Klamath was: "Since very little is known about the biology or habitat requirements for the freshwater-resident species in the upper Klamath River Basin, it is difficult to predict whether there would be a significant change in the habitat capacity for these species with dam removal." Lamprey Expert Panel Report at 31.

As to the overall Klamath River system, the Expert Panel states the habitat capacity for Pacific lamprey is predicted to increase 14%. *Id.* at 32. The EIS/EIR then assumes a 14% increase in habitat capacity automatically translates to a 14% increase in numbers, an assumption that is suspect because, as noted above, the quality of that habitat has not been evaluated. Indeed, the Expert Panel found that the extent to which lamprey can use any increased habitat

depends on whether lamprey can actually colonize new habitat areas. *Id.* In yet another conspicuous failure of NEPA and CEQA compliance, the EIS/EIR contains no analysis of whether this will, in fact, happen. The EIS/EIR just assumes it will happen.

In that regard, it is interesting to note that the habitat condition that could make the Proposed Action favorable to lamprey is an increase in fine silt/sand in the river bottom. *Id.* at 15, EIS/EIR at 3.3-120. However, those things that may help lamprey, *i.e.,* increased sedimentation, are not so helpful to salmonids and trout. While the EIS/EIR seeks to downplay the size and duration of the adverse effects of sedimentation on coho salmon, Chinook salmon, and various species of trout, the Lamprey Expert Panel notes it is "reasonable to expect that this fine-grained sediment will be remobilized over a period ranging from years to decades." Lamprey Expert Panel Report at 33. The long-term prospect is for "an increase of approximately 127,000 tons per year of fine sediment" as a result of dam removal. *Id.* This may be helpful to lamprey but it is not helpful to salmon and trout species for which siltation has a detrimental impact on spawning grounds. And this number significantly understates the amount of sediment that will actually be released into the river.

9. Fish Interactions in the River

The EIS/EIR treats each species discussed above as if it is the only occupant of the ecosystem. The EIS/EIR chooses to ignore the fact that these various species share the same habitat, compete for the same space and food, and prey on each other. As a result, the EIS/EIR fails to examine the extent to which these ecosystem interrelationships change its already questionable assertions regarding the alleged benefits stemming from the Proposed Action.

For example, the EIS/EIR is devoid of any analysis regarding the effect of the Proposed Action on resident native fish. The Resident Fish Expert Panel noted there are 16 such species that may benefit from the Proposed Action. Resident Species Expert Panel Report at 64. The

impacts of increasing the numbers of 16 different species and of the resulting predator prey relationships are totally ignored in the EIS/EIR. As the Chinook Expert Panel noted, predation by an increased redband trout population could cancel the benefits to Chinook salmon claimed for the Proposed Action. Chinook Expert Panel Report at 17. Although redband trout is not one of the 16 resident species referenced in this section, the same predation issues exist as to resident species. Not only has the EIS/EIR failed to examine the ecosystem impacts of a possibly increased population of 16 resident species, but, as discussed above, it has also ignored the ecosystem impacts of an enlarged redband trout population.

The absence of any analysis of these interspecies interactions is a conspicuous failure in the EIS/EIR. The Chinook Expert Panel clearly identified this failure stating that the overarching and controlling assumption in the EIS/EIR is that interspecies "interactions are less important" than the single species direct effects of dam removal. Chinook Expert Panel Report at 27. In a telling comment, the Expert Panel states it "does not know if this is true." *Id.* Nevertheless, the EIS/EIR persists with its single species, silo, analytical approach even though "[u]nder the Proposed Action all of the fish species would overlap with all others at some part of their life cycles, and some of them use similar habitat." *Id.* The Panel recommended that "a specific analysis be conducted ... to investigate whether trade-offs or synergies may exist among the various species likely to be affected by the Proposed Action." *Id.* In a total failure of common sense and analysis, the EIS/EIR ignores the fact that species share, and interact in, the same ecosystem. By itself, the failure to consider this environmental effect renders the EIS/EIR inadequate.

A related issue, also not addressed in the EIS/EIR, is the management requirements for ESA protected species and how those requirements affect the claimed benefits of the Proposed

Action. For example, the Chinook Expert Panel noted that a petition has been filed to list the Klamath Spring Chinook salmon under the ESA. The Panel asserted such a listing would be "particularly problematic in the case of Lost River and shortnose suckers ... versus Chinook salmon ... the former would benefit from higher [Upper Klamath Lake] water levels and the latter would benefit from increased flows." Chinook Expert Panel Report at 26. Regardless of whether there is an ESA listing for spring Chinook, the issue of the competing needs of different species continues to exist. Further illustrating this problem, the Chinook Expert Panel found that the "current Biological Opinion [for protected suckers] may reserve more water for suckers than that offered under KBRA." *Id.* The EIS/EIR cannot ignore such issues, particularly when they involve ESA protected species.

Similarly, the EIS/EIR states that implementing the Proposed Action will allow Chinook salmon and steelhead to have access to areas designated as critical habitat for the threatened bull trout. These are areas that Chinook and steelhead have not been able to access since the completion of the Copco 1 Dam in 1981. EIS/EIR at 4-70. The EIS/EIR then admits Chinook salmon and steelhead are likely to prey upon bull trout fry and juveniles in new habitat areas after the dams are removed, and vice versa. *Id*. There is no analysis in the EIS/EIR of the effects of this predation on the threatened bull trout, a significant omission given the EIS/EIR claims an 81.4% increase in the adult Chinook salmon population and an increase in steelhead numbers. EIS/EIR, Summary of Key Conclusions and at 3.3-112. If the EIS/EIR is correct, then the impacts on the threatened bull trout of this interspecies interaction cannot be dismissed with the statement "these species co-evolved in the watershed together and it is anticipated that they would be able to co-exist in the future." EIS/EIR at 4-70. While these species may have evolved together in a different era and in a different ecosystem, the EIS/EIR ignores the fact that the

ecosystem has changed since that era – and the Proposed Action will change it again. The EIS/EIR incorrectly assumes the evolutionary past will somehow once again come into existence. That conclusion has no support in reality. The EIS/EIR inappropriately ignores this interspecies interaction – an interaction of particular note since bull trout is a threatened species.

Another key ecosystem conflict ignored in the EIS/EIR is the relationship between worms that carry fish killing parasites and the claimed increases in fish populations. As discussed above, increases in salmon populations hinge "to a large degree" on the ability to control fish disease. Chinook Expert Panel Report at 13. Yet, the EIS/EIR admits the Proposed Action will increase nutrient loads, which increases river algae populations, which increases the habitat and numbers of worms that host fish killing parasites and disease. EIS/EIR at 3.4-17, 3.2-101, 3.2-102, 3.4-5, 3.4-8. The effects of this ecosystem impact are ignored in the EIS/EIR.

Commenting on all such interspecies conflicts, the Chinook Expert Panel noted that "[r]esolving such potential conflicts may trump or substantially alter agreements developed under the Proposed Action...." Chinook Expert Panel Report at 26. Despite the possibility that these interspecies conflicts may trump the benefits claimed for the Proposed Action, the EIS/EIR is devoid of any analysis of interspecies interactions.

10. Other River Species

The analysis of the impact of dam removal on other river species is equally deficient. For example, as to freshwater mussels the EIS/EIR states high sediment concentrations "for more than 4- to 5- day periods within the mainstem Klamath River … might result in substantial mortality." EIS/EIR at 3.3-131. The EIS/EIR goes on to admit it "seems reasonable to presume that some percentage of Klamath River freshwater mussels buried under 0.5 to 3.0 feet of new sediment could not survive." *Id.* at 3.3-131. In another section of the EIS/EIR one finds the admission that the sediment deposition is not expected to exceed two feet. *Id.* at 3.11-22.

Nowhere does the EIS/EIR discuss the immediate impact of burying freshwater mussels under two feet of sediment. Nowhere does the EIS/EIR discuss the long-term effects of this burial given that the EIS/EIR admits 4-5 days is the critical period before "substantial" mortality sets in and given that the EIS/EIR admits that the period of high sedimentation "would be 3 to 4 months." *Id.* at 4-54. Instead, the EIS/EIR simply concludes the impacts of burying freshwater mussels are "expected to be short-term." *Id.* How the EIS/EIR can make such a claim in light of the evidence is unclear. The reality is that freshwater mussels will be buried for an extended time and mortality will be "substantial." Yet, the EIS/EIR fails to discuss the extent, and the ecosystem implications, of this mortality.

For other filter feeders, the EIS/EIR admits the sediment deposits from dam removal would "be expected to affect filter-feeding [benthic macroinvertebrates] in much the same fashion as described for freshwater mussels." *Id.* at 3.3-133. Based on that, one would expect "substantial" mortality for these macroinvertebrates. Yet, the EIS/EIR is once again devoid of any analysis of the extent, and the ecosystem impact, of this mortality.

11. Estuarine and Ocean Impacts

Repeatedly the EIS/EIR states sediment release from dam removal will not have any real impact on the Klamath River estuary and the aquatic species found there. EIS/EIR at 3.3-110 ("The Proposed Action is not expected to … affect coho salmon estuarine habitat. Sediment … would likely not extend downstream to the estuary."); at 3.3-99 ("The Proposed Action would not …. affect estuarine habitat used by fall-run Chinook."); at 3.3-118 ("The Proposed Action is not expected to … affect steelhead estuarine habitat.... Sediment … would likely not extend downstream to the estuary."); at 3.3-130 ("The Proposed Action is not likely to … affect estuarine habitat …. [S]ediment … resulting from the Proposed Action would likely not extend downstream to the estuary.")

There are two problems with this no impact conclusion. First, if the EIS/EIR is correct, then virtually all of the 3,540,000 tons of sediment released in the first year after dam removal, plus all the remaining sediment that will be released, will stay in the river. *See* Part II.C.1.a. The EIS/EIR fails to explain how leaving millions of tons of sediment in the river, coupled with the statement in the EIS/EIR that salmon need spawning areas that are "relatively free" of sediment, is consistent with the conclusions in the EIS/EIR that dam removal will help salmon or other fish that need sediment free spawning areas. Equally important for NEPA and CEQA compliance, the EIS/EIR fails to examine the overall ecosystem impacts of leaving 3,540,000 tons of sediment in the river.

This leads to the second problem with the many statements in the EIS/EIR that no sediment will reach the estuary and, therefore, the EIS/EIR need not examine estuarine impacts – which it did not. The problem is that these statements are contradicted by other statements in the EIS/EIR. The EIS/EIR states "the released sediment would likely exceed the carrying capacity of the river during some water year types, and it would result in sedimentation … [in] the Klamath River estuary." EIS/EIR at 3.11-20. At another point, the EIS/EIR states that "[essential fish habitat] in the estuary could be affected by elevated turbidity from sediment releases...." *Id.* at 4-72. The EIS/EIR also states there will be suspended sediment in the estuary for up to two years. EIS/EIR at ES28. Thus, the EIS/EIR contradicts its many earlier statements quoted above that sediment from dam release will not reach the estuary with almost as many statements that sediments will reach the estuary. But the contradictions continue.

The EIS/EIR also asserts that any sediment deposition in the river "would be flushed downstream during high-flow events. Any settling or sedimentation … is expected to be minimal and short-lived. Further … there is no sandbar within the mouth of the Klamath River

itself; rather the sandbar is located offshore. As a result, the majority of the suspended sediment load from the river is carried out to sea and does not remain in the estuary itself." *Id.* at 3.11-21. The principal problem with the preceding quote is that it is factually incorrect. There is a rather large sandbar at the mouth of the Klamath River. Figure 1 attached to these Comments shows that several large sandbars exist within the river near its mouth. Moreover, a large spit of sediment is located directly along the coast, substantially blocking the majority of the Klamath River estuary.

Thus, we have multiple statements that "sediment … would likely not extend downstream to the estuary," meaning it stays in the river, followed by statements that there will be sediment deposits in the estuary, followed by statements that because of the absence of a sandbar at the mouth of the Klamath River the "majority" of the sediment will wash into the ocean and not stay in the estuary. So, which is it? The answer is we do not know. No decision maker can make an informed decision based on such inconsistent and poor analysis. There can be no "hard look" because the EIS/EIR cannot tell us what we are looking at.

If there is sediment deposition in the estuary, the inadequacy of the EIS/EIR becomes even more pronounced. The EIS/EIR has not one shred of analysis regarding the impacts of sediment deposit on species that spend all or some of their life cycle in estuarine habitat. For example, the federally listed eulachon (threatened) and the state listed longfin smelt (threatened) generally occur within 8 miles of the coast in the estuary. *Id.* at 3.3-129 and 3.3-130. Anadromous species such as salmon also move through the estuary. Further, the estuary has been designated as essential fish habitat for both pelagic fish and groundfish. *Id.* at 3.3-93 and 94.

If the sediment is going to pass through the estuary to the ocean, then we have a new analytical problem. The EIS/EIR contains absolutely no analysis of the effects on the ocean and its resources of either the volume of the sediment that will be deposited into the ocean or of the contaminants in the sediment. Not only is there no analysis that meets NEPA and CEQA standards, but the EIS/EIR fails to discuss how the Proposed Action complies with Executive Order 13547. That Order directs federal agencies to consider the effects of their actions on the ocean and to ensure no adverse effects consistent with their existing statutory authorities. The EIS/EIR is devoid of the required analysis.

12. The Significance Criteria

The EIS/EIR has categorized the adverse impacts of the Proposed Action as either significant or less than significant. Effects the EIS/EIR deems beneficial are so labeled. EIS/EIR at 3.3-52. However, as used in the EIS/EIR, this system of classification is meaningless for NEPA analysis and for the decision maker.

The EIS/EIR states a "significant" impact is one that has a "substantial" effect. *Id.* at 3.3-52, 53. But what constitutes a "substantial" effect? What level of effect comprises a "substantial" one? Without knowing the metric used in the EIS/EIR, there is no basis to evaluate the significance conclusions in the EIS/EIR. The Chinook Expert Panel, for example, addressed this core definitional issue by defining the term substantial to mean an effect that is more than trivial. Chinook Expert Panel Report at 7, n.3. Since the EIS/EIR cites with approval the Chinook Expert Panel Report, perhaps the EIS/EIR has adopted that Panel's definition of substantial. If so, then the EIS/EIR has misapplied its own significance standard and categorized as less than significant many effects which are significant. The reader and the decision maker are left with no standards by which to evaluate the "significance" conclusions in the EIS/EIR.

13. Conclusion

The EIS/EIR states the need for the Proposed Action is to advance the restoration of salmonid fisheries. DOI created four expert panels to assess the merits of the Proposed Action in achieving that goal, as well as in assisting other fish.

The EIS/EIR mischaracterizes and misstates the findings and conclusions of the Expert Panels. While the EIS/EIR claims the Expert Panels validated the EIS/EIR's assertion of "substantial" and "major" improvements, the Expert Panels called the results of the Proposed Action "small," "remotely possible," "unlikely," "uncertain," and "not feasible." Even these words seem inadequate when one considers the fact that the conclusions of the EIS/EIR regarding sediment impacts are based on estimates of sediment release that are off by orders of magnitude and when the Expert Panels and the EIS/EIR admit the Proposed Action will make existing problems of water quality worse.

A recurring theme in the Expert Panel Reports is that the data and analyses necessary to support the conclusions in the EIS/EIR have not been done. Therefore, the actual effects of the Proposed Action are simply not known despite claims to the contrary in the EIS/EIR. One Expert Panel, after considering this lack of data and analysis, termed the Proposed Action an "experiment."

The Expert Panels also pointed to significant flaws in what analysis has been undertaken. The Panels noted DOI elected to confine its analysis to the impacts of the Proposed Action on individual species, as if each such species exists in the ecosystem all by itself. But these species compete for food and space and often prey on each other. Changing the relative numbers and composition of these species changes the ecosystem. The EIS/EIR does not analyze the effects of interspecies interactions even though one Expert Panel found these interspecies interactions could "cancel" the benefits claimed for salmon under the Proposed Action. The EIS/EIR has not

taken the hard look required by NEPA nor does it meet CEQA's information disclosure provisions. In fact, the EIS/EIR has not taken any look. Moreover, in considering the needs of ESA-protected species, one Expert Panel questioned whether the KBRA projects aimed at benefitting salmon and other species could even be undertaken given the priority needs of ESA-listed species.

Furthermore, the EIS/EIR fails to examine the environmental effects of releasing millions of tons of sediment into the river, its estuary, and the ocean. Not only is the EIS/EIR internally inconsistent but is often factually wrong. These inconsistencies and factual errors make reliance on the analysis in the EIS/EIR arbitrary and capricious. Because of these errors, the analysis in the EIS/EIR fails to meet even the minimum standards of adequacy under NEPA and CEQA.

Finally, in a singular failure of NEPA and CEQA analysis, the Expert Panels were instructed to examine the fishery impacts of only two of the five alternatives identified in the EIS/EIR. Despite the resulting failure to examine all the alternatives, the EIS/EIR relies on the Expert Panel Reports as the basis on which the EIS/EIR can propose its preferred alternative and reject the other four alternatives.

The proper NEPA and CEQA analyses have not been undertaken. The necessary data to reach the conclusions made in the EIS/EIR do not exist. What data exist do not support the claim in the EIS/EIR that the Proposed Action will achieve its objective of restoring salmonid fisheries.

D. Algae

Two algal communities predominate in the Klamath River Basin phytoplankton which is present in lakes and reservoirs and periphyton which is present in the river system. EIS/EIR at 3.4-2. The EIS/EIR admits that if the Proposed Action is implemented, there would be "no change from existing conditions from nuisance" phytoplankton and periphyton in the upper

Klamath Basin upstream of the J.C. Boyle Reservoir. *Id.* at 3.4-13. The result is different within the Hydroelectric Reach, defined in this section of the EIS/EIR as the area from the upstream end of J.C. Boyle Reservoir to Iron Gate Dam, including all sections categorized as mainstem, bypassed, and peaking reaches and including tributaries to the Klamath River such as Jenny, Spencer, Slate, Shovel, and Fall Creeks. *Id.* at 3.4-1.

In the Hydroelectric Reach, the EIS/EIR concludes dam removal will eliminate the reservoirs that are home to phytoplankton and, therefore, these algae blooms would be very limited or cease to exist. *Id.* at 3.4-13. However, for periphyton, the EIS/EIR concludes the Proposed Action will cause "long-term increases in nuisance periphyton growth due to increases in available habitat" and there will "be a significant impact" from dam removal. *Id.* at 3.4-15.

