AO_LT_1208_040

Klamath Bucket Brigade, Inc
7120 Wocus Road
Klamath Falls, Oregon 97601
541-883-8744
www.klamathbucketbrigade.org

November 17, 2011

Ms. Elizabeth Vasquez
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

RE: Comments on Draft EIS/EIR, Klamath Settlement

Comment 1a - Disapproves of Dam Removal

The Klamath Bucket Brigade is adamantly opposed to dam removal and the Klamath Basin Restoration agreement and the Klamath Hydroelectric Settlement Agreement as they are currently constituted. Our Board of Trustees is made up of both Project and Off-Project irrigators. The agreements represent a minority of special interest groups and spreads the cost to every U.S. taxpayer. The Klamath Bucket Brigade Board of Trustees cannot support any agreement that does not assure all individual property and water rights are protected.

Comment 2 - Hydropower

We cannot support removal of dams that produce clean hydroelectric energy in a time when our electric bills for both home and irrigation are rising rapidly. We have a number of issues with the Klamath Dam Removal Draft EIS/EIR which we believe is a political, not scientific, document.

Comment 3 - Fish

The KBRA was tied to the removal of the four Klamath River Dams by the negotiators. We understand the politics of why this was done, but since the KBRA is supposed to be a long term solution, removal of dams on a major river system will pose more long-term negative precedence than benefits gained. We think that existing studies (primarily in the 'gray' literature) are inadequate to provide reliable predictions about the effects of dam removal. Most notably, there has not been a systematic, comprehensive

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Comment 3 cont.

assessment of the impact of dam removal on native fish populations of the Klamath, particularly salmonids. This is surprising because the primary motivation for removal of the dams is improvement of these populations.

We disagree with statements that removal of the Klamath Dams will not result in a precedent which is an action or decision that can be used subsequently as an example for a similar decision or to justify a similar action. The removal of the dams only furthers the aims of dam removal advocates, particularly in the Snake and Columbia Rivers. The plan doesn't provide an alternative to dam removal, blames low flows on the agricultural community, erodes property and water rights, and offers very little advice as to what needs to be done to make recovery possible."

Comment 4 - Alternatives

The TMDL for uplands in the Upper Klamath Lake watershed calls for a reduction of 18% in external phosphorous loading. But just 4% of total external loads come from agriculture pumping; this drives fears that the burden to improve water quality could fall disproportionately on agriculture's shoulders.

Comment 5 - Water Quality

Dam removal is a hoax, and aside from paying the "stakeholders" millions, will not save the fish. How does the purchase of a 92,000 acre property for the Klamath Tribe save the fish?

Comment 6 - KBRA

The FERC re-license report clearly states that the Upper Klamath Basin is a naturally polluted watershed. It is volcanic and high in alkali. Never is there mention of linking increase in algae behind the dams to the ever increasing release of naturally warm, nutrient laden, eutrophic water from Upper Klamath Lake, which have been mandated by Federal Biological Opinions.

Comment 7 - Algae

The Federal Energy Regulatory Commission estimated that 20 million cubic yards of sediment has accumulated behind the four Klamath River hydropower dams and according to a previous report commissioned by the Department of Interior that may be a gross underestimation of the actual amount of sediment. The Draft Environmental Impact Statement does not appear to mitigate that 20 million cubic yards of sediment. Apparently the Department proposes to blow the dams and wash all that sediment downriver. That amount of sediment is equivalent to about 2 million ten yard dump truck loads of silt, sediment and organic muck. How can anyone, especially a government agency charged with protecting the environment, justify dumping that much sediment into the Klamath River to expedite the politically correct demolition of

Comment 8 - Sediment Transport

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Ms. Elizabeth Vasquez
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

Page 3

Comment 8 cont.

hydroelectric dams?

Comment 9 - Water Rights/Supply

Dam Removal and the KBRA may have started out as a possible solution to the water problems in the Klamath River Basin but the final product does not deliver. Dam removal does NOT produce any additional water and permanently reduces the amount of water available to agriculture. The document says it will create hundreds of jobs. Agriculture related jobs will actually decrease due to less land being farmed each year. Jobs connected to dam removal will be temporary.

We join with the majori Comment 10 - Economics and Siskiyou Counties who believe dam removal and the KBRA should not be approved and funded. We support Alternative 1.

Sincerely,

Comment 1b - Disapproves of Dam Removal

Dan Nielsen, President

Dan Nielsen

CC: Gordon Leppig
California Department of Fish & Game
619 Second Street
Eureka, CA 95501

Comment Author	Nielson, Dan
Agency/Assoc.	Klamath Bucket Brigade, Inc.
Submittal Date	December 12, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1208_040-1	Master Response GEN-2 Some People Approve of Dam Removal, Others Oppose Dam Removal. Master Response COST-1 Cost Estimate. Master Response GHG-2 Rate Increase.	No
AO_LT_1208_040-2	Master Response GHG-1 Green Power. Master Response GHG-3 Replacement Power. Master Response GEN-3 Best Available Information.	No
AO_LT_1208_040-3	Master Response GEN-3 Best Available Information.	No
AO_LT_1208_040-4	Appendix A of the Draft EIS/EIR includes a wide range of alternatives representing diverse viewpoints and needs based on internal and public scoping. The alternatives that moved forward for more detailed analysis in this EIS/EIR are those that best meet the NEPA purpose and need and CEQA objectives, minimize negative effects, are feasible, and represent a range of reasonable alternatives (see Appendix A for more information). The comment author suggests that the Draft EIS/EIR does not include an alternative to dam removal; however, Alternative 4 - Fish Passage at Four Dams provides an alternative that leaves the dams in place.	No
AO_LT_1208_040-5	The Klamath Facilities Removal project or the Klamath Hydroelectric Settlement Agreement and Klamath Basin Restoration Agreement do not in any way influence the requirements of the Upper Klamath Lake TMDL. That said, the Upper Klamath Lake TMDL relies on designated management agencies (DMAs) to develop implementation plans to achieve TMDL goals and objectives. The Oregon Department of Agriculture as the responsible agency for agricultural sources has developed a series of recommended (i.e., voluntary) best management practice (BMP) guidelines for agricultural operations to employ. There are sources other than agriculture that will also contribute to reduced nutrient loadings. The action under consideration (Klamath Facilities Removal) is unrelated to the requirements of any TMDL.	No
AO_LT_1208_040-6	Master Response GEN-1 Comment Included as Part of Record. Master Response KBRA-5 KBRA and Klamath Tribes.	No

Comment Author	Nielson, Dan
Agency/Assoc.	Klamath Bucket Brigade, Inc.
Submittal Date	December 12, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1208_040-7	Water quality in the Klamath River is affected by the geology and meteorology of the Klamath Basin, as well as current and historical land- and water-use practices (see Draft EIS/EIR Section 3.2.3.1 Existing Conditions, p. 3.2-19 to 3.2-33, and Appendix C, p. C-1 to C-86). Upper Klamath Lake and portions of the Klamath River have historically been known to be productive and at times eutrophic water bodies (see studies cited in the Draft EIS/EIR including Bradbury et al. [2004], Coleman et al. [2004]*, and Eilers et al. [2001]). Findings presented in the Draft EIS/EIR are consistent with this understanding. Recent land use disturbances and changes in hydrology have led to hypereutrophic conditions in Upper Klamath Lake that frequently violate water quality standards and place designated beneficial uses in the lake and in the receiving waters of the Klamath River at risk. Water quality in the Klamath River is linked to that of Upper Klamath Lake; as presented in the Draft EIS/EIR Section 3.2.3.3 to 3.2.3.7 (p. 3.2-23 to 3.3-30) and Appendix Section C.2 to C.6 (p. C-8 to C-63), extensive monitoring and research has been conducted for development of the Upper Klamath Lake TMDLs that shows the lake is a major source of nitrogen and phosphorus loading to the Klamath River and this nutrient loading can negatively affect other water quality parameters such as dissolved oxygen, pH, chlorophyll-a, and algal toxins in the river. While alkalinity is an important aspect of water chemistry, particularly since it characterizes the buffering capacity of water against rapid pH changes, a full and independent analysis of the role of alkalinity in Klamath River water quality was not deemed necessary for the Draft EIS/EIR. Instead, alkalinity is indirectly incorporated into the water quality analyses through consideration of pH. As stated in Appendix Section C.5.2, p. C-47, “Because the Klamath River is a weekly buffered system (i.e., has typically low alkalinity <100 mg/L), it is susceptible to photosynthesis-driven daily swings in pH.” The pH analyses for the No Action/No Project Alternative and the Proposed Action are provided in Draft EIS/EIR Sections 3.2.4.3.1.5 (p. 3.2-66 to 3.2-68) and 3.2.4.3.2.5 p. 3.2-112 to 3.2-117. * Coleman et al. (2004) was not originally cited in the Draft EIS/EIR. This reference has been added to the Final EIS/EIR and can be downloaded from the following link: http://www.sciencedirect.com/science/article/pii/S0041010109003481	Yes
AO_LT_1208_040-8	Master Response WQ-1 Sediment Deposits Behind the Dams and Potential Contaminants.	No
AO_LT_1208_040-9	Master Response WSWR-1 Effects to Agricultural Water Supply.	No

Comment Author	Nielson, Dan
Agency/Assoc.	Klamath Bucket Brigade, Inc.
Submittal Date	December 12, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1208_040-10	The hydrology data are key inputs in the economics analysis. The hydrology analysis modeled the results with the implementation of the KBRA including water supply reliability and included an analysis of drought frequency under the action alternatives and No Action/No Project Alternative. The assumptions used in the hydrology analysis are discussed in detail in "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. Prepared for Mid-Pacific Region, US Bureau of Reclamation, Technical Service Center, Denver, CO. This report can be found on www.klamathrestoration.gov Based on the hydrology assumptions presented in "Hydrology, Hydraulics and Sediment Transport Studies for the Secretary's Determination on Klamath River Dam Removal and Basin Restoration," Agricultural production for the No Action and Action alternatives is equal in all years except for 5 modeled drought years. In these modeled drought years the agricultural model and regional impact models estimate a positive effect in regional employment, labor income, and sales compared to the No Action/No Project Alternative. The agricultural analysis and the regional analysis are further discussed in Irrigated Agriculture Economics Technical Report, and Benefit Cost and Regional Economic Development Technical Report these reports can be found on www.klamathrestoration.gov. The comment author is correct that jobs associated with dam removal will be short-term, during the 1-2 year period of dam removal activities. However, expenditures on dam removal will result in positive employment impacts during this period.	No

AO_MC_1026_019

KLAMATH DAM REMOVAL
DRAFT EIS/EIR HEARING
OCTOBER 26, 2011
PUBLIC TESTIMONY
ARCATA, CALIFORNIA

MR. OGAN: My name is Chet Ogan, O-g-a-n. I'm a the conservation chair for the Redwood Region Audubon Society, representing almost 900 members here locally in Humboldt, Del Norte, southwestern Siskiyou, and western Trinity County.

Comment 1 - Approves of Dam Removal

I am for dam removal, Alternative 2 or Alternative 3. I would like to see the function of the ecosystem using best management practices and adaptive management. But I do have concerns about long-term water quality allocations, in light of climate change. And I would also like to -- we would also like to see functional restoration of the Shasta and Scott Rivers.

Thank you.

Comment 2 - Out of Scope

Comment Author	Ogan, Chet
Agency/Assoc.	Redwood Region Audubon Society
Submittal Date	October 26, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_MC_1026_019-1	The Secretary of the Interior acknowledges that there are many people who support dam removal and there are many who maintain that the dams should stay in place. There are a range of reasonable alternatives presented in the Draft EIS/EIR; 18 alternatives are presented in the Draft EIS/EIR, five of which are examined in detail using the best available science. There are positive and negative aspects for each of these alternatives. The potential effect of each alternative is discussed in the EIS/EIR and will be fully considered by the Secretary, along with public input and peer reviewed science before making a final determination.	No
AO_MC_1026_019-2	Actions on the Scott and Shasta Rivers are not part of the Proposed Action.	No

AO_EM_1230_051

From: Andrew Orahoske[SMTP:ANDREW@WILDCALIFORNIA.ORG]
Sent: Friday, December 30, 2011 2:41:58 PM
To: BOR-SHA-KFO-Klamathsd; KSDcomments@dfg.ca.gov
Subject: additional comments from EPIC
Auto forwarded by a Rule

Comment 1 - Fish

EPIC would like add the following comment.

The DEIS fails to address the Lost River and Shortnose Sucker recovery and proposed critical habitat designation. Please add the attached U.S. Fish Wildlife Service proposed rule to the record for the DEIS.

Thank you.

Andrew J. Orahoske
Conservation Director

Environmental Protection Information Center
145 G Street, Suite A
Arcata, CA 95521
Tel: (707) 822-7711
www.wildcalifornia.org

deletion in the preamble to the direct final Notice of Deletion, and those reasons are incorporated herein. If we receive no adverse comment(s) on this deletion action, we will not take further action on this Notice of Intent for Deletion. If we receive adverse comment(s), we will withdraw the direct final Notice of Deletion and it will not take effect. We will, as appropriate, address all public comments in a subsequent final Notice of Deletion based on this Notice of Intent for Deletion. We will not institute a second comment period on this Notice of Intent for Deletion. Any parties interested in commenting must do so at this time.

For additional information, see the direct final Notice of Deletion which is located in the Rules section of this **Federal Register**.

List of Subjects in 40 CFR Part 300

Environmental protection, Air pollution control, Chemicals, Hazardous waste, Hazardous substances, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Superfund, Water pollution control, Water supply.

Authority: 33 U.S.C. 1321(c)(2); 42 U.S.C. 9601–9657; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp., p. 351; E.O. 12580, 52 FR 2923; 3 CFR, 1987 Comp., p. 193.

Dated: November 14, 2011.

Al Armendariz,

Regional Administrator, Region 6.

[FR Doc. 2011–31266 Filed 12–6–11; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MB Docket No. 11–192, RM–11646; DA 11–1924]

Television Broadcasting Services; Lincoln, NE

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: The Commission has before it a petition for rulemaking filed by Lincoln Broadcasting, LLC ("LBL"), the licensee of KFXL–TV, channel 51, Lincoln, Nebraska, requesting the substitution of channel 15 for channel 51 at Lincoln. LBL's proposal complies with the Commission announcement that it would lift the current freeze on the acceptance of channel substitution rulemaking proceeding for petitions proposing to relocate from channel 51. LBL also states that the proposed facility will increase the net total population served by the station by almost 700,000 persons. LBL believes the grant of this petition would serve the public interest.

DATES: Comments must be filed on or before January 6, 2012, and reply comments on or before January 23, 2012.

ADDRESSES: Federal Communications Commission, Office of the Secretary, 445 12th Street SW., Washington, DC 20554. In addition to filing comments with the FCC, interested parties should serve counsel for petitioner as follows: Howard M. Liberman, *Esq.*, Drinker Biddle & Reath, 1500 K Street NW., Suite 1100, Washington, DC 20005.

FOR FURTHER INFORMATION CONTACT: Joyce L. Bernstein, *joyce.bernstein@fcc.gov*, Media Bureau, (202) 418–1647.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Notice of Proposed Rule Making, MB Docket No. 11–192, adopted November 21, 2011, and released November 22, 2011. The full text of this document is available for public inspection and copying during normal business hours in the FCC's Reference Information Center at Portals II, CY–A257, 445 12th Street SW., Washington, DC 20554. This document will also be available via ECFS *(http://www.fcc.gov/cgb/ecfs/)*. (Documents will be available electronically in ASCII, Word 97, and/or Adobe Acrobat.) This document may be purchased from the Commission's duplicating contractor, Best Copy and Printing, Inc., 445 12th Street SW., Room CY–B402, Washington, DC 20554, telephone 1–(800) 478–3160 or via email *http://www.BCPIWEB.com*. To request this document in accessible formats (computer diskettes, large print, audio recording, and Braille), send an email to *fcc504@fcc.gov* or call the Commission's Consumer and Governmental Affairs Bureau at (202) 418–0530 (voice), (202) 418–0432 (TTY). This document does not contain proposed information collection requirements subject to the Paperwork Reduction Act of 1995, Public Law 104–13. In addition, therefore, it does not contain any proposed information collection burden "for small business concerns with fewer than 25 employees," pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, *see* 44 U.S.C. 3506(c)(4).

Provisions of the Regulatory Flexibility Act of 1980 do not apply to this proceeding. Members of the public should note that from the time a Notice of Proposed Rule Making is issued until the matter is no longer subject to Commission consideration or court review, all *ex parte* contacts (other than *ex parte* presentations exempt under 47 CFR 1.1204(a)) are prohibited in Commission proceedings, such as this one, which involve channel allotments. See 47 CFR 1.1208 for rules governing restricted proceedings.

For information regarding proper filing procedures for comments, see 47 CFR 1.415 and 1.420.

List of Subjects in 47 CFR Part 73

Television, Television broadcasting.

Federal Communications Commission

Barbara A. Kreisman,

Chief, Video Division, Media Bureau.

Proposed Rules

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR Part 73 as follows:

PART 73—RADIO BROADCAST SERVICES

1. The authority citation for Part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 303, 334, 336, and 339.

§ 73.622(i) [Amended]

2. Section 73.622(i), the Post-Transition Table of DTV Allotments under Nebraska is amended by removing channel 51 and adding channel 15 at Lincoln.

[FR Doc. 2011–31403 Filed 12–6–11; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2011–0097; 4500030114]

RIN 1018–AX41

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Lost River Sucker and Shortnose Sucker

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; reproposal.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to designate critical habitat for the Lost River sucker (*Deltistes luxatus*) and shortnose sucker (*Chasmistes brevirostris*) under the Endangered Species Act of 1973, as amended (Act). In total, we are proposing as critical

habitat approximately 146 miles (234 kilometers) of streams and 117,848 acres (47,691 hectares) of lakes and reservoirs for Lost River sucker and approximately 128 miles (207 kilometers) of streams and 123,590 acres (50,015 hectares) of lakes and reservoirs for shortnose sucker. The proposed critical habitat is located in Klamath and Lake Counties, Oregon, and Modoc County, California. On December 1, 1994, we published proposed critical habitat for Lost River sucker and shortnose sucker. This new proposed rule uses updated information concerning Lost River sucker's and shortnose sucker's ecology, as well as the technological advancements made available since preparing the 1994 proposed rule, to inform our proposed critical habitat designation for Lost River sucker and shortnose sucker.

DATES: We will accept comments received or postmarked on or before February 6, 2012. We must receive requests for public hearings, in writing, at the address shown in the **FOR FURTHER INFORMATION CONTACT** section by January 23, 2012.

ADDRESSES: You may submit comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal: *http://www.regulations.gov.* In the Enter Keyword or ID box, enter Docket No. FWS–R8–ES–2011–0097, which is the docket number for this rulemaking.

(2) *By hard copy:* Submit by U.S. mail or hand-delivery to: Public Comments Processing, *Attn:* FWS–R8–ES–2011–0097; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042–PDM; Arlington, VA 22203.

We will not accept email or faxes. We will post all comments on *http://www.regulotions.gov.* This generally means that we will post any personal information you provide us (see the Public Comments section below for more information).

FOR FURTHER INFORMATION CONTACT: Laurie R. Sada, Field Supervisor, U.S. Fish and Wildlife Service, Klamath Falls Fish and Wildlife Office, 1936 California Avenue, Klamath Falls, OR 97601; telephone 541–885–8481; facsimile 541–885–7837. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Public Comments

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from government agencies, the scientific community, industry, or any other interested party concerning this proposed rule. We particularly seek comments concerning:

(1) The reasons why we should or should not designate habitat as "critical habitat" under section 4 of the Act (16 U.S.C. 1531 *et seq.*), including whether there are threats to the species from human activity, the degree of which can be expected to increase due to the designation, and whether that increase in threat outweighs the benefit of designation such that the designation of critical habitat may not be prudent.

(2) Specific information on:

(a) The amount and distribution of Lost River sucker and shortnose sucker habitat;

(b) What areas, that were occupied at the time of listing (or are currently occupied) contain physical and biological features essential to the conservation of the species, should be included in the designation and why;

(c) Special management considerations or protection that may be needed for the physical and biological features essential to the conservation of the species in critical habitat areas we are proposing, including managing for the potential effects of climate change; and

(d) What areas not occupied at the time of listing that meet our criteria for being essential for the conservation of the species should be included in the designation and why.

(3) Land use desiguations and current or planned activities in the subject areas and their possible impacts on proposed critical habitat.

(4) Information on the projected and reasonably likely impacts of climate change on the Lost River sucker and shortnose sucker, the features essential to its conservation, and the areas proposed as critical habitat.

(5) Whether any specific areas we are proposing for critical habitat designation should be considered for exclusion under section 4(b)(2) of the Act, and whether the benefits of potentially excluding any specific area outweigh the benefits of including that area under sectiou 4(b)(2) of the Act;

(6) Any probable economic, national security, environmental, cultural, or other relevant impacts of designating as critical habitat any area that may be included in the final designatiou. In particular, we seek information on any impacts on small entities, and the benefits of including or excluding areas that exhibit these impacts; and

(7) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the **ADDRESSES** section. We will not accept comments sent by email or fax or to an address not listed in the **ADDRESSES** section. We will post your entire comment—including your personal identifying information—on *http://www.regulations.gov.* You may request at the top of your document that we withhold personal information such as your street address, phone number, or email address from public review; however, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *http://www.regulations.gov,* or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Klamath Falls Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Background

It is our intent to discuss only those topics directly relevant to the designation of critical habitat for these species in this proposed rule. For further information on the Lost River sucker's and shortnose sucker's biology and habitat, population abundance and trend, distribution, demographic features, habitat use and conditions, threats, and conservation measures, please see the final listing rule (53 FR 27130; July 18, 1988), the 2007 5–year reviews completed for the Lost River sucker and shortnose sucker (Service 2007a and 2007b), and the Draft Revised Lost River Sucker and Shortnose Sucker Recovery Plan (Service 2011). These documents are available on the Klamath Falls Fish and Wildlife Office web site at *http://www.fws.gov/klamathfallsfwo/ or* on the Environmental Conservation Online System *http://ecos.fws.gov/ecos/indexPublic.do).*

Lost River sucker and shortnose sucker are members of the fish family Catostomidae and are endemic to the upper Klamath River basin (National Research Council of the National Academies (NRC) 2004, pp. 184, 189). Both species predominantly inhabit lake environments but also utilize riverine, marsh, and shoreline habitats for portions of their life history. Lost River sucker and shortnose sucker spawn in the spring in rivers and creeks in areas with a moderate velocity of water flow

containing gravel or cobble substrate at depths less than 1.3 meters (m) (4.3 feet (ft)) (Moyle 2002, pp. 200, 204). In addition, a small group of Lost River sucker spawns at several shoreline springs along the eastern portion of Upper Klamath Lake (Janney *et al.* 2008, p. 1813).