Below the Hydroelectric Reach, the EIS/EIR concludes "[p]eriphyton growth could continue to be relatively high ... following dam removal because of continuing nutrient inputs from the Upper Klamath Basin...." *Id.* at 3.4-17. In that regard, the EIS/EIR admits there are "overall increases in absolute nutrient concentrations anticipated under the Proposed Action...." *Id. See also id.* at 5-100 (the Proposed Action "would result in increases in nutrient inputs ... that could increase periphyton biomass; ... this impact would be significant and unavoidable."). In fact, the EIS/EIR states all of the various models "recognize ... that under the Proposed Action total nutrient concentrations in the Klamath River downstream of Iron Gate Dam would increase." *Id.* at 3.2-101. One model cited in the EIS/EIR concludes that total phosphorous concentrations would increase 2%-12% for the June-October period. However, total nitrogen concentrations would jump 37-42% June-October and 48%-55% for the middle months of July-September. *Id.* at 3.2-102. It is these high nutrient concentrations that feed the growth of harmful algae, making the existing problem worse. As the Chinook Expert Panel noted: "There

is a clear conceptual relationship between nutrient loading to a water body and algal biomass...." Chinook Expert Panel Report at 10.

The increase in nutrients and the corresponding increase in algae is particularly significant given that the stated need for dam removal is to increase salmon populations. One of the key obstacles to achieving that objective is the incidence of fish disease. Indeed, the Chinook salmon Expert Panel found the overall success of any program to increase salmon populations hinges "to a large degree" on disease reduction. *Id.* at 13. However, the EIS/EIR admits that a significant component of periphyton is the species *Cladophora* which provides important habitat for the worms that are host to fish killing parasites. EIS/EIR at 3.4-5 and 3.4-8. In short, the Proposed Action increases the habitat favorable for fish disease, thereby making that problem worse.

In an attempt to rescue the case for the Proposed Action, the EIS/EIR falls back on the alleged benefits of KBRA implementation. A closer look at the EIS/EIR documents the weakness of this reliance. The EIS/EIR states: "If projects were well designed and implemented on a large enough scale ... KBRA projects ... proposed to reduce nutrient loading ... could fully mitigate for" increases in periphyton biomass associated with higher nutrient concentrations resulting from the Proposed Action. *Id.* at 3.4-15. This statement has four significant admissions. First, it is contradicted by the EIS/EIR which admits that the Proposed Action, which includes the KBRA, will increase algae concentrations. Second, the EIS/EIR admits there is not enough information in the KBRA to know if the projects are well designed, let alone if they will work. Third, the EIS/EIR admits the benefits from the KBRA might occur only if the KBRA is fully and completely funded and implemented, an unlikely event in today's budget

climate. Fourth, even if the KBRA projects are well designed and fully implemented, the most that can be said is they "could" mitigate for the adverse effects of dam removal.

In other words, the most likely net result of the Proposed Action is to make the problem of harmful algae blooms a worse problem and to impede the benefits anticipated to result from already adopted Foreseeable Restoration Measures.

E. Terrestrial Resources

In this section, the EIS/EIR pretends to analyze the effects of the Proposed Action on terrestrial species of plants and animals, including birds. The most glaring example of the inadequacy of the EIS/EIR is that the "analysis" of the effects of the Proposed Action on terrestrial invertebrates is confined to just five lines. EIS/EIR at 3.5-40. Nevertheless, those five lines contain three damning statements. First, the EIS/EIR admits several "special-status" invertebrate species may occur in the project area. *Id.* Second, one of those species is of such concern that a petition has been filed to list it under the Endangered Species Act. *Id.* Third, the EIS/EIR excuses its failure to conduct any analysis of the effects of dam removal on invertebrate species by stating that the majority of its information comes from the PacifiCorp Final Technical Report and PacifiCorp simply "did not conduct surveys for terrestrial invertebrates." *Id.* at 3.5-3 and 3.5-40. The legal position appears to be that PacifiCorp's failure to examine the impact of the Proposed Action on terrestrial invertebrates excuses DOI from NEPA and CEQA compliance. The EIS/EIR fails to even come close to the required legal standard of taking a "hard look" at environmental issues.

As to birds, the EIS/EIR states 174 bird species are found in the project area, of which 46 are special-status species. *Id.* at 3.5-18 and 3.5-39. Among those species are bald and golden eagles protected under the Bald and Golden Eagle Protection Act ("BGEPA"), 16 U.S.C. §703. Numerous other birds are protected by the Migratory Bird Treaty Act ("MBTA"), 16 U.S.C.

§668, including the osprey, willow flycatcher, peregrine falcon, and greater sandhill crane. EIS/EIR at 3.5-51-52. Also present is the northern spotted owl, listed as a threatened species under the ESA. *Id.* at 3.5-39. After a simple listing of the species in the project area, all analysis ends.

Instead of examining the impacts of the Proposed Action on these birds, the EIS/EIR simply states that buffer zones will be established around known nests, implicitly acknowledging the existence of adverse impacts that require buffer zones. *Id.* at 3.5-48-52. But there is no discussion of whether the size of these buffer zones is adequate and why. There is no discussion of whether the Proposed Action will affect the availability of new nesting sites that may be needed. There is no discussion about the impact of dam removal on other habitat needs such as feeding sites. Without these analyses, the EIS/EIR provides no basis for DOI to make any informed determination regarding the impact of the Proposed Action on birds. NEPA's and CEQA's standards for analysis and informed decision making are not met.

Also conspicuously absent from the "analysis" in the EIS/EIR is how the Proposed Action complies with existing law and agency policy. In its recently issued draft guidance on how wind power projects are to comply with the BGEPA and MBTA, DOI is suggesting multiple years of surveys on bird use patterns. Land Based Wind Energy Guidelines, U.S. Fish and Wildlife Service, September 13, 2011. The EIS/EIR states that the Proposed Action will only require two years of such studies. EIS/EIR at 3.5-50. The EIS/EIR applies a different and lesser standard to the Proposed Action than DOI is applying to wind power projects. The EIS/EIR fails to explain this inconsistency.

F. Floods and Fire

The EIS/EIR uses incomplete and inadequate criteria to determine if the flood related effects of the Proposed Action are significant. The EIS/EIR states the impact of the Proposed

Action is significant only if it will "substantially increase" the risk that a flood may occur. EIS/EIR at 3.6-20. The criteria are incomplete. Any change in the time available to respond to flood conditions is also a critical element of significance – an element completely ignored in the EIS/EIR.

This failure has particular consequences under CEQA. CEQA Guidelines Appendix G, state that the decision maker should consider whether the project would "Expose people or structures to a significant risk of loss, injury or death involving flooding" and also whether the project would "substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site[.]"

Furthermore, the data used to assess the likelihood of increase flooding understates the potential harm from dam removal. The EIS/EIR states the Lead Agencies "modeled flood events that meet criteria for a 100-year flood using daily average flows…." *Id.* at 3.6-21. The EIS/EIR then incorrectly concludes the Proposed Action will not increase flood risks because the EIS/EIR modeling results are very similar to the current flood risk determined to exist by the Federal Emergency Management Agency ("FEMA"). *Id.*

There are two problems with this statement. First, FEMA flood risk analysis is based on peak river flows. The EIS/EIR uses average daily flow. Peak flows are higher, and very often significantly higher, than average daily flows. It is incorrect to say that the effect of an average flow is comparable to the effect of a peak flow. To a flooded community, peak flows are the critical issue. It is the peak flow that sends the most water cascading into the community. Yet, the EIS/EIR bases its modeling of effects on average flows. The result is an incorrect and

understated flood risk from dam removal. To the people whose lives and property may be swept away in a flood, the callous disregard of the true risks of flooding is nothing short of shocking.

The second problem with the claim in the EIS/EIR that the Proposed Action will not change flood risks is that the EIS/EIR admits the geographic reach of an average daily flow in a post-dam removal flood event is "fairly close" to the geographic reach of a worst-case peak flow without dam removal because the average flow is less than the peak flow. The EIS/EIR is admitting that peak flood events will be worse after dam removal than before dam removal. Indeed, in an understatement noteworthy for its willingness to ignore the problem, the EIS/EIR states "[u]nder the Proposed Action, the 100-year flood plain inundation area downstream from Iron Gate Dam could change.…" *Id.* at 3.6-27. Here, the EIS/EIR finally admits that dam removal will increase flooding and the effect will be "significant." *Id.* at 3.6-22.

In a vain attempt to rescue its case for dam removal, the EIS/EIR states these "significant" flooding effects will be rendered less significant because of the implementation of KBRA proposed mitigation measures. In other words, we need not worry because the KBRA is here. A closer analysis of the KBRA mitigation measures shows this is a false promise.

The principal KBRA mitigation measure is that prior to dam removal, the National Weather Service ("NWS") will be informed of the planned dam removal so that NWS can update its river forecast models to better advise people that a flood is coming. In other words, the mitigation proposed is not to reduce the flood risk but to tell people the flood is coming. The net effect of the Proposed Action is that flooding will be worse but people will be told the flood is coming.

However, the EIS/EIR incorrectly assumes that simply telling NWS the dams are being removed changes the ability of NWS to notify people of a coming flood. The EIS/EIR does not

consider how long it will take NWS to develop new flood forecast procedures based on new hydraulic conditions. Nor does the EIS/EIR consider how much data are required to properly calibrate the updated models to achieve an adequate level of flood forecast accuracy. It may take a decade or more of monitoring post-dam removal river flows to acquire sufficient information for accurate calibration. Furthermore, the EIS/EIR does not consider whether NWS has the funding or the infrastructure to undertake the data monitoring necessary to support adequate river forecasting post dam removal. Finally, simply telling people about a flood risk does nothing to improve the emergency response ability of the community. The EIS/EIR is devoid of any discussion of this important aspect of mitigating the increased risk of flooding caused by the Proposed Action.

Emergency response capability is critical because the timing of the flood peak will be significantly affected by the Proposed Action. Flood peaks under the Proposed Action will occur about 10 hours sooner than under the status quo. Bureau of Reclamation, Hydrology, Hydraulics and Sediment Transport Studies for the Secretary's Determination on Klamath River Dam Removal and Basin Restoration, Technical Report No. SRH-2011-02, 2011, at 6.3-6.7. This cuts the time available for floodplain occupants to escape rising waters by about 20% based on the more rapidly occurring peak, a significant fact ignored in the EIS/EIR.

Ignoring the fact that flooding will increase under the Proposed Action, the EIS/EIR closes with the statement that we can mitigate for increased flooding because, after the dams are removed, we will learn how to notify people of flood risks. EIS/EIR at 3.6-39. The EIS/EIR is telling us that mitigation measures "will be effective" because flood risks will be identified after the fact. In other words, remove the dams then assess the risks. This is backwards and violates the applicable legal standards by avoiding the required "hard look." The EIS/EIR impermissibly

defers the analytical work to the post-action future. *National Audubon Society v. Department of the Navy*, 422 F. 3d 174 (4th Cir. 2005).

Turning from floods to fires, all of the towns in the County of Siskiyou are listed as "at risk" communities for wildfire by the federal government. 63 Fed. Reg. 751 (Jan. 4, 2001); California Fire Alliance, http://www.cafirealliance.org/communities_at_risk/. Fire history maps show that fires in this area are becoming geographically larger as well as greater in intensity.

Siskiyou County has 22 community Fire Safe Councils, a Siskiyou County Fire Safe Council, a Siskiyou County Fire Safe Panel that advises the Board of Supervisors, and a Community Wildlife Protection Plan. Fire is a very significant issue in the County of Siskiyou. With virtually no analysis, other than a significant admission that the loss of the reservoirs behind the dams will increase turnaround time for fire-fighting helicopters, the EIS/EIR concludes the impact of the Proposed Action on government's ability to fight fires will be "less than significant." EIS/EIR at 3.18-18 and 19. Reducing the ability to fight an increasing fire problem does not sound insignificant. The EIS/EIR offers no analysis of the likely effects of this reduced ability to fight wildfires other than the conclusory statement that it will not be a significant problem. Such conclusory statements offer little comfort to the citizens of the County of Siskiyou. Such conclusory statements violate NEPA's and CEQA's standards for adequate analysis.

G. Water Quality

The EIS/EIR identifies seven water quality issues associated with the Proposed Action: (1) sedimentation; (2) nutrient concentrations; (3) algae growth; (4) dissolved oxygen levels; (5) water temperature; (6) pH levels; and (7) the presence of organic and inorganic compounds. EIS/EIR at 3.2-1. Each of these water quality problems has led to determinations that surface waters and designated beneficial uses, including fish and wildlife related uses, of the Klamath

River Basin, including those of the Hydroelectric Reach and the lower Klamath River, are impaired with respect to these constituents of concern. Accordingly, as discussed above, numerous TMDLs have been adopted and will be implemented to address the existing conditions of pollution with respect to each constituent of concern. This section will discuss the inadequacy of the EIS/EIR impacts analysis for each constituent of concern.

1. Sedimentation

As discussed in Parts II.C.1.a, II.C.2.e, and II.C.11 of these Comments, the EIS/EIR proceeds from a series of incorrect and inconsistent assumptions regarding the quantity of sediment that will be released because of dam removal, the time it will take for the effect of the sediment release to dissipate, and whether the released sediment will remain entirely within the river or be deposited in the estuary or the ocean. Until these inconsistencies are resolved, and the baseline data corrected, the EIS/EIR provides no basis on which a decision maker can make an informed decision about the effects of dam removal consistent with the requirements of NEPA and CEQA.

Compounding these problems is the absence of analysis regarding the pollutant content of the sediment and the effects of those pollutant loads on aquatic life and human health. The EIS/EIR concludes, without explanation or supporting data, that there is "little positive indication that substantial aquatic toxicity, or ecological or human health risk, would likely result from exposure to the sediments." EIS/EIR at 3.21-4.

The fact that there are no data to support this conclusion is amply demonstrated by the very next sentence in the EIS/EIR that "further evaluations must be conducted before conclusions about the potential for contaminant-related impacts and risks can be reached. This includes direct laboratory testing of the sediments to assess their toxicity ... and [their] bioavailability ... *i.e.* whether contaminants [can bioaccumulate]...." *Id.* In other words, we do

not know the effects of sediment release, notwithstanding the statement in the EIS/EIR that there is no problem. In fact, the EIS/EIR goes on to say that "some," but not all, of the toxicity and bioaccumulation tests have been done but "[t]he results of this biological testing are pending." *Id.* With only "some" testing done, and the results still "pending," the EIS/EIR somehow concludes there is "little" indication of a problem. Such specious analysis does not, and never can, meet the evidentiary standards of NEPA and CEQA for a hard look at the environmental consequences of the Proposed Action.

Adding insult to analytical injury, the EIS/EIR acknowledges there have been significant nutrient inputs into the Klamath River Basin and, therefore, into the reservoirs behind the dams. *Id.* at 3.2-20, 3.2-101. Thus, mixed with the sediments are likely to be large amounts of nitrogen and phosphorous that will be released when the associated sediment is released. But the EIS/EIR never discusses, let alone analyzes, the environmental impacts of the release of these accumulated nutrients, impacts that could be severe given that up to 3.5 million tons of nutrient enriched/contaminated sediment will be released as a result of the Proposed Action.

2. Nutrient Concentrations

The EIS/EIR admits all of the models "recognize ... that under the Proposed Action total nutrient concentrations in the Klamath River downstream of Iron Gate Dam would increase." *Id.* at 3.3-101. One model concludes phosphorous concentrations would increase 2%-12% in the June-October period. Nitrogen concentrations would rocket up 37%-42% in the same period and 48%-55% July-September. *Id.* at 3.2-102. Thus, the EIS/EIR concludes the Proposed Action "would result in increases in nutrient inputs...." *Id.* at 5-100. *See also id.* at 3.4-17 and 3.2-103 (there are "overall increases in absolute nutrient concentrations anticipated under the Proposed Action...."). In other words, the Proposed Action makes the problem of nutrient concentrations worse. Yet, contrary to CEQA requirements, the water quality section of the EIS/EIR

determines that all impacts from nutrient increases are not likely to be significant. Further, no mitigation measures or measures to try to preserve the efficacy of the Foreseeable Restoration Measures are proposed or analyzed.

3. Algae Growth

The Proposed Action also makes the problem of river algae worse. There is a clear relationship between increased nutrient levels and the growth of harmful algae. Chinook Expert Panel Report at 10. Thus, the EIS/EIR is forced to admit that higher nutrient concentrations are likely to "increase [river algae] biomass; ... this impact would be significant and unavoidable." EIS/EIR at 5-100. *See also id.* at 3.4-15 (the Proposed Action will cause "long term increases in nuisance" algae growth that will have "a significant impact"). Despite these increases, no feasible alternatives or mitigation measures to reduce algae impacts and/or preserve the efficacy of the Foreseeable Restoration Measures are proposed or analyzed, contrary to CEQA.

4. Dissolved Oxygen

The increased levels of sediments, nutrients, and algae discussed above have the concurrent effect of reducing dissolved oxygen levels and increasing the variability in daily dissolved oxygen levels. Indeed, the EIS/EIR recognizes that increased nutrient concentrations and related increases in algae populations consume oxygen (respiratory consumption) and reduce the amount of dissolved oxygen available to other organisms. *Id.* at 3.2-26. Nowhere does the EIS/EIR examine the effects of respiratory consumption by the increased algae populations resulting from the Proposed Action.

Sediment releases could also cause a decrease in dissolved oxygen concentrations in the Klamath River below J.C. Boyle Dam for up to two years and this would have "a significant impact" on the river. *Id.* at 3.2-104, 3.2-109. However, as noted above, the predictions in the EIS/EIR about the amount of sediment to be released and how long it will take to dissipate are

incorrect and are disputed by DOI's own Expert Panels. *See* Parts II.C.1.a and II.C.2.e of these Comments. The actual impact, not analyzed in the EIS/EIR, will be much greater than assumed in the EIS/EIR.

Finally, the magnitude of daily fluctuations in the amount of dissolved oxygen in the river may be greater under the Proposed Action. EIS/EIR at 3.2-104, 3.2-109, 3.2-110. Having admitted that, the EIS/EIR fails to quantify either the amount or duration of these fluctuations. Instead, the EIS/EIR discusses the monthly average amount of dissolved oxygen in the river following dam removal. *Id.* at 3.2108, Table 3.2-13. However, aquatic species feel the effects of oxygen deprivation on a minute-by-minute basis, not on a monthly average. The EIS/EIR employs an incorrect baseline measurement and fails to properly examine the effects on aquatic species of the dissolved oxygen fluctuations.