Lost River sucker are distributed within Upper Klamath Lake and its tributaries (Klamath County, Oregon), Clear Lake Reservoir and its tributaries (Modoc County, California), Tule Lake (Siskiyou and Modoc Counties, California), Lost River (Klamath County, Oregon, and Modoc County, California), Link River (Klamath County, Oregon), and the Klamath River mainstem, including Keno, J.C. Boyle, Copco, and Iron Gate Reservoirs (Klamath County, Oregon, and Siskiyou County, California; Moyle 2002, p. 199; NRC 2004, pp. 190–192). The distribution of shortnose sucker overlaps with that of Lost River sucker, but shortnose sucker also occurs in Gerber Reservoir (Klamath County, Oregon) and upper Willow Creek (Modoc County, California, and Lake County, Oregon), a tributary to Clear Lake Reservoir (Buettner and Scoppettone 1991, p. 18; Moyle 2002, p. 203; NRC 2004, pp. 190–192).

Lost River sucker and shortnose sucker were once widespread in the upper Klamath River basin and were important to subsistence, commercial, and recreational fishers (Moyle 2002, pp. 200–201, 204; Service 2011, pp. 1, 28–29). Lost River sucker and shortnose sucker have been extirpated from portions of their historic range (Moyle 2002, pp. 200, 204), and previous efforts to monitor angler catch rates have indicated extreme population declines relative to former levels (Scoppettone and Vinyard 1991, p. 367; NRC 2004, p. 203). Putative factors for declines include introduction of exotic species and habitat loss and alteration, primarily due to construction of dams, water diversions, and draining of wetlands (Scoppettone and Vinyard 1991, pp. 368–369, 371; Moyle 2002, pp. 200–201, 204).

Previous Federal Actions

The Lost River sucker and shortnose sucker were listed as endangered on July 18, 1988 (53 FR 27130). A recovery plan for Lost River sucker and shortnose sucker was finalized on March 17, 1993 (Service 1993). Five-year reviews for the Lost River sucker and shortnose sucker were completed on July 19, 2007 (73 FR 11945; March 5, 2008). A considerable amount of scientific information has been collected since the 1993 recovery plan and an updated, revised draft recovery plan for the Lost River sucker and shortnose sucker was released in 2011 (Service 2011).

On September 9, 1991, the Service received a 60–day notice of intent to sue from the Oregon Natural Resources Council (ONRC) for failure to prepare a recovery plan and to designate critical habitat for the Lost River sucker and shortnose sucker. On November 12, 1991, ONRC filed suit in Federal Court (*Wendell Wood et al.* v. *Marvin Plenert, et al.* (Case No. 91–06496–TC (D. Or.))). The Service entered into a settlement agreement and agreed to complete a final recovery plan by March 1, 1993, and a proposal to designate critical habitat on or before March 10, 1994, and publish a final critical habitat rule by November 29, 1994.

On December 1, 1994, we published proposed critical habitat for Lost River sucker and shortnose sucker (59 FR 61744); that proposal was never finalized. The ONRC (now known as Oregon Wild) recently contacted the Department of Justice and requested that we issue a final critical habitat rule within a reasonable amount of time. On May 10, 2010, a settlement agreement was reached that stipulated the Service submit a final rule designating critical habitat for the Lost River sucker and the shortnose sucker to the **Federal Register** no later than November 30, 2012 (*Wood et al.* v. *Thorson et al.*, No. 91–cv–6496–TC (D. Or.)). Given this settlement agreement, advancement in our understanding of Lost River sucker's and shortnose sucker's ecology, and the technological advancements made available since preparing the former proposed rule, we now issue a new proposed critical habitat rule.

Critical Habitat

Background

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies insure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner seeks or requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

For inclusion in a critical habitat designation, the habitat within the geographical area occupied by the species at the time it was listed must contain physical and biological features which are essential to the conservation of the species and which may require special management considerations or protection. Critical habitat desiguations identify, to the extent known using the best scientific and commercial data available, those physical and biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat), focusing on the principal biological or physical constituent elements (primary constituent elements) within an area that are essential to the conservation of the species (such as roost sites, nesting grounds, seasonal

wetlands, water quality, tide, soil type). Primary constituent elements are the elements of physical and biological features that, when laid out in the appropriate quantity and spatial arrangement to provide for a species' life-history processes, are essential to the conservation of the species.

Under the Act, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. We designate as critical habitat areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species. When the best available scientific data do not demonstrate that the conservation needs of the species require such additional areas, we will not designate critical habitat in areas outside the geographical area occupied by the species. An area currently occupied by the species but that was not occupied at the time of listing may, however, be essential to the conservation of the species and may be included in the critical habitat designation.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines, provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. Climate change will be a particular challenge for biodiversity because the interaction of additional stressors associated with climate change and current stressors may push species beyond their ability to survive (Lovejoy 2005, pp. 325–326). The synergistic implications of climate change and habitat fragmentation are the most threatening facet of climate change for biodiversity (Hannah *et al.* 2005, p.4). Current climate change predictions for terrestrial areas in the Northern Hemisphere indicate warmer air temperatures, more intense precipitation events, and increased summer continental drying (Field *et al.* 1999, pp. 1–3; Hayhoe *et al.* 2004, p. 12422; Cayan *et al.* 2005, p. 6; Intergovernmental Panel on Climate Change (IPCC) 2007, p. 1181). Climate change may lead to increased frequency and duration of severe storms and droughts (McLaughlin *et al.* 2002, p. 6074; Cook *et al.* 2004, p. 1015; Golladay *et al.* 2004, p. 504).

The specific effects of climate change on the upper Klamath River basin have not been thoroughly investigated; however, potential effects include increased temperatures, drier summers, and higher snowpack elevation (Koopman *et al.* 2009, p. 3). As a result of increased temperatures, it is anticipated the peak spring runoff of tributary streams will shift earlier in the year from spring to late winter (Poff *et al.* 2002, p. 11). Thus, we anticipate Lost River sucker and shortnose sucker may experience altered timing of spawning migrations, *i.e.*, spawning migrations may occur earlier in the year. Furthermore, altered stream flow into lakes may lead to lower lake levels (Poff *et al.* 2002, p. 15). Lower lake levels may prevent fish from accessing refugia or shoreline spawning areas, such as spring-influenced habitat, that may be important during periods of poor water quality (Banish *et al.* 2009, p. 165). As lakes warm in response to increased temperatures, algal production increases (Poff *et al.* 2002, p. 13), which may exacerbate hypereutrophic (nutrient rich) systems, such as Upper Klamath Lake. Nuisance algal blooms are already considered a threat to Lost River sucker and shortnose sucker (Perkins *et al.* 2000, pp. 24–25, 30), and therefore may be a heightened threat in the face of climate change. Diseases such as gill rot caused by the Columnaris bacterium also are likely to become more of a concern with higher water temperatures (NRC 2004, p. 201).

We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be required for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act, (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to insure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and (3) the prohibitions of section 9 of the Act if actions occurring in these areas may affect the species. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

Physical or Biological Features

In accordance with sections 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied by the species at the time of listing to designate as critical habitat, we consider the physical and biological features essential to the conservation of the species which may require special management considerations or protection. These include, but are not limited to:

(1) Space for individual and population growth and for normal behavior;

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, or rearing (or development) of offspring; and

(5) Habitats that are protected from disturbance or are representative of the

historical, geographical, and ecological distributions of a species.

We derive the specific physical or biological features required for Lost River sucker and shortnose sucker from studies of this species' habitat, ecology, and life history as described below. Additional information can be found in the final listing rule published in the **Federal Register** on July 18, 1988 (53 FR 27130), and the Draft Revised Recovery Plan for the Lost River Sucker and Shortnose Sucker (Service 2011). We have determined that Lost River sucker and shortnose sucker require the following physical or biological features:

Space for Individual and Population Growth and for Normal Behavior

Lakes, streams, marshes, and spring habitats with migratory corridors between these habitats provide space for individual and population growth and for normal behavior of Lost River sucker.

Lost River sucker spend most of their lives within lakes although they primarily spawn in streams (Moyle 2002, p. 199). Spawning occurs in late winter and early spring in major tributaries to lakes where they occur. In addition, a small proportion of Lost River sucker utilize spring areas within Upper Klamath Lake for spawning (Janney *et al.* 2008, p. 1813). After hatching, larval Lost River sucker drift downstream within spawning tributaries and reach lakes by mid-summer. Larval habitat is generally along the shoreline, in water 10 centimeters (cm) to 50 cm (6 inches (in) to 20 in) deep where emergent vegetation provides cover from predators, protection from currents and turbulence, and abundant food (Cooperman and Markle 2004, p. 375). As larval suckers grow into the juvenile stage, they increasingly use deeper habitat with and without emergent vegetation. Adult Lost River sucker primarily use deep (greater than 2.0 m (6.6 ft)), open-water habitat as well as spring-influenced habitats that act as refugia during poor water quality events (Banish *et al.* 2009, pp. 159–161, 165).

Reservoirs also figure prominently in meeting the requirements for space for individual and population growth and for normal behavior of Lost River sucker. Much of the upper Klamath River basin landscape has been hydrologically altered since Anglo-European settlement, including construction of reservoirs. Some reservoirs have adversely affected Lost River sucker, while others may provide benefits. For example, the dam on Malone Reservoir blocks access to historical Lost River sucker habitat for individuals migrating in the mainstem Lost River. In contrast, construction of hydroelectric dams on the mainstem Klamath River and construction of Clear Lake Reservoir likely have increased the amount of available habitat.

Because shortnose sucker share the same habitats as Lost River sucker, the lakes, reservoirs, streams, marshes, and spring habitats with migratory corridors between these habitats also provide space for individual and population growth and for normal behavior of shortnose sucker. Therefore, based on the information above, we identify lakes, reservoirs, streams, marshes, and spring habitats with migratory corridors between these habitats to be a physical or biological feature essential for the conservation of both Lost River sucker and shortnose sucker.

Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements

Adult Lost River sucker have subterminal mouths and gill raker structures that are adapted for feeding primarily on benthic macroinvertebrates in lake environments (NRC 2004, p. 190). Prey selection, however, appears to be a function of developmental shifts in habitat use. Lost River sucker larvae feed near the surface of the water column, primarily on chironomids (commonly called "midges"; a family of small flies whose larval and pupal stages are mainly aquatic) (Markle and Clauson 2006, pp. 494–495). Juvenile Lost River sucker rely less on surface-oriented feeding and shift to prey items from benthic areas. For instance, Markle and Clauson (2006, pp. 495–496) documented that juvenile Lost River suckers consumed chironomid larvae as well as micro-crustaceans (amphipods, copepods, cladocerans, and ostracods). As adults, Lost River sucker consume many of these same items (Moyle 2002, pp. 199–200).

Shortnose sucker have terminal mouths and gill raker structures adapted for feeding on zooplankton (Moyle 2002, p. 203; NRC 2004, p. 190). Similar to Lost River sucker, shortnose sucker also exhibit an ontogenetic shift in prey selection (Markle and Clauson 2006, pp. 494–495). Adult shortnose sucker also consume many of the same prey items as juveniles, including chironomid larvae, amphipods, copepods, cladocerans, and ostracods (Moyle 2002, p. 203; Markle and Clauson 2006, pp. 494–495).

Habitats must provide the necessary conditions, including water with sufficient phytoplankton and fine aquatic substrate, to harbor prey species in sufficient quantity and diversity to meet the nutritional and physiological requirements necessary to maintain Lost River sucker and shortnose sucker populations. Therefore, based on the information above, we identify an abundant food base, including a broad array of chironomids, micro-crustaceans, and other small aquatic macroinvertebrates, to be a biological feature necessary for both Lost River sucker and shortnose sucker.

Cover or Shelter

The cover and shelter components, including emergent vegetation and depth, are the same for shortnose sucker as for Lost River sucker. Lost River sucker and shortnose sucker larvae density is generally higher within and adjacent to emergent vegetation than in areas devoid of vegetation (Cooperman and Markle 2004, p. 374; Crandall *et al.* 2008, p. 413; Erdman and Hendrixson 2009, p. 18; Cooperman *et al.* 2010, p. 34). Emergent vegetation provides cover from predators and habitat for prey such as zooplankton, macroinvertebrates, and periphyton (Klamath Tribes 1996, p. 12; Cooperman and Markle 2004, p. 375). Such areas also may provide refuge from wind-blown current and turbulence, as well as areas of warmer water temperature, which may facilitate larval growth (Cooperman and Markle 2004, p. 375; Crandall 2004, p. 7; Cooperman *et al.* 2010, pp. 35–36).

Different life stages use different water depths as cover or shelter. Juvenile Lost River sucker and shortnose sucker primarily use relatively shallow (less than approximately 1.2 m (3.9 ft)) vegetated areas, but may also begin to move into deeper, unvegetated, off-shore habitats (Buettner and Scoppettone 1990, pp. 33, 51; Markle and Clauson 2006, p. 499). Data from Upper Klamath Lake indicate juveniles of less than 1 year often are found at depths less than 1.0 m (3 ft) in May and June, but shift in late July to water 1.5 to 2.0 m (5 to 6.5 ft) deep (Burdick and Brown 2010, p. 50; no similar data exist from other occupied water bodies). Similarly, 1-year-old juveniles occupy shallow habitats during April and May, but may move into deeper areas along the western shore of Upper Klamath Lake (*e.g.*, Eagle Ridge trench) until dissolved oxygen levels become reduced in mid- to late-July (Bottcher and Burdick 2010, p. 17; Burdick and VanderKooi 2010, p. 13). Juveniles then appear to move into shallower habitat along the eastern shore or main part of Upper Klamath Lake (Bottcher and Burdick 2010, p. 17).

It is assumed that sub-adults, *i.e.*, individuals that display all of the

characteristics of adults with the exception of reproductive maturity and reproductive structures (*e.g.*, tubercles), utilize habitats similar to adults (NRC 2004, p. 199). Adult Lost River sucker and shortnose sucker inhabit water depths of 0.9 to 4.8 m (3.0 to 15.7 ft) (Reiser *et al.* 2001, p. 5–26; Banish *et al.* 2009, p. 161). In addition, cover (e.g., large woody debris) is sparse in many of the lentic habitats occupied by adult Lost River sucker and shortnose sucker, so water depth or turbidity may provide concealment from avian predators (Banish *et al.* 2009, p. 164).

Therefore, based on the information above, we identify lakes and reservoirs with adeqnate amounts of emergent vegetation of appropriate depth and water quality to provide for cover and shelter as described above to be a physical or biological feature for Lost River sucker and shortnose sucker.

Sites for Breeding, Reproduction, or Rearing (or Development) of Offspring

Throughout their range, Lost River sucker ascend large tributary streams to spawn, generally from February through April, often corresponding with spring snowmelt (Moyle 2002, p. 200; NRC 2004, p. 194). They have been documented migrating upstream as many as 120 kilometers (km) in the Sprague River (75 miles (mi)) (Ellsworth *et al.* 2007, p. 20). Beginning at the same time, a segment of the Lost River sucker population uses shoreline areas affected by input of spring discharge for spawning in Upper Klamath Lake (Janney *et al.* 2008, p. 1813). In rivers, spawning occurs in riffles and pools over gravel and cobble substrate at depths less than 1.3 m (4.3 ft) and velocities up to 85 cm per second (2.8 ft per second; Buettner and Scoppettonne 1990, p. 20; Moyle 2002, p. 200; NRC 2004, p. 194). At shoreline spring habitat, spawning occurs over similar substrate and at similar depths. Females broadcast their eggs, which are fertilized most commonly by two accompanying males (Buettner and Scoppettone 1990, p. 17). The fertilized eggs settle within the top few inches of the substrate until hatching, around 1 week later. Generally, larvae spend little time in rivers after swim-up, but quickly drift downstream to lakes (Cooperman and Markle 2003, pp. 1147–1149). Downstream movement occurs mostly at night near the water surface (Ellsworth *et al.* 2010, pp. 51–52). Larvae transform into juveniles by mid-July at about 25 mm (0.98 in) total length. Juvenile Lost River sucker primarily occupy relatively shallow (less than approximately 50 cm (1.6 ft)), vegetated areas, but also may begin to move into deeper, unvegetated, off-shore habitats as they grow (Buettner and Scoppettone 1990, pp. 32–33; NRC 2004, p. 198).

Throughout their range, shortnose sucker ascend large tributary streams to spawn, generally from February through May, often corresponding with spring snowmelt (Moyle 2002, p. 204; NRC 2004, p. 194). Shortnose sucker have been documented migrating upstream as far as 13 km (8 mi) in the Sprague River (Ellsworth *et al.* 2007, p. 20). Spawning at shoreline springs in Upper Klamath Lake by shortnose sucker is presently rare (NRC 2004, p. 194). In lotic habitat, spawning occurs in similar habitat as Lost River sucker spawning, althongh spawning may occur in areas with greater stream flow (up to 125 cm per second (4.1 ft per second); Moyle 2002, p. 204). At shoreline spring habitat, spawning occurs over similar substrate and at similar depths to Lost River sucker spawning. Females broadcast their eggs, which are fertilized most commonly by two accompanying males (Buettner and Scoppettone 1990, p. 44). Larval out-migration, and larval and juvenile rearing patterns, are similar to Lost River sucker (Buettner and Scoppettone 1990, p. 51; Cooperman and Markle 2004, pp. 374–375; NRC 2004, p. 198; Ellsworth *et al.* 2010, pp. 51–52).

Therefore, based on the information above, we identify accessible lake and river spawning locations with suitable water flow, gravel and cobble substrate, and water depth (as well as flowing water) for larval out-migration and juvenile rearing habitat as described above to be physical features for both Lost River sucker and shortnose sucker.

Primary Constituent Elements for Lost River Sucker and Shortnose Sucker

Under the Act and its implementing regulations, we are required to identify the physical and biological features essential to the conservation of Lost River sucker and shortnose sucker in areas occupied at the time of listing, focusing on the features' primary constituent elements. We consider primary constituent elements to be the specific elements of physical and biological features that are essential to the conservation of the species.

Based on our current knowledge of the physical or biological features and habitat characteristics required to sustain the species' life-history processes, we determine that the primary constituent elements specific to self-sustaining Lost River sucker and shortnose sucker populations are:

(1) *Water.* Areas with sufficient water quantity and depth within lakes, reservoirs, streams, marshes, springs, groundwater sources, and refugia habitats with minimal physical, biological, or chemical impediments to connectivity. Water should exhibit depths ranging from less than 1.0 m (3.28 ft) up to 4.5 m (14.8 ft) to accommodate each life stage. The water quality characteristics shonld include water temperatures of less than 28.0 °Celsius (82.4 °F); pH less than 9.75; dissolved oxygen levels greater than 4.0 mg per L; algal toxins (less than 1.0 microgram (µg) per L); and un-ionized ammonia (less than 0.5 mg per L). Elements also include natural flow regimes that provide flows during the appropriate time of year or, if flows are controlled, minimal flow departure from a natural hydrograph.

(2) *Spawning and rearing habitat.* Streams and shoreline springs with gravel and cobble substrate at depths typically less than 1.3 m (4.3 ft) with adequate stream velocity to allow spawning to occur. Areas identified in PCE1 containing emergent vegetation adjacent to open water that provides habitat for rearing . This facilitates growth and survival of suckers, as well as protection from predation and protection from currents and turbulence.

(3) *Food.* Areas that contain an abundant forage base, including a broad array of chironomidae, crustacea, and other aquatic macroinvertebrates.

With this proposed designation of critical habitat, we intend to identify the physical and biological features essential to the conservation of the species, through the identification of the appropriate quantity and spatial arrangement of the primary constituent elements sufficient to support the life-history processes of the species.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features which are essential to the conservation of the species and which may require special management considerations or protection. Special management considerations or protection may be necessary to eliminate or reduce the magnitude of threats that affect these species. Threats identified in the final listing rule for these species include: (1) Poor water quality; (2) potential entrainment at water diversion structures; (3) lack of access to essential spawning habitat; (4) lack of connectivity to historical habitat (*i.e.*, migratory impediments); (5) degradation of spawning, rearing, and

adult habitat; and (6) predation by or competition with nonnative fish.

Poor water quality is particularly associated with high abundance of the blue-green alga *Aphanizomenon flos-aque*. Core samples of bottom sediments indicate that A. *flos-aque* was not present in Upper Klamath Lake prior to the 1900s (Bradbury et al. 2004, p. 162; Eilers *et al.* 2004, p. 14). Its appearance is believed to be associated with increases in productivity of the lake through human influence (NRC 2004, pp. 108–110). This alga now dominates the algal community from June to November, and, because of the high phosphorus concentrations and its ability to fix nitrogen, is able to reach seasonally high biomass levels that eventually produce highly degraded water quality (Boyd *et al.* 2002, p. 34). Once the algal bloom subsides, decomposition of the massive amounts of biomass can lower dissolved oxygen and raise pH to levels harmful or fatal to fish (Perkins et al. 2000, pp. 24–25; Wood *et al.* 2006, p. 1). Additionally, other cyanobacteria (*Microcystis* sp.) may produce toxins harmful to sucker liver tissue (VanderKooi *et al.* 2010, p. 2). Special management considerations or protections are therefore needed to protect water quality from the deleterious effects of algal blooms and may include reducing excess phosphorus concentrations by fencing cattle out of riparian areas, reconfiguring agricultural waterways, increasing riparian stands of vegetation, and restoring wetland habitat that is crucial for filtering sediment aud nutrients.