The EIS/EIR compounds the issues created by improper impacts analysis by failing to evaluate the availability and feasibility of mitigation measures to address dissolved oxygen impacts of the Proposed Action, or the potential for the Proposed Action to significantly adversely affect or inhibit the success of ongoing implementation of Foreseeable Restoration Measures.

5. Water Temperature

Similarly, the EIS/EIR discussion regarding the impact of the Proposed Action on water temperature misses the point. The EIS/EIR reviews the impact of the Proposed Action on the average mean daily temperature. However, aquatic species experience water temperature effects on an hourly basis, not on an average mean daily basis. It is the hourly temperatures that are key. As DOI's Expert Panel for coho salmon and steelhead trout noted, while dam removal may lower the average mean daily temperature, this is not the relevant analytical point because under the Proposed Action the "highest temperatures experienced by fish ... will increase." Coho and

Steelhead Expert Panel Report at 31-32. The EIS/EIR fails to examine the effect on aquatic species of these increased water temperatures, relying instead on generalized averages that ignore and mask the actual temperature effects of the Proposed Action.

In addition, the EIS/EIR fails to evaluate the availability and feasibility of mitigation measures to address temperature impacts of the Proposed Action as required by CEQA. Further, the EIS/EIR fails to examine the potential for the Proposed Action to significantly adversely affect or inhibit the success of ongoing implementation of the Foreseeable Restoration Measures. As a result, the EIS/EIR does not have sufficient information on which to base a decision regarding implementation of the Proposed Action.

6. pH

The EIS/EIR admits that elevated pH levels are linked to the high rates of photosynthesis by river algae (periphyton). EIS/EIR at 3.2-28. However, the EIS/EIR dismisses these effects, and fails to examine them, based on the assertion that increased periphyton growth is only a possibility in the Hydroelectric Reach under the Proposed Action. *Id.* at 3.2-113. The problem with this attempt to avoid analysis is that in the more specific section of the EIS/EIR dealing with algae, the EIS/EIR admits the Proposed Action will cause "long-term increases in nuisance periphyton" and this will have "a significant impact" on the environment. *Id.* at 3.4-15. Below the Hydroelectric Reach, the EIS/EIR admits that increased photosynthetic activity coupled with higher nutrient concentrations "would result in large daily variation in pH and generally high pH levels.... This may result in instantaneously exceeding the North Coast Basin Plan water quality objective maximum pH value of 8.5 ... which may be stressful to fish and other aquatic life and adversely affect beneficial uses." *Id.* at 3.2-115.

Notwithstanding these admissions that the Proposed Action will make the problem of pH levels worse, the EIS/EIR has no analysis of the effects of elevated pH on aquatic species, or the

degree to which the Proposed Action will interfere with or inhibit pH improvements that can be reasonably expected to occur from implementation of the Foreseeable Restoration Measures. Instead, the EIS/EIR says the increased growth in river algae "may" be counteracted by river scouring from flood and storm events that increase river flow. *Id.* There are two major problems with this attempt to avoid meaningful discussion of the adverse effects of elevated pH levels. First, the EIS/EIR admits that notwithstanding any scouring that may occur, algae populations will still increase. Second, there is no analysis of the frequency of any such scouring, let alone the effects of algae growth and elevated pH levels in the years that lie between such events. The facts are that elevated pH levels will occur. The EIS/EIR fails to examine those effects and also fails to examine the impact of the Proposed Action on implementation of the Foreseeable Restoration Measures as required by CEQA.

7. Inorganic and Organic Contaminants

The EIS/EIR states that sediment testing showed "low levels" of metals, pesticides, chlorinated acid herbicides, PCBs, volatile organic compounds, cyanide, and dioxins in the sediments behind the dams. *Id.* at 3.2-121. The EIS/EIR next states that acute bioassay tests designed to determine the toxicity of these contaminated sediments showed no significant harm to aquatic life except for the sediments behind J.C. Boyle Dam. Aquatic species exposed to chemicals at the concentrations found in sediments behind J.C. Boyle Dam showed "considerably lower survival." *Id.* The EIS/EIR claims an analysis of the effects of these admittedly threatening contaminants is not required because the contaminants will mix with, and be diluted by, the sediments and water released from the three dams below J.C. Boyle Dam. *Id.* at 3.2-121-123.

Contrary to the incorrect view embraced by the EIS/EIR, the solution to pollution is not dilution. Moreover, the EIS/EIR ignores the fact that approximately 22 river miles of aquatic

habitat lie between J.C. Boyle Dam and the next downriver dam. *Id.* at 3.3-25. There will be no dilution of organic and inorganic chemicals for the aquatic species in this area. Moreover, the problem is not confined to sediments behind J.C. Boyle Dam. Dioxin, a known carcinogen, exceeded human health screening levels in each of the three reservoirs behind the dams to be removed.

The EIS/EIR also ignores the fact that aquatic life could be threatened even if contaminant levels are diluted. What the EIS/EIR actually says is that dilution will result in "diminishing the potential" problem. *Id.* at 3.2-121. Diminishing the potential for a problem is far different than not having a problem – and the potential harm is never analyzed.

Nowhere is the unwillingness of the EIS/EIR to actually consider the effects of these contaminants on the environment more apparent than with respect to known carcinogens such as dioxin, DDT, and PCBs. The EIS/EIR states dioxin levels in sediment "exceed Oregon human health and bioaccumulation thresholds...." *Id.* at 3.2-31. While this is true, the EIS/EIR fails to explain that the dioxin contamination problem is not limited to the reservoir behind J.C. Boyle Dam. The EIS/EIR also neglects to mention that the dioxin concentrations exceed the Environmental Screening Level for Human Health set by California. The EIS/EIR then fails to consider that DDT is found in J.C. Boyle reservoir sediments above both fresh water and human health standards. Finally, the EIS/EIR fails to consider that dioxin, furan, and PCBs were found in each reservoir sediment at levels above Oregon's hazardous threshold for mammals. *Id.* at 3.2-119. The EIS/EIR cavalierly dismisses all of these problems by stating, for example, that Oregon's "human health thresholds" of harm are "lower" than federal levels and Oregon's standards do not apply in California. Therefore, there is risk to human health or the environment that merits analysis. *Id.* at 3.2-31 and 3.2-119.

Such a dismissal of issues, such a lack of analysis of actual and potential effects of known carcinogens, cannot be said to meet NEPA's or CEQA's standards for a hard look at environmental effects. Compounding these failures is the absence of any analysis of the effects of the plan to spray herbicides over up to 75% of the total reservoir area behind the dams. *Id.* at 3.2-120. The herbicides are to control invasive plant species. *Id.* However, the EIS/EIR does not examine the effects of adding herbicides to the environment, including the riverine environment into which the chemicals will wash. Why is there no analysis? Because DOI will be using approved herbicides and will be doing so in accordance with the labels. *Id.* That position ignores the fact that huge legal battles are now being waged about whether "approved" herbicides used in accordance with their labels are, in fact, causing harm to aquatic species. The EIS/EIR cannot ignore this issue, particularly when ESA protected species inhabit the river.

Finally, it is a telling commentary on the bias in the EIS/EIR that the EIS/EIR concludes the alleged mild contaminant effects of the Proposed Action justify a finding that the Proposed Action will have less than significant impact while the same EIS/EIR concludes that the "minor or limited adverse effects" of the No Action Alternative supports a determination of potentially significant impacts. EIS/EIR at 3.2-74 and 75. The threshold of significance cannot be changed on a whim such that chemicals found in concentrations likely to produce mild effects are significant when evaluating the No Action Alternative, but are less than significant when evaluating the Proposed Action. Lead Agencies have discretion to set significance thresholds, but not the discretion to employ those thresholds in a manner that leads to a biased evaluation of, and conclusions regarding the potential impacts of the Proposed Action as compared to project alternatives.

8. Conclusion

As to water quality, the EIS/EIR admits the Proposed Action makes the problems worse by increasing sediment and nutrient loads and the growth of harmful algae. DOI's Expert Panels conclude that the problem of increased water temperature and temperature variability is made worse by the Proposed Action. The EIS/EIR admits lower dissolved oxygen and elevated pH issues are made worse by the Proposed Action. But the EIS/EIR fails to examine key parameters, fails to properly assess significance of impacts, uses incorrect baseline assumptions, and fails to consider important issues. In short, once again, the EIS/EIR fails to meet even the minimal standards of legal adequacy as to analysis – and where such analysis exists, it shows the Proposed Action makes water quality problems worse, not better, further jeopardizing the already unsure habitat and water quality improvements that should be derived from implementation of the Foreseeable Restoration Measures.

H. Groundwater

To examine the effects of the Proposed Action on groundwater, the EIS/EIR begins by inappropriately limiting the area of analysis. The EIS/EIR states the area of analysis is the Klamath Basin upstream of Copco 1 Dam because this area is covered by a U.S. Geological Survey model designed to determine the effects of various actions on groundwater. EIS/EIR at 3.7-1. The entire area below Copco 1 Dam is excluded from any analysis and never considered in the EIS/EIR because "[n]o model exists for areas below Copco 1 Dam." *Id.* The lack of any such model does not excuse the Lead Agencies from their NEPA and CEQA responsibility to consider the impacts of the Proposed Action. And impacts there will be.

Groundwater in the region is largely fed by percolation from the surface. *Id.* at 3.7-5. Clearly, the reservoirs behind the dams are a source of the percolation. Conspicuously absent from the EIS/EIR is any analysis of how a change from reservoir related groundwater recharge to

river and aerial precipitation recharge will affect groundwater supplies. Instead, the EIS/EIR contains the unsupported conclusory statement that the amount of water will be about the same. *Id.* at 3.7-17. Compounding the lack of analysis regarding supply impacts is the absence of analysis regarding increased usage impacts. For example, the EIS/EIR admits the Proposed Action will result in hundreds of agriculture irrigators "pumping more groundwater." *Id.* at 3.15-72. Notwithstanding no factual analysis of either the supply or the demand side of the groundwater issue, the EIS/EIR concludes the impacts of the Proposed Action on groundwater "would be less than significant." *Id.* at 3.7-17. This type of unsupported conclusory statement is typical of the EIS/EIR and further documents its legal deficiency.

This deficiency is crystallized by the admission that domestic and irrigation wells may need to be deepened so that users can continue to receive water in the needed quantity and flow. *Id.* at 3.7-16. Indeed, the chosen groundwater impact mitigation measure in the EIS/EIR "provides for the deepening (or replacement) of an existing affected domestic or irrigation groundwater well so the groundwater production rate from the well is returned to conditions prior to implementation of the Proposed Action…." *Id.* at 3.7-22. Wells would not need to be deepened if groundwater levels were not dropping because of the Proposed Action. Yet, the EIS/EIR offers no analysis of the impact of the Proposed Action on this natural resource.

Further illustrating the need for, and the absence of, analysis is the discussion of the effects of the KBRA. The EIS/EIR states the KBRA will reduce surface water diversions by a significant amount in order to leave water in the river for fish. *Id.* at 3.7-19. The EIS/EIR goes on to admit this will increase the need for groundwater pumping as a replacement water supply. *Id.* Are the interrelated and cumulative effects of dam removal and the KBRA ever considered in the EIS/EIR? Not surprisingly, the answer is no. The only thing said is that since the surface

actions associated with dam removal are geographically separated from actions associated with changing water diversions, groundwater is not likely to be affected. *Id.*

Finally, as discussed in more detail in the energy issues section of these Comments, (*see* Part II.N of these Comments), the EIS/EIR has no analysis of the cost to domestic and irrigation groundwater users of having to pay for increased pumping costs associated with deeper wells. Nor does the EIS/EIR address the issue of from where users will get temporary water supplies while their wells are being deepened.

I. Air Quality and Climate Change

The EIS/EIR states: "No operational sources are part of the Proposed Action; therefore, this analysis considers only construction-related air quality impacts." EIS/EIR at 3.9-10. While the Lead Agencies are not proposing an "operational" component of the Project, operational sources are a reasonably foreseeable outcome of the Proposed Action. For example, additional operational sources will be necessary to generate the power required to serve customers presently receiving power generated by the dams. This is expressly acknowledged in Section 3.10 of the EIS titled Greenhouse Gases/Global Climate Change. Thus, the statement that no operational sources are part of the Proposed Action is fundamentally flawed and inconsistent with other sections of the EIS/EIR. The EIS/EIR must address the additional pollutants that will be generated from the new sources needed to provide energy once the dams are removed. There is a high likelihood that the sources of this additional power will increase emissions because the hydroelectric power from the dams currently generates only minimal emissions associated with "vehicle exhaust from continued maintenance and operation of the Four Facilities." EIS/EIR at 3.9-10. In fact, the EIS/EIR admits increased air emissions are related to "replacing hydropower at the dams with power that is likely to be produced, at least in part, from fossil fuels through other regional sources." EIS/EIR at 3.10-14.

To compensate for the likely increased air emissions resulting from not using clean hydropower, the EIS/EIR alleges emissions benefits could occur from "alterations in land use, agricultural resources (including the creation of new agricultural areas) and recreation from implementation of the KHSA and KBRA" and the EIS/EIR expects that "a net reduction in carbon emissions could occur from the land use conversion." *Id.* at 3.10-16-3.10-17. The problem with the EIS/EIR's treatment of this issue is that no substantive information is provided that describes the number of acres for which sequestration might be increased or the feasibility and responsibility for implementing such projects to demonstrate that they will in fact provide a net reduction in carbon emissions. Furthermore, while the KBRA includes a Renewable Power Program, that plan has not been developed and the EIS/EIR does not document the extent to which renewable power can realistically replace the existing hydropower from the dams.

Further, the mitigation measures proposed to address increased air emissions do not meet basic standards to qualify as mitigation measures. The measures focus on reducing energy use, presumably to reduce the demand for non-renewable energy resources, which demand will likely increase under the Proposed Action. However, the EIS/EIR is devoid of analysis explaining how these measures would reduce energy consumption over and above current programs in California or Oregon. In addition, "[m]itigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments." CEQA Guidelines §15126.4(a)(2). Mitigation Measures CC-1 through CC-3 are lacking critical details such as which party is to implement the measure, how the measures would be implemented, at what point in time these measures would reduce the demand for energy, and any performance standards. Without such information, the alleged mitigation measures are meaningless and do not meet NEPA or CEQA requirements.

An additional mitigation measure should be included for Alternatives 2 and 3. The additional mitigation measure is necessary to provide funding for the extra costs that Siskiyou County and other municipalities and agencies will incur to develop greenhouse gas emission reduction/climate action plans in light of the increase in emissions created by removal of clean hydroelectric power and replacement of such power with non-renewable, greenhouse gas-emitting sources.

To quantify the alleged effectiveness of the various GHG emission reduction measures discussed in the EIS/EIR, that document uses the California Air Pollution Control Officers Association publication. The specific example, EIS/EIR at 3.10-45, is related to efficiency of construction of a non-residential building using additional energy efficiencies compared to the 2008 Title 24 standards. But this example is irrelevant to the actual existing conditions and facts in the project area. The issue in the project area is impacts on existing communities and their existing residential and non-residential units. Providing an example of new development and the efficiencies that could be achieved does absolutely nothing to evaluate the impacts of the proposed project on existing communities.

Moving to the issue of methane gas, the treatment in the EIS/EIR of methane gas release from reservoirs has at least two flaws. First, as the Karuk Tribe 2006 comment letter acknowledges there is "a lack of KPH-specific data, [and] estimating its methane emissions precisely is not possible at this time." The Tribe went on to state that "site-specific studies of KPH reservoirs could be used to refine the estimate." The EIS/EIR does not inform the reader of these substantive qualifications to the results or that the so-called "calculations" are in reality nothing more than comparisons to other reservoirs with no actual site specific information. Rather than conduct the site-specific study called for by the Karuk Tribe, the EIS/EIR simply

inserts the 2006 information, making one small adjustment related to the global warming potential of methane, but not making any other attempt to link the EIS/EIR conclusions to existing conditions at the reservoirs. Second, the EIS/EIR completely ignores potential mitigation measures for the other alternatives. A fair and unbiased comparison of the impacts of the alternatives requires that reasonable and feasible mitigation measures be included for all of the alternatives, not simply for Alternative 2.

In that regard, Tables 3.10-17 and 3.10-18 of the EIS/EIR compare the GHG emissions of the alternatives with and without methane generation from the reservoirs. EIS/EIR at 3.10-45. As previously indicated, the methane generation from the reservoirs is speculative and unsubstantiated. The key point, which the EIS/EIR does not address, is that other alternatives such as Alternative 4 have a dramatically lower GHG emission level than Alternatives 2 or 3. CEQA requires that the Lead Agency "should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects" of the project. Pub. Res. Code §21002. Alternative 4 is the environmentally superior alternative relative to GHG emissions, and the Lead Agencies must demonstrate why Alternative 4 is not feasible in order to select Alternative 2.

Finally, it must be noted the EIS/EIR makes several statements and conclusions about free-flowing rivers as compared to systems with dams and the manner in which these two different systems respond to climate change. *See e.g.*, EIS/EIR at 3.10-9, 3.10-10, 3.10-13. These statements and conclusions are used to support dam removal. But the EIS/EIR ignores the fact that downstream of Iron Gate Dam the river is free flowing for 190 miles. The dams proposed to be removed are a small percentage of the Klamath River. The EIS/EIR does not provide a complete and unbiased comparison of alternatives because no mitigation measures or

design features are included for the No Action/No Project or Fish Passage at Four Dams alternatives. Without an evaluation of the manner in which those alternatives might adapt, respond to, or mitigate the effects of climate change, the analysis is incomplete and skewed to dam removal.

J. Transportation

Dam removal will result in tons of waste material that must be transported to disposal sites. In an understatement of reality, the EIS/EIR concludes "[s]ome of the roads in the area of analysis may not have been designed to sustain heavy roads." EIS/EIR at 3.22-15. The facts are that the roads and bridges were not so designed and cannot support the weights to which they will be subjected. Indeed, the EIS/EIR admits that for the Copco 2 Dam removal "[t]he existing access roads would require substantial upgrades to handle the hauling of the excavated concrete and provide access for a large, crawler-mounted crane." *Id.* at 2-26. For other roads at other dams the EIS/EIR concedes "[c]onstruction equipment could damage existing roads during deconstruction." *Id.* at 4-173. With respect to bridges, the EIS/EIR acknowledges that three bridges that will be important for the transport of dam removal waste "could be incapable of supporting and withstanding the weight of heavy deconstruction and hauling vehicles." *Id.* All of these structural problems are worsened to the extent heavy deconstruction traffic is using these roads and bridges during the wet months of the year.

Instead of conducting the analysis NEPA and CEQA require of these infrastructure issues, the EIS/EIR says "an in depth analysis of bridge and road capacity" will be done later. *Id.* For the EIS/EIR to meet NEPA and CEQA standards for adequacy, that analysis must be in the EIS/EIR. If the existing transportation infrastructure is inadequate to accomplish dam removal, it calls into question the feasibility of the Proposed Action. If it is DOI's position that this is a mitigatable issue, then it is incumbent that the EIS/EIR explain how.

In addition to these fundamental policy issues, the EIS/EIR has numerous factual errors. For example, the EIS/EIR describes Copco Road as a paved, two lane road in good condition, with a speed limit of 55 mph. EIS/EIR at 3.22-4-5. This description might be appropriate on the first three miles from Interstate 5 to the Klamathon Bridge. Beyond that point, 70%-80% of the road is in very poor to failed condition. Moreover, the EIS/EIR assumes construction traffic will be occurring between January and September and spreads construction traffic impacts to Copco Road over this time frame. Because of the documented poor condition of Copco Road, the County has greatly restricted truck traffic to the dry summer months. To the extent the Proposed Action contemplates using Copco Road for heavy machinery access and for waste hauling in months other than the dry summer months, the Proposed Action is inconsistent with applicable County requirements. Equally important, given that Copco Road is already in a state of serious disrepair, the EIS/EIR discusses neither the inevitable need to reconstruct Copco Road after dam removal nor the environmental impacts of that action.

Similarly, the EIS/EIR states Patricia Avenue and Ager Beswick Road would provide haul access from Copco 1 and Copco 2 dams. *Id.* at 3.22-5. However, Patricia Avenue is a residential street and neither road was designed for heavy loads. Furthermore, there is no road connecting Patricia Avenue to either dam. The EIS/EIR also ignores the fact that the "possible" closing of Copco and Topsy Grade Roads during dam deconstruction, *id.* at 3.22-13 n.4, is simply unacceptable given that there are private homes served by these roads.

Lastly, unaddressed are issues related to the maintenance of public roads in the project area. There are, according to information provided by the Siskiyou County Department of Public Works, over 200 culverts beneath the public roads in the project area. These culverts empty into the reservoirs. Many of these culverts have outflow that will have to travel from what is now

lake edge to the new channel. There is no examination of the potential for scour and erosion in these culverts as a result of the Proposed Action.

K. Noise

Like the discussion of transportation impacts, the evaluation in the EIS/EIR of noise impacts is woefully inadequate. It fails to meet the most basic requirements necessary to provide a meaningful review of the Proposed Action. Indeed, the typical review by the County of Siskiyou of the noise effects of much more limited projects provides significantly more detailed information and analysis. The absence of any meaningful analysis in the EIS/EIR of the existing noise environment and of how the Proposed Action will impact existing conditions precludes a decision maker from understanding the noise effects of the Proposed Action.

For example, the County of Siskiyou has a General Plan Noise Element ("GPNE") that identifies acceptable noise levels in open space areas, rural areas, etc. It is not possible to evaluate land use noise impacts for consistency with the County's requirements without providing an analysis of the noise levels that will be associated with the Proposed Action. Nowhere does the EIS/EIR provide these data.

Similarly, the EIS/EIR does not collect data on existing noise levels against which the noise from dam removal could be compared and contrasted. Instead, the EIS/EIR uses generalized assumptions from the U.S. Environmental Protection Agency and definitions from the Federal Highway Administration regarding acceptable noise levels in urban areas. There is no explanation of why it is appropriate to use an urban area, which has high background noise levels, as a baseline for rural Siskiyou County. The Thresholds of Significance: Criteria for Defining Environmental Significance, prepared by California's Office of Planning and Research indicate why that baseline is not valid. Therein, it is stated: "The significance of an activity may

vary with its setting. For instance, a subdivision which would create 10 new lots may not be significant in an urban area, but may be significant in an undeveloped rural area."

The rural character of the County is also important for tourists and local citizens using recreational and camping sites within the County of Siskiyou. Many recreational users enjoy sites in the County specifically because of their remote location and solitude. The effects on these people of increasing noise levels from the Proposed Action is never examined, in part because the increased noise levels are never quantified and compared to existing levels.

In that regard, it should also be noted that the EIS/EIR discusses noise questions based on typical residential construction standards. These generalized standards, applicable to urban areas, are inappropriate when applied to rural Siskiyou County. Many County residents live in mobile homes. Mobile homes have significantly different noise attenuation levels than do urban single family homes. The assumptions in the EIS/EIR regarding the applicable standards by which to judge noise impacts are, once again, incorrect.

Finally, in considering noise impacts, the EIS/EIR fails to take into account the conflict between the dam removal schedule and the County's regulations. For example, the EIS/EIR assumes construction traffic will occur between January and September. However, because of the well-documented poor condition of Copco Road, the County has placed significant restrictions on the use of this road by trucks outside of the dry summer months. The Proposed Action contemplates spreading the noise from the movement of heavy equipment and the hauling of tons of waste over nine months and assumes the total amount of new noise is divided by nine. However, these operations will have to be done in many fewer months because of road conditions and the County's Ordinance. Therefore, the EIS/EIR incorrectly analyzes the monthly impact of truck noise along Copco Road.

The discussion of noise mitigation measures suffers the same defects. For example, Mitigation Measure NV-1 provides that truck loading, unloading, and hauling operations will be scheduled so as to reduce noise impacts "to less than noticeable levels." EIS/EIR at 3.23-22. However, truck volumes will more than double along roads such as Copco Road. Given the enormity of the project and the doubling of traffic from heavy trucks, the proposed mitigation is simply not achievable. Noise and traffic levels cannot be reduced to less than noticeable amounts.

In sum, the evaluation of noise impacts from the Proposed Action is wholly inadequate. It proceeds from incorrect assumptions and fails to discuss, let alone examine, important aspects of the issue.

L. Waste Disposal

The EIS/EIR begins its discussion of waste disposal issues by stating that all concrete and earth waste resulting from dam removal will be disposed of onsite or near the existing dam sites. EIS/EIR at 3.18-21. That leaves 7,200 tons of metal, some of which would be recycled, and 4,500 tons of rebar for disposal offsite. *Id.* The EIS/EIR concludes the disposal of rebar and metals is not an issue with respect to landfill capacity because the combined remaining capacity of the Yreka Solid Waste Landfill and the Klamath Falls Landfill is 4.3 million cubic yards. *Id.* In addition, the Dry Creek Landfill is reported to have 165 million cubic yards of unused capacity. *Id.* The EIS/EIR asserts this is a sufficient capacity. However, the EIS/EIR does not analyze the effect of using this capacity for dam removal waste on the long-term plans of the affected Counties for landfill capacity. The affected Counties are the entities that will bear the long-term burdens and costs of finding new capacity if existing capacity is consumed by dam waste. In that regard, the EIS/EIR acknowledges the "population in Siskiyou and Klamath Counties is expected to increase" and as a consequence "the generation of solid waste would also

be expected to increase...." *Id.* at 4-173. Then, stating the obvious, the EIS/EIR concedes "[s]olid waste facilities have a finite amount of space and can only accept waste if space is available." *Id.* Having identified the problem the Counties will face, the EIS/EIR fails to examine the consequences of dam removal for the Counties' solid waste disposal plans.

The problem becomes even more severe when one considers the fact that the Proposed Action will also generate 1,241,500 cubic yards of earth and 126,000 cubic yards of concrete. EIS/EIR at 3.18-21. At one point, the EIS/EIR states all of this material will be disposed of at or near the dams. *Id.* Later, the EIS/EIR states "[t]he earth, concrete, and rebar waste that would be removed from the facilities under the Proposed Action would be sent to local landfills. The selected landfills in the region have adequate capacity to absorb the debris...." *Id.* at 4-173. So, which is it? How is a decision maker to evaluate the impacts of solid waste disposal when the EIS/EIR presents conflicting strategies and analyzes neither?

Assuming the idea is to bury 1,367,000 cubic yards of earth and concrete onsite, the EIS/EIR opines that "[p]ermanent disposal sites would be needed near the dams on lands currently designated open space and/or conservation." *Id.* at 3.1423. Conspicuously absent from the EIS/EIR is any discussion of the impacts on these protected open space and conservation areas of disposing of 1,241,500 cubic yards of earth and 126,000 cubic yards of concrete. Digging up and burying this enormous volume of waste will have effects on open space and conservation areas. But the EIS/EIR, in yet another failure of analysis, is silent as to these effects.

If, however, the plan is to dispose of 1,367,500 cubic yards of earth and concrete waste at the Yreka Solid Waste Landfill and the Klamath Falls Landfill, the EIS/EIR fails to discuss the impact on the Counties of using 32% of the remaining 4.3 million cubic yards of capacity at

these facilities. The EIS/EIR acknowledges the Counties will grow and will need landfill capacity, but ignores the consequential economic and environmental impacts of using one-third of the remaining capacity of these two landfills for dam removal, including the economic and environmental consequences to the Counties of having to site replacement capacity.

In other words, a decision maker reading the EIS/EIR and attempting to make a reasoned decision about environmental consequences does not know what is planned and does not know the consequences of the possible plans. This is hardly the stuff of informed decision making that satisfies NEPA or CEQA.

M. Socioeconomic, Land Use, and Related Issues

The County of Siskiyou comprises 6,340 square miles of which over 60% is owned and managed by federal and state agencies. EIS/EIR at 3.14-5. The County is home to 44,328 people. *Id.* Unfortunately, according to California's statistical reports, their income is only 73% of the State's average income and their median income is only 60% of the State's average. Currently, the County is experiencing in excess of 17% unemployment. The County and its citizens are suffering extreme economic hardship.

To enable it to serve its citizens, Siskiyou County receives tax revenues that are derived principally from property taxes and from sales and use taxes. *Id.* at 3.15-20. These taxes support essential governmental services such as education, health, public assistance, emergency services, and public recreation.

The vast majority of the County's tax revenue comes from privately-owned property. The EIS/EIR states there are 668 parcels with an assessed land value of $9 million that will be affected by dam removal. *Id.* at 3.15-64. Beyond that statement, the EIS/EIR makes no effort to quantify the loss of revenue the County will experience due to land values adversely affected by dam removal. Nor does the EIS/EIR make any effort to assess the impact of lost revenues on the

County's ability to serve its citizens. The EIS/EIR only states that "the Proposed Action could cause a short- and long-term decline in tax revenue" and that "[l]ost tax revenues to Siskiyou County would be an adverse economic effect." *Id.* at 3.15-65 and 4-162.

After admitting adverse impacts, the EIS/EIR seeks to avoid any analysis of these impacts stating that the magnitude of any loss is unknown. *Id.* at 3.15-65. It is curious that the EIS/EIR characterizes the amount of lost revenue impact as unknown given that a study commissioned by DOI reported on March 22, 2011 that the assessed land value of the 668 parcels the EIS/EIR admits will be adversely affected by dam removal will drop by 26% from $8,570,030 to $6,350,785. Bender Rosenthal, Inc., Dam Removal Real Estate Evaluation Report Prepared for the Department of the Interior, March 22, 2011, at 51. However, this number is understated because this is an assessment of land value only and does not include any structures or other improvements on the land. *Id.* at 23.

It is not clear why DOI elected to ignore its own report in the EIS/EIR. It is also unclear why the EIS/EIR neglects to examine the direct and indirect effects of this revenue loss on the County and its ability to serve its citizenry, particularly when buried in another part of the EIS is the surprising admission that the "[r]eduction in the counties' budgets [from lost tax revenue] and resulting reductions or eliminations in social programs would disproportionately affect low income and minority residents and tribal people." EIS/EIR at 5-104.

The only thing the EIS/EIR has to say in response is that lost County income might be made up by revenue from new land uses and from payments from the State of California for payment-in-lieu of property taxes on PacifiCorp property. *Id.* at 3.15-65. But the EIS/EIR offers no analysis or facts to support this claim. Instead, the EIS/EIR says it will "not describe potential changes in land use" that might occur, *id.* at 3.14-1, and fails to explain how a cash

starved state will find the money for the payments-in-lieu of taxes. In the end, the EIS/EIR admits "the Proposed Action would cause short-term and long-term declines in tax revenues to the counties …", *id.* at 5-104, and that County revenues could be affected "indefinitely," *id.* at 4-160. The impacts of that are never analyzed.

Perhaps in an effort to minimize the significance of the expected revenue losses, the EIS/EIR has a table measuring the average tax revenues received by the County of Siskiyou 2000-2010. *Id.* at 3.15-21, Table 3.15-19. This figure, $16,447,000, might be of historic interest but it obscures the fact that the 2010 tax revenue to the County of Siskiyou was only $11,669,731. This number is 29% lower than the historic average and, in present economic conditions, shows no signs of significant change. Any revenue impact assumptions in the EIS/EIR are based on historic revenue data that are off by 29%.

Absent any facts and any analysis of the magnitude or effects of these tax revenue losses, a decision maker cannot assess the socioeconomic impacts of the Proposed Action on the County of Siskiyou. However, what we do know is that 64% of the land in the County of Siskiyou is in federal or state ownership and, therefore, the County has a very limited ability to make up for lost revenue from taxes on privately owned lands.

Compounding this failure of analysis is that the EIS/EIR effectively ignores other aspects of the long-term economic, employment, and revenue impacts of the Proposed Action. The EIS/EIR admits that under the Proposed Action "the regional economy would lose 49 jobs, $2.05 million in labor income and $5.19 million in output ..." due to dam operations. *Id.* at 3.15-54. Added to this is the loss of four jobs and $0.13 million from the loss of reservoir recreation and 14 jobs and $0.43 million from the loss of whitewater rafting opportunities. *Id.* at 3.15-58 and 3.15-61. None of these socioeconomic impacts are examined.

Not only are none of these job loss impacts examined, but the EIS/EIR offers no recognition of the fact that county government is one of the principal employers in the County of Siskiyou. Already, the County has laid off dozens of valuable employees because of declining revenue. The EIS/EIR fails to consider these present and cumulative impacts when it says the County will experience a further decline in tax revenues because of the Proposed Action – a decline that could last "indefinitely."

Instead, the EIS/EIR pivots to claim significant benefits to commercial and recreational fishermen because of alleged increases in fish abundance. *Id.* at 3.15-56-60. However, as noted in Part II.C of these Comments, such claims are illusory.

In still another failure of analysis, the EIS/EIR says land uses will change but, as noted above, "does not describe potential changes in land use that would occur if the dams were removed." *Id.* at 3.14-1. For example, the EIS/EIR fails to examine the potential impact of converting farmland to non-agricultural use notwithstanding the fact that the impact could be huge. *Id.* at 3.14-27. New and different land uses resulting from dam removal will significantly change the socioeconomic landscape of the County of Siskiyou, and other counties. Yet, the EIS/EIR contains no analysis.

Furthermore, the area of analysis for land use effects of the Proposed Action is too limited, *id.* at 3.14-3, Figure 3.14-1, and should be expanded to include the area where reasonably foreseeable effects of the Proposed Action will occur. The magnitude of all the changes that will result from the Proposed Action, the construction and restoration activities, and the vast reach of the related programs are not addressed by the limited area of analysis. The area of analysis should include the entire Klamath Basin, as the effects of the Proposed Action will extend throughout the Klamath Basin.

Finally, the EIS/EIR does not properly examine the socioeconomic impact of lost recreational opportunities for the local citizenry, tourists, and tourism. For example, Hells Corner Reach is the only Class V rapids in the region and it will be lost because of the Proposed Action. *Id.* at 3.20-46. The closest similar experience can only be had by traveling 80 miles. *Id.* The EIS/EIR also concedes that the lakes that will cease to exist because of dam removal provide important recreational opportunities for the people of the region. *Id.* at 3.20-38. However, the EIS/EIR does not examine the related socioeconomic and recreational effects of this loss. Rather, the EIS/EIR simply says people can go elsewhere. *Id.*

All of these failures of analysis are of particular note under NEPA and CEQA. CEQ's regulations implementing NEPA specifically provide that the effects to be analyzed in the EIS include "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate...." 40 C.F.R. §1508.8(b). Here, however, the EIS/EIR "does not describe potential changes in land use that would occur if the dams were removed." EIS/EIR at 3.14-1. In a conspicuous failure of NEPA compliance, the EIS/EIR does not even begin to examine the effects of land use changes because the EIS/EIR does not describe changed land uses resulting from dam removal.

The problems for CEQA compliance are equally severe. An EIR must address a proposed project's "significant effects on the environment." Pub. Res. Code §21100(b)(l); *see also* CEQA Guidelines §15126.2(a) (the EIR "shall identify and focus on the significant environmental effects of the proposed project"). A significant effect on the environment is defined as "a substantial, or potentially substantial, adverse change in the environment." Pub. Res. Code §21068; *see also* Pub. Res. Code §21100(d). The EIR must identify both direct and indirect significant effects. CEQA Guidelines §15126.2(a). Where a project's economic or

social effects will cause physical effects on the environment, those effects must be analyzed in the EIR. CEQA Guidelines §15131(a). Additionally, the "[e]conomic or social effects of a project may be used to determine the significance of physical changes caused by the project." *Id.* at §15131 (b). And in considering the feasibility of changing the project so as to reduce impacts, the agency must consider the project's impacts on economic, social, and housing factors. *Id.* at §15131 (c). The Proposed Action's negative impact on the County's tax base and revenue is a significant economic and social factor as are the anticipated changes in land use. The EIS/EIR has not adequately analyzed any of these factors or given them appropriate weight.

N. Energy Usage and Cost

Closely related to the socioeconomic issues discussed in the preceding section is the issue of energy usage and costs. The Proposed Action "would result" in the loss of 169 MW, or 658,000 MWh" of power. EIS/EIR at 3.18-23. The EIS/EIR attempts to gloss over this power loss by asserting it is minimal when compared to the size of the Northwest Power Pool. *Id.* One is reminded of the unfortunate approach applied elsewhere in the EIS/EIR that the solution to pollution is dilution. If we increase the area in which we measure impacts, and the area is large enough, then there is no longer a harm – except of course to the people at the epicenter of the problem. Here, the people at the epicenter are those who depend on power from the dams. As to those people, the EIS/EIR is forced to admit "the loss of power generated may have some impact to the local area…." *Id.* To put this loss of power into perspective, 658,000 MWh is enough to power approximately 65,000 homes for one year. There are only 23,506 homes in the County of Siskiyou. *Id.* at 3.17-6. In other words, the "some impact to the local area" means that every household in the County of Siskiyou will be affected. In fact, the July 2008 report by Camp, Dresser and McKee Inc. prepared for DOI estimates the cost of replacing this lost power at approximately $172 million.