Hydrographs of both Clear Lake Reservoir and Upper Klamath Lake exhibit patterus of a snow-melt driven system with highest inflows and levels during spring and early summer, although groundwater also is a significant contributor to Upper Klamath Lake (Gannett *et al.* 2007, p. 1). However, Clear Lake Reservoir, Gerber Reservoir, and Upper Klamath Lake are managed to store and divert water for irrigation every year. Clear Lake Reservoir is highly sensitive to drought and downstream water delivery because of its small watershed, low precipitation, minimal groundwater input, and high evaporation rates (NRC 2004, p. 129). In the dry years of 1991 and 1992, the U.S. Bureau of Reclamation (BOR) drew down the level of Clear Lake Reservoir to extremely low levels for irrigation supply (Moyle 2002, p. 201). In 1992, Lost River sucker within Clear Lake Reservoir were examined and exhibited signs of stress, including high rates of parasitism and poor body condition (NRC 2004, p. 132). These signs of stress began to decline as the water level in Clear Lake Reservoir rose in 1993, at the end of the drought (NRC 2004, p. 132). In 2009, when lake levels were again low due to drought, diversions from Clear Lake Reservoir were halted in mid-summer, and there were no diversions in 2010. Additionally, low lake levels adversely affect Clear Lake Reservoir sucker populations by limiting access to Willow Creek, the sole spawning tributary (Barry *et al.* 2009, p. 3). Likewise, the amount of available larval habitat and suitable shoreline spring spawning habitat in Upper Klamath Lake is significantly affected by even minor changes in lake elevation (Service 2008, p. 79). Therefore, special management considerations or protections are needed to address fluctuations in water levels due to regulated flow and lake elevation management. Special management may include the following actions: managing bodies of water such that there is minimal flow departure from a natural hydrograph; maintaining, improving, or reestablishing instream flows to improve the quantity of water available for use; and maintaining or improving groundwater use.

The effects of fluctuations in water levels due to regulated flow management may affect the ability of Lost River sucker and shortnose sucker to access refugia during periods of poor water quality. For example, Pelican Bay appears to act as a key refugium during periods of poor water quality, and efforts to maintain the quality and quantity of the habitat there may be beneficial for suckers (Banish *et al.* 2009, p. 167). Therefore, special management considerations or protections are needed to address access to refugia and may include the following: maintaining appropriate lake depths to allow access to refugia; restoring degraded habitats to improve quantity of flow at refugia as well as refugia quality; and maintaining or establishing riparian buffers aronnd refugia to improve refugia water quality.

The Klamath Project (Project) stores and later diverts water from Upper Klamath Lake for a variety of Project purposes. These operations result in lake levels and flows at the outlet of the lake that differ from historic conditions, some of which increase movement of juvenile fish downstream of Upper Klamath Lake. As such, special management considerations or protections for water quantity may be needed to address water intake at water diversion structures to improve water diversion efficiency to increase the quantity of water available as habitat.

Throughout the Upper Klamath Lake and Lost River Basin, timber harvesting and associated activities (*e.g.*, road building) by Federal, State, tribal, and private landowners have resulted in soil erosion on harvested lands and transport of sediment into streams and rivers adjacent to or downstream from those lands (Service 2002, p. 65; NRC 2004, pp. 65–66). Past logging and road building practices often did not provide for adequate soil stabilization and erosion control. A high density of forest roads remain in the upper Klamath River basin, and many of these are located near streams where they likely contribute sediment (USFS 1995, p. 7), which results in an increase of fine soil particles that can cover spawning substrata. The major agricultural activity in the upper Klamath River basin, livestock grazing, also has likely led to an increase in sediment and nutrient loading rates by accelerating erosion (Moyle 2002, p. 201; Service 2002, pp. 56, 65; McCormick and Campbell 2007, pp. 6–7). Livestock, particularly cattle, have heavily grazed flood plains, wetlands, forest, rangelands, and riparian areas, resulting in the degradation of these areas. Grazing alters the streamside riparian vegetation and compacts soil surfaces, increasing groundwater runoff, lowering streambank stability, and reducing cover. The increase in sediment accumulation and nutrient loading is consistent with the changes in land use in the upper Klamath River basin occurring over the last century (Bradbury *et al.* 2004, pp. 163–164; Eilers *et al.* 2004, pp. 14–16). Therefore, special management considerations or protections may be required to improve water quality and include: reducing sediment and nutrient loading by protecting riparian areas from agricultural and forestry impacts, reducing road density to prevent excess sediment loading, and improving cattle management practices.

Lost River sucker and shortnose sucker have limited hydrologic connection to spawning or rearing habitat. For example, low lake levels adversely affect Clear Lake Reservoir sucker populations by limiting access to the Willow Creek drainage, the sole spawning tributary (Barry *et al.* 2009, p. 3). Likewise, the amount of suitable shoreline spring spawning habitat in Upper Klamath Lake is significantly affected by even minor changes in lake elevation, but it is unknown exactly how such levels directly affect annual productivity. Several shoreline spring-spawning populations, including Harriman Springs and Barkley Springs,

have been lost or significantly altered due to railroad construction (Andreasen 1975, pp. 39–40; NRC 2004, p. 228). Historically, wetlands comprised hundreds of thousands of hectares throughout the range of the species (Gearhart *et al.* 1995, pp. 119–120; Moyle 2002, p. 200; NRC 2004, pp. 72–73), some of which likely functioned as crucial habitat for larvae and juveniles. Other wetlands may have played vital roles in the quality and quantity of water. Loss of ecosystem functions such as these, due to alteration or separation of the habitat, is as detrimental as physical loss of the habitat. Approximately 70 percent of the original 20,400 ha (50,400 ac) of wetlands surrounding Upper Klamath Lake was diked, drained, or significantly altered beginning around 1889 (Akins 1970, pp. 73–76; Gearhart *et al.* 1995, p. 2). Additionally, of the approximately 13,816 ha (34,140 ac) of wetlands connected to Upper Klamath Lake, relatively little functions as rearing habitat for larvae and juveniles, partly due to lack of connectivity with current spawning areas (NRC 2004, pp. 72–73). Therefore, special management considerations or protections may be needed for water quantity to improve access to spawning locations and quality and quantity of wetlands used as rearing habitat. This may be accomplished by: improving lake level management to allow access to spawning locations during late winter and early spring, restoring access to wetland rearing habitat, and creating wetland rearing habitat adjacent to lakes and reservoirs.

The exotic fish species most likely to affect Lost River sucker and shortnose sucker is the fathead minnow. This species may prey on young Lost River sucker and shortnose sucker and compete with them for food or space (Markle and Dunsmoor 2007, pp. 571–573). For example, fathead minnow were first documented in the upper Klamath River basin in the 1970s and are now the numerically dominant exotic fish in Upper Klamath Lake (Simon and Markle 1997, p. 142; Bottcher and Burdick 2010, p. 40; Burdick and VanderKooi 2010, p. 33). Additional exotic, predatory fishes found in sucker habitats, although typically in relatively low numbers, include yellow perch (*Perca flavescens*), bullhead (*Ameiurus* species), largemouth bass (*Micropterus salmoides*), crappie (*Pomoxis* species), green sunfish (*Lepomis cyanellus*), pumpkinseed (*Lepomis gibbosus*), and Sacramento perch (*Archoplites interruptus*) (NRC 2004, pp. 188–189). Special management considerations or protections may be needed to protect the forage base from predation by exotic fish species and could be accomplished by the following: reducing conditions that allow exotic fishes to be successful and restoring conditions that allow Lost River sucker and shortnose sucker to thrive, conducting evaluations to determine methods to remove exotic fish species, and determining methods to reduce or eliminate competition for the forage base upon which Lost River sucker and shortnose sucker depend to survive.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(1)(A) of the Act, we use the best scientific and commercial data available to designate critical habitat. We review available information pertaining to the habitat requirements of the species. In accordance with the Act and its implementing regulation at 50 CFR 424.12(e), we consider whether designating additional areas—outside those currently occupied as well as those occupied at the time of listing—are necessary to ensure the conservation of the species. We are proposing to designate only areas within the geographical area occupied by the species at the time of listing, and that are also presently occupied, because these areas are sufficient for the conservation of Lost River sucker and shortnose sucker and have all of the physical or biological features essential to the conservation of Lost River sucker and shortnose sucker. The Draft Lost River Sucker and Shortnose Sucker Recovery Plan (Service 2011) recognizes two recovery units, each containing occupied management units. The steps we followed in identifying critical habitat were:

1. Our initial step in identifying critical habitat was to determine, in accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, the physical or biological habitat features essential to the conservation of the species, as explained in the previous section.

2. We reviewed the best available scientific data pertaining to the habitat requirements of this species, including information obtained from the Lost River and Shortnose Sucker Recovery Team and the Recovery Implementation Committee, which included biologists from partner agencies and entities including Federal, State, tribal, and private biologists; experts from other scientific disciplines, such as hydrology and forestry; resource users; and other stakeholders with an interest in Lost River sucker and shortnose sucker and the habitats they depend on for survival or recovery. We also reviewed available data concerning Lost River sucker and shortnose sucker habitat use and preferences, habitat conditions, threats, population demographics, and known locations, distribution, and abundances of Lost River sucker and shortnose sucker.

We identified the geographical areas occupied by Lost River sucker and shortnose sucker at the time of listing that contain the PBFs essential for the conservation of the species and which contained one or more of the primary constituent elements identified above. This was done by gathering information from the entities listed above and mapping Lost River sucker and shortnose sucker distribution.

We used data gathered during the Lost River sucker and shortnose sucker recovery planning process and the Draft Lost River Sucker and Shortnose Sucker Recovery Plan (Service 2011), and supplemented those data with recent data developed by State agencies, tribes, the U.S. Forest Service, Bureau of Land Management, and other entities. These data were used to update Lost River sucker and shortnose sucker status and distribution data for purposes of the proposed critical habitat designation.

For areas where we had data gaps, we solicited expert opinions from knowledgeable fisheries biologists in the local area. Material reviewed included data in reports submitted during section 7 consultations, reports from biologists holding section 10(a)(1)(A) recovery permits, research published in peer-reviewed scientific journals, academic theses, State and Federal government agency reports, and GIS data.

In streams, critical habitat includes the stream channel within the designated stream reach and a lateral extent as defined by the bankfull elevation on one bank to the bankfull elevation on the opposite bank. The lateral extent of critical habitat in lakes and reservoirs is defined by the perimeter of the water body as mapped according to the U.S. Geological Survey 2009 National Hydrography Dataset. Land ownership calculations were based on 2011 Oregon and California Bureau of Land Management State office data layers. An updated data layer of Upper Klamath Lake and newly restored wetlands was provided by the U.S. Geological Survey (USGS), Western Fisheries Research Center, and Klamath Falls Field Station.

3. In selecting areas to propose as critical habitat, we considered factors such as size, connectivity to other aquatic habitats, and rangewide

recovery considerations. We took into account the fact that Lost River sucker and shortnose sucker habitats include streams used largely for spawning and outmigration; lakes and reservoirs used for rearing, foraging, and migration; and springs used for spawning and refugia.

4. In determining areas to propose as critical habitat, we relied upon principles of conservation biology, including: (a) Resistance and resiliency, to ensure sufficient habitat is protected throughout the range of the species to support population viability (e.g., demographic parameters); (b) Redundancy, to ensure multiple viable populations are conserved throughout the species' range; and (c) Representation, to ensure the representative genetic and life history of suckers (*e.g.*, spring spawning and river spawning) were conserved.

5. Using the conservation biology principles and primary constituent elements, we examined the distribution of Lost River sucker and shortnose sucker to determine critical habitat based on the following criteria: Largest occupied areas or populations, most highly connected populations and habitat, areas that can contribute to Lost River sucker and shortnose sucker conservation, and areas with highest conservation potential (*e.g.*, essential PBFs). We then used these criteria to identify those areas that contain habitats essential to the conservation of Lost River sucker and shortnose sucker. Using the conservation biology principles and primary constituent elements, we examined the distribution of Lost River sucker and shortnose sucker to assess whether or not to propose areas as critical habitat. We emphasized areas as essential to the conservation of the Lost River and shortnose sucker which contained populations of highest conservation value with characteristics such as: (a) The largest occupied areas or populations, (b) the most highly connected populations and habitat, (c) areas that can contribute to Lost River sucker and shortnose sucker conservation and recovery.

6. We examined geographic locations currently occupied by Lost River sucker and shortnose sucker and determined that certain areas did not contain the PBFs essential for the conservation of these species, and we have not proposed these areas as critical habitat. Such determinations include those areas where Lost River sucker or shortnose sucker: Are not viable, are not connected to spawning habitat, occur in low densities or abundances in very isolated populations, are greatly impacted by nonnative species, have very low potential for conservation or restoration, or have low connectivity among populations and severe habitat degradation.

When determining proposed critical habitat boundaries, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical and biological features for Lost River sucker and shortnose sucker. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this proposed rule have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, if the critical habitat is finalized as proposed, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical and biological features in the adjacent critical habitat.

We are proposing for designation of critical habitat lands that we have determined were occupied at the time of listing and contain sufficient elements of physical and biological features to support life-history processes essential to the conservation of the Lost River sucker and shortnose sucker.

Proposed Critical Habitat Designation

We are proposing two units as critical habitat for Lost River sucker and two units for shortnose sucker with each unit being composed of streams, lakes, and reservoirs. The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for Lost River sucker and shortnose sucker.

The two units we propose as critical habitat for the Lost River sucker, which were both occupied at the time of listing, are:

(1) Upper Klamath Lake Unit, including Upper Klamath Lake and tributaries as well as the Link River and Keno Reservoir.

(2) Lost River Basin Unit, including Clear Lake Reservoir and tributaries.

The two units we propose as critical habitat for the shortnose sucker, which were occupied at the time of listing, are:

(1) Upper Klamath Lake Unit, including Upper Klamath Lake and tributaries as well as the Link River and Keno Reservoir.

(2) Lost River Basin Unit, including Clear Lake Reservoir and tributaries, and Gerber Reservoir and tributaries.

The approximate area and stream length within each proposed critical habitat unit is shown in Tables 1 through 4.

TABLE 1—AREA OF LAKES AND RESERVOIRS PROPOSED AS CRITICAL HABITAT FOR LOST RIVER SUCKER

[Area estimates reflect all land within critical habitat unit boundaries]

Critical habitat unit	Land ownership by type	Acres (hectares)
1. Upper Klamath Lake	Federal	15,198 (6,151)
	State	533 (216)
	Private/Other	74,684 (30,224)
2. Lost River Basin	Federal	27,238 (11,023)
	State	0
	Private/Other	194 (79)
Total	Federal	42,437 (17,174)
	State	533 (216)
	Private/Other	75,249 (30,452)
Total		118,219 (47,842)

Note: Area sizes may not sum due to rounding.

TABLE 2—STREAM LENGTH PROPOSED AS CRITICAL HABITAT FOR LOST RIVER SUCKER

[Area estimates reflect all land within critical habitat unit boundaries]

Critical habitat unit	Land ownership by type	Miles (kilometers)
1. Upper Klamath Lake	Federal	13 (21).
	State	0.
	Private/Other	106 (171).
2. Lost River Basin	Federal	23 (37).
	State	Less than 1.
	Private/Other	3 (5).
Total	Federal	36 (58).
	State	Less than 1.
	Private/Other	109 (176).
Total		146 (234).

Note: Lengths may not sum due to rounding.

TABLE 3—AREA OF LAKES AND RESERVOIRS PROPOSED AS CRITICAL HABITAT FOR SHORTNOSE SUCKER

[Area estimates reflect all land within critical habitat unit boundaries]

Critical habitat unit	Land ownership by type	Acres (hectares)
1. Upper Klamath Lake	Federal	15,198 (6,151)
	State	533 (216)
	Private/Other	74,684 (30,224)
2. Lost River Basin	Federal	32,051 (12,971)
	State	0
	Private/Other	1,124 (455)
Total	Federal	47,250 (19,121)
	State	533 (216)
	Private/Other	76,179 (30,829)
Total		123,961 (50,166)

Note: Area sizes may not sum due to rounding.

TABLE 4—STREAM LENGTH PROPOSED AS CRITICAL HABITAT FOR SHORTNOSE SUCKER

[Area estimates reflect all land within critical habitat unit boundaries]

Critical habitat unit	Land ownership by type	Miles (kilometers)
1. Upper Klamath Lake	Federal	6 (9).
	State	0.
	Private/Other	34 (54).
2. Lost River Basin	Federal	72 (116).
	State	Less than 1.
	Private/Other	16 (26).
Total	Federal	78 (125).
	State	Less than 1.
	Private/Other	50 (80).
Total		128 (207).

Note: Length may not sum due to rounding.

We present brief descriptions of the two critical habitat units for Lost River sucker and two critical habitat units for shortnose sucker and the reasons why they meet the definition of critical habitat, below. The areas we are proposing as critical habitat below satisfy each of the criteria stated above under "Criteria Used To Identify Critical Habitat" considerations. These areas will:

- Provide sufficient habitat throughout the range of the species to ensure multiple populations are conserved throughout the species' range;
- Support viability of each population;
- Ensure Lost River sucker and shortnose sucker are distributed across various habitat types required by different life stages; and
- Conserve the full genetic variability and variable life histories (*e.g.*, stream-spawning and lake-spawning) of Lost River sucker and shortnose sucker. Each unit for Lost River and shortnose sucker was occupied at the time of listing.

Unit 1: Upper Klamath Lake

Lost River Sucker

The Upper Klamath Lake unit is located in south-central Oregon within Klamath County and consists of 90,415 ac (36,590 ha) and 119 mi (192 km) of proposed critical habitat. This unit includes Upper Klamath Lake and Agency Lake, together with some wetland habitat; portions of the Williamson and Sprague Rivers; Link River; Lake Ewauna; and the Klamath River from the outlet of Lake Ewauna downstream to Keno Dam. This unit is proposed as critical habitat for Lost River sucker because it contains those physical or biological features essential to the conservation of the species which may require special management or protection. This unit, at least seasonally, contains primary constituent elements 1, 2, and 3. The unit represents the largest population of Lost River sucker and provides redundancy in the number of Lost River sucker populations that are needed for conservation. Additionally, this unit contains areas for both river and spring spawning life histories, which is not known to occur elsewhere throughout the range of the species. The physical and biological features which may require special management or protection include maintaining: Water quality by preventing the deleterious effects of nuisance algal blooms, increased sedimentation, excess nutrients, and other factors affecting water quality; water quantity to prevent reductions in water levels that may limit access to spawning locations or refugia and reduce the depth of water used as cover, and cause a lack of access to essential rearing habitat (*i.e.*, marsh and wetland areas); gravel and cobble substrata to prevent the degradation of spawning, rearing, and adult habitat caused by past land management practices; and the forage base to prevent predation by or competition with nonnative fish that may reduce available forage for Lost River sucker.

Shortnose Sucker

The unit is the same as for Lost River sucker, except that it contains 40 mi (63 km) of streams in proposed critical habitat (because shortnose sucker are not known to occur as far upstream within the Sprague River), along with the 90,415 ac (36,590 ha) of lakes and reservoirs. This unit is proposed as critical habitat for shortnose sucker because it contains those physical and biological features essential to the conservation of the species and which may require special management or protection. This unit, at least seasonally, contains primary constituent elements 1, 2, and 3. This unit is essential to shortnose sucker conservation because it supports the largest population of shortnose sucker and provides redundancy in the number of shortnose sucker populations that are needed for conservation. Additionally, this unit ensures shortnose sucker are distributed across various habitat types required by different life stages. The physical and biological features which may require special management or protection include maintaining: Water quality by preventing the deleterious effects of nuisance algal blooms, increased sedimentation, excess nutrients, and other factors affecting water quality; water quantity to prevent reductions in water levels that may limit access to spawning locations or refugia and reduce the depth of water used as cover, and cause a lack of access to essential rearing habitat (*i.e.*, marsh and wetland areas); gravel and cobble substrata to prevent the degradation of spawning, rearing, and adult habitat caused by past land management practices; and the forage base to prevent predation by or competition with nonnative fish that may reduce available forage for shortnose sucker.

Unit 2: Lost River Basin

Lost River Sucker

The Lost River Basin unit is located in south-central Oregon in Klamath and Lake Counties as well as northeastern California in Modoc County and consists of 27,432 ac (11,102 ha) and 26 mi (42 km) of proposed critical habitat. This unit includes Clear Lake Reservoir and its principal tributary. This unit is proposed as critical habitat for Lost River sucker because it contains those physical and biological features essential to the conservation of the species and which may require special management or protection. This unit, at least seasonally, contains primary constituent elements 1, 2, and 3. This unit supports a large population of Lost River sucker and provides redundancy in the number of Lost River sucker populations that are needed for conservation. Additionally, this unit ensures Lost River sucker are distributed across various habitat types required by different life stages. The physical and biological features which may require special management or protection include maintaining: Water quality by preventing the deleterious effects of nuisance algal blooms, increased sedimentation, excess nutrients, and other factors affecting water quality; water quantity to prevent reductions in water levels that may limit access to spawning locations or refugia and reduce the depth of water used as cover, and cause a lack of access to essential rearing habitat (i.e., marsh and wetland areas); gravel and cobble substrata to prevent the degradation of spawning, rearing, and adult habitat caused by past land management practices; and the forage base to prevent predation by or competition with nonnative fish that may reduce available forage for Lost River sucker.