Beyond admitting there will be "some" local impact, the EIS/EIR says nothing more. There is no analysis of what the socioeconomic effects might be although the EIS/EIR does make two significant admissions. First, PacifiCorp will need to purchase "at least 42.7 MW" of replacement power. EIS/EIR at 3.17-6. Second, irrigators will be pumping more water under the Proposed Action than under the status quo and, therefore, "paying more for electricity under the Proposed Action…." *Id.* at 3.15-72.

The EIS/EIR contains no discussion of the effect of these increased costs on the approximately 550 irrigated farms in Siskiyou County. Nor does the EIS/EIR explain what additional economic costs the consumer will bear because PacifiCorp is having to purchase power after dam removal. DOI's disregard of these economic impacts must be considered in light of the fact that the citizens of the County of Siskiyou are already reeling from 17% unemployment and a flagging economy. Yet, the EIS/EIR is devoid of any analysis of this socioeconomic and human impact of dam removal.

Similarly, the EIS/EIR is devoid of any analysis of the long term environmental impacts of not having clean hydropower. The EIS/EIR dismisses these impacts with the assertion that the four dams provide only a small amount of the total power in the Northwest Power Pool and, besides, PacifiCorp will need to develop more power sources by 2018 in order to meet growing energy demands. *Id.* at 3.18-23-24. While the individual impact of dam removal may, or may not, be small, there is an impact, and it is an impact whose strength is multiplied when it is cumulated with the loss of other power sources and with increasing demands for power. The EIS/EIR contains no analysis of this cumulative effect – and no analysis of the environmental consequences of using other power sources, including the construction of power generating facilities and associated transmission lines.

The reality is that replacing clean hydropower with virtually any other power source increases pollution emissions or otherwise adversely affects the environment. The EIS/EIR seeks to avoid these issues by pointing, for example, to wind power as a clean energy alternative. Even here, the EIS/EIR fails to note the high degree of environmental controversy surrounding wind power – a controversy that has caused DOI to develop new guidelines to reduce the number of birds killed by large wind power turbines. The EIS/EIR also points to coal with its well known environmental issues and to natural gas while noting that natural gas plants require a large amount of fuel. *Id.* at 3.18-23. The fact the EIS/EIR seeks to avoid is that replacing clean hydropower with other energy sources has consequences. But none of these consequences are examined in the EIS/EIR.

O. Water Rights

The discussion in the EIS/EIR regarding the Proposed Action's impacts on surface water supply availability and water rights compliance relies on incomplete data as to the water supplies, rights, and facilities the Proposed Action will affect. The EIS/EIR also impermissibly defers analysis of the Proposed Action's effects to some later time and fails to recognize and analyze important impacts.

1. The EIS/EIR Fails to Analyze the Decreased Reliability of Yreka's Municipal Water Supply That Will Result From Implementation of the Proposed Action

The City of Yreka, which is filing separate and additional comments on the EIS/EIR, is dependent on the Klamath River watershed for its municipal water supply. Specifically, under California State Water Rights Permit No. 15379, the City may draw up to 9.7 million gallons of water per day from Fall Creek, a Klamath River tributary. This diversion has been in place for over forty years. Fall Creek water is transported to the City of Yreka via a 24-inch pipeline that passes under the Eastern (upstream) portion of Iron Gate Reservoir.

This pipeline will have to be relocated before the Proposed Action can proceed. EIS/EIR at 3.18-14. Otherwise, the pipeline will be damaged by construction activities associated with dam removal, or damaged by the increased water velocities that may result once the dam reservoir is drawn down. *Id.* The EIS/EIR contemplates the pipeline will be rebuilt, either along a pipe bridge across the river or attached to the Lakeview Bridge, which is downstream of the Iron Gate Dam and Reservoir.

With no analysis whatsoever, the EIS/EIR concludes that the demolition and reconstruction of this important pipeline, a key part of the City of Yreka's municipal water supply infrastructure, will result in no change from existing conditions. There are six problems with the approach delineated in the EIS/EIR.

First, construction of the type necessitated by demolishing and moving the pipeline is not guaranteed to proceed smoothly. While the EIS/EIR seeks to assure us that the water supply for Yreka will be unaffected by pipeline relocation, it provides next to no discussion of why this is true. The EIR/EIR states the pipeline would be disconnected "for a short period of time" but does not state how short or long that period will be. It fails to specifically discuss the sources from which water for the City will come during the pipeline's disconnection and fails to analyze the environmental and economical effects of using those alternative sources.

Second, the EIS/EIR neglects to discuss whether its proposed new pipeline can survive natural disasters such as flooding, rockslides, and seismic events. A 100-year flood, for example, may carry uprooted trees and other debris that extend far above the water's surface. The new pipeline proposed in the EIS/EIR is an above-ground suspended pipeline bridge or a pipeline attached to the underside of Lakeview Bridge. There is no analysis of the ability of the proposed new structure to withstand natural forces. For example, there is no evidence the

EIS/EIR considered whether the height of the proposed pipeline above a 100-year flood level is sufficient to protect it from the water and floating debris. Equally important, the EIS/EIR omits any discussion of how an above-ground pipeline can be protected from malicious human interference in the form of vandalism or terrorism.

Third, and related to the first point, the EIS/EIR fails to consider the importance of the water supply to the citizens of the City of Yreka. Approximately 7,500 people depend on the existing pipeline for their water. The EIS/EIR is devoid of any discussion of how these people will receive water if there is a disruption in service caused by the problems discussed above. Given the City's Water rights Permit and the needs of its citizens, this is a conspicuous failure of analysis in the EIS/EIR.

Fourth, the proposed above-ground pipeline will be significantly longer than the existing pipeline. The Lakeview Bridge, for example, is located a significant distance from the current crossing location. Therefore, the installation of thousands of feet of additional pipeline becomes a necessity. This significantly changes the hydraulics of the system because there is always friction with the water along the pipeline wall. Increasing pipeline length increases the period of time this friction occurs and slows water speed/pressure, necessitating stronger pumps to maintain the same water pressure that would exist in a shorter pipeline. The EIS/EIR fails to consider whether the existing pump infrastructure can support a longer pipeline.

Fifth, the EIS/EIR fails to consider the economic impacts of building new pumping infrastructure and of maintaining a longer pipeline.

Sixth, the existing pipeline contains a cathodic system to protect it from rusting. The system uses electric energy to safeguard the pipeline from corrosion. The EIS/EIR fails to consider how its proposed above-ground pipeline will be connected to the existing cathodic

system, whether the existing system is sufficient to service a longer pipeline, and who bears the cost of installing and maintaining a larger system.

All these issues could be avoided if the replacement pipeline were constructed in the same way as the original pipeline, but the EIS/EIR refuses to analyze this alternative. *Id.* at 2-29. Instead, the EIS/EIR dismisses the idea of a replacement underground pipeline stating it "would likely require digging in bedrock, which would be complicated and expensive." *Id.* Not only is there no analysis to support this conclusory statement, but it is wrong. It is common in areas where rock geology occurs to bury pipelines. Numerous buried pipelines have been installed in bedrock throughout northern California using rock excavation equipment such as rock trenchers, rock saws, and rock wheels. Trenchless pipe installations using directional drilling or bore and jack methods have also been successfully completed in bedrock. There are many contractors in California who have this type of equipment. Despite these factors, the EIS/EIR rejects this option without any analysis.

The facts are that the existing pipeline was designed and constructed underground to protect it and to assure its long-term service to the City. The Proposed Action should not jeopardize this and any replacement pipeline should be constructed in a manner similar to the original. The demolition and permanent reconfiguration of the pipeline is likely to adversely affect the reliability of water supply to the City of Yreka and the EIS/EIR fails to consider the relevant issues.

This failure is even more glaring given that the California legislature has a clearly articulated policy that the reliability of water supplies, including municipal water supplies, is an important state goal, one that is consistent with the California Constitution. *See* Water Code,

§§10531 and 10610.2. This is especially true in the context of city water supplies. Water Code, §106.5, provides:

> It is hereby declared to be the established policy of this State that the right of a municipality to acquire and hold rights to the use of water should be protected to fullest extent necessary for existing and future uses[.]

Water use in California has to be reasonable and beneficial. Cal. Const. Art. X, §2. Reliability of water supplies is a key component of beneficial use: "Conservation and reliability of water supply fall within the parameters of the constitutional mandate of reasonable beneficial use. (Cal. Const., art. X, §2; Water Code, §§100, 102, 105.)" *Hillside Memorial Park & Mortuary v. Golden State Water Co*., 199 Cal.App.4th 658, 671 (2011). Moreover, "[c]onservation of water and reliability of the water supply are matters of significant public interest and are of transcendent importance." *Central and West Basin Water Replenishment Dist. v. Southern Cal. Water Co.,* 109 Cal.App.4th 891, 903 (2003) (internal quotation omitted).

The deconstruction and relocation of the City of Yreka municipal water supply pipeline will have significant effects on the short- and long-term reliability of the water right represented by the City's permit. However, the EIS/EIR fails to analyze these effects, which is counter to the articulated policy and case law of the State of California, each of which place great priority on water supply reliability in the context of municipal water supplies.

2. The EIS/EIR's Analysis of Impacts to Water Rights is not Based on Sufficiently Specific Data About Those Rights

Although the EIS/EIR makes an effort to identify water rights that will be affected by the Proposed Action, it wholly fails to consider the specific circumstances and physical facilities associated with the vast majority of those water rights and diversions. Accordingly, the evaluation of impacts is not tethered to actual facts.

The EIS/EIR explicitly concedes this shortcoming. In discussing the existing Klamath River water rights that are likely to be affected by the Proposed Action, the EIS/EIR states that although "each of these water rights listings will have associated intake facilities to draw water from the Klamath River … the specific type, location, and layout of each of these intake facilities is unknown at this time." EIS/EIR at 3.8-11. Without any specific knowledge about the location, layout, and construction of the intake facilities and diversion structures associated with the water rights being analyzed, it is hard to understand how the EIS/EIR can possibly analyze the Proposed Action's impacts on those water rights.

The Significance Criteria for the EIS/EIR regarding water rights are: (1) injury to existing water rights or adjudication claims, and (2) decreasing water supplies beyond what is needed for public health and safety (*i.e.*, needs for drinking water and fire suppression) for the current population. *Id.* at 3.8-13. Again, it is impossible to apply these criteria to the existing water rights in a vacuum; that is, without knowledge of how those rights are exercised and implemented.

For example, the EIS/EIR analyzes the potential sediment-caused impacts resulting from the Proposed Action and concludes that, although significant adverse impacts would result, Mitigation Measure WRWS-1 would reduce the impacts to a less than significant level. *Id.* at 3.8-17. However, as noted in previous sections, the EIS/EIR has seriously understated the amount of sediment at issue and, therefore, the effect of this mitigation measure is in doubt. Mitigation Measure WRWS-1 contemplates that *after* the dams are removed, and at the water rights holders' request, there will be an investigation of the impacts caused by the Proposed Action, at which time the Dam Removal Entity will modify the impact points as necessary so as to reduce the Action's effects. *Id.* at 3.8-26. This is an example of putting the cart before the

horse, wherein the environmental planning documents have improperly deferred the substantive environmental analysis of the Proposed Action's effects to some future time.

By failing to determine the actual scope and nature of the specific water rights and water intake facilities likely to be affected by the Proposed Action, the EIS/EIR has failed in its obligation to take a "hard look" at the environmental issues and effects that will result from the Proposed Action. Far from being "a thorough investigation into the environmental impacts of an agency's action and a candid acknowledgment of the risks that those impacts entail," the draft EIS/EIR instead impermissibly defers the analytical investigative work to the post-action future. *National Audubon Society v. Department of the Navy*, 422 F.3d 174, 185-186 (4th Cir. 2005) (citations omitted). Although "foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can." CEQA Guidelines §15144. Here, the EIS/EIR does not show that the agency has used its best efforts to find, disclose, and analyze all that it reasonably can about the actual scope and nature of the water rights and facilities that will be impacted by the Proposed Action.

Instead of relying on mitigation measures to provide post-hoc information about the specific environmental impacts of the Proposed Action on water rights, the EIS/EIR needs to establish specific information about the rights and water intake structures that will be affected. This is especially true in light of the EIS/EIR's conclusion that the release of sediment currently stored in the reservoirs will change Klamath River geomorphology and affect water intake pumps downstream from Iron Gate Dam. EIS/EIR at 3.8-17. There again, the EIS/EIR confirms that the "specific layout of the intake facilities is unknown." *Id.* Although these facilities represent important water rights for domestic, irrigation, and/or fire protection use, the EIS/EIR fails to articulate the scope and extent of the Proposed Action's impacts on those rights.

3. The EIS/EIR Fails to Articulate Why Actions Contained in the KBRA Will Not Have an Effect on Water Rights

In conclusory fashion, the EIS/EIR states that impacts from programs contained within the KBRA, which is a component of the Proposed Action, will not affect water rights and water supplies. These conclusions are premised in large part on the vague concept of "geographic separation" between the specific KBRA project components and the hydroelectric facility removal actions.

However, the EIS/EIR fails to articulate where these projects are in relation to the water rights and supplies being analyzed, and why the stated "geographic separation" is sufficient to ensure there are no effects. This lack of analysis is present for the Fisheries Reintroduction and Management Plan, *id.* at 3.8-19, the Wood River Wetland Restoration, *id.* at 3.8-20, the Water Diversion Limitations, *id.*, the Water Use Retirement Program, *id.* at 3.2-21, the Off-Project Water Reliance Program, *id.* at 3.8-22, and the Interim Flow and Lake Level Program, *id.* at 3.8-24. Without a description of the actual "geographic separation" and physical interrelation between these important aspects of the Proposed Action and water rights, the public has no way of critically evaluating the EIS/EIR's conclusion that no effects will result from these components of the Proposed Action.

P. Cultural and Historic Resources

The EIS/EIR states DOI will use the NEPA process to comply with the requirements of section 106 of the National Historic Preservation Act ("NHPA"). EIS/EIR at 3.13-3. However, the EIS/EIR admits it fails to meet the requisite analytical standards. The EIS/EIR states: "The specific details of how the proposed undertaking or the alternatives might be implemented are not fully known at this time and cannot be fully analyzed in the EIS/EIR." *Id.* The EIS/EIR admits: "The identification of a potential effect on some historic properties cannot be fully

determined prior to approval of either the proposed undertakings or an alternative...." *Id.* at 3.13-4. It is hard to see how the EIS/EIR can be considered as complying with NEPA, CEQA, or the NHPA when the EIS/EIR admits it cannot undertake, and has not undertaken, the required NHPA analyses.

Nevertheless, the EIS/EIR persists in claiming it has done an adequate job of analysis. The EIS/EIR states it is integrating the NHPA requirements into the NEPA process "pursuant to the criteria identified in 36 CFR Section 800.8(c)(1)-(4)." *Id.* at 3.13-1. A closer look at the referenced section only serves to demonstrate that the EIS/EIR does not and cannot, comply with the NHPA. 36 C.F.R. §800.8(c)(4) provides:

> If an agency official has found during preparation of an ... EIS that the effects of an undertaking on historic properties are adverse, the agency official shall develop measures in the ... DEIS, or EIS to avoid, minimize, or mitigate such effects.

The regulations go on to say that the agency's responsibilities are "satisfied" when it has entered into a "binding commitment" to implement the identified mitigation measures or the Advisory Council on Historic Preservation has commented on the measures. *Id.* Here, the EIS/EIR cannot yet identify the adverse effects, let alone identify mitigation measures and enter into binding implementation agreements or consultations.

Even more stunning given that the EIS/EIR admits the effects of the Proposed Action and alternatives "are not fully known" and "cannot be fully analyzed" is the next statement that "DOI has developed measures to avoid, minimize or mitigate adverse effects to historic properties and historic resources...." EIS/EIR at 3.13-27. It stretches the outer bounds of credibility to claim that one has successfully mitigated for effects that are not even known. Indeed, there is no indication that the material provided by the County of Siskiyou on behalf of the Shasta Tribe

regarding potential cultural and burial sites currently in the project area was ever meaningfully examined.

This leads to the question of exactly what type of mitigation is contemplated. In describing the mitigation plan, the EIS/EIR begins by stating that "adverse effects to known historic properties ... cannot be avoided. In addition, adverse effects to as yet unidentified or unevaluated historic properties expected to be identified ... may result from [the Proposed Action.]" *Id.* at 3.13-34. The EIS/EIR then gives the mitigation plan: "The adverse effects will need to be minimized or mitigated." *Id.* In other words, the mitigation plan is to decide later. This is not the type of concrete mitigation plan that complies with the NHPA.

The absence of any mitigation plan is amply demonstrated by the mitigation measures referenced in the EIS/EIR. These mitigation measures are comprised of (1) continuing to find out what is the problem, and (2) identifying ways to mitigate. *Id.* at 3.13-39-40. For example, mitigation measures CHR 1-4 all state that the first action is to identify cultural and historic resources that will be affected by the Proposed Action. After that process is complete, mitigation measures CHR 1-4 provide for the "identification and evaluation [of] alternatives to avoid, minimize, or mitigate ... adverse effects...." *Id.* at 3.13-39. The EIS/EIR's unsupported conclusion is that this so-called mitigation "would be effective." *Id.* at 3.14-40.

Try as it might, the EIS/EIR does not meet the NEPA or CEQA standards for a hard look at environmental effects. It is hard to look at effects when you are still trying to find out the effects. Further, the EIS/EIR will not substitute for the analysis and concrete mitigation required under the NHPA.

Q. Environmental Justice

The EIS/EIR admits the Proposed Action will cause a short-term and long-term loss of revenues to the affected counties and that this loss "would disproportionately affect low income

and minority county residents and tribal people." EIS/EIR at 5-104. Neither the extent of the loss nor the impact on low income and minority residents and tribal people is examined, despite the fact the EIS/EIR admits these impacts could last "indefinitely." *Id.* at 4-160.

The EIS/EIR also admits that tribal people depend on freshwater mussels for subsistence and for cultural and economic value and reducing mussel populations would have a "disproportionate adverse effect" on tribal people. *Id.* at 3.16-29. As discussed in Part II.C.10 of these Comments, freshwater mussels are likely to experience "substantial" mortality from the release of sediment following dam removal. The sum total of the analysis of these impacts on tribal people in the EIS/EIR is the statement that these affects cannot be "completely avoided."

The EIS/EIR claims tribal people will benefit from increased salmon and other fish populations. EIS/EIR at 3.16-29. As discussed in Part II.C of these Comments, those claimed benefits are illusory.

The EIS/EIR falls short of anything that approaches adequate analysis of environmental justice issues. Rather, the EIS/EIR makes claims of benefits belied by the facts and then fails to examine the effects of harms that even the EIS/EIR admits will occur.

R. Tributaries

The Proposed Action is the removal of four dams along the Klamath River and implementation of the KBRA. EIS/EIR at 2-19 (the Proposed Action "would include ... the implementation of the KBRA"), 3.3-75 (the Proposed Action "includes the implementation of KBRA"), and 3.3-138. Appendix C-2 of the KBRA contains cost estimates for the various KBRA projects. Among those projects are habitat and aquatic restoration in and around six tributaries of the Klamath River, the Williamson River, Sprague River, Wood River, Shasta River, Scott River, and Salmon River. EIS/EIR at 2-43 citing KBRA, Appendix C-2. For five of those tributaries, there are also upland habitat projects included within the list of KBRA projects.

Id. In addition, there are four projects for tributaries in general. These projects address issues involving water quality, vegetation, physical habitat, and certain fish (listed suckers). KBRA, Appendix C-2 at C.8. Between 2012 and 2021, the expenditures on these tributary projects totals $177,045,000. *Id.* at C.7-C.8.

These are significant and large scale actions. The effects will be felt in the tributaries and in Klamath River. However, the environmental effects analysis in the EIS/EIR has no evaluation or analysis of these projects which are part of the Proposed Action and which impinge, for better or worse, on the Klamath River. The failure to conduct the required analyses is yet another example of the legal and substantive deficiency of the EIS/EIR.

III. THE MITIGATION ANALYSIS

A. The Legal Standard

1. NEPA

CEQ's regulations require that an EIS "[i]nclude appropriate mitigation measures" for the proposed action and its alternatives. 40 C.F.R. §1502.14(f). *See also* 40 C.F.R. §1502.16(h). Mitigation is defined as avoiding the impacts altogether, minimizing the impacts, rectifying the impacts by rehabilitating and restoring the environment, reducing or eliminating the impacts over time, and compensating for impacts by providing substitute resources. 40 C.F.R. §1508.20.

Although NEPA does not impose a substantive requirement that a complete mitigation plan be finalized in an EIS, a mere listing of mitigation measures is not enough. *Sierra Club v. Federal Highway Administration,* 715 F.Supp.2d 721 (S.D. Tex. 2010), *aff'd*, 2011 U.S. App. Lexis 16066 (5th Cir.)(Aug. 2, 2011). The courts have found impact statements that did no more than list mitigation measures to be inadequate because the discussion failed to fully discuss mitigation measures or to include measures that should have been discussed. *Navajo Nation v. United States Forest Service,* 479 F.3d 1024 (9th Cir. 2007), opinion adopted *en banc,* 535 F.3d

1058 (9th Cir. 2008), *cert. denied,* 129 S. Ct. 2763 (2009); *Davis v. Mineta,* 302 F.3d 1104 (10th Cir. 2002); *Neighbors of Cuddy Mountain v. United States Forest Service,* 137 F.3d 1372 (9th Cir. 1998); *Environmental Defense Fund, Inc. v. Froehlke*, 473 F.2d 346 (8th Cir. 1972).

Like other elements of an EIS, mitigation measures must be discussed in sufficient detail to ensure there has been a hard look at the environmental issues and their effects. Courts will not accept conclusory descriptions of mitigation measures and their alleged effectiveness. *Neighbors of Cuddy Mountain v. United States Forest Service,* 137 F.3d 1372 (9th Cir. 1998). *See also* Haugard, Perspectives on NEPA: Let's Bring a Bit of Substance to NEPA – Making Mitigation Mandatory, 30 Environmental Law Report 10638 (2009); Slotterback, Evaluating the Implementation of Environmental Review Mitigation in Local Planning and Development Processes, 28 Environmental Impact Assessment Review 546 (208). In *South Fork Band Council of Western Shoshone of Nevada v. United States Department of Interior,* 588 F.3d 718 (9th Cir. 2009), for example, the court held an EIS inadequate because it did not assess the effectiveness of mitigation measures but said their feasibility would depend on details to be developed later.

The critical importance of mitigation analysis as to both a proposed action and its alternatives is confirmed by CEQ's recent promulgation of a Guidance on the Appropriate Use of Mitigation and Monitoring ("Guidance"). 76 Fed. Reg. 3,843 (Jan. 21, 2011). The Guidance emphasizes CEQ's regulatory requirements that an EIS must analyze the environmental consequences of an action and its alternatives including the "means to mitigate adverse environmental impacts." Guidance §B. The EIS/EIR fails to meet these standards.

2. CEQA

CEQA requires agencies to implement alternative or mitigation measures if they are feasible and found to substantially lessen the significant environmental effects. It is California's

policy that public agencies "should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects[.]" CEQA Guidelines §21002. Accordingly, one of the EIR's fundamental purposes is to identify measures for mitigating the proposed project's significant environmental impacts. *Id.* at §§21002.1(a), 21061. The EIR must describe feasible project impact mitigation measures. CEQA Guidelines §§15121(a), 15126.4(a). These measures should be "pragmatic, concrete means to minimize the impacts and restore ecological equilibrium" *Environmental Council of Sacramento v. City of Sacramento,* 142 Cal.App.4th 1018, 1039 (2006). They should not be remote and speculative. *Federation of Hillside & Canyon Ass'ns v. City of Los Angeles,* 83 Cal.App.4th 1252, 1260 (2000).

The EIR must "describe feasible measures which could minimize significant adverse impacts[.]" CEQA Guidelines §15126.4(a)(1). CEQA requires that "[e]ach public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so." Cal. Pub. Res. Code §21002.1(b); *City of Marina v. Board of Trustees*, 39 Cal.4th 341, 360 (2006). CEQA Guidelines §15130(b)(3). *See also,* CEQA Guidelines §§15126.4(a)(1), 15130(b)(3) (the discussion of cumulative impacts must include a summary of the expected environmental effects to be produced by those projects, a reasonable analysis of the cumulative impacts, and full consideration of all feasible mitigation measures that could reduce or avoid any significant cumulative effects of a proposed project).

"Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified." CEQA Guidelines §15126.4 (a)(1)(B). Where the mitigation measures themselves cause one or more significant

effects, the effects of the mitigation measure must be discussed. *Id.* at §15126.4 (a)(1)(D). *See also Stevens v. City of Glendale,* 125 Cal.App.3d 986 (1981).

The "mitigation" concept, is broad, and includes all of the following.

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environments.

CEQA Guidelines §15370.

Although the CEQA Guidelines permit agencies to make findings that some mitigation measures are infeasible, (§21081 (a)(3)), those findings must be sufficiently detailed and based "on substantial evidence in the record." CEQA Guidelines §21081.5. *See also Citizens for Quality Growth* v. *City of Mount Shasta,* 198 Cal.App.3d 433, 441 (1988) (agency's findings under §21081 as to mitigation must be sufficiently detailed).

The EIR must also respond to and address specific suggestions for mitigation measures of significant impacts, unless those suggested measures are "facially infeasible." *Los Angeles Unified School Dist. v. City of Los Angeles,* 58 Cal.App.4th 1019, 1029 (1997).

B. The Mitigation Analysis – The Alternatives

The requirement for mitigation analysis applies to both the proposed action and its alternatives. However, the EIS/EIR is almost completely devoid of the required discussion of the mitigation measures for the alternatives. The only discussion of mitigation is with respect to the Proposed Action and to a significantly lesser degree the no action alternative. Absent is the

required mitigation analysis regarding alternatives 3, 4, and 5. On this basis alone, the EIS/EIR fails to meet NEPA's and CEQA's standards for adequacy. There is simply no way to examine and compare the environmental effects of the various alternatives because the EIS/EIR does not include a complete mitigation analysis.

C. The Mitigation Analysis – Bifurcation

The EIS/EIR is also legally defective because it attempts to bifurcate the analysis of dam removal and mitigation, inappropriately leaving the second for a later day. This violates the requirement that the EIS/EIR take a hard look at the environmental effects of a proposed action.

The Proposed Action is the removal of four dams on the Klamath River, including the removal of all associated power generation facilities and "implementation of the KBRA." EIS/EIR at 2-19. To make certain everyone understands that the Proposed Acton includes the KBRA mitigation measures, the EIS/EIR goes on to state "the KBRA is a component of the Proposed Action." *Id.* at 3.3-138. *See also id.* at 3.3-75 (the Proposed Action "includes ... the implementation of the KBRA.") The environmental effects of the Proposed Action depend on the implementation of the KBRA mitigation measures.

Notwithstanding this, the EIS/EIR states it will provide "project-level analysis," *i.e.,* detailed analysis, of dam removal but, as for the KBRA mitigation measures, the evaluation will be "on a programmatic level" only. *Id.* at 3.1-4. The reason for this circumscribed review of the KBRA is that "[w]hile the general goals of the KBRA actions and programs are known, the specific actions that would occur are not yet defined...." *Id.* In other words, the KBRA cannot be evaluated because it is too general.

The preceding admissions render the EIS/EIR legally defective. NEPA and CEQA require that mitigation measures be discussed in sufficient detail to ensure a hard look has been taken at the environmental effects of a proposed action. To know the environmental impacts of

dam removal, the decision maker must know the effects of the planned mitigation. That has not been done, and cannot be done at this time, because the KBRA is only a statement of general goals. How those goals will be achieved is generally not known. The attempt to bifurcate the analysis of dam removal and the analysis of mitigation is a clear violation of NEPA's and CEQA's requirements to include mitigation analysis in the EIS.

In addition to violating the requirements for adequate mitigation analysis, the attempt to bifurcate dam removal from the KBRA mitigation plan also violates CEQ's regulations regarding how to define the federal action. CEQ's regulations define a "major federal action" as including "a group of concerted actions to implement a specific policy or plan" and as "systematic and connected agency decisions." 40 C.F.R. §1508.18(b)(4). Here, the EIS/EIR admits the KBRA is incorporated into the dam removal action – it is one "systematic and connected" action.

In that regard, CEQ's regulations state:

> Agencies shall make sure the proposal which is the subject of an environmental impact statement is properly defined.... Proposals or parts of proposals which are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement.

40 C.F.R. §1502.4(a). The EIS/EIR states the Proposed Action incorporates the KBRA. Yet, there cannot be any analysis because the KBRA is to ill-defined to permit proper analysis. In a vain attempt to avoid this legal failure, the EIS/EIR, for purposes of mitigation analysis, suddenly pretends the KBRA is not part of the federal action.

To justify this fiction, the EIS/EIR attempts to define the KBRA as a "connected action" to the dam removal that somehow can be examined later. EIS/EIR at 1-1. First, this is inconsistent with the statements in the EIS/EIR that the KBRA is not just connected to, but is incorporated into, the Proposed Action. Second, even if the EIS/EIR characterization of the

KBRA as a connected action is correct, CEQ's regulations provide that connected actions "should be discussed in the same impact statement." 40 C.F.R. §1508.25(a)(1). For example, in *Hammond v. Norton,* 370 F.Supp.2d 226 (D.D.C. 2005), the court held the Bureau of Land Management erred by not considering two natural gas pipeline projects in a single EIS because the two pipelines did not have independent and separate utility. Here, the EIS/EIR readily admits the KBRA does not have independent utility apart from dam removal. EIS/EIR at 1-26, including Table 1-1 at 1-26-27. A closer look at Table 1-1 further confirms that all the KBRA fisheries programs, for example, are directly linked to dam removal. And recall the EIS/EIR states the need for dam removal is to restore salmon fisheries.

The reality, admitted in the EIS/EIR, is that dam removal and the KBRA are one action, the Proposed Action. The environmental effects of dam removal depend on the specific actions in the KBRA. However, because those actions are unknown, the effects of dam removal are unknown and the EIS/EIR fails to meet the requisite legal standard for mitigation analysis and for a hard look at the environmental effects of the Proposed Action.

Furthermore, as discussed in the next section, DOI cannot attempt to run away from its statements that the KBRA is too general to be analyzed and instead argue that the KBRA's mitigation measures were fully reviewed and that the KBRA will be effective in mitigating the adverse effects of dam removal.

D. The Mitigation Measures of the KBRA

As noted in Part II of these Comments, the alleged benefits of the Proposed Action hinge on the full and effective implementation of the KBRA. However, as the Coho and Steelhead Expert Panel stated in assessing the benefits of the KBRA, "uncertainty is high because the KBRA plan is so unspecific." Coho and Steelhead Expert Panel Report at 47. The Panel found the KBRA is only "a list of possible actions without sufficient detail to estimate quantitatively

their effects on habitat...." *Id.* at 48. As to how the KBRA will impact overall ecosystem functions, the Expert Panel found "the details of the KBRA [are] insufficient to answer this question." *Id.* at 49.

In the same manner, the Resident Fish Expert Panel found that any level of improvement attributed to the KBRA "is uncertain, in part because details of most activities have not been described." Resident Fish Expert Panel Report at 77.

Even the EIS/EIR itself admits that the alleged benefits of the KBRA – benefits DOI relies on to justify the Proposed Action – cannot be determined because the KBRA is too ill defined and, furthermore, the claimed benefits may not exist even if the KBRA is implemented. A few examples suffice to illustrate the point.

- After admitting the Proposed Action will increase nutrient loads and the production of harmful river algae, the EIS/EIR states these effects "could" possibly be mitigated "if" the KBRA mitigation projects are well designed and implemented on a large enough scale. EIS/EIR at 3.4-15. Note there is not enough information about the KBRA projects to determine if the projects are well designed or on a large enough scale to address the problem. Note also that at the end of the day the EIS/EIR admits that even with the KBRA the Proposed Acton will make nutrient loads worse. *See* Part II.C.1.c of these Comments.
- After admitting that a habitat restoration plan is needed due to "the likelihood for invasive or weedy species to colonize newly exposed areas," the EIS/EIR admits the alleged benefits of the KBRA cannot be examined because the plan provided for in the KBRA will be developed later. EIS/EIR at 3.5-44.

Given that the Proposed Action incorporates the KBRA (EIS/EIR at 2-19, the Proposed Action "would include ... implementation of the KBRA ..."), an analysis of the effects of the Proposed Action is also an analysis of the KBRA. Again, a few examples regarding the Proposed Action suffice to illustrate that the mitigation analysis in the EIS/EIR is defective.

- To evaluate the effect of the Proposed Action on water temperatures "will require more detailed information" than is presented. Coho and Steelhead Expert Panel Report at 32.
- Regarding any improvement in ecosystem functions, there "is insufficient information available" to answer how the Proposed Action compares to the status quo. *Id.* at 51.
- Regarding the precise extent to which the Proposed Action differs from the status quo as to the incidence of fish disease, "[t]he information available is insufficient...." *Id.*
- It is uncertain if the Proposed Action together with the KBRA can improve the low oxygen issues in the river. Chinook Expert Panel Report at 14.
- Whether thermal refugia will benefit steelhead "is not known." Coho and Steelhead Expert Panel Report at 43.

Furthermore, it is unlikely the KBRA can be fully implemented or that it will be effective. The Chinook Expert Panel, for example, noted that based on "the Panel's past experiences with large rehabilitation projects in other streams, the stream rehabilitation literature [citations omitted], and increased uncertainty of KBRA funding, the Panel has strong reservations that KBRA will be implemented with sufficient effectiveness...." Chinook Salmon Expert Panel Report at 26-27. The Chinook Expert Panel then said that even if the KBRA is fully funded and implemented its proposed actions and their claimed benefits are "infeasible," "unlikely," "remote," "uncertain," "may not match the scope and extent" of the problems, and

could be subject to species interactions not considered in the EIS/EIR that result in "cancelling" the alleged benefits of the KBRA and the Proposed Action. *Id.* at 10, 11, 13, 14-15, 17.

Repeatedly, the EIS/EIR and the various Expert Panels established by DOI admit the KBRA is so lacking in specifics that its effectiveness cannot be evaluated. Repeatedly, where some details are present, the effectiveness of the KBRA is called into question. Repeatedly, the statement is made that "if" the KBRA is 100% funded and implemented, then it "could" have a mitigating effect. None of this is the type of analysis that passes legal muster. How can a decision maker evaluate the benefits of a plan so lacking in details? The resounding answer from the Expert Panels is he or she cannot. Furthermore, how can a decision maker consider a mitigation plan that experts and even the EIS/EIR admit is not feasible and unlikely to succeed? The answer is he or she cannot. To the extent the EIS/EIR relies on the KBRA as providing mitigation analysis, or mitigation, the EIS/EIR fails to meet NEPA's and CEQA's standards for mitigation analysis.

Furthermore, Appendix C to the KBRA lists 112 projects that are part of the KBRA. KBRA, Appendix C at C.7-C.9. The vast majority of those projects will have environmental effects. Since the KBRA is part of the Proposed Action, one would expect an analysis in the EIS/EIR of those 112 projects. There is virtually none.

E. Conclusion

NEPA and CEQA require a full and complete analysis of the mitigation measures that will be part of the proposed action and each alternative. Otherwise, the decision maker cannot truly compare the actual effects of the proposed action versus its alternatives. The EIS/EIR fails to meet this legal standard because there is no mitigation analysis as to the alternatives. As to the Proposed Action, the mitigation proposals contained in the KBRA are often so ill-defined that they cannot be evaluated. Where more detail is provided, the EIS/EIR and the Expert Panels

often conclude the KBRA is unlikely to succeed, not feasible, and too uncertain as to outcome. The EIS/EIR does not contain a legally adequate mitigation analysis.

IV. ALTERNATIVES ANALYSIS

A. The Analysis of Alternatives

The analysis of alternatives is considered the "heart" of an EIS. 40 C.F.R. §1504.14. The alternatives analysis is the critical element of an EIS. In its famed Forty Questions Guidance, CEQ stated: "The degree of analysis devoted to each alternative in the EIS is to be substantially similar to that devoted to the 'proposed action.'" Memorandum for Federal NEPA Liaisons, Federal, State, and Local Officials and Other Persons Involved in the NEPA Process, 46 Fed. Reg. 18,026 (Mar. 16, 1981), Question 5b. This CEQ Guidance mirrors the NEPA implementing regulations that direct federal agencies to "[r]igorously explore and objectively evaluate all reasonable alternatives...." 40 C.F.R. §1502.14(a).