Shortnose Sucker

The unit is the same as for Lost River sucker, but also includes Gerber Reservoir and its principal tributaries. This unit contains 33,175 ac (13,426 ha) and 88 mi (142 km) of proposed critical habitat. This unit is proposed as critical habitat for shortnose sucker because it contains those physical and biological features essential to the conservation of the species and which may require special management or protection. This unit, at least seasonally, contains primary constituent elements 1, 2, and 3. This unit represents a large population of shortnose sucker and provides redundancy in the number of shortnose sucker populations that are needed for conservation. Additionally, this unit is essential because it ensures shortnose sucker are distributed across various habitat types required by different life stages. The physical and biological features which may require special management or protection include maintaining: Water quality by preventing the deleterious effects of nuisance algal blooms, increased sedimentation, excess nutrients, and other factors affecting water quality; water quantity to prevent reductions in water levels that may limit access to spawning locations or refugia and reduce the depth of water used as cover, and cause a lack of access to essential rearing habitat (i.e., marsh and wetland areas); gravel and cobble substrata to prevent the degradation of spawning, rearing, and adult habitat caused by past land management practices; and the forage base to prevent predation by or competition with nonnative fish that may reduce available forage for shortnose sucker.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In

addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

Decisions by the 5th and 9th Circuit Courts of Appeals have invalidated our regulatory definition of "destruction or adverse modification" (50 CFR 402.02) (see *Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service*, 378 F. 3d 1059 (9th Cir. 2004) and *Sierra Club* v. *U.S. Fish and Wildlife Service et al.*, 245 F.3d 434, 442 (5th Cir. 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of actions that are subject to the section 7 consultation process are actions on State, tribal, local, or private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded or authorized, do not require section 7 consultation.

As a result of this consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect, and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy, or destruction or adverse modification of critical habitat, or both. We define "reasonable and prudent alternatives" (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action,

(2) Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the Director's opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies may sometimes need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

Application of the "Adverse Modification" Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species. Activities that may destroy or adversely modify critical habitat are those that alter the physical and biological features to an extent that appreciably reduces the conservation value of critical habitat for Lost River sucker and shortnose sucker. As discussed above, the role of critical habitat is to support life-history needs of the species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation.

Activities that may affect critical habitat, when carried out, funded, or authorized by a Federal agency, should result in consultation for the Lost River sucker and shortnose sucker. These activities include, but are not limited to:

(1) Actions that would significantly alter the level of lakes or reservoirs. Such activities could include, but are not limited to, water diversions or water withdrawals. These activities could reduce the amount of habitat necessary for rearing of larvae and juvenile Lost River sucker aud shortnose sucker, preclude access to spawning habitat, reduce or prevent access to refugia, and reduce the amount of water needed to provide the physical and biological features necessary for adult Lost River sucker and shortnose sucker.

(2) Actions that would significantly increase sediment deposition within stream channels. Such activities could include, but are not limited to, excessive sedimentation from livestock grazing, road construction, channel alteration, timber harvest and management, off-road vehicle use, and other watershed and floodplain disturbances. These activities could reduce and degrade spawning habitat of Lost River sucker and shortnose sucker by increasing the sediment deposition to deleterious levels.

(3) Actions that would significantly alter lake, reservoir, and/or channel morphology or geometry. Such activities could include, but are not limited to, channelization, impoundment, road and bridge construction, mining, dredging, and destruction of riparian vegetation. These activities may lead to changes in water flows and levels that would degrade or eliminate Lost River sucker and shortnose sucker habitats. These actions can also lead to increased sedimentation and degradation in water quality to levels that are beyond the tolerances of Lost River sucker and shortnose sucker.

Exemptions

Application of Section 4(a)(3) of the Act

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural resources

management plan (INRMP) by November 17, 2001. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

(1) An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;

(2) A statement of goals and priorities;

(3) A detailed description of management actions to be implemented to provide for these ecological needs; and

(4) A monitoring and adaptive management plan.

Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management; fish and wildlife habitat enhancemeut or modification; wetland protection, enhancement, and restoration where necessary to support fish and wildlife; and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) now provides: "The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation."

There are no Department of Defense lands within the proposed critical habitat designation; as a result no lands are being exempted under section 4(a)(3) of the Act.

Exclusions

Application of Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

Under section 4(b)(2) of the Act, we may exclude an area from designated critical habitat based on economic impacts, impacts on national security, or any other relevant impacts. In considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and determine whether the benefits of exclusion outweigh the benefits of inclusion. If the analysis indicates that the benefits of exclusion outweigh the beuefits of inclusion, the Secretary may exercise his discretion to exclude the area only if such exclusion would not result in the extinction of the species.

Exclusions Based on Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we are preparing an analysis of the economic impacts of the proposed critical habitat designation and related factors.

An economic analysis was conducted for the December 1, 1994, proposed rule (59 FR 61744) to estimate the economic effects of the proposed critical habitat designation. The previous economic analysis acknowledges the proposed designation would constrain the ability of Federal agencies to engage in activities, or to support the activities of others, that would adversely modify or destroy critical habitat. Major Federal agencies in the upper Klamath River basin indicated their activities would be altered to protect Lost River sucker and shortnose sncker. However, different conclusions were reached by these agencies as to whether these changes were a result of Lost River sucker and shortnose sucker being listed as endangered, from proposed critical habitat designation, or both. The economic analysis further indicated critical habitat designation would negatively affect local employment due to a change in the output of goods and services, primarily from the resource extraction businesses. Conversely, designation also would enhance natural resource amenities, causing economic growth as a result of immigration of people seeking a heightened local and regional quality of life. The economic analysis concluded by determining the effect of designation would be neutral. Additional details can be found in that 1994 proposed rule (59 FR 61750–61753; December 1, 1994).

We are conducting a new economic analysis for this proposed rule, and we will announce the availability of that draft economic analysis as soon as it is completed, at which time we will seek public review and comment. At that time, copies of the draft economic analysis will be available for downloading from the Internet at *http://www.regulations.gov*, or by contacting the Klamath Falls Fish and Wildlife Office directly (see **FOR FURTHER INFORMATION CONTACT** section). During the development of a final designation, we will consider economic impacts, public comments, and other new information, and areas may be excluded from the final critical habitat designation under section 4(b)(2) of the Act and our implementing regulations at 50 CFR 424.19.

Exclusions Based on National Security Impacts

Under section 4(b)(2) of the Act, we consider whether there are lands owned or managed by the Department of Defense where a national security impact might exist. In preparing this proposal, we have determined that the lands within the proposed designation of critical habitat for Lost River sucker and shortnose sucker are not owned or managed by the Department of Defense, and, therefore, we anticipate no impact on national security. Consequently, the Secretary does not propose to exercise his discretion to exclude any areas from the final designation based on impacts on national security.

Exclusions Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts on national security. We consider a number of factors, including whether the landowners have developed any HCPs or other management plans for the area, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at any tribal issues, and consider the government-to-government relationship of the United States with tribal entities. We also consider any social impacts that might occur because of the designation.

In preparing this proposal, we have determined that there are currently no HCPs or other management plans for Lost River sucker and shortnose sucker,

and the proposed designation does not include any tribal lands or trust resources. We anticipate no impact on tribal lands, partnerships, or HCPs from this proposed critical habitat designation. Accordingly, the Secretary does not propose to exercise his discretion to exclude any areas from the final designation based on other relevant impacts.

Peer Review

In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), we are seeking the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of peer review is to ensure that our critical habitat designation is based on scientifically sound data, assumptions, and analyses. We have invited these peer reviewers to comment during this public comment period on our specific assumptions and conclusions in this proposed designation of critical habitat.

We will consider all comments and information we receive during the comment period on this proposed rule during our preparation of a final determination. Accordingly, the final decision may differ from this proposal.

Public Hearings

Section 4(b)(5) of the Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days after the date of publication of this proposed rule in the **Federal Register**. Such requests must be sent to the address shown in the **FOR FURTHER INFORMATION CONTACT** section. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing.

Required Determinations

Regulatory Planning and Review—Executive Order 12866

The Office of Management and Budget (OMB) has determined that this rule is not significant and has not reviewed this proposed rule under Executive Order 12866 (Regulatory Planning and Review). OMB bases its determination upon the following four criteria:

(1) Whether the rule will have an annual effect of $100 million or more on the economy or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government.

(2) Whether the rule will create inconsistencies with other Federal agencies' actions.

(3) Whether the rule will materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

(4) Whether the rule raises novel legal or policy issues.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*) as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 (5 U.S.C. 801 *et seq.*), whenever an agency must publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

At this time, we lack the available economic information necessary to provide an adequate factual basis for the required RFA finding. Therefore, we defer the RFA finding until completion of the draft economic analysis prepared under section 4(b)(2) of the Act and Executive Order 12866. This draft economic analysis will provide the required factual basis for the RFA finding. Upon completion of the draft economic analysis, we will announce availability of the draft economic analysis of the proposed designation in the **Federal Register** and reopen the public comment period for the proposed designation. We will include with this announcement, as appropriate, an initial regulatory flexibility analysis or a certification that the rule will not have a significant economic impact on a substantial number of small entities accompanied by the factual basis for that determination.

The previous economic analysis (see our 1994 proposed rule at 59 FR 61750–61753, December 1, 1994) indicated dislocation of workers in the local resource extraction industries would be offset, in the long run, by the creation of additional jobs in other sectors locally or in other areas. At that time, the analysis determined the national adjustment to the proposed designation would be essentially imperceptible as the U.S. economy redeployed labor and other resources that might become unemployed because of the designation. Further, the analysis stated that as buyers, sellers, workers, firms, households, and communities adjusted to the proposed designation, its economic impacts would be spread over a broad economic and spatial landscape.

We have concluded that deferring the RFA finding until completion of the new draft economic analysis is necessary to meet the purposes and requirements of the RFA. Deferring the RFA finding in this manner will ensure that we make a sufficiently informed determination based on adequate, current economic information and provide the necessary opportunity for public comment.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. We do not expect that the proposed critical habitat designation for the Lost River sucker and shortnose sucker would significantly affect energy supplies, distribution, or use.

Although there is a large natural gas pipeline within the Lost River Basin Unit, the Federal Energy Regulatory Commission recently completed a formal biological opinion and conference report with the Service regarding the effect of those operations on Lost River sucker and shortnose sucker and proposed critical habitat. The biological opinion (Service 2010) established strict Terms and Conditions for the conservation of Lost River sucker and shortnose sucker in those habitats that would be impacted by pipeline operations; several of these habitats are included in this proposal. The designation of critical habitat in the areas adjacent to the pipeline will not change current Lost River sucker and shortnose sucker conservation practices surrounding pipeline operations. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required. However, we will further evaluate this issue as we conduct our economic analysis, and review and revise this assessment as warranted.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), we make the following findings:

(1) This rule would not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector, and includes both "Federal intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)–(7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or tribal governments" with two exceptions. It excludes "a condition of Federal assistance." It also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, aud tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide fundiug," and the State, local, or tribal governments "lack authority" to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Iudependent Living; Family Support Welfare Services; and Child Support Enforcement. "Federal private sector mandate" includes a regulation that "would impose an enforceable duty upon the private sector, except (i) A condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program."

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for au action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule would significantly or uniquely affect small governments because, based in part on an analysis conducted for the previous proposed designation of critical habitat and extrapolated to this designation, we do not expect this rule to significantly or uniquely affect small governments. Therefore, a Small Government Agency Plan is not required. However, we will further evaluate this issue as we conduct our economic analysis, and review and revise this assessment if appropriate.

Takings—Executive Order 12630

In accordance with Executive Order 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for Lost River sucker and shortnose sucker in a takings implications assessment. Critical habitat designation does uot affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. The takings implications assessment concludes that this proposed designation of critical habitat for Lost River sucker and shortnose sucker does not pose significant takings implications for lands within or affected by the designation.

Federalism—Executive Order 13132

In accordance with Executive Order 13132 (Federalism), this proposed rule does not have significant Federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this proposed critical habitat designation with appropriate State resource agencies in Oregon and California. The designation of critical habitat in areas currently occupied by the Lost River sucker and shortnose sucker imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments because the areas that contain the physical and biological features essential to the conservation of the species are more clearly defined, and the elements of the features of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist local governments in long-range planning (rather than having them wait for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform—Executive Order 12988

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. This proposed rule uses standard property descriptions aud identifies the elements of physical and biological features essential to the conservation of the Lost River sucker and shortnose sucker within the designated areas to assist the public in understanding the habitat needs of the species.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (42 U.S.C. 4321 et seq.)

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(1) Be logically organized;

(2) Use the active voice to address readers directly;

(3) Use clear language rather than jargon;

(4) Be divided into short sections and sentences; and

(5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the **ADDRESSES** section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, *etc.*

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes.

We determined that there are no tribal lands that were occupied by the Lost River sucker and shortnose sucker at the time of listing that contain the features essential for conservation of the species, and no tribal lands unoccupied by the Lost River sucker and shortnose sucker that are essential for the conservation of the species. Therefore, we are not proposing to designate critical habitat for the Lost River sucker and shortnose sucker on tribal lands.

References Cited

A complete list of references cited is available on the Internet at *http://www.regulations.gov* and upon request from the Klamath Falls Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this package are the staff members of the Klamath Falls Fish and Wildlife Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

2. In § 17.11(h), revise the entry for "Sucker, Lost River" and "Sucker, shortnose" under "FISHES" in the List of Endangered and Threatened Wildlife to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*
FISHES							
*	*	*	*	*	*		*
Sucker, Lost River ...	*Deltistes luxatus*	U.S.A. (CA, OR)	Entire	E	313	17.95(e)	NA
*	*	*	*	*	*		*
Sucker, shortnose	*Chasmistes brevirostris.*	U.S.A. (CA, OR)	Entire	E	313	17.95(e)	NA
*	*	*	*	*	*		*

3. In § 17.95, amend paragraph (e) by adding entries for "Lost River Sucker (*Deltistes luxatus*)" and "Shortnose Sucker (*Chasmistes brevirostris*)," in the same alphabetical order that the species appear in the table at § 17.11(h), to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(e) *Fishes.*

* * * * *

Lost River Sucker (*Deltistes luxatus*)

(1) Critical habitat units are depicted for Klamath and Lake Counties, Oregon,

and Modoc County, California, on the maps below.

(2) Within these areas, the primary constituent elements of the physical and biological features essential to the conservation of Lost River sucker consist of three components:

(i) *Water.* Areas with sufficient water quantity and depth within lakes, reservoirs, streams, marshes, springs, groundwater sources, and refugia habitats with minimal physical, biological, or chemical impediments to connectivity. Water should exhibit depths ranging from less than 1.0 m (3.28 ft) up to 4.5 m (14.8 ft) to accommodate each life stage. The water quality characteristics should include water temperatures of less than 28.0 °Celsius (82.4 °F); pH less than 9.75; dissolved oxygen levels greater than 4.0 mg per L; algal toxins (less than 1.0 microgram (μg) per L); and un-ionized ammonia (less than 0.5 mg per L). Elements also include natural flow regimes that provide flows during the appropriate time of year or, if flows are controlled, minimal flow departure from a natural hydrograph.

(ii) *Spawning and rearing habitat.* Streams and shoreline springs with gravel and cobble substrate at depths typically less than 1.3 m (4.3 ft) with adequate stream velocity to allow spawning to occur. Areas identified in PCE1 containing emergent vegetation adjacent to open water that provides habitat for rearing . This facilitates growth and survival of suckers, as well as protection from predation and protection from currents and turbulence.

(iii) *Food.* Areas that contain an abundant forage base, including a broad array of chironomidae, crustacea, and other aquatic macroinvertebrates.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

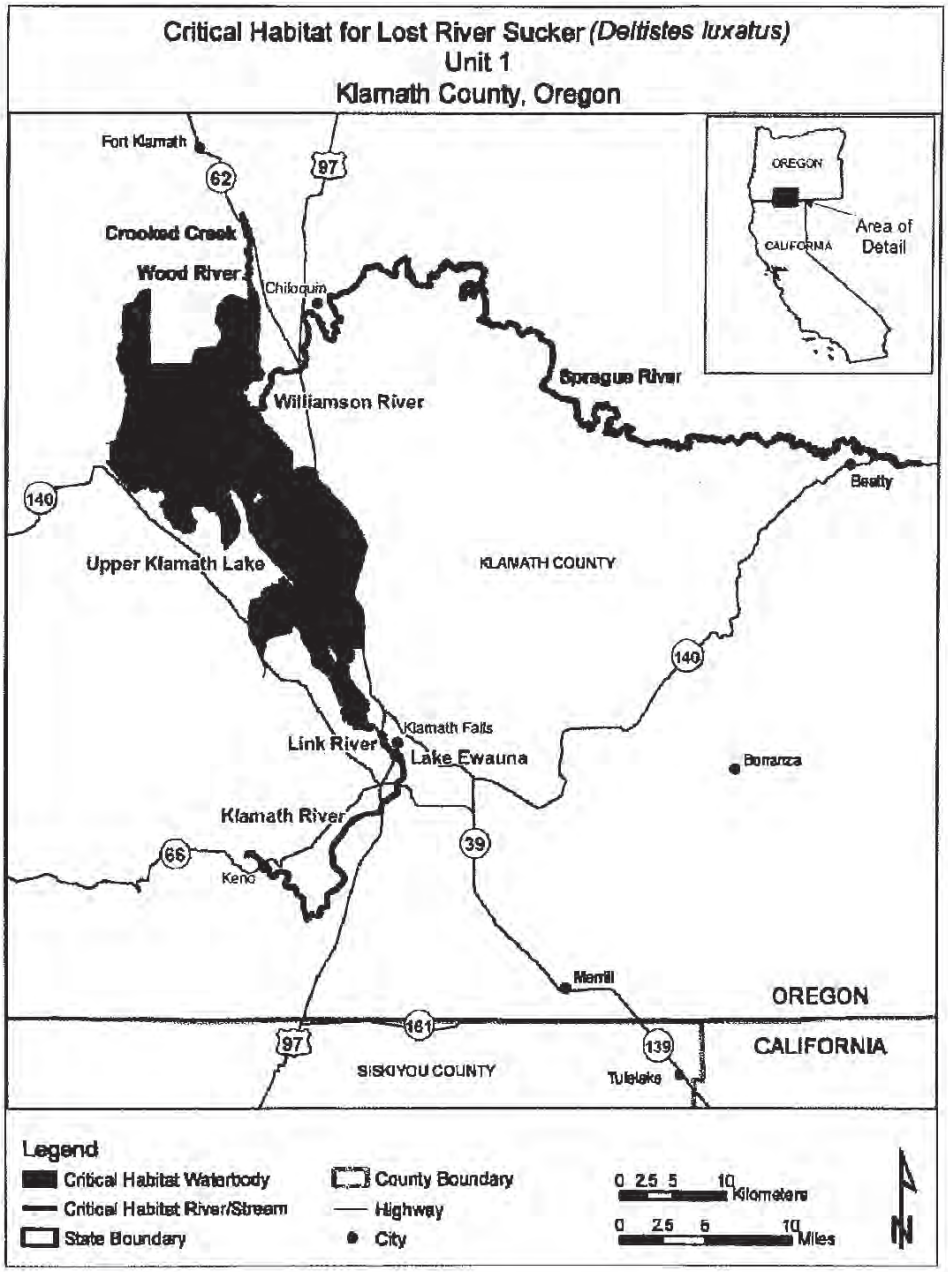
(4) *Critical habitat map units.* Data layers defining map units were created on a base of the U.S. Geological Survey 2009 National Hydrography Dataset, and critical habitat was then mapped using North American Datum (NAD) 83, Universal Transverse Mercator Zone 10N coordinates.

(5) Unit 1: Upper Klamath Lake Unit, Klamath County, Oregon.

(i) [Reserved for textual description of Unit 1.]

(ii) *Note:* Map of Unit 1, Upper Klamath Lake, follows:

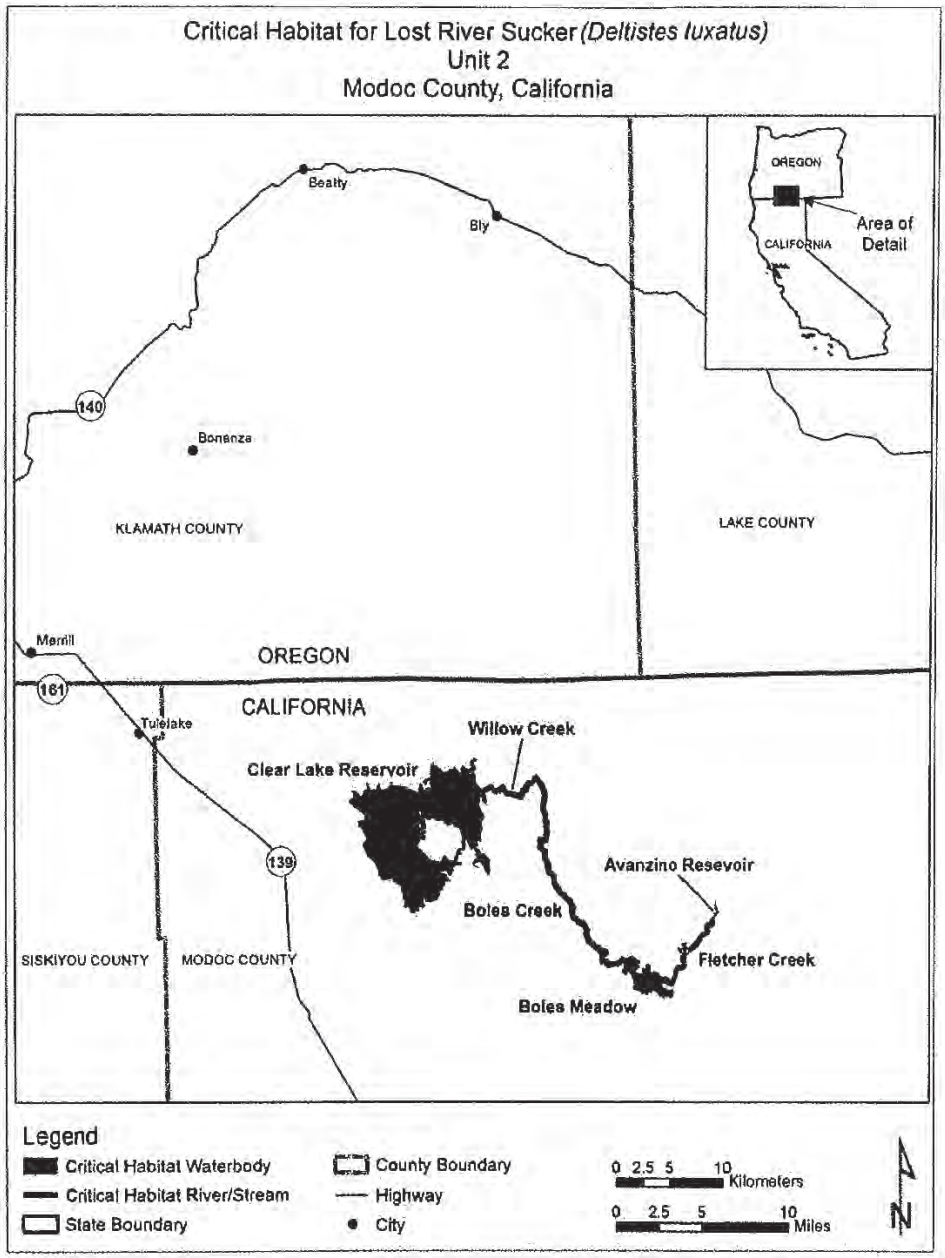
BILLING CODE 4310–55–P



(6) Unit 2: Lost River Basin Unit, Modoc County, California.

(i) [Reserved for textual description of Unit 2.]

(ii) *Note:* Map of Unit 2, Lost River Basin, follows:



* * * * *

Shortnose Sucker (*Chasmistes brevirostris*)

(1) Critical habitat units are depicted for Klamath and Lake Counties, Oregon, and Modoc County, California, on the maps below.

(2) Within these areas, the primary constituent elements of the physical and biological features essential to the conservation of the shortnose sucker consist of three components:

(i) *Water.* Areas with sufficient water quantity and depth within lakes, reservoirs, streams, marshes, springs, groundwater sources, and refugia habitats with minimal physical, biological, or chemical impediments to connectivity. Water should exhibit depths ranging from less than 1.0 m (3.28 ft) up to 4.5 m (14.8 ft) to accommodate each life stage. The water quality characteristics should include water temperatures of less than 28.0 °Celsius (82.4 °F); pH less than 9.75; dissolved oxygen levels greater than 4.0 mg per L; algal toxins (less than 1.0 microgram (μg) per L); and un-ionized ammonia (less than 0.5 mg per L). Elements also include natural flow regimes that provide flows during the appropriate time of year or, if flows are controlled, minimal flow departure from a natural hydrograph.

(ii) *Spawning and rearing habitat.* Streams and shoreline springs with gravel and cobble substrate at depths typically less than 1.3 m (4.3 ft) with adequate stream velocity to allow spawning to occur. Areas identified in PCE1 containing emergent vegetation adjacent to open water that provides habitat for rearing . This facilitates growth and survival of suckers, as well as protection from predation and protection from currents and turbulence.

(iii) *Food.* Areas that contain an abundant forage base, including a broad array of chironomidae, crustacea, and other aquatic macroinvertebrates.

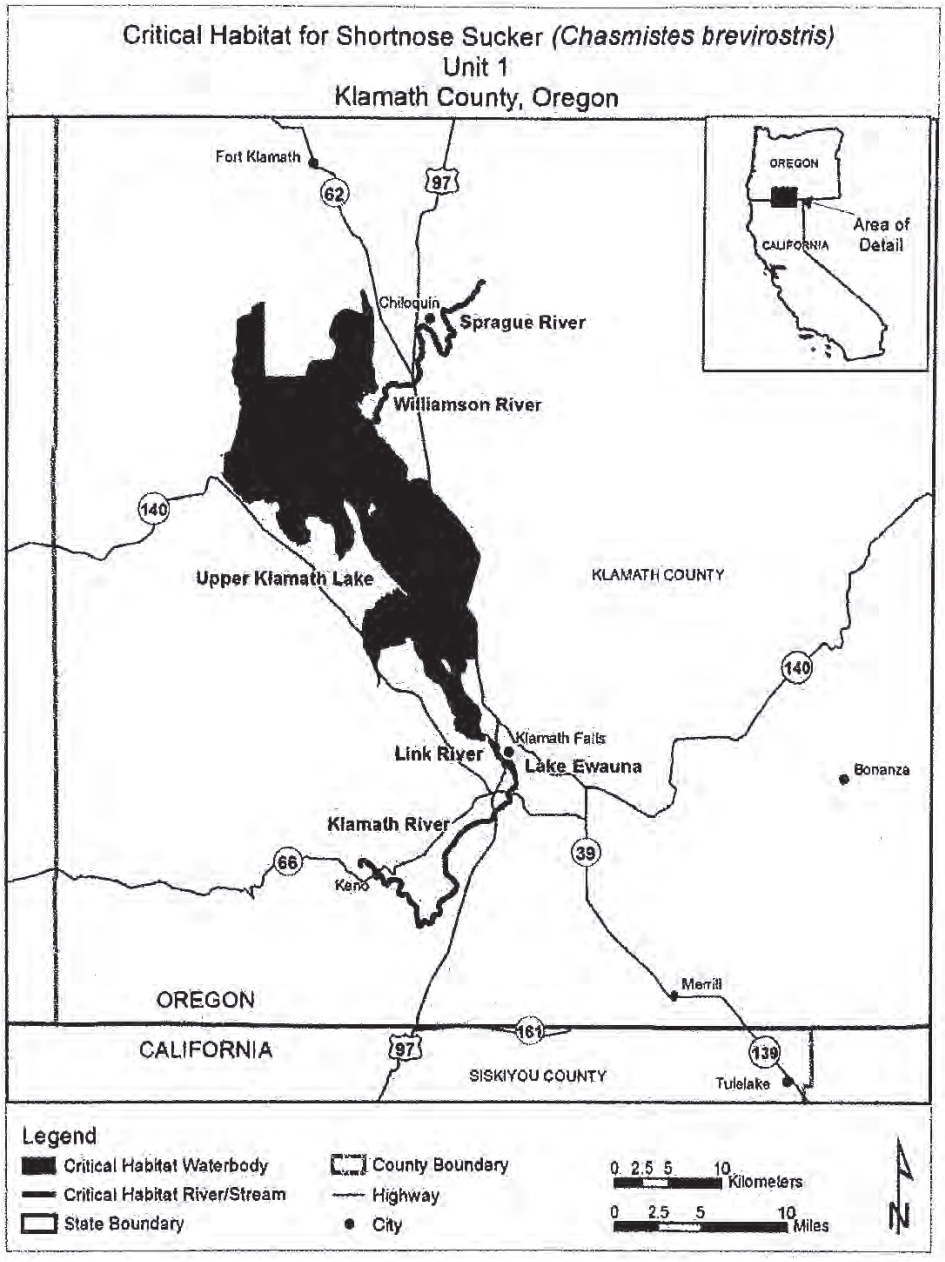
(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) *Critical habitat map units.* Data layers defining map units were created on a base of the U.S. Geological Survey 2009 National Hydrography Dataset, and critical habitat was then mapped using North American Datum (NAD) 83, Universal Transverse Mercator Zone 10N coordinates.

(5) Unit 1: Upper Klamath Lake Unit, Klamath County, Oregon.

(i) [Reserved for textual description of Unit 1.]

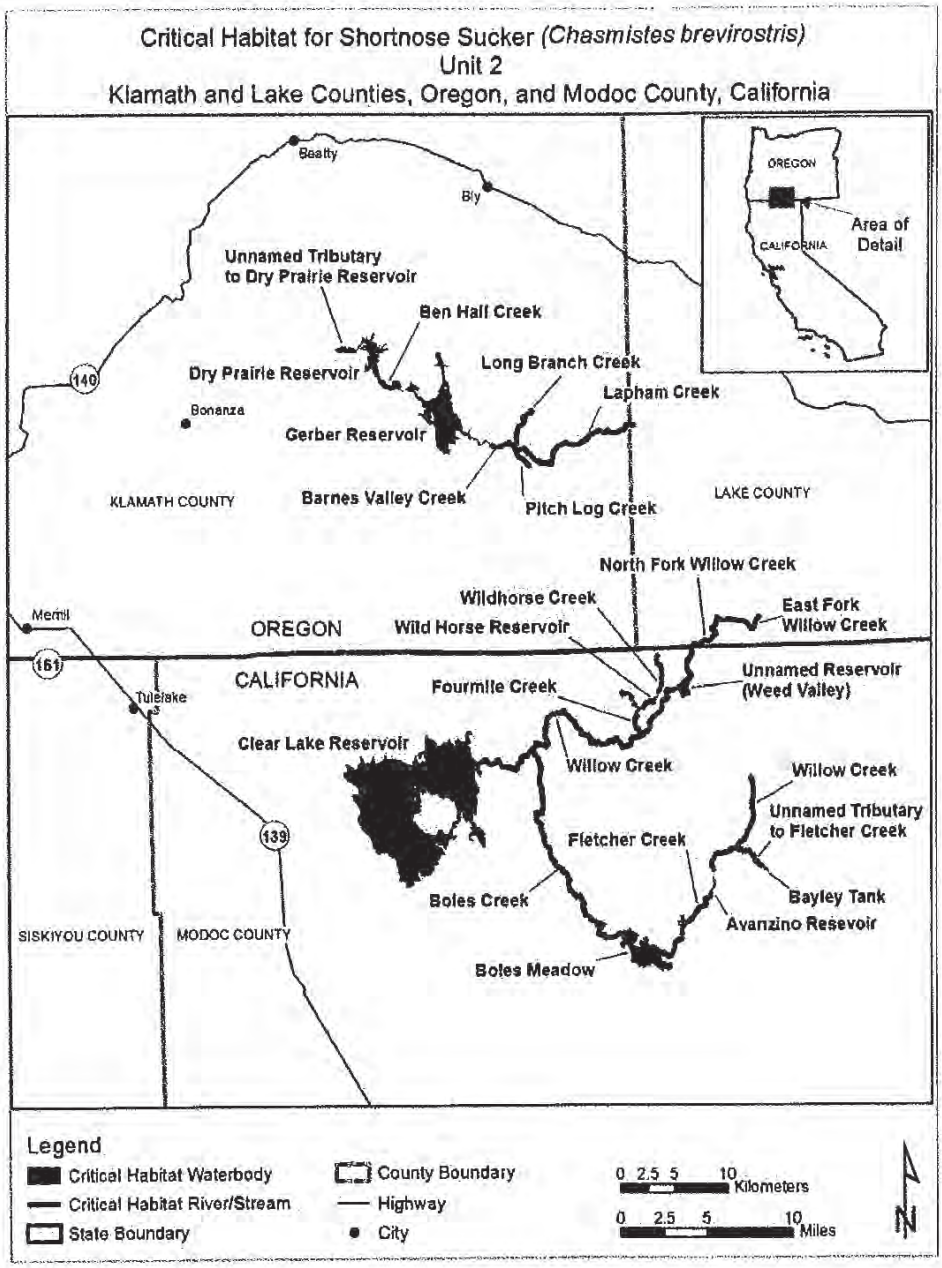
(ii) *Note:* Map of Unit 1, Upper Klamath Lake, follows:



(6) Unit 2: Lost River Basin Unit, Klamath and Lake Counties, Oregon, and Modoc County, California.

(i) [Reserved for textual description of Unit 2.]

(ii) *Note:* Map of Unit 2, Lost River Basin, follows:



* * * * *

Dated: November 22, 2011.

Eileen Sobeck,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 2011–31380 Filed 12–6–11; 8:45 am]

BILLING CODE 4310–55–C

Comment Author	Orahoske, Andrew
Agency/Assoc.	Environmental Protection Information Center
Submittal Date	December 30, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_EM_1230_051-1	The final rule for the designation of critical habitat for the Lost River and shortnose sucker has been incorporated into the analysis in the EIS/EIR. As discussed in Section 3.3.4.3 of the Draft EIS/EIR under Alternatives 2 p. 3.3-126) and 3, The KBRA is expected to provide benefits to sucker populations through: nutrient reduction, reconnecting former wetlands to Agency Lake, reconstructing quality rearing habitat for early life stages, and restoring spring shoreline spawning habitat among others. The KBRA speaks to the settlement of long-running disputes concerning the use of Klamath Basin water for irrigation, fish and wildlife. It also speaks to water quality improvements in the basin. Addressing the water-related issues within the basin is expected to benefit all species of resident fish, including suckers. The EIS/EIR concludes that based on improved habitat quality, the effect of the Proposed Action would be beneficial for Lost River and shortnose sucker populations in the Long Term (Draft EIS/EIR p. 3.3-127). The Resident Fish Expert Panel concluded that a dams out plus KBRA management scenario provides promise for preventing extinction of sucker species and for increasing overall population abundance and productivity (Buchanan et al. 2011).	No

AO_LT_1227_047

epic

Keeping Northwest California wild since 1977

December 27, 2011

Ms. Elizabeth Vasquez
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825
Email: KlamathSD@usbr.gov

Gordon Leppig
California Department of Fish & Game
619 Second Street
Eureka, CA 95501
Email: KSDcomments@dfg.ca.gov

RE: Comments on the Klamath Facilities Removal Draft EIS/EIR

Dear Responsible Officials,

I am writing on behalf of the Environmental Protection Information Center ("EPIC"), a nonprofit organization that works to protect and restore ancient forests, watersheds, coastal estuaries, and native species in Northern California. EPIC submits the following comments regarding the Klamath Facilities Removal draft EIS/EIR.

Duplicate of GP_WI_1110_480

EPIC supports immediate removal of all dams on the Klamath River and its tributaries. EPIC also supports the restoration of all historic wetlands and marshes in the Klamath basin, including Lower Klamath Lake, Tule Lake and Upper Klamath Lake. These restoration activities must also improve conditions for salmon in the Scott and Shasta Rivers, namely through the retirement of water diversions and the removal of Dwinnell Dam. By removing dams and restoring wetlands, the Klamath Basin will begin a long road to recovery. All of these actions are very much in the public interest. Subsequent remedial actions will be needed in the future, and will vary depending on environmental conditions, including climate change. Therefore any decision must be accompanied by a continued commitment to adaptive management, ongoing restoration, monitoring and securing sufficient funding for these important and ongoing activities.

Comment 1 - Approves of Dam Removal

Duplicate of GP_WI_1110_480

The draft EIS/EIR also attempts to analyze the allocation and flow of water in the basin. Any decision must ensure absolute minimum flows and flows sufficient for ecosystem recovery in the main-stem Klamath and its tributaries, and the upper basin marshes. In particular, any decision must contain a long-term plan to effectively stem the flow of water to the Klamath

Comment 2 - Hydrology

Environmental Protection Information Center
145 G Street, Suite A, Arcata, CA 95521
(707) 822-7711
www.wildcalifornia.org

Duplicate of GP_WI_1110_480

Irrigation Project, and commit to retiring agricultural production in the upper basin, especially on National Wildlife Refuges. Salmon and other aquatic organisms need sufficient water throughout the year, and the dry season is by the far the most critical time that clean, cold water is needed. **Any decision must guarantee a minimum flow for salmon in the mainstem Klamath River, which the best available science indicates is 1,300 cubic feet per second at the Iron Gate gauge for the dry season.** The National Marine Fisheries Service has required a minimum flow at Iron Gate pursuant to biological opinions to comply with the Endangered Species Act, and therefore any decision must include a minimum flow for fish. The absence of a mandated minimum flow for fish in any of the alternatives presented in the DEIS/EIR is of tremendous concern to our organization, and unfortunately suggests a potential prejudice against salmon recovery in favor of irrigation interests that brings into question the stated objectives of the facilities removal process.

Comment 3 - Fish

Duplicate of GP_WI_1110_480

In addition, any decision must also increase water flows from the Trinity River along with flows from the Klamath to restore ecosystem function and salmon populations. Restoration activities on the Trinity River below Trinity Dam show that more water is needed to ensure proper functioning habitat. Therefore any decision must analyze the impact of Central Valley Project operations on the Klamath River and its tributaries. The government agencies must ensure that more water from the Trinity River stay within the watershed so that increased water flows in the dry season assist salmon migration in the Lower Klamath River.

Comment 4 - Out of Scope

Sincerely,

Andrew Orahoske
Conservation Director
Environmental Protection Information Center
145 G Street, Suite A
Arcata, California 95521
Tel: (707) 822-7711
Email: andrew@wildcalifornia.org

Comment Author	Orahoske, Andrew
Agency/Assoc.	Environmental Protection Information Center
Submittal Date	December 27, 2011

Portions of this letter are verbatim duplicates of comments submitted in the comment author's submittal coded - GP_WI_1110_480. Responses to those initial comments that were duplicated in this letter are presented in this EIS/EIR alongside GP_WI_1110_480. Responses to comments provided in this letter that were not also submitted as a part of GP_WI_1110_480 are listed below.

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1227_047-1	Master Response GEN-2 Some People Approve of Dam Removal, Others Oppose Dam Removal.	No
AO_LT_1227_047-2	The Draft EIS/EIR describes the NEPA Purpose and Need/CEQA Project Objectives in Section 1.4.2. These statements clearly indicate the need for action alternatives to address water needs of agriculture, refuges, and fish. The alternatives are designed to meet the Purpose and Need/Project Objectives by addressing fish needs as well as agriculture and refuge water needs rather than prioritizing one element of the Purpose and Need/Project Objectives at the expense of other elements.	No
AO_LT_1227_047-3	Master Response AQU – 11 NMFS BO, ESA and KBRA Water Management.	No
AO_LT_1227_047-4	Trinity River flows and their relationship to the CVP are not part of the Proposed Action for dam removal.	No

Klamath Settlement

EIS/EIR PROCESS

Comment Form

AO_MF_1020_011

Please mail your comments to:

Ms. Elizabeth Vasquez
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

OR

Mr. Gordon Leppig
California Dept. of Fish and Game
Northern Region,
619 Second Street
Eureka, CA 95501

Email:

KlamathRestoration.gov

Fax:
(916) 978-5055

All comments on the Draft EIS/EIR must be received by November 21, 2011.

(Please print legibly)

Name: Nathaniel Pennington

Organization: Salmon River Restoration Council

Title: Fisheries Biologist

Address: P.O. Box 153 Orleans CA 95556

Email: fisheries@srrc.org

Comment 1 - Approves of Dam Removal

Comments: Dam Removal on the Klamath River is the most important thing that can be done to save the allready imperriled Klamath River Salmon population. Alternative 2 - Removal of all of the dams in the Klamath River is the only way to save the economy related to California's Fishery and the only way to clean up one of the west coasts largest watersheds.

Tearing out all of the Dams in the Klamath is the only Solution!!!

The No Action alternative also Fails to account for sediment build up that would eventualy cause the dams to be useless anyway.

Comment 2 - Alternatives

Public Disclosure: It is not required that you submit personal information. If you de[illegible] n may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying i[illegible] arantee that we will be able to do so.

Comment Author	Pennington, Nathaniel
Agency/Assoc.	Salmon River Restoration Council
Submittal Date	October 20, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_MF_1020_011-1	Master Response GEN-2 Some People Approve of Dam Removal, Others Oppose Dam Removal.	No
AO_MF_1020_011-2	An estimate of the future filling of the Klamath Dams under the No Action Alternative can be found on p 3.11-18 of the EIS. This indicates an overall reduction in reservoir storage capacity of 13 percent by year 2061. This would have a minimal effect on reservoir operations and project benefits.	No

AO_LT_1230_064

CALIFORNIA FARM BUREAU FEDERATION
OFFICE OF THE GENERAL COUNSEL
2300 RIVER PLAZA DRIVE, SACRAMENTO, CA 95833-3293 · PHONE (916) 561-5665 · FAX (916) 561-5691

December 29, 2011

Sent via e-mail
KlamathSD@usbr.gov
KSDcomments@dfg.ca.gov

Re: Klamath Facilities Removal Draft EIS/EIR

Dear Mr. Secretary:

The California Farm Bureau Federation is a non-governmental, non-profit, voluntary membership California corporation whose purpose is to protect and promote agricultural interests throughout the state of California and to find solutions to the problems of the farm, the farm home and the rural community. Farm Bureau is California's largest farm organization, comprised of 53 county Farm Bureaus currently representing approximately 74,200 agricultural, associate, and collegiate members in 56 counties. Farm Bureau strives to protect and improve the ability of farmers and ranchers engaged in production agriculture to provide a reliable supply of food and fiber through responsible stewardship of California's resources.

Farm Bureau appreciates the opportunity to comment on the Klamath Facilities Removal Public Draft Environmental Impact Statement/ Environmental Impact Report (Draft EIS/EIR), a project intended to implement the Klamath Hydroelectric Settlement Agreement (KHSA) and Klamath Basin Restoration Agreement (KBRA and collectively with KHSA "agreements"). This project would profoundly alter the hydrology and ecology of the Klamath Basin, and would therefore directly and indirectly affect Farm Bureau members owning or operating farms and ranches throughout the Klamath Basin. While Farm Bureau does not take any position on the proposed removal of the four Klamath River dams, it is very concerned with how the proposed project may impact its members.