The EIS/EIR falls short of this standard. As noted in Part II.C of these Comments, DOI convened four expert panels to examine issues surrounding the various fish resources in the Klamath Basin, including Chinook and coho salmon. The reports of these Expert Panels are the foundational documents for the findings and conclusions in the EIS/EIR regarding whether the Proposed Action can, in fact, restore salmon and other fish resources. However, as noted in Part II.C of these Comments, DOI restricted each Expert Panel to an analysis of only two alternatives, no action and the Proposed Action. Not only does this demonstrate a closed mind on the part of DOI, but it violates NEPA and CEQA which require a robust analysis of all alternatives.

DOI cannot rescue its position by arguing the EIS/EIR dutifully examines all alternatives. This attempted defense only serves to document the failed analysis in the EIS/EIR. For example, as to aquatic resources, the EIS/EIR devotes 22 pages of discussion to the No Action alternative and 103 pages to the Proposed Action (Alternative 2), for a total of 125 pages. Alternatives 3, 4,

and 5 get a combined total of 50 pages of discussion. The attention and analysis given to each alternative is hardly comparable.

This pattern repeats itself throughout the EIS/EIR and a few examples suffice. As to the issue of algae production, the Proposed Action receives nine pages of discussion. Alternative 4 receives 14 lines of discussion compressed into one paragraph. For terrestrial resources, the Proposed Action is discussed over 28 pages. Alternative 4 is covered in just over one page. As to water quality, the Proposed Action is reviewed in 56 pages. Alternative 4 gets less than two pages. For air quality and climate change, there are 16 pages of discussion for the Proposed Action and six for Alternative 4. The EIS/EIR even admits it failed to treat the alternatives equally. For example, water temperature model results were "not developed for all the alternatives...." EIS/EIR at 3.3-49.

The EIS/EIR has failed to provide the robust alternatives analysis required by NEPA and CEQA. Instead, DOI instructed its Expert Panels to ignore three of the alternatives and the EIS/EIR then adopts the Expert Panel reports as justifying the selection of the Proposed Action. What discussion does occur regarding the orphaned three alternatives is cursory at best. The EIS/EIR fails to meet CEQA and NEPA standards for a rigorous and objective evaluation of alternatives.

B. The Purpose and Need Statement

CEQ regulations require the agency to identify the purpose and need for the proposed action. 40 C.F.R. §1502.10(d). Here, DOI states the purpose of the Proposed Action "is to achieve a free flowing river condition...." EIS/EIR at 1-29. The need for the action "is to advance restoration of the salmonid fisheries in the Klamath Basin...." *Id.*

DOI's statement of the purpose of the Proposed Action preordains the selection of a dam removal alternative. No other alternative achieves the purpose of a "free flowing river." By

adopting such a limited purpose, DOI has dictated the result of its decision about how to restore salmon resources. DOI's selection of a purpose statement stands in contrast to the statement of purpose approved in *Westlands Water District v. United States Department of the Interior*, 376 F.3d 853, 866 (9th Cir. 2004), where the project's purpose was to restore anadromous fish runs. For the Klamath River, DOI has already selected the method to restore anadromous fish runs – dam removal. Not only does this demonstrate a closed mind in violation of the arbitrary and capricious standards of the Administrative Procedure Act, but it also violates NEPA. As the court said in *Simmons v. United States Army Corps of Engineers,* 120 F.3d 664, 666 (7th Cir. 1997), an agency cannot "contrive a purpose so slender as to define competing 'reasonable alternatives' ... out of existence...."

Because the range of alternatives that must be analyzed under CEQA is tied to the project's objectives, DOI's statement of purpose violates CEQA. CEQA requires that the project purpose help the agency develop and consider appropriate alternatives. DOI's use of the "free flowing river" objective preordains the outcome and thereby undermines CEQA's requirement that decision making occur after*,* not before, the environmental analysis is done.

V. CUMULATIVE IMPACTS ANALYSIS

A. The Legal Standard – NEPA

A discussion of the cumulative environmental effects of a proposed action is an essential part of the environmental review process. Otherwise, the actual impact of a proposed action cannot be fully understood. *Kern v. United States Bureau of Land Management,* 284 F.3d 1062 (9th Cir. 2002). A "cumulative impact" is defined as:

> the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future action.... Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. §1508.7. However, a discussion of the cumulative impact of alternatives to the proposed action is not required. *Soda Mountain Wilderness Council v. Norton,* 424 F.Supp.2d 1241 (E.D. Cal. 2006).

As to past impacts that must be analyzed, CEQ has stated there must be

> a concise description of the identifiable present effects of past actions to the extent that they are relevant and useful in analyzing whether the reasonably foreseeable effects of the agency proposal for action and its alternatives may have a continuing, additive and significant relationship to those effects.

Guidance on the Consideration of Past Actions in Cumulative Impact Analysis, 2005, at 1-2. This interpretation of an agency's responsibilities under NEPA has been upheld by the courts. *League of Wilderness Defenders v. United States Forest Service,* 549 F.3d 1211 (9th Cir. 2008).

As to what future impacts must be considered, courts have held that all "reasonably foreseeable" actions that have potential cumulative effects must be addressed. *Lands Council v. McNair,* 537 F.3d 981 (9th Cir. 2008) *en banc*. However, speculative impacts need not be considered. *Town of Marshfield v. F.A.A.,* 552 F.3d 1 (1st Cir. 2008). Some degree of certainty must exist as to project approval. *Habitat Education Center v. U.S. Forest Service,* 609 F.3d 897 (7th Cir. 2010).

The nature of other actions must also be considered. For example, a non-adjacent similar action having cumulative effects is to be considered. *See, e.g., Grand Canyon Trust v. Federal Aviation Administration,* 290 F.3d 339 (D.C. Cir. 2002) (where airport noise was at issue all sources of noise should be evaluated). Similarly, non-adjacent dissimilar projects should be considered where they have related impacts. *People of State of California v. United States Department of Transportation,* 260 F.Supp.2d 969 (N.D. Cal. 2003) (airport expansion project must address cumulative impacts of nearby projects including hotel construction); *League of*

Wilderness Defenders v. Marquis-Brong, 259 F.Supp.2d 1115 (D. Or. 2003) (timber sale must consider cumulative effects of fire and grazing on nearby land).

In addition to considering the nature of related actions, there are issues of proximity to consider. For example, an agency should consider the impact of a project on an adjacent area. *Earth Island Institute v. United States Forest Service,* 351 F.3d 1291 (9th Cir. 2003) (timber sale required consideration of cumulative impacts on spotted owls in a neighboring national forest). In addition, agencies must consider cumulative impacts even if they are not area specific. *Center for Biological Diversity v. National Highway Traffic Safety Administration,* 538 F.3d 1172 (9th Cir. 2008) (national corporate average fuel economy standards required an evaluation of the cumulative impact of the rule on greenhouse gas emissions in light of reasonably foreseeable similar standards for light trucks and passenger automobiles).

Assuming the scope of the cumulative impact analysis is appropriate, the next issue is what level of analysis is adequate. Here, courts have applied a "rule of reason" test to determine if the analysis is reasonably thorough such that the decision maker can make an informed decision. *Westside Property Owners v. Schlesinger,* 597 F.2d 1214 (9th Cir. 1979). Again, the standard is whether there is sufficient information to demonstrate the agency has taken a "hard look" at the cumulative impacts of the proposed action. *Environmental Protection Information Center v. Blackwell,* 389 F.Supp.2d 1174 (N.D. Cal. 2004). This standard requires "some quantified or detailed information" because general statements about possible effects and some risk "do not constitute a hard look absent a justification regarding why more definitive information could not be provided." *Klamath-Siskiyou Wildlands Center v. Bureau of Land Management,* 387 F.3d 989, 993-94 (9th Cir. 2004). Thus, conclusory statements absent analysis are inadequate. *Muckleshoot Indian Tribe v. U.S. Forest Service,* 177 F.3d 800 (9th Cir. 1999).

Further, a plaintiff need not show that cumulative effects will actually occur but only that such a potential exists. *Te-Moak Tribe of Western Shoshone of Nevada v. U.S. Department of Interior,* 608 F.3d 592 (9th Cir. 2010).

A requirement to consider cumulative impacts is, however, less rigorous in the case of a programmatic EIS when the agency can consider these impacts at the site and project specific stage. *Northern Alaska Environmental Center v. Lujan,* 961 F.2d 886 (9th Cir. 1992).

B. The Legal Standard – CEQA

While NEPA requires an analysis of environmental effects that may not be "significant" on their own but which may be "significant" when combined with similar effects over time, CEQA adopts a "considerable" effect standard. Environmental effects that may not be "considerable" on their own but which may be "considerable" when combined with similar effects over time require analysis. The CEQA Guidelines define a cumulative effect as:

> [T]wo or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.
>
> (a) The individual effects may be changes resulting from a single project or a number of separate projects.
>
> (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

CEQA Guidelines §15355. Thus, a lead agency must discuss the cumulative impacts of a project when the cumulative effect is significant and the project's incremental contribution would be "cumulatively considerable." CEQA Guidelines §§15065(a)(3) and 15130(a).

If the combined cumulative impact of the effects of the proposed project and other projects is not considerable, an EIR must explain why that is so. CEQA Guidelines

§15130(a)(2). Further, if mitigation for the proposed project is determined to render the cumulative impacts less than considerable, the EIR must identify the facts supporting that conclusion. CEQA Guidelines §15130(a)(3). With respect to mitigation, however, CEQA requires an EIR to identify all reasonable and feasible mitigation options. CEQA Guidelines §15130. Further, no public agency can approve a project that has significant impacts unless feasible changes have been incorporated into the project to avoid or substantially lessen the significant environmental effects. CEQA Guidelines §15091. Thus, CEQA requires each agency to mitigate or avoid significant environmental effects whenever it is feasible to do so. Pub. Res. Code §21002.1(b).

C. The Cumulative Impact Analysis

As a threshold matter, the cumulative impact analysis in the EIS/EIR is per se deficient. The EIS/EIR relies on the environmental effects analysis in the EIS/EIR to establish the baseline effects caused by dam removal. These effects are then evaluated in the cumulative impact analysis. As discussed in Part II of these Comments, the EIS/EIR understates or fails to analyze the baseline effects. Consequently, the baseline, the foundation from which the cumulative effects analysis proceeds, is incorrect. That alone renders the cumulative impact analysis in the EIS/EIR legally insufficient. No more need be said. Nevertheless, these Comments will examine other weaknesses in the cumulative impacts section of the EIS/EIR.

1. Scope of Analysis

The cumulative impacts analysis must examine the cumulative effects of past, present, and reasonably foreseeable effects of other projects. Table 4-4 of the EIS/EIR lists the "Projects Considered in Cumulative Effects Analysis." EIS/EIR at 4.3-22-26. Sixty-two projects are listed, including multiple surface transportation projects, multiple housing developments and other housing facilities, mining projects, waterfront development, and energy production

facilities. Presumably, these projects would not be on the list if they were not past, present, or reasonably foreseeable projects. However, these projects are not analyzed for cumulative impacts in association with the Proposed Action. Here again, the EIS/EIR fails to meet the standards of legal adequacy.

Also conspicuously absent from this analysis are the KBRA projects proposed for Klamath River tributaries discussed in Part II.R of these Comments. These projects, which are both reasonably foreseeable and part of the Proposed Action, receive not a word of analysis in the cumulative impacts analysis. Since none of these projects were considered in the environmental effects section of the EIS/EIR, one would at least expect some mention of them in the cumulative impacts analysis. But that is not the case. Indeed, Appendix C to the KBRA lists 112 projects, and there is virtually no analysis in the EIS/EIR of the cumulative effects of these reasonably foreseeable actions.

2. Aquatic Resources

The EIS/EIR claims that because of "increased habitat availability and improved habitat quality" the long-term cumulative effects of the Proposed Action will be beneficial. EIS/EIR at 4-78. As discussed in Part II.C of these Comments, the facts do not support this conclusion as to the baseline effects of the Proposed Action – a baseline that must be correct in order to properly assess cumulative impacts. Even the EIS/EIR admits that the starting point for cumulative impact analysis is the baseline environmental effects. EIS/EIR at 4-27. Curiously, the EIS/EIR states this baseline includes the effects of the KBRA, effects which, as noted in Part III of these Comments, have not been analyzed. *Id.*

The same lack of analysis, and the failure to have a proper baseline analysis of the effects of dam removal, also infects the cumulative effects discussion for Chinook salmon (*id.* at 4-73-76), coho salmon (*id.* at 4-76-78), steelhead (*id.* at 4-79-80), Pacific lamprey (*id.* at 4-80), green

sturgeon (*id.* at 4-81), Lost river and shortnose suckers (*id.* at 4-81), redband trout (*id.* at 4-83), bull trout ((*id.* at 4-83), eulachon and longfin smelt (*id.* at 4-83-84), and freshwater mussels and benthic macroinvertebrates (*id.* at 4-85-86).

For almost every fish species, the EIS/EIR has the same language. Because of alleged greater access to habitat, reduced fish disease and algae blooms, and improved water quality and temperature, the species will benefit and, therefore, the cumulative effect is beneficial. A review of the effects of dam removal on aquatic species set forth in Part II.C of these Comments shows that the facts belie any claim of beneficial impact. What the facts show is the impacts of the Proposed Action are unknown, negative, or not analyzed. Rather than repeat the contents of Part II.C, that Part is hereby incorporated into this Part V as if fully set forth herein.

Because the cumulative impacts analysis in the EIS/EIR fails to proceed from a correct baseline of effects and fails to consider the impacts of associated and related actions, the cumulative impacts discussion in the EIS/EIR does not meet the applicable legal standard.

3. Other Resources

As is the case with the cumulative effects analysis of aquatic resources, the analysis regarding the cumulative effects of the Proposed Action on other resources is woefully inadequate and proceeds from an incorrect baseline of effects. A few examples suffice.

- The review regarding algae fails to consider the runoff from other planned projects. EIS/EIR at 4-93.
- For terrestrial resources, the EIS/EIR identifies timber harvesting, agriculture, recreation, residential development, water diversions, and mining as having past, present, and future impacts but fails to state what are those impacts relative to the added impacts from the Proposed Action. *Id.* at 4-95.

- Having identified residential and commercial development as adding impervious surfaces that can channel water into rivers, the EIS/EIR neglects to discuss those impacts relative to the Proposed Action.
- In discussing the existing Klamath River water rights that are likely to be affected by the Proposed Action, the EIS/EIR states that although "each of these water rights listings will have associated intake facilities to draw water from the Klamath River … the specific type, location, and layout of each of these intake facilities is unknown at this time." *Id.* at 3.8-11. Without specific knowledge about the location, layout, and construction of the intake facilities and diversion structures associated with the water rights being analyzed, it is hard to understand how the EIS/EIR can possibly analyze the Proposed Action's impacts on cumulative water rights, or the effectiveness of the proposed mitigation measure WRWS-1. Accordingly, the EIS/EIR conclusion that "With implementation of this mitigation, the Proposed Action's incremental contribution to the cumulative effects on water intake pumps from sedimentation associated with reservoir drawdown will not be cumulative considerable," *id.* at 4-20-21, is premised on conjecture, not on data and analysis. Without knowledge and information about the specific water rights and facilities that will be impacted by the sedimentation and changes in the river's geomorphology, the EIS/EIR cannot properly determine the Proposed Action's cumulative effects, or how those effects are to be mitigated.
- Not only does the EIS/EIR proceed from a wholly incorrect and grossly underestimated baseline regarding the effects of the Proposed Action on sedimentation, but it fails to examine the sedimentation effects of the activities and

projects that are acknowledged to contribute to sedimentation such as timber harvesting, mining, agriculture, livestock grazing, and road related erosion. *Id.* at 4-139.

- The EIS/EIR does not discuss the cumulative impact on the river, estuarine and ocean ecosystems of actions that increase sedimentation, increase water temperature, increase pH levels, increase nutrient concentrations, increase chemical concentrations, lower oxygen levels, and increase algae populations.
- The EIS/EIR does not discuss the cumulative effects of an increased demand for groundwater.
- As to land use issues, the EIS/EIR artificially limits the time frame to 18 months following dam removal as if all land use impacts will be over in 18 months. *Id.* at 4-151.
- The EIS/EIR artificially limits the time frame for analysis regarding solid waste disposal issues associated with dam deconstruction, ignoring the fact that using up to one-third of the existing disposal capacity at two facilities has long-term cumulative effects. *Id.* at 4-108.
- Although the EIS/EIR identifies the Northwest Forest Plan as an applicable authority and regulation, *id.* at 3.14-8, the EIS/EIR has no analysis of the past and continuing effects of this Plan on Siskiyou County. Timber harvests have declined from the 1978-1989 average of 180-250 million board feet to around 20 million board feet. The EIS/EIR fails to examine the associated economic impacts when these losses are added to the job and revenue loss of the Proposed Action.

- The past economic effects of a ban on mining and of reduced agriculture and cattle grazing that continue today are ignored.
- While the individual energy impact of dam removal may, or may not, be small, there is an impact whose strength is multiplied when it is cumulated with the loss of other power sources and with increasing demands for power. The EIS/EIR contains no analysis of this cumulative effect or of the cumulative effect of replacing clean hydropower with other energy sources.

As is the case with the cumulative impacts analysis for aquatic resources, the cumulative effects analysis as to other resources fails to meet the applicable standards.

VI. LOCAL REQUIREMENTS

The EIS/EIR consistently fails to analyze, and account for, the fact that the County of Siskiyou has laws and regulations that apply to the Proposed Action. The analysis starts with statutes such as the Federal Land Policy and Management Act of 1976, 43 U.S.C. §1701, and the Intergovernmental Cooperation Act, 31 U.S.C. §6501, that require coordination with local governmental authorities in land use planning and development. Dam removal falls within this category. Equally important, CEQ's regulations implementing NEPA provide that any EIS "shall discuss any inconsistency of a proposed action with any approved state or local plan and laws…." 40 C.F.R. §1506.2(d). The discussion of local requirements in the EIS/EIR also fails to meet the standards set forth in CEQA Guidelines section 15126 regarding impacts analysis. CEQA Guidelines §15126.

The EIS/EIR attempts to justify its lack of analysis as being due to questions that "remain over the ultimate applicability of local regulations depending on the selection of the Dam Removal Entity (DRE)" or Hydropower Licensee. EIS/EIR at 6-1. Regardless of who is

removing the dams, the County's Ordinances will apply. The EIS/EIR incorrectly defers future "environmental analysis and compliance documentation" to later. Under CEQA and NEPA, the time to analyze impacts of the project is in the Draft EIS/EIR, not later. In fact, the County of Siskiyou has consistently requested that DOI coordinate with the County so as to identify applicable County Ordinances and to discuss compliance. Unfortunately, such requests have been ignored.