The Draft EIS/EIR Fails to Contain Alternatives

There is but one decision before the Secretary, to implement the KHSA and KBRA or not. These two negotiated agreements, which reflect a political and legal compromise between a certain stakeholder representatives, put the State and Federal governments in a very unique position, and one that is very difficult to reconcile with the purposes and protections of NEPA and CEQA.

Comment 1 - KHSA

The agreements, which reflect acceptable outcomes for the participants in the negotiations at the time those negotiations were conducted, admittedly preceded the

NANCY N. MCDONOUGH, GENERAL COUNSEL
ASSOCIATE COUNSEL:
CARL G. BORDEN · KAREN NORENE MILLS · CHRISTIAN C. SCHEURING · KARI L. FISHER · JACK L. RICE

Comment 1 cont.

requisite scientific inquiry into whether or not the agreements reflected an outcome that was in the public interest. Stated another way, the agreements were reached before information was available to know whether the agreements were right. By putting the cart of compromise before the horse of fact, the whole KHSA/KBRA/Draft EIS/EIR/ Secretarial Determination process is predicated on the fact that the political and legal compromise reached by a relatively small number of stakeholder representatives got it right – even without the benefit of the science that was to be forthcoming.

Because of this, the Secretary is really left with only one decision that has only two outcomes: to find dam removal is in the public's interest and thus comply with the agreements, or effectively kill a very extraordinary compromise. This is, for all intents and purposes, means the Draft EIS/EIR is reviewing an all or nothing deal. Given the substantial investment in time and treasure by the signatories to the agreements, particularly the agencies responsible for this Draft EIS/EIR, it is not surprising that the environmental review appears to strongly endorse the agreements. However, the purposes of NEPA and CEQA are not to justify past decisions or to endorse compromises, but to take a hard look at a proposed project in order to objectively inform the public and the agency about the impacts of the proposed project and to assess possible alternatives. Here, because the all-or-nothing nature of the KHSA and KBRA agreements effectively predetermine the outcome, it is hard to understand how this Draft EIS/EIR complies with either NEPA or CEQA.

Comment 2 - NEPA/CEQA

The fundamental purpose of NEPA and CEQA is to ensure that decision makers have made the appropriate analysis necessary to make an informed decision about a particular action. To accomplish this, NEPA and CEQA require agencies to look at the potential impacts of project, look at alternatives to the proposed project, and suggest ways the project could be accomplished to mitigate those impacts. This document, in spite of its thousands of pages of text and pictures, fails to accomplish those goals. Instead of providing important information about whether dam removal is really a good idea, and how it might be accomplished with the least impacts, the Draft EIS/EIR appears to try and provide a post-hoc rationalization for the KHSA and KBRA.

While these agreements reflect extraordinary progress in resolving environmental disputes in the Klamath Basin, they fundamentally reflect political and legal compromises. By entering into these agreements the agencies have seeming tied their hands in a manner inconsistent with the purposes of NEPA. This means that even though the Draft EIS/EIR analyzes several alternatives, these are really not viable alternatives since there is but one choice.

Comment 3 - Alternatives

The Secretary Should Reconsider Requiring Fish Passage at All Four Klamath Dams

Although the agencies conducting this environmental review have admirably made every effort to retain objectivity, the fact remains that the Secretary's decision is really a dichotomous choice – endorse the agreements or kill the agreements. This troubling constraint, however, is based in significant part on an inappropriate restriction that must

Comment 3 cont.

be revisited – PacifiCorp's obligation to provide fish passage at each of the four dams on the Klamath River. This obligation, effectively used by "dambusters" in other regions as well, originates from the Secretary's determination, pursuant to Section 18 of the FPA, that PacifiCorp is obligated to provide for fish passage in order to retain a new license.

The result of this determination preemptively requiring fish passage, the Secretary has effectively tied his own hands when it comes to objectively assessing the agreements and making the Secretarial Determination. This not only seems inconsistent with the purposes and obligations of environmental review under NEPA and CEQA, but also seems practically and scientifically deficient. The most objective approach would have the Secretary seriously consider whether the rigid course laid out by the handful of stakeholder representatives in marathon negotiating sessions unerringly hit the mark with the KHSA and KBRA. But, since the Secretary, by his determination that fish passage was needed at all four dams (thus rendering retention of the dams economically infeasible), constrained the negotiations and also constrained the subsequent objectivity of the Secretarial Determination and the Draft EIS/EIR used to guide that determination.

Since much has been learned about the system since the Secretary determined that fish passage was needed at all four dams (and since the negotiators agreed to the KBRA and KHSA), and because some of this information suggests that fish passage at all locations may not actually be that beneficial to the fishery, the Draft EIS/EIR should consider alternatives that would revisit the issue of fish passage at all four dams.

The KBRA/KHSA Will Affect Far More People and Enviornments than The Signatories Reflect

The Draft EIS/EIR is fundamentally flawed because it fails to adequately analyze all of the ecological and human environments that will be significantly affected by the agreements. The proposed action, and any of the alternatives (other than the no action alternative) will have profound environmental impacts throughout the Klamath Basin. In spite of this, the Draft EIS/EIR only analyzes:

> the land use area was defined as lands encompassed by the Federal Energy Regulatory Commission (FERC) boundary identified in the FERC EIS (2007), surrounding lands that could be affected by implementation of the KHSA and private lands adjacent to the reservoirs and the Klamath River downstream of the reservoirs to the estuary that would be affected by the removal of the dams and loss of the reservoirs."

This ignores the rest of the watershed, particularly the Scott and Shasta River watersheds as well as landowners upstream of the FERC boundary. However, the proposed action, which is intended to affect anadromous fish populations in the Klamath Basin, in a large part by altering the hydrology of the mainstem Klamath River, will have watershed wide impacts. The following are some examples of these impacts:

Comment 4 - NEPA/CEQA

Comment 4 cont.

- Eradication of the 2019 mainstem spawning Coho cohort will reduce the already delicate numbers of Coho in the Klamath Basin, thereby increasing the pressures on the Coho returning to the Scott and Shasta. Not only do Farm Bureau members have an intrinsic interest in the health of their Coho fishery, but impairments to Coho numbers increases the regulatory pressure on these farmers and ranchers.

- Removal of the dams will alter the growing season flows of the Klamath River, which will ostensibly be a return toward the "natural" hydrograph, and thus an improvement for the fishery. However, since altering the existing hydrograph will have unknown impacts (see the report of the expert panel), those farmers who use water from the tributaries to the mainstem, but were not party to the agreements, may be significantly but indirectly affected by the proposed action. This could happen if after dam removal it turned out there was not enough water to sustain the system as it has become adapted without greater input from these tributaries. Since the Draft EIS/EIR does not analyze how the proposed action or the various alternatives could affect these other tributaries, it does not provide the Secretary or the public adequate information. (This point was raised in Farm Bureau's scoping comments as well.)

- How the return of salomids, particularly those that are listed, may impact the environments to which they return. This must include the economic impacts associated with adapting existing infrastructure and management to the presence of listed and other species.

Basically, the proposed project would profoundly alter the entire Klamath Basin, even though only a relative small portion of the basin developed the agreements. The Draft EIS/EIR must then analyze the impacts to the entire basin and not focus only on the narrowest possible region. It is impossible to assert that altering the mainstem hydrology and ecology will not affect what happens further than a short distance from the mainstem. However, this is exactly what the Draft EIS/EIR does. It is this sort of narrow perspective that NEPA and CEQA were intended to prevent. What this all points to is that the environmental review must include a thorough analysis of how the proposed project may affect farmers and ranchers outside the "FERC boundary." This analysis must include a thorough review of how the new hydrology will affect fishery stocks on the Scott and Shasta Rivers as well as the hydrologic impacts of those rivers, in their existing condition, on the new flows in the Klamath River.

Comment 5 - Envr. Justice

The Draft EIS/EIR Fails to Adequately Assess the Impacts of the Proposed Action on the Agrarian Culture

An important part of the Klamath Basin mosaic is the agrarian culture that has developed since the Nineteenth Century. While the Draft EIS/EIR properly analyzes the impacts of the proposed project on Native American cultures throughout the entire basin, it fails to assess the agrarian culture. This deficiency must be remedied by analyzing how the

Comment 5 cont.

changing face of the Klamath Basin will impact the existing agrarian culture. It is worth noting that the area of analysis of this cultural impact should extend as broadly as the area of analysis for the Native American cultures – namely the entire basin.

Comment 6 - NEPA/CEQA

Additional Studies are Needed to Support the Conclusions in the Draft EIS/EIR

Although much data gathering and analysis has been completed so far, additional information is needed before the Secretary can make an appropriately informed decision about whether to comply with the agreements. This point was raised by the expert panel that drafted the report entitled "Scientific Assessment of Two Dam Removal Alternatives on Coho Salmon and Steelhead" as well as a number of other experts. Consequently, the Secretary must delay his decision until such time as the necessary questions can be answered and the conclusions indicated by this Draft EIS/EIR can be supported.

The Explanation of the Setting is Not Adequate

The clear purpose of the proposed project and the agreements is to make significant alterations to the hydrology and ecology of the Klamath River for the benefit of the Klamath River fisheries, and consequently the communities reliant upon those fisheries. This appropriate objective, one that is shared by Farm Bureau, will be furthered, but not independently achieved this action. And, while it is certainly not the obligation or intention of the proposed action to completely achieve a strong recovery for salmonids, the environmental setting must be adequately comprehensive so that the Secretary can know whether the proposed action will actually have the anticipated effect. In other words, the setting, or some other part of the Draft EIS/EIR, must adequately describe what is happening on the system, particularly to adult salmonids on the mainstem. This is necessary to help the Secretary determine whether the proposed action is in the public interest. The most important piece of analysis missing from the Draft EIS/EIR is how recreational, commercial, and subsistence fishing are affecting, and will affect, anadromous salmonids in the Klamath Basin.

Comment 7 - Proposed Project/Action

The Draft EIS/EIR does not assess how dam removal will interact with the California and Federal Anti-degradation Policies

Both California and the United States have anti-degradation policies that dam removal will interact with both of these policies. While there has been substantial analysis of the water quality impacts of the proposed action, it is not clear what the impacts will be regarding these policies. Consequently, the Draft EIS/EIR should review the water quality issues in light of the California and Federal anti-degradation policies.

Comment 8 - Water Quality

Comment 9 - Fish

Appendix E is Unclear

Section E.3.1.1 of the Draft EIS/EIR is unclear because it does not clearly describe what percentages of the fall run Chinook will be affected by the proposed action. While this section gives certain percentages of fish that will not be affected, it fails to clearly state in the same section the percentage that will be affected. Additionally, the Draft EIS/EIR fails to clearly state what percentage of natural spawners will be affected or what, if any, importance the distinction between natural and hatchery spawners will might be. Additionally, the Draft EIS/EIR fails to make use of the most recent data that is readily available on CDFG's website.[1]

Comment 10 - Fish

Impact to Coho Salmon is Not Sufficiently Analyzed

The Draft EIS/EIR fails to adequately analyze the impact of the proposed dam removal on Coho salmon, a listed species in the Klamath Basin. This inadequacy also is an example of why the analysis area (see above) is not adequate. Farmers and ranchers on in Scott and Shasta River watersheds are exceedingly concerned about the welfare of the Coho salmon. This fish, intrinsically important to many Farm Bureau members, has fueled significant conflict within these watersheds. Seeming to completely disregard the sensitivity the agencies have for Coho in these watersheds, the Draft EIS/EIR appears to dismiss as insignificant the complete extermination of the 2019 mainstem spawning cohort of Coho salmon. This is done apparently by relying on the fact that the number of mainstem spawning Coho is insignificant. This, however, derives too much from the very limited information available. As indicated by the expert panel, additional information is needed to know whether there will be significant impacts to Coho. Before such a determination can be made additional data must be gathered. Also, how this loss will affect species and landowners in the Scott and Shasta River watersheds must also be analyzed.[2]

Conclusion

Farm Bureau appreciates the opportunity to provide these comments on the Draft EIS/EIR.

Very truly yours,

Jack L. Rice
Associate Counsel

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[1] Available at: http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=17948 (viewed 12/28/11)

[2] See NMFS Klamath River Basin 2011 Report to Congress available at: http://www.nmfs.noaa.gov/pr/pdfs/species/klamathriverbasin2011.pdf (12-29-11)

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AO_LT_1230_064-1	Master Response GEN-3 Best Available Information. Master Response GEN-7 Unsubstantiated Information. Master Response GEN-13 Range of Alternatives Considered. Master Response N/CP-18 Process to Select Alternatives for Detailed Analysis. Provisions in NEPA and CEQA require that a project be sufficiently defined in order to inform the public and decision makers of what the Proposed Action is, and in order to conduct public scoping to seek public input on formulation of project alternatives. The agreements framed the extent and nature of the scientific studies completed and underway. The Lead Agencies believe the EIS/EIR is fully compliant with NEPA and CEQA.	No
AO_LT_1230_064-2	Master Response N/CP-18 Process to Select Alternatives for Detailed Analysis. Master Response GEN-7 Unsubstantial Information. A summary of the environmental impacts and proposed mitigation for each impact is summarized in Table 5-1 of the EIS/EIR. Table 5-2 presents the significant and unavoidable impacts of the alternatives. A detailed description of the mitigation for each significant impact is described in Chapter 3 for each resource. Both the KBRA and the KHSA simply identify the general nature of improvements and activities that may occur in the future, and set the framework for the Proposed Action that is addressed in the Klamath Facilities Removal EIS/EIR. That point is made in the very first paragraph of the Draft EIS/EIR (p. 1-1, Chapter 1 Introduction). Neither agreement commits public agencies to a definite course of action with respect to improvements and activities that may ultimately come to fruition. In fact, to the contrary, both agreements specifically state that nothing in the either agreement is intended or shall be construed to be a pre-decisional commitment of funds or resources by public agency party. Nothing in either agreement is intended or shall be construed to predetermine the outcome of any regulatory approval or other action by a public agency party necessary under applicable law in order to implement either agreement – see, specifically, Article 1.6.6 of the KHSA and Article 2.6.6 of the KBRA. Additionally, both agreements specifically contemplate the need for NEPA and CEQA review of improvements and activities that may ultimately occur – see, specifically Article 3.2 of the KHSA and Article 2.2.7 of the KBRA.	No

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AO_LT_1230_064-3	In addition to the action alternatives, the EIS/EIR fully analyzes Alternative 1, the No Action/No Project Alternative. This alternative considers future conditions with the dams in place and no fish passage is installed. All action alternatives are compared to Alternative 1, thereby determining if these alternatives would produce adverse or beneficial effects compared to the dams remaining in place with no fish passage.	No
AO_LT_1230_064-4	Master Responses GEN-1 Comment Included as Part of Record. Master Response GEN-2 Some People Approve of Dam Removal and Others Oppose Dam Removal. With regards to the KBRA, several water conservation and management actions are intended to benefit both anadromous salmonids and endangered sucker populations. A copy of the KBRA is available on the klamathrestoration.gov web page and can be downloaded through this link: http://klamathrestoration.gov/sites/klamathrestoration.gov/files/Klamath-Agreements/Klamath-Basin-Restoration-Agreement-2-18-10signed.pdf. A cornerstone of the KBRA is the agreement to limit diversions to Reclamation's Klamath Project in exchange for certain assurances among the parties in the Oregon water rights adjudication process and with respect to the exercise of certain tribal water rights. A description of the Programmatic Measures included under the KBRA is provided in Section 2.4.3.9 of the EIS/EIR, KBRA – Programmatic Measures. Most of the programs that provide additional water for fish are organized under the Water Programs section of the KBRA. Section 3.8.4.3 of the EIS/EIR provides information regarding water supply and water allocation. The KBRA, which is a component of the Proposed Action, encompasses several programs that could affect water rights and water supply, including the Water Diversion Limitations Program (Program), the On-Project Plan and Drought Plan. The Program provides specific allocation of water for refuges and limitations on specific diversions for the Reclamation's Klamath Project intended to increase water availability for fisheries purposes. The program would be implemented during dry years to increase flows for fisheries by reducing Reclamation's Klamath Project diversion upstream of approximately 100,000 acre-feet. Water diversions could increase by 10,000 acre-feet for irrigation in some years if: 1) dam removal is implemented, 2) 10,000 acre-feet of new storage is created, or 3) Klamath Basin Coordinating Council concurs. Implementation of the diversion limitations would include	No

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	assurances of increased reliability of diversions. The On-Project Plan provides the framework for management of Water Diversion Limitations implementation. While reducing diversions during the driest years would affect water supply for irrigation, it would not affect what is needed for public health and safety. Water may not be available to fulfill some water rights or adjudication claims during dry years; however the On-Project Plan, Drought Plan, and Future Storage Opportunities to be implemented as part of the KBRA would help to offset a portion of these deficiencies. These plans would provide mechanisms for irrigators to plan for water deliveries based on the type of water year. It is likely that health and safety issues related to water supply would be a priority whereas, water for irrigation would likely be less of a priority. The geographic separation between the Water Diversion Limitations and the hydroelectric facility removal actions analyzed above reduce the potential for negative water supply effects generated by this program from contributing to water supply effects generated by facility removal. Reclamation (2012d) conducted an analysis comparing river flows under the No Action Alternative (BO flows) and the Proposed Action (Alternative 2) which includes one of many possible management scenarios for KBRA type flow releases over a fifty year time period. Results of this modeling analysis indicate that the average monthly flows at Iron Gate are generally similar between these two alternatives. The exceptions to this are the months of October to December, where the average flows are about 200 to 400 cfs less under Proposed Action than under the No Action Alternative, and in April, where the flows are about 300 cfs higher under the Dam Removal Alternative than under the No Action Alternative. The annual flow at Keno Dam is generally similar between the two alternatives except for the few driest years on record. In these dry years, the agricultural supply is significantly reduced under the No Action Alternative, whereas the agricultural supply is much less severely impacted under the Dam Removal Alternative; therefore, more flow is released to the Klamath River under the No Action Alternative than under the Dam Removal Alternative. At Iron Gate Dam from July through November, the flows are commonly around 800 cfs under the Dam Removal Alternative during these extremely dry years whereas the flows are more commonly between 1000 and 1300 cfs under the No Action Alternative. To insure adequate protection of Chinook salmon spawning and incubation habitat a minimum based flow of 800 cfs was incorporated into the hydrology modeling effort for the period from October through February (Reclamation 2012d, Appendix E).	

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	Establishment of this base flow insures that at least 75 percent or greater of the available Chinook salmon spawning habitat from the R-Ranch study site downstream to the Brown Bear study site is provided in every year (Hardy et al. 2006). Reclamation (2012d) also found that the 50 percent exceedance flows (normal years) under the Dam Removal Alternative are about 5 to 15 percent greater for the months of April and June to August and about 15 to 20 percent less for the months of October to December. The 90 percent exceedence flows (dry years) are similar for the two alternatives from March to September, but for the months of October to February, the No Action Alternative 90 percent exceedance flows are about 20 to 30 percent larger (290 to 360 cfs larger). In the Effects Determinations Section (3.3.4.3), the EIS/EIR states: - "Over the long term, the Proposed Action would alter the hydrograph so that the duration, timing, and magnitude of flows would be more similar to the unregulated conditions under which the native fish community evolved (Hetrick et al. 2009). While mean annual flows would not substantially change from existing flows due to the lack of active reservoir storage (Stillwater Sciences 2009b; Reclamation 2012d), flow variability would increase." - "The Proposed Action would establish a flow regime that more closely mimics natural conditions in the lower Klamath River. Flows under the Proposed Action are intended to benefit fall-run Chinook salmon. Hetrick's analysis of KBRA type flows showed the greatest benefits would be in years when production was low (Hetrick et al. 2009). Implementing either the KBRA type flows or the Hardy et al. - (Hardy et al. 2006) Phase II flow recommendations was predicted to decrease the occurrence of poor production years in the future by two-thirds. This would have significant positive consequences for Chinook salmon given their life cycle in the Klamath River (Hetrick et al. 2009). Dam removal would also cause water temperatures to become warmer earlier in the spring and early summer and cooler earlier in the late summer and fall, and to have diurnal variations more in sync with historical migration and spawning periods (Hamilton et al. 2011). These changes would result in water temperature more favorable for salmonids in the mainstem."	