The facts are that the EIS/EIR is barren of any substantive discussion of the provisions of the laws and regulations of the County of Siskiyou. A few examples are sufficient to establish the deficiency of the EIS/EIR. Chief among these examples is Title 10, Chapter 13 of the County's Code of Ordinances that makes the "demolition, deconstruction, or removal of major facilities" unlawful absent the issuance of "a permit granted by the County…." A major facility is defined to include dams. Nowhere are the provisions of this Ordinance, let alone compliance with the Ordinance, discussed in the EIS/EIR. The failure to do so is a clear violation of NEPA and CEQA.

The trucks and equipment used in dam deconstruction will bring enormous weights to bear on County roads. The applicable County Ordinances require that loads over 80,000 pounds GVW secure a transportation permit. The EIS/EIR has no discussion of this requirement.

The County of Siskiyou has a General Plan Noise Element ("GPNE") that recognizes the County's size makes it infeasible to have detailed noise contours throughout the County. Therefore, the GPNE provides a detailed process for conducting noise studies to ensure that projects do not individually or cumulatively create adverse noise impacts. The noise analysis in the EIS/EIR does not conform to this process.

The County of Siskiyou has restricted truck traffic along Copco Road to the dry summer months because of the roads substandard surface conditions. Ignoring this County regulation, the Proposed Action improperly contemplates increased heavy truck traffic during the restricted months.

Although the EIS/EIR admits the Proposed Action will increase the risk and severity of flooding, one searches the document in vain for any recognition of the fact that Section 10-10 of the County Code of Siskiyou County requires a flood damage prevention permit for activities affecting the floodplain. Not surprisingly, there is no discussion of whether and how the Proposed Action complies, or will comply, with the County's requirements.

Pursuant to the Klamath Hydroelectric Settlement Agreement ("KHSA") certain parcels of land are transferred to the state and federal government. As such, they would no longer be subject to local zoning and regulation. How these lands will be transferred and managed consistent with the applicable County Ordinances is a topic ignored in the EIS/EIR, again in violation of 40 C.F.R. §1506.2(d) and of CEQA.

As these few examples demonstrate, the EIS/EIR fails to consider the applicable Ordinances of the County of Siskiyou, instead choosing to disregard or ignore those Ordinances.

VII. COASTAL ZONE MANAGEMENT ACT

The Proposed Action will result in impacts between Siskiyou County and the Pacific Ocean, but the EIS/EIR does not address any impacts in Del Norte County nor does it address in a consistent and thorough manner project related impacts on areas downstream of the dams "that would be affected by the removal of the dams and loss of the reservoirs." EIS/EIR at 3.14-2. Specifically, the EIS/EIR does not address project consistency with the Coastal Zone Management Act. Chapter 6 of the EIS/EIR is the section on compliance with applicable laws, policies and plans, and Table 6-1 is titled "Related Federal Laws, Rules, Regulations, Executive

Orders, and Other Authorities." EIS/EIR at 6-1-6-9. Table 6-1 identifies the Coastal Zone Management Act as an applicable law. *Id.* at 6-2. However, the EIS/EIR fails to address coastal zone consistency and includes no analysis of the project relative to the Coastal Zone Management Act. The EIS/EIR also contains only passing references to the California Coastal Management Act, the State's coastal management program. Because of the likely adverse impacts of the Proposed Action on aquatic and other resources resident in the coastal zone, the EIS/EIR must document the consistency of the Proposed Action with the state and federal coastal zone management statutes. It has not done so.

VIII. CONCLUSION

NEPA and CEQA require that there be a "hard look" at the environmental effects of a proposed action. However, this hard look "must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made[.]" *Western Watersheds Project v. Kraayenbrink,* 620 F.3d 1187, 1205 (9th Cir. 2010). Here, the EIS/EIR fails to take the requisite hard look, ignores key issues, uses incorrect facts, misstates the conclusions of expert review panels established by DOI, and glosses over adverse environmental effects or refuses to acknowledge them. For all intents and purposes, the EIS/EIR appears to be "a subterfuge designed to rationalize a decision already made."

- The EIS/EIR states the need for the Proposed Action is to advance the restoration of salmonid fisheries. DOI established four Expert Panels to study the likelihood of the Proposed Action achieving that goal. After reviewing the data, the Expert Panels called the results of the Proposed Action "small," "remotely possible," "uncertain," "unlikely," and "not feasible." In short, there is a very low likelihood the Proposed Action will achieve its goal.

- A recurring theme in the Expert Panel Reports is that the data and analyses necessary to support the conclusions in the EIS/EIR have not been done. The actual effects of the Proposed Action are simply not known despite claims to the contrary in the EIS/EIR. Because of the absence of data and analyses, one Expert Panel termed the Proposed Action an "experiment." Spending hundreds of millions of dollars on an "experiment" that will, at best, achieve "small" results is highly questionable.
- To justify the Proposed Action, the EIS/EIR makes fundamental errors of analysis. For example, the EIS/EIR examines the effects of the Proposed Action on fish as if each individual species is the only occupant of the ecosystem. However, these species share the same habitat, compete for the same space and food, and prey on each other. Failing to examine interspecies ecosystem relationships is a conspicuous and glaring omission in the EIS/EIR. This is especially true when one Expert Panel determined that interspecies conflicts, including predation on salmon by an expanded redband trout population, could result in "cancelling" the benefits to salmon claimed to result from the Proposed Action. Increased predation resulting from the Proposed Action also poses real threats to the bull trout, a species protected under the Endangered Species Act.
- The benefits claimed for the Proposed Action in the EIS/EIR are illusory or negative. For example, an Expert Panel judged the net benefits of the Proposed Action for salmon to be "small." Among many other things, the Panel noted that salmon need spawning beds that are relatively free of silt and sediment. In concluding that the benefits to salmon would be "small," the Expert Panels based their analysis on an

assumed sediment release of 200,000-400,000 tons after dam removal. The actual number, using data in the EIS/EIR, is 3,540,000 tons.

- An Expert Panel found the EIS/EIR's reliance on average daily mean temperatures to measure the temperature impacts of dam removal on fish was incorrect. Fish do not experience average temperatures. Fish experience hour-by-hour temperatures. If temperatures rise above a certain level, notwithstanding the average, fish are adversely affected. An Expert Panel concluded that dam removal will increase the highest temperatures experienced by fish.
- A key water quality problem in the Klamath River Basin is high nutrient loads that cause low dissolved oxygen and algae blooms. The EIS/EIR admits the Proposed Action will increase nutrient loads and, therefore, make water quality worse.
- Another key water quality problem is algae growth. The EIS/EIR admits the Proposed Action will make this problem worse.
- Water quality is adversely affected by elevated pH levels. The EIS/EIR admits the Proposed Action will make this problem worse.
- Low dissolved oxygen levels are yet another water quality problem. The EIS/EIR concedes this problem is likely to be worse because of the Proposed Action.
- Disease is a major problem affecting fish populations. Because increased river algae biomass provides improved habitat for disease carrying worms, the Proposed Action will make the fish disease problem worse.
- According to the EIS/EIR, freshwater mussels, an important subsistence and cultural species for tribal people, experience "substantial" mortality when buried for more

than four-five days. The EIS/EIR admits freshwater mussels, and all other filter feeders, will be buried under up to two feet of sediment for three-four months.

- The EIS/EIR is also riven with inconsistent statements and inadequate or non-existent analysis. For example, in at least four places the EIS/EIR states it need not examine the effects of dam removal on estuarine habitat, including the essential fish habitat in the Klamath River estuary, because sediment will not reach the estuary. In an equal number of places, the EIS/EIR says sediment will reach the estuary. Both assertions cannot be right. If sediment will reach the estuary, the EIS/EIR has failed to examine the effects of increased sedimentation. If sediment will not reach the estuary, the EIS/EIR has understated the effect of adding 3.5 million tons of sediment to salmon spawning beds and other river habitat. And nowhere does the EIS/EIR discuss the impacts on the ocean environment.
- The EIS/EIR admits that dioxin and other chemicals are present in dangerous levels behind J.C. Boyle Dam. There is no analysis of the likely adverse impacts of these pollutants. Instead, the EIS/EIR says these hazardous pollutants will be diluted when the three dams below J.C. Boyle Dam are removed. The EIS/EIR ignores the habitat between the J.C. Boyle Dam and the next dams. The EIS/EIR also ignores the issue of whether these substances, even if diluted, remain harmful.
- After admitting there are special status invertebrates in the project area, one of which could be listed under the Endangered Species Act, the EIS/EIR completes its "hard look" analysis of the impacts of dam removal on invertebrates in just five lines.
- The EIS/EIR notes the presence of 174 bird species in the project area stating that buffer zones will be needed to protect many of them from activities undertaken as

part of dam removal. There is no discussion of whether the size of the buffer zones are adequate or why.

- The EIS/EIR admits dam removal will increase the risk of flooding and decrease the time people have to respond before the flood hits. There is no analysis of the effects of those increased risks.
- All the towns in the County of Siskiyou are "at risk" communities for wildfires. Dam removal will remove reservoirs that provide water to fight such fires. The EIS/EIR fails to properly examine the effects of this decreased fire fighting ability.
- The EIS/EIR first states that the concrete, earth, and other waste from dam removal will be disposed of on-site. Later, the EIS/EIR states this waste will be taken to local landfills. Both statements cannot be right. If the waste is disposed of on-site, the EIS/EIR says it will be placed in areas that are now protected open space and conservation areas. The EIS/EIR does not examine the impact on these areas of disposing of approximately 1.4 million cubic yards of waste. If the waste is sent to local landfills, the EIS/EIR does not examine the impact on the counties of using up almost one-third of the capacity remaining at two landfills.
- The EIS/EIR acknowledges that roads and bridges in the project area were not designed to sustain the heavy loads associated with dam removal and could be incapable of supporting this weight. After these admissions, the EIS/EIR says an in-depth analysis will be done later.
- The EIS/EIR admits tax revenues to the County of Siskiyou will decline, perhaps indefinitely. There is no analysis of the effects of reduced revenues on the County's ability to serve its citizens.

- The EIS/EIR admits land use changes will occur as a result of dam removal but decides it will "not describe potential changes in land use that would occur if the dams were removed."
- The dams provide energy sufficient to power 65,000 homes for a year. The County of Siskiyou has approximately 23,500 homes. Every household in this and other counties will be affected. The EIS/EIR contains no analysis of the impact of increased energy costs on the citizens of Siskiyou County or of the environmental effects of replacing clean hydropower with other energy sources.
- The EIS/EIR uses incomplete data as to water supplies, rights, and facilities. While the EIS/EIR makes a limited effort to identify exiting water rights, it fails to consider the specific circumstances and physical facilities associated with those water rights and diversions and, therefore, how these water rights will be affected by the Proposed Action.
- The deconstruction and relocation of the City of Yreka municipal water supply pipeline will have significant effects on the short-term and long-term reliability of the water rights granted to the City. These effects are not analyzed.
- The EIS/EIR admits there are significant cultural and historic resources in the project area. The impacts "analysis" in the EIS/EIR is confined to stating DOI will identify affected cultural and historic resources later.
- The EIS/EIR inappropriately attempts to analyze noise impacts on County residents by applying standards used for noisy urban settings to rural Siskiyou County. The EIS/EIR compounds its error by failing to take actual measurements of existing noise levels or of noise levels expected from dam deconstruction.

- The EIS/EIR admits the loss of tax revenue to the affected counties raises significant environmental justice issues because the impacts of lost tax revenue will "disproportionately affect" low income, minority, and tribal people. The EIS/EIR then fails to examine those effects.
- The EIS states the KBRA and its planned actions are part of the Proposed Action. There are 112 such measures, virtually all of which have environmental effects. Virtually none are analyzed in the EIS/EIR. Curiously, among those projects are habitat and aquatic restoration actions on six tributaries of the Klamath River. Valued at over $177 million, these projects will have some effects on the Klamath River. One searches the EIS/EIR in vain for any analysis.
- The EIS/EIR fails to comply with the legal requirement to identify and analyze the mitigation measures that would be associated with alternatives to the Proposed Action. There is simply no way to examine and compare the environmental effects of the Proposed Action with that of various alternatives without an analysis of the mitigation plan associated with the alternatives.
- As to the mitigation for the Proposed Action, the EIS/EIR inappropriately leaves the bulk of that analysis for a later day. Virtually all the mitigation measures for dam removal are in the KBRA. But the EIS/EIR admits those measures cannot be analyzed because "[w]hile the general goals of the KBRA actions and programs are known, the specific actions that would occur are not yet defined...." Where some definition does exist, the Expert Panels formed by DOI generally characterized the KBRA actions as "infeasible" and "not likely" to succeed.

- The heart of an EIS/EIR is a rigorous analysis of alternatives. Consistently, the EIS/EIR fails to meet this analytical requirement. The EIS/EIR examines its favored Proposed Action in dozens of pages while often confining the analysis of alternatives to mere paragraphs. A glaring example of this biased and incomplete analysis is that the four Expert Panels created to examine the effect of the Proposed Action on fish were instructed by DOI to limit their analysis to the Proposed Action and the status quo. They were told to ignore the other three alternatives in the EIS/EIR. Given that the stated need for dam removal is to restore salmon fisheries, and given that the EIS/EIR relies on the Expert Panels to justify its favorable view of dam removal regarding fish resources, this is a singular failure of NEPA and CEQA compliance.
- The EIS/EIR violates the fundamental requirements of NEPA and CEQA to fairly and objectively compare alternatives. The EIS/EIR attributes all of the alleged environmental benefits of implementing the KBRA to the Proposed Action. This ignores the fact that many of the KBRA actions will proceed even if the dams are not removed. Therefore, the benefits of these KBRA actions, if any, must be included in the No Action and other Alternatives, including Alternative 4. The EIS/EIR violates applicable law by not doing so.
- In evaluating alternatives, the EIS/EIR fails to examine whether the adverse environmental effects of dam removal will inhibit or prevent achieving the benefits that are alleged to come from those KBRA actions that will be implemented even if the dams are not removed.
- The bias against any alternative except dam removal is amply demonstrated by the fact that the same pollutant releases considered to have an insignificant effect under

the Proposed Action are considered to have a significant effect under the No Action Alternative.

- The EIS/EIR is devoid of any discussion of how the Proposed Action proposes to comply with the applicable Ordinances of the County of Siskiyou. Many of these Ordinances are never even mentioned. Equally important, in many cases, the Proposed Action violates, or is inconsistent with, the County's Ordinances. Conspicuously absent from the EIS/EIR is any discussion regarding how to address these issues.

The preceding is only a sampling of the myriad problems, failings, and issues associated with the EIS/EIR and with its conclusions. The EIS/EIR meets neither the spirit nor the letter of the law. A revised EIS/EIR must be prepared to address these deficiencies. Only by circulating a corrected and expanded document will the Lead Agencies provide adequate information on environmental impacts, alternatives, and mitigation measures with which stakeholders can evaluate the alternatives and decision makers can act.

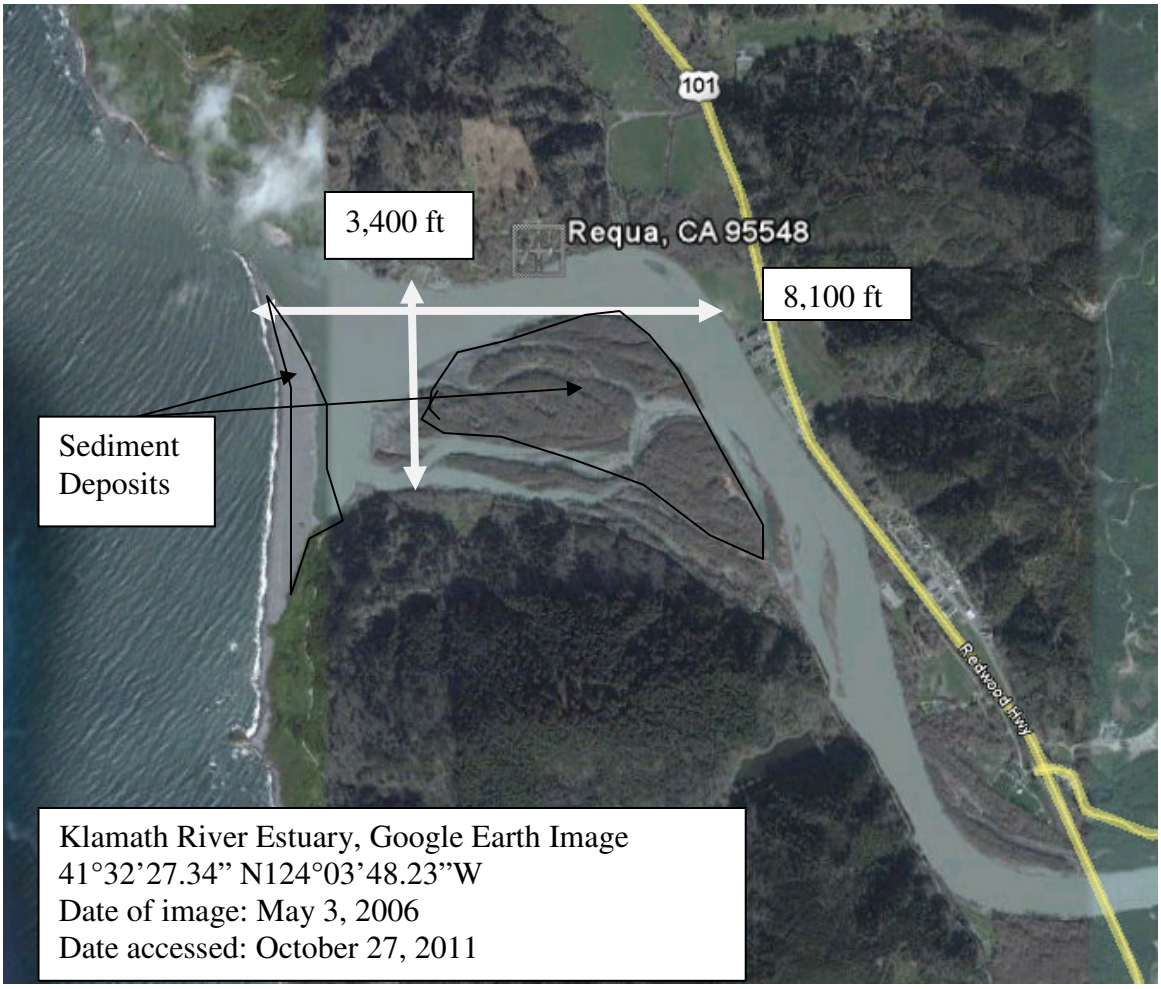

Figure 1. Aerial view of the mouth of the Klamath River.