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	In order to clarify one potential misconception, under KBRA Section 1.1.2, Federal agencies, including the NOAA Fisheries Service and the USFWS, are not parties to the KBRA until enactment of legislation that authorizes and directs certain Federal agencies to become parties. This legislation has not been enacted; thus, NOAA Fisheries Service and USFWS are not yet parties to the KBRA. When such legislation is enacted and certain Federal agencies become parties to the KBRA, there are a number of sections of the KBRA that clarify that Federal agencies must comply with all applicable laws, regulations, and other legal requirements, including the ESA, when implementing the KBRA (see, for example, KBRA Sections 2.1, 2.2, and 7.4.3). Section 22.5 of the KBRA specifically clarifies that the KBRA does not supercede NOAA Fisheries Service and USFWS' obligations under the ESA and related regulations. In order to clarify a mistake in the comment author's quotation of this section, Section 22.5 of the KBRA provides, "By entering into this Agreement, NOAA Fisheries Service and USFWS are not prejudging the outcome of any process under the ESA and NOAA Fisheries Service and USFWS implementing regulations, and NOAA Fisheries Service and USFWS expressly reserve the right to make determinations and take actions as necessary to meet the requirements of the ESA and implementing regulations." In addition, the KBRA specifically describes processes that are available and will be used by parties to comply with requirements under the ESA (see, for example, KBRA Sections 22.1 and 22.2). As described in Section 3.3.4.3 of the EIS/EIR, the Proposed Action, which includes implementation of the KBRA, would result in flows more favorable to all life stages of salmonids, and would provide suitable habitat for resident riverine species, anadromous fish and lamprey in hydroelectric reach from the upstream end of J. C. Boyle Reservoir to Iron Gate Dam. In the lower Klamath River below Iron Gate Dam, over the long term, the Proposed Action would alter the hydrograph so that the duration, timing, and magnitude of flows would be more similar to the unregulated conditions under which the native fish community evolved (Hetrick et al. 2009). The Proposed Action would have a beneficial effect on EFH for Chinook and coho salmon in the long term. The fact that coho and Chinook salmon historically occupied the hydroelectric reach and the lower Klamath is also evidence that restoring flows to mimic historic patterns will be sufficient for maintenance and recovery of fish populations. As discussed in Section 3.3.4.3 of the EIS/EIR under Alternatives 2 p. 3.3-126) and 3, the KBRA is expected to provide benefits to	

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	sucker populations through: nutrient reduction, reconnecting former wetlands to Agency Lake, reconstructing quality rearing habitat for early life stages, and restoring spring shoreline spawning habitat among others. The KBRA speaks to the settlement of long-running disputes concerning the use of Klamath Basin water for irrigation, fish and wildlife. It also speaks to water quality improvements in the basin. Addressing the water-related issues within the basin is expected to benefit all species of resident fish, including suckers. The EIS/EIR concludes that based on improved habitat quality, the effect of the Proposed Action would be beneficial for Lost River and shortnose sucker populations in the Long Term (EIS/EIR 3.3-127). The Resident Fish Expert Panel concluded that a “dams out plus KBRA” management scenario provides promise for preventing extinction of sucker species and for increasing overall population abundance and productivity (Buchanan et al. 2011). As part of the Proposed Action, the Klamath River would more closely mimic the natural hydrograph. The removal of the dams could also provide habitat for anadromous fish (Hetrick et al. 2009). In the absence of the reservoirs, hydraulic residence time in this reach would decrease from several weeks to less than a day, and water quality would also be improved by nutrient assimilation in this reach (Hamilton et al. 2011). Evaporation from the surface of reservoirs (about 11,000 acre-feet [Reclamation 2012d]) would be reduced, adding to the river flow. The reservoir drawdowns would allow tributaries and springs such as Fall, Shovel, and Spencer Creeks and Big Springs to flow directly into the mainstem Klamath River, creating patches of cooler water that could be used as temperature refugia by fish (Hamilton et al. 2011). Water quality conditions would also improve further downstream in the Hydroelectric Reach. From Copco 1 to Iron Gate Reservoir, removal of the Four Facilities would result in a 2-10oC decrease in water temperatures during the fall months and a 1-2.5oC increase in water temperatures during spring months (PacifiCorp 2004a, Dunsmoor and Huntington 2006, NCRWQCB 2010a, Perry et al. 2011; see also Draft EIS/EIR, Section 3.2.4.3.2.1), an increase dissolved oxygen concentrations (PacifiCorp 2004b, NCRWQCB 2010; see also Draft EIS/EIR, Section 3.2.4.3.2.4), and eliminate reservoir habitat that creates ideal conditions for seasonal nuisance and/or noxious phytoplankton blooms (see Draft EIS/EIR, Section 3.4, Algae). Removing the dams would allow access to at least 49 tributaries upstream of Iron Gate Dam that could provide 420 miles of habitat for anadromous fish (DOI 2007), including groundwater-fed areas resistant to water temperature increases caused by changes in climate (Hamilton et al. 2011). In addition, the mainstem	

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	downstream of Iron Gate Dam would reflect natural temperature regimes (Hamilton et al. 2011). An additional 22.4 miles of riverine and riparian habitat would improve water quality by restoring the nutrient cycling and aeration processes provided by a natural channel. These improvements resulting from the Proposed Action would likely moderate the anticipated stream temperature increases resulting from climate change. The National Academy of Sciences, NRC reviewed the Instream Flow Study Report (Hardy et al. 2006) in their publication "Hydrology, ecology, and fishes of the Klamath River Basin" which is cited as NRC 2008 in the Draft EIS/EIR. According to the NRC, the most important outcome of the Instream Flow Study was that it indicated increases in existing flows downstream from Iron Gate Dam probably would benefit fish populations (NRC 2008, p. 194). Table 3.3-4 (Draft EIS/EIR, Section 3.33.3, p. 3.3-43) presents the minimum flows below Iron Gate Dam and lake elevations for Upper Klamath Lake from the 2010 BO for coho salmon. The minimum flows required by the current BO are similar to those recommended in Hardy et al, 2006. Maintaining minimum flows as described in Hardy 2006 would contribute to restoration of salmonids in the Klamath Basin, but as the NRC noted, that would not address the other factors that are causing the decline of anadromous fish populations. The ability of the mainstem Klamath River to support the rearing and migration of anadromous species is reduced by periodic high water temperatures during summer, poor water quality (low DO and high pH; see Sections 3.2.3.5 and 3.2.3.6), and disease outbreaks during spring. Habitat quality in the tributaries is also affected by high temperatures(Draft EIS/EIR Section 3.3.3.2, p. 3.3-27). As described in Section 3.3.4.3 of the EIS/EIR, Alternatives 2 and 3 which includes implementation of the KBRA, would result in flows more favorable to all life stages of salmonids, and would provide suitable habitat for resident riverine species, anadromous fish and lamprey in hydroelectric reach from the upstream end of J. C. Boyle Reservoir to Iron Gate Dam. In the lower Klamath River below Iron Gate Dam, over the long term, the Proposed Action would alter the hydrograph so that the duration, timing, and magnitude of flows would be more similar to the unregulated conditions under which the native fish community evolved (Hetrick et al. 2009). Master Response AQU-21 NRC Dam Removal Help Coho. The effects of the Proposed Action to coho salmon, their designated critical habitat and coho essential fish habitat are described in Section 3.3.4.3., under Effects Determinations, and Appendix E of the EIS/EIR. The timing of upstream migration of coho salmon in the main stem Klamath River is described to span	

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	from September to January. It is anticipated that as a result of the Proposed Action, the upper Klamath River, mid-Klamath River, Shasta River, Scott River, Salmon River, and lower Klamath River coho salmon population units would have an increase in abundance, productivity, population spatial structure, and genetic diversity. In general, free flowing conditions as per the Proposed Action, would likely provide optimal efficiency, decrease outmigrant delay, and increase concomitant adult escapement (Buchanan et al. 2011a). The EIS/EIR found that the effect of the Proposed Action would be significant for the coho salmon from the Upper Klamath River, Mid-Klamath River, Shasta River, and Scott River population units in the short term and the effect of the Proposed Action would be beneficial for the coho salmon from the Upper Klamath River, Mid-Klamath River, Lower Klamath River, Shasta River, Scott River, and Salmon River population units in the long term as a result of increased habitat availability and improved habitat quality.	
AO_LT_1230_064-5	NEPA and CEQA require an analysis of impacts on historical and cultural resources (40 CFR §1502.16(g); CEQA Guidelines § 21084.1). Analyzing environmental effects on Indian Tribes is a requirement of NEPA (40 CFR §1502.16(c)). Analyzing environmental impacts on the Agrarian Culture is not a specific requirement of NEPA or CEQA; therefore the EIS/EIR does not analyze this specific culture in the Cultural Resources section. However, the Draft EIS/EIR does examine impacts on Agricultural Resources (See Chapter 14), Socioeconomics (Chapter 3.15), and Environmental Justice (Chapter 3.16).	No
AO_LT_1230_064-6	Master Response GEN-3 Best Available Information.	No
AO_LT_1230_064-7	Section 3.3.3 describes the existing conditions and affected environment related to aquatic resources in the Klamath Basin. The purpose of this section is to provide enough detail to understand changes associated with the alternatives, and the Lead Agencies believe the level of detail is appropriate. Section 3.3.4.3, Alternative 1: No Action/No Project Alternative describes future conditions if no project is implemented, and this section describes how ongoing activities could affect anadromous salmonids into the future.	No
AO_LT_1230_064-8	If the dam removal alternative moves forward it will require both CWA Section 404 and 401 permits that will entail water quality certification by relevant agencies. As part of the water quality certification review of both Federal (CWA) and state CA Porter-Cologne Clean Water Act provisions for anti-degradation will be considered as part of the permitting process.	No

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AO_LT_1230_064-9	The comment mistakenly refers to Section E.3.1.1, rather than Section 3.2.1 of Appendix E. Section E.3.2.1 of Appendix E states: "Much of the overall effect of the Proposed Action on fall-run Chinook salmon will depend on the relative proportion of mainstem spawners during the fall of 2019, prior to the January 2020 initiation of facility removal. Based on redd surveys from 1999 through 2009 (Magneson and Wright 2010), an average of around 1,700 redds could be affected. Based on escapement estimates in the Klamath Basin from 2001 through 2009 (CDFG, unpublished data) this would be around 8 percent of all anticipated redds in the Basin in 2019. Based on the proximity to the Iron Gate Hatchery, it is expected that much of the redds affected will be of hatchery origin." In the analysis presented in the EIS/EIR it was assumed that an average of 9,200 chinook spawners would construct about 4,600 redds. A more accurate estimate of the number redds constructed within the mainstem is provided by the USFWS (Magneson and Wright 2010) and this number is used in the Final Analysis. Although the number of redds present has changed as a result of this new information, the total estimate of the number of adult Chinook salmon spawners remains the same. Text in the EIS/EIR has been updated with this new information to more accurately reflect the potential impact to spawning Chinook salmon in the mainstem Klamath River downstream of Iron Gate Dam. The description and narrative used to depict the information presented in this section states that approximately 8 percent of the fall Chinook spawners, and resulting redds could be affected by the Proposed Action. Additionally, the percentage of mainstem spawners (8 percent) used to estimate the relative proportion of mainstem spawners expected in 2019 is based on a mark and re-sight methodology. The CDFG data set referred to in the comment provides estimated numbers of fall Chinook returning to portions of the Klamath Basin from 1978 through 2010, but this data is not applicable to the mark and re-sight methodology used to estimate the relative proportion of mainstem spawners which began in 2001.	
AO_LT_1230_064-10	The effects of the Proposed Action to coho salmon, their designated critical habitat and essential fish habitat are described in the Draft EIS/EIR in Section 3.3.4.3., under Effects Determinations, and in Appendix E (Potential Suspended Sediment Effects on Anadromous Fish in the Klamath Basin) and Appendix F (Potential Bedload Sediment Effects on Anadromous Fish in the Klamath Basin). The Draft EIS/EIR found that the effect of the Proposed Action would be significant for the coho salmon from the Upper Klamath River, Mid-Klamath River, Shasta	

Comment Author	Rice, Jack
Agency/Assoc.	California Farm Bureau Federation
Submittal Date	December 30, 2011

Comment Code	Comment Response	Change in EIS/EIR
	River, and Scott River population units in the short term and the effect of the Proposed Action would be beneficial for the coho salmon from the Upper Klamath River, Mid-Klamath River, Lower Klamath River, Shasta River, Scott River, and Salmon River population units in the long term as a result of increased habitat availability and improved habitat quality. Master Response AQU – 6A Expert Panel Coho, Steelhead and Chinook. Master Response AQU – 21 NRC Dam Removal Help Coho. Section (3.3.4.3), the Draft EIS/EIR states: “Over the long term, the Proposed Action would alter the hydrograph so that the duration, timing, and magnitude of flows would be more similar to the unregulated conditions under which the native fish community evolved (Hetrick et al. 2009). While mean annual flows would not substantially change from existing flows due to the lack of active reservoir storage (Stillwater Sciences 2009b; Reclamation 2012d), flow variability would increase.” There are a number of sections of the KBRA that clarify that Federal agencies must comply with all applicable laws, regulations, and other legal requirements, including the ESA, when implementing the KBRA (see, for example, KBRA Sections 2.1, 2.2, and 7.4.3). Section 22.5 of the KBRA specifically clarifies that the KBRA does not supercede NOAA Fisheries Service and USFWS obligations under the ESA and related regulations. In order to clarify a mistake in the comment authors quotation of this section, Section 22.5 of the KBRA provides, “By entering into this Agreement, NOAA Fisheries Service and USFWS are not prejudging the outcome of any process under the ESA and NOAA Fisheries Service and USFWS implementing regulations, and NOAA Fisheries Service and USFWS expressly reserve the right to make determinations and take actions as necessary to meet the requirements of the ESA and implementing regulations.” In addition, the KBRA specifically describes processes that are available and will be used by parties to comply with requirements under the ESA (see, for example, KBRA Sections 22.1 and 22.2). Regardless of the outcome of the Secretarial Determination, future Federal actions influencing coho salmon or their critical habitat will be subject to interagency consultations under Section 7 of the ESA to insure those actions are not likely to jeopardize the continued existence of the Southern Oregon Northern California Coast (SONCC) Evolutionary Significant Unit (ESU) of coho	

Comment Author	Rice, Jack
Agency/Assoc.	California Farm Bureau Federation
Submittal Date	December 30, 2011

Comment Code	Comment Response	Change in EIS/EIR
	salmon or result in the destruction or adverse modification of its designated critical habitat.	

AO_LT_1229_056

ecotrust

December 29, 2011

Ms. Elizabeth Vasquez
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

Mr. Gordon Leppig
California Dept. of Fish and Game
Northern Region
619 Second Street
Eureka, CA 95501

Re: Klamath Facilities Removal Draft EIS/EIR Comments, submitted online and via email to KlamathSD@usbr.gov

Dear Ms. Vasquez and Mr. Leppig:

Ecotrust submits the following comments in strong support of Alternatives 2 and 3 in the Klamath Facilities Removal Draft EIS/EIR.

Ecotrust's mission is to inspire fresh thinking that creates economic opportunity, social equity and environmental well-being. Because social, economic and environmental conditions are all interconnected and interdependent parts of a larger system of life support, only systemic solutions solve our systemic problems.

In early 2006 Ecotrust authored a study, the goal of which was to identify and begin to quantify the likely economic impacts, both positive and negative, that removal of the four lower Klamath dams would have on local stakeholders, with a particular focus on Siskiyou County as three of the four dams being considered for removal are located within its borders.[1] While noting that dam removal may result in negative impacts as far as increased electrical rates and declining property values due to loss of lake views, the study predicted positive economic impacts for the majority of the region's stakeholders.[2] The wealth of updated studies and data in the Draft EIS/EIR build upon this preliminary study, supporting the conclusion that dam removal will advance the health and resilience of the Klamath Basin in order to restore the suite of economic, social and environmental benefits that the region's stakeholders depend on.

Four federally recognized Tribes depend on the Klamath River for cultural and subsistence purposes, farmers and ranchers use the river for irrigation, and commercial fishing communities

[1] See http://www.ecotrust.org/nativeprograms/siskiyou_assessment.html, last accessed Nov. 21, 2011.
[2] Id.

depend on Klamath salmon for their livelihood. For many years, competing demands on limited water resources have led to disputes and ongoing crises for Klamath communities, including fishing closures, fish kills, and irrigation shut-offs. Status quo management of the region's water resources has not been able to resolve conflicts among stakeholders or deal with cumulative effects of management deficiencies.

In recognition of this problem, representatives of more than 40 organizations, including three of the four Tribes, farmers, fishermen, conservation organizations, irrigators, counties, the states of Oregon and California, and federal agencies came together to develop two connected agreements in an effort to resolve many of the Klamath's deep-seated natural resource-related issues. These two agreements are the Klamath Hydroelectric Settlement Agreement (KHSA) and the Klamath Basin Restoration Agreement (KBRA). The KHSA provides a process for environmental review, additional studies and a decision by the Secretary of the Interior regarding whether removal of the four dams owned by PacifiCorp will: a) advance restoration of salmon in the Basin; and b) is in the public interest, including consideration of potential impacts on affected local communities and Tribes. The KBRA is linked to the KHSA and is a watershed-wide program to restore fisheries, improve water quality and provide water supply certainty to communities and water users in the Basin. These agreements represent a remarkable effort by diverse regional stakeholders to set aside ideological debates and focus on managing the ecosystem as a whole and work toward protecting everyone's collective interests.

Consistent with the KHSA and the connected KBRA, the proposed action in the Draft EIS/EIR is to remove the four dams owned by PacifiCorp with the purpose of achieving a free flowing river condition and full volitional fish passage as well as other goals expressed in the two agreements.[3] Of the five Alternatives in the Draft EIS/EIR, both Alternative 2 (full facilities removal of the four dams) and Alternative 3 (partial facilities removal of the four dams) would meet the conditions of the KHSA and would implement the KBRA.

With respect for the hard work of the diverse group of Klamath Basin stakeholders on the KHSA and KBRA and the anticipated net progress represented by these agreements toward improving the region's economic, social and environmental resilience, Ecotrust supports both Alternatives 2 and 3. The thoroughness of the data included in the Draft EIS/EIR supports this conclusion.

Economics

In addition to the fact that dam removal was determined to be less costly than continued operation, the KBRA identified 112 actions that could result in new economic activity in the Klamath Basin, including fisheries restoration, water and power programs, and economic development for Tribes and counties in the Klamath Basin.[4]

Cost of dam removal vs. continued dam operation

[3] Draft EIS/EIR § 1.4.2.1, at 1-29.
[4] Draft EIS/EIR § 3.15-37.

PacifiCorp Hydroelectric Service demonstrated that the costs to relicense and continue operation of the Klamath dams with required fish passage structures would be far more expensive to rate payers than implementation of the KHSA, with an estimated $290 million for dam removal, compared to an estimated cost in excess of $400 million to re-license the dams.[5]

Fisheries restoration

In addition to estimated new fishing jobs due to restored fisheries, other existing data illustrates further economic boosts that are likely to result from fisheries restoration, including a study released in 2005 on the potential economic impact of restored salmon and steelhead fishing in Idaho, concluding that a restored salmon and steelhead fishery would bring almost $550 million every year to Idaho's economy.[6] This estimate included direct spending by fishermen and the ripple effects of related, indirect expenditures within the region.[7]

Another study, released in 2009, found that enhanced protection of salmon habitats within critical streams that flow into the Wild & Scenic Rogue River would lead to significant economic benefits for both present and future generations.[8] Protecting salmon habitats also helps to improve the quality of other recreational activities, such as fishing and boating, which enhance the economic value of the region's natural resources.[9]

The results presented in both studies demonstrate that restoring high value fisheries like salmon provide large net benefits to regional stakeholders and to society as a whole.

Economic Development for Tribes and Counties

Implementation of the KBRA is intended to address economic development issues in counties; and efforts to support tribal fishing and long-term economic self-sufficiency.[10] As part of this, Klamath County would work to undertake a study and projects for economic development associated with the restoration of the Klamath River and reintroduction of anadromous fisheries into Klamath County and the headwaters of the Klamath River in Lake County, Oregon.[11]

Long-term tribal economic revitalization projects include the establishment of an interim fishing site for the Klamath Tribes and the Mazama Forest Project, which would help the Klamath Tribes buy back a portion of their former 1.2 million acre reservation.[12]

Employment (construction, fisheries, agriculture)

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[5] Draft EIS/EIR at ES-13.
[6] See http://www.wildsalmon.org/images/stories/sos/PDFs/FishingEconReport.05.pdf, last accessed Nov. 21, 2011.
[7] Id.
[8] See http://www.americanrivers.org/assets/pdfs/wild-and-scenic-rivers/the-economic-value-of-rogue.pdf, p. 15, last accessed Nov. 21, 2011.
[9] Id.
[10] Draft EIS/EIR at ES-19.
[11] KBRA § 27.3.1.
[12] KBRA § 33.

Full or partial removal of the dams and the resulting restoration of the Klamath Basin ecosystem would lead to the creation of a number of full-time, part-time and temporary jobs. While up to 49 annual dam operations jobs and up to 14 white-water rafting jobs are estimated to be lost by dam removal, the removal project is estimated to result in 1,400 jobs during the year of construction and implementation of the KBRA's restoration programs is estimated to result in 4,600 jobs over 15 years of implementation.[13] An average of over 450 new annual commercial fishing jobs are estimated to result from dam removal and ecosystem restoration. And due to increased reliability of water supply and the resulting boost to gross farm income, between 70 to 695 new average annual jobs are estimated for the region's farming sector.[14]

Social Equity

Implementation of the KBRA is projected to contribute to public welfare and sustainability of the region's communities through reliable water supply, affordable electricity, and programs to offset potential property tax losses.[15]

Water

Adherence to the KBRA ensures that the Klamath, Karuk, and Yurok Tribes agree not to exercise water right claims that would conflict with water deliveries to Reclamation's Klamath Project water users and for project water users to accept reduced water deliveries. As a result, there would be more support for fisheries restoration programs, greater certainty about water deliveries at the beginning of each growing season, and agreement that certain of the parties will work collaboratively to resolve outstanding water-right contests pending in the Oregon Klamath Basin Adjudication process.[16]

Fisheries

Klamath Basin dam removal and the KBRA's habitat restoration activities are expected to lead to an increase in commercial and sport harvests of Chinook salmon of 46.5 percent and a tribal harvest increase of 54.8 percent.[17] The revitalization of the salmon fishery is of high cultural and spiritual importance to the Tribes. Dam removal and restoration actions would enhance the ability of the Tribes in the Klamath River Basin to conduct traditional ceremonies and other culturally important traditional practices. In addition, spring Chinook salmon are prized for their nutritional value and beneficial fat content and would provide quality benefits to the Tribal subsistence and ceremonial fishery while increasing opportunities for traditional, healthy food consumption.[18]

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[13] Draft EIS/EIR § 3.15.
[14] Id.
[15] Draft EIS/EIR at ES-19.
[16] Id.
[17] Draft EIS/EIR § 3.15.
[18] Draft EIS/EIR § 3.15.

Environment

Fisheries

At one time, the Klamath was one of the largest salmon producing rivers in the lower 48 with historic salmon and steelhead returns estimated to range from 650,000 to 1,000,000.[19] Klamath salmon and steelhead populations have since fallen to critically low population levels, estimated to have declined as much as 96 percent from historical levels.[20] Protecting and restoring the region's natural ecosystem services, including salmon populations, is critically important to local stakeholders.

Water Quality

Dam removal would achieve elimination of the reservoir's toxic algal blooms, lower fall water temperatures, and improve dissolved oxygen concentrations. These improvements in water quality are essential to boosting the recovery of the region's fisheries. In addition to increases in Chinook salmon noted above, restored water flows would enable steelhead trout to access approximately 420 miles of historical habitat, and coho salmon are expected to reclaim 68 miles of habitat which would contribute to the recovery of this federally listed species.[21] With coho salmon federally listed as threatened and Lost River and shortnose suckers listed as fully protected species under California Fish and Game code, long-term water quality restoration activities would have the added benefit of accelerating compliance with state and federal management goals and regulations under the Endangered Species Act and the California code. Restoration activities would also help to achieve water quality goals under the Clean Water Act.

Wildlife Refuges

Implementation of the KBRA would bring a long overdue element of fairness to the water allocation system in the basin by ensuring adequate water supply is available for allocation to the region's wildlife refuges. A more reliable source of cool inflow would benefit aquatic species by influencing temperature, dissolved oxygen, algal growth, and the dilution of contaminants.[22]

Conclusion

Comment 1 - Approves of Dam Removal

Ecotrust recognizes the investment of the principal parties in the Klamath Basin to seek new solutions that provide for social, economic and environmental stability in the Basin and in the region. Leadership from tribal governments, fishermen, irrigators, and local, state and federal governments have dedicated many years and large amounts of funding to bring the region to this

[19] http://www.ecotrust.org/nativeprograms/Siskiyou_Co_Economic_Assessment.pdf citing J.B. Hamilton, G.L. Curtis, S.M Snedaker and D.K. White. 2005. Distribution of anadromous fishes in the Upper Klamath River Watershed prior to hydropower dams—A Synthesis of the historical evidence. *Fisheries* 30 (4):11.
[20] Draft EIS/EIR at Table 3.3-1.
[21] Draft EIS/EIR at 5-3.
[22] Draft EIS/EIR at 4-87.

Comment 1 cont.

point of departure from past, failed management and governance systems. This bottom-up partnership is both innovative and commendable.

In the Klamath Basin it is time to resolve long-standing disputes, rebalance water allocations with much needed certainty for water users, and set a new course that consciously seeks to avoid the predictable catastrophes such as the 2001 water shut-off, the 2002 massive fish kill, and the 2006 commercial salmon fishing closures. The Klamath has received enough negative national attention and struggled long enough. The community members of the Klamath basin are now ready to lead and demonstrate a new approach to the world. Ecotrust is hopeful that the recent historic agreements reached in the Basin will lead to decisions that result in long-term investements to restore the region's natural capital, create new jobs and sustain important livelihoods, create new social equity and establish a new order of community and environmental resilience.

Ecotrust appreciates the opportunity to provide these comments. We urge a final decision to adopt full or partial removal of the four dams represented by DEIS Alternatives 2 and 3.

Sincerely,

Megan Mackey, Policy Associate
Ecotrust

Richard W. George, Manager
Policy and Indigenous Affairs
Ecotrust

Cc: Klamath Tribes Chairman Gary Frost
Hoopa Valley Tribe Chairman Leonard E. Masten, Jr.
Yurok Tribe Chairman Thomas P. O'Rourke, Sr.
Karuk Tribe Chairman Russell Attebery

Comment Author	Richard, George & Mackey, Megan
Agency/Assoc.	Ecotrust
Submittal Date	December 29, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1229_056-1	Comment Noted. Master Response GEN-2 Some People Approve of Dam Removal, Others Oppose Dam Removal.	No

AO_EM_1124_037

From: Paul Ringo[SMTP:PRINGO@ATT.NET]
Sent: Thursday, November 24, 2011 1:42:33 PM
To: BOR-SHA-KFO-Klamathsd
Subject: Klamath river comments
Auto forwarded by a Rule

Dear Sirs,
Please accept these comments. I made an error in the email address when I submitted these comments initially. I sent the message to usbr.com by mistake. Thank you for your graciousness.

Paul Ringo
Sabine Riverkeeper
P.O. Box 345
Merryville, La 70653

Ms. Elizabeth Vasquez,
Bureau of Reclamation,
2800 Cottage Way, Sacramento, CA 95825
KlamathSD@usbr.gov

Comment 1a - Approves of Dam

Dear Sirs,
On behalf of the Sabine Riverkeeper, I would like to submit comments regarding the Klamath river proposals. The Sabine Riverkeeper is a non-profit member of the Waterkeeper Alliance. We join in agreement with the Klamath Riverkeeper in endorsing Alternative 2. In our view, Alternative 2 is the only alternative which would proportionally mitigate for the water quality, environmental justice and economic impacts to downstream communities due to the Klamath dams.

Comment 2 - ITAs

The tribes in the Klamath basin were not given the opportunity to comment in the original proposals for building dams on the river. We ask that they be recognized as those with primary concerns and authority in the basin. The interruption of water flow that has resulted in salmon declines have affected their diets and the overall health of the native peoples. This is perhaps the most important consideration in the decision about removing the dams. The health of the people is a reflection of the health of the river.

Comment 1b - Approves of Dam Removal

We support removal of the dams as proposed in alternative 2 as well as the restoration agreement. The Karuk tribe has a significant history and relationship with the salmon through history. The dams have interrupted the salmon reproduction which directly affects the Karuk people. Toxic algae blooms as a result of chemical discharges have resulted in health problems. These same chemicals can bioaccumulate and change the overall health of the river and the people that live near it. It is a slow killing process that must be corrected. In our experience, we have found that as flows in our river have been restored to traditional levels, the river system itself is restored. The biological life is restored as well as plant life. Recreational opportunities and tourism money

replaces destructive economic practices. A restoration of traditional values follows because the proper order is re-established.

Healthy fish runs mean a healthier economy as fish habitat is restored. Strong commercial fishing and sport fishing promotes a healthy sustainable economic process that no other place in the world can claim. I sincerely urge you to take advantage of what you h ave in a difficult economic climate. Take whatever steps you can now to preserve what you have that is unique and created specifically for your climate and your people. The agricultural and economic climate in your area is yours to manage wisely. Rest assured the the corporate mentality that has brought about this series of problems will not have the incentive to care for anything outside itself.

As an outsider, I thank you for the opportunity to express our views. Your river is one that is a treasured resource. Dams that were built in the past were built with greed as the motive without regard for the impacts it would have over years. The destruction of entire communities and cultural ways of life has been heartbreaking in our area. Streams where families gathered for picnics on Saturday afternoons and baptisms on Sunday morning have been defiled almost beyond recognition. There is but one way to bring about restoration. That is to admit our mistakes and take positive measures toward returning to sustainable roots that honor people the the Creator of all.

Paul Ringo
Sabine Riverkeeper
P.O. Box 345
Merryville, La. 70653

Comment Author	Ringo, Paul
Agency/Assoc.	Sabine Riverkeeper
Submittal Date	November 24, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_EM_1124_037-1	Comment Noted. Master Response GEN-2 Some People Approve of Dam Removal, Others Oppose Dam Removal.	No
AO_EM_1124_037-2	The KHSA was developed by representatives of 45 organizations including federal agencies, the States of California and Oregon, PacifiCorp, Indian Tribes, counties, irrigators, and conservation and fishing groups in order to end one of the most economically, environmentally, and culturally devastating water disputes in the western United States. The KHSA established a process for a Secretarial Determination whether removal of J.C. Boyle, Copco 1, Copco 2, and Iron Gate Dams (1) will advance restoration of salmonid (salmon, steelhead, and trout) fisheries of the Klamath Basin, and (2) is in the public interest, which includes but is not limited to, consideration of potential impacts on affected local communities and Tribes. The KBRA is a basin-wide approach to addressing the current resources challenges. The complete KBRA package entails various commitments and actions that have been or will be proposed and/or undertaken in the basin by federal, state, local, tribal, and private interests. Tribal programs of the KBRA include economic development for local tribes, regulatory assurances that adverse impacts would be minimized and tribal fisheries and natural resource would be conserved. All federally recognized tribes in the Klamath Basin were consulted on a government-to-government basis during the development of the Facilities Removal EIS/EIR. Both current effects of dams on trust resources, traditionally used resources, and cultural values associated with these resources and potential effects of dam removal on these resources and cultural values are documented in Section 3.12 of the Draft EIS/EIR.	No

AO_LT_1229_054

American Rivers
Thriving By Nature

December 29, 2011

Ms. Elizabeth Vasquez
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825
KlamathSD@usbr.gov

Mr. Gordon Leppig
California Department of Fish and Game
619 Second Street
Eureka, CA 95501
KSDcomments@dfg.ca.gov

RE: American Rivers Comments on Klamath Facilities Removal Public Draft Environmental Impact Statement and Environmental Impact Report

Dear Ms. Vasquez and Mr. Leppig:

Comment 1 - Approves of Dam Removal

American Rivers appreciates the opportunity to comment on the draft Klamath Facilities Removal Environmental Impact Statement/ Environmental Impact Report (DEIS). The comprehensive analysis presented in DEIS clearly indicates dam removal is in the public interest and will advance the restoration of steelhead, salmon and other fish species in the Klamath Basin. The DEIS provides the necessary basis for the Secretary of the Interior to make an affirmative Secretarial Determination in March of 2012, as set forth in the Klamath Basin Restoration Agreement and Klamath Hydropower Settlement Agreement ("Klamath Agreements").

American Rivers supports Alternative 2, Full Facilities Removal of Four Dams, and Alternative 3, Partial Facilities Removal of Four Dams as described in the DEIS. These

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Comment 1 cont.

alternatives equally achieves the purposes of fisheries restoration and improvements to water quality and habitat, among other benefits.

The benefits of removing the four Klamath River dams in concert with the full implementation of the Agreements offers the only feasible path to basin wide fisheries restoration and community health. The DEIS shows the comprehensive project will dramatically increase salmon and steelhead populations and improve commercial and tribal fisheries, create thousands of jobs, secure water deliveries for farmers and ranchers, and recognize and strengthen tribal trust responsibilities. Alternatives 2 and 3 also protect PacifiCorp customers from potentially significantly greater costs associated with other possible project alternatives.

American Rivers actively participated in PacifiCorp's dam relicensing proceeding beginning in 2000, including the Energy Policy Act proceeding in 2006 that upheld the prescriptions for volitional fish passage issued by the National Marine Fisheries Service and Fish and Wildlife Service. American Rivers was actively involved in developing the Klamath Agreements and is a signatory to both.

American Rivers is a national river conservation organization founded in 1973 to restore and protect our rivers for the benefit of people, fish and wildlife. We have 15 offices around the country including Oregon and California, with 75,000 supporters including more than 10,000 in California and Oregon. .

Below we provide comments to selected sections of the DEIS.

2.0 Alternatives

American Rivers supports Alternative 2, Full Facilities removal of Four Dams. This alternative would include the complete removal of dams and associated facilities and the transfer of Keno Dam to the Department of the Interior (DOI). This would result in a free-flowing Klamath River downstream of Keno dam and would provide passage for steelhead and salmon into more than 300 miles of historic spawning and rearing habitat in the Upper Klamath Basin.

The estimated cost of Alternative 2 is $290 million, with $200 million coming from PacifiCorp's ratepayers in Oregon ($187 million) and California ($13 million). The remaining $90 million for dam removal is to be paid by the State of California.

American Rivers also supports Alternative 3, Partial Facilities Removal of Four Dams, because it would achieve restoration and economic objectives equal to Alternative 2 but would cost California only $47 million, which is $43 million less than Alternative 2. This option would remove the majority of the four dams to allow a free-flowing river and volitional fish passage, but would leave certain hydropower facilities and abutments would remain.

Comment 2 - KBRA

Contrary to other commenters to the DEIS, the No Action Alternative and Alternative 4 correctly assume that the obligations under the KBRA that would not otherwise be implemented under separate commitments ("KBRA-only actions") will not be implemented unless the removal of Klamath River dams occurs. The KBRA does not provide for full implementation of its provisions absent dam removal. As a signatory to the KBRA, American Rivers would not support implementation of KBRA-only actions unless Klamath dams were removed because many of its provisions, in particular those related to diversion limitations and associated flows in the lower Klamath and lake levels in Upper Klamath lake, are predicated on the ecological benefits of removing Klamath dams.

Comment 3 - Alternatives

American Rivers recommends the final EIS include a more detailed analysis of Alternative 8, Full Facilities Removal of Four Dams Without KBRA. The value of providing this additional analysis includes: 1) evaluating the most the most likely path to dam removal if the Klamath Agreements terminate; and, (2) distinguishing the significant restoration and economic benefits provided by implementing the KBRA and KHSA.

Comment 4 - Alternatives

American Rivers also recommends a more detailed analysis of why Alternative 10, Fish Bypass: Bogus Creek Bypass, and Alternative 11, Fish Bypass: Alternative Tunnel Route, as unfeasible. In addition to the biological reasons given in DEIS Appendix A (pgs. 4-9 to 11) and in the CDFG 2009 reference, these options are likely unfeasible for many reasons, including: 1) the enormous uncertainty that such complex and unproven techniques would succeed in passing any fish; 2) the need for routing such channels/tunnels across or underneath private property likely would involve condemnation to obtain necessary rights of way and easements; 3) the high costs and uncertainties of these options, especially Alternative 11 which would require tunneling though a significant mountain formation.

3.2 Water Quality

The presence and operation of the PacifiCorp's dams negatively impacts water quality in the Klamath River, and the DEIS makes clear that leaving the dams in place under the No Action/No Project Alternative and other alternatives that retain the dams would cause continued violations of California North Coast Basin Plan water quality objectives and adversely affect beneficial uses in the Klamath River downstream of Iron Gate Dam (see e.g., DEIS pg. 3.2-47 to 52 and 3.2-61 to 66). The four dams slow the transport of water, resulting in increased water temperature and decreased water quality conditions during the summer months. The dams also alter seasonal water temperature patterns disrupting spawning run-timing for fall-run Chinook and coho salmon.

Alternatives 2 and 3 will eliminate the thermal lag caused by water storage in reservoirs levels resulting in water temperatures following more natural patterns of variation and improve dissolved oxygen levels resulting in more suitable conditions for migration, spawning and rearing of anadromous fish.

3.3 Aquatic Resources

Sediment transport

American Rivers is encouraged by DEIS findings that although impacts of suspended sediment concentrations and sediment deposition rates would likely prove lethal over the short term, the effect on habitat is anticipated to be short term (see e.g., DEIS pg. 3.3-75 to 99). Moreover, with the implementation of mitigation measures, such as capture and relocation of migrating adults or outmigrating juveniles can significantly reduce short term adverse impacts (see e.g., DEIS pg. 3.3-195 to 201).

Chinook Salmon

Alternatives 2 and 3 are expected to increase Chinook salmon run sizes by over 80 percent. This will also result in expected increases in salmon ocean commercial and sport harvests is also forecasted to increase by 46.5 percent, tribal harvest by 54.8 percent and in-river recreation harvest by 9 percent.

Under the dam removal alternative fall-run Chinook salmon would gain access to the Upper Klamath River basin, including the Sprague, Williamson and Wood Rivers.

Another 49 tributaries would be accessible in the upper basin. All together over 420 miles of additional spawning and rearing habitat will be available Chinook salmon.

Keno Dam and reservoir experiences poor water quality conditions during the summer months with water temperatures exceeding 25 degrees C (77 degrees F). This may prevent fish passage through this area following the removal of the four dams in the lower river. However, there is evidence that Upper Klamath Lake is suitable for Chinook salmon from October through May, suggesting that if fall spawning fish can tolerate the Keno reach, more suitable conditions await in Upper Klamath Lake. Still, poor water quality conditions may necessitate seasonal trap and haul around Keno Reservoir for some life stages of Chinook salmon. The DEIS underscores the benefits to Keno Reservoir water quality with the full implementation of the KBRA. This is one good example of the need to implement both dam removal and the Klamath Basin Restoration Agreement actions to fully achieve basin wide restoration of salmon runs.

The DEIS also highlights the findings of several expert panels on the influence of dam removal and implementation of the KBRA on salmon and steelhead populations. Expert panels agree that dam removal would be a major step forward in increasing salmon and steelhead numbers in the Klamath Basin. Expert panels also underscore the need to implement the KBRA to achieve desired fisheries benefits, especially in the area of above Upper Klamath Lake. Expert panels concluded a fully implemented dam removal and restoration program would achieve the state goal for a "natural sustainable fishery and full participation in harvest opportunities, as well as the overall ecosystem health of the Klamath River Basin".

Coho Salmon

Alternatives 2 and 3 would open up access to 68 miles of historic coho salmon spawning and rearing habitat. This includes the mainstem Klamath River between Iron Gate and JC Boyle dam and tributaries such as Jenny Creek, Shovel Creek and most notably Spencer Creek. Spencer Creek was identified by Dr. Walt Duffy from Humboldt State during a federal hearing on the Klamath Dams in 2006, as the 'most important coho salmon habitat in the project area'. The removal of the four dams will increase Klamath basin wide coho habitat by 5% according to Dr. Duffy.

Fish Disease and Parasites

Alternatives 2 and 3 are expected to decrease the exposure and impacts of disease on salmon and steelhead din the Klamath River. The infection of juvenile outmigrating salmon smolts by parasitic fish disease has been a major contributor to the decline of Klamath River fisheries. The removal of four dams from the river and resultant more natural hydrology patterns and improved water quality conditions will reduce disease impacts on salmon and steelhead. Degraded habitat conditions below the dams have provided ideal habitat for the host polychaete worm which carries the fish disease. Fish eat the worms and become infected. Dam removal will reduce the favorable habitat for the worms and reduce exposure of the disease to fish.

The removal of Iron Gate Dam will allow fish to migrate farther upstream and reduce the concentration of adults below the dam. The greater dispersal of spawning adults upstream will reduce exposure to dense populations of polycheates in the area below Iron Gate Dam.

3.6 Flows and Flood Hydrology

The implementation of dam removal and the KBRA will establish a more holistic way to manage water flows in the Klamath basin. Single species management based on dueling Biological Opinions has created an atmosphere of regulatory legal warfare that has proven to not be of benefit to fish, farmers or communities of the Klamath basin. The proposed flows in the KBRA are better for fish than the current minimum streamflows currently being implemented.

With the removal of the four dams the differences in monthly average flows compared to dams in place is relatively small. Without the dams, however, smaller seasonal fluctuations will be translated downstream and no longer buffeted by the presence of the dams and reservoirs. These flow variations can be important migratory cues for anadromous fish.

Minimum baseflows with the dams gone and the implementation of the KBRA will be improved. The absolute minimum baseflow target under the KBRA at Iron Gate Dam will be approximately 800 cfs. Under typical water year conditions flows are expected to be more than this in the range of 1,000 cfs during the summer months. The KBRA allows for additional water to be release from Upper Klamath Lake when minimum

flow values are not met. This real time operation and flow balancing is one of the benefits of managing flows at a basinwide level. For comparison, flows in 1992 dipped to around 400 cfs during the summer months. In 2002, an extended period of low flows in the 700 cfs range during the late-summer and early fall months resulted in one of the largest fish kills in the recorded with over 60,000 Chinook salmon and steelhead dying in the lower Klamath River. The implementation of dam removal and the KBRA will improve temperature and flow conditions, and real-time water management, and prevent future fish kills.

Flooding Risk

Opponents of Klamath River dam removal suggest that flooding is the inevitable consequence of the loss of the dams, yet in high spring runoff conditions the four lower Klamath River dams only provide approximately ten hours of capacity. The four lower most Klamath dams are not designed to buffer flood flows, they are simply too small to regulate large flows.

Flood flows in the Klamath basin are buffered and managed by operations at Link River Dam on Upper Klamath Lake. Further, the KBRA calls for wetlands restoration on the shores of Upper Klamath Lake adding more flood storage to the system than will be lost by removing the four dams. American Rivers agrees with the DEIS conclusion that there will be "no significant impact" on flooding below Iron Gate dam. There is less than 7% maximum discharge difference between dams in and dams out, so in reality the dams to very little to mitigate large winter flood events.

3.10 Greenhouse Gases/Climate Change

The removal of four hydroelectric dams will result in the loss of locally generated power. However, the amount of this loss must be put into perspective. The Klamath dams generate 169 MW on the books, but according to the Federal Energy Regulatory Commission an average of only 82 MW per year over the past 50 years. Contrast this to PG&E's McCloud-Pit project in Shasta County just to the south of the Klamath Dams, where 5 dams generate over 700 MW of reliable hydropower. The Klamath Dams are not large power producing dams and represent only 1% of PacifiCorp's entire electricity portfolio.

PacifiCorp is already committed to bringing more than 1,400 MW of brand new, cost effective renewable power online by 2015, dwarfing the loss of power from the Klamath dams. American Rivers encourages PacifiCorp and settlement parties to place future renewable power projects in Siskiyou County to further add to the economic benefits of dam removal and the KBRA to the region.

Comment 5 - Land Use

3.14 Land Use

The implementation of Alternatives 2 and 3 will result in the loss of the thee large reservoirs, affecting individuals that live on or near the reservoirs—particularly Copco Lake. The KHSA calls for the transfer of PacifiCorp lands currently inundated by the reservoir to be transferred to the states of California and Oregon. The states do not yet have detailed plans for management of these lands but they are targeted for restoration.

The KHSA calls for the states to pay in-lieu of taxes to the counties for lands that are transferred from private to public ownership. American Rivers encourages the states to provide assurances this will be done. Additionally, American Rivers encourages settlement parties to engage with Siskiyou County and local residents on the use of lands along and underneath the reservoirs.

3.15 Socioeconomics

The DEIS shows that the implementation of Alternatives 2 and 3 will create significant and lasting economic benefits to the Klamath Basin. During the one-year dam removal project a total of 1,400 jobs will be created to dismantle the dams. Implementation of the many programs in the KBRA over a 15-year time period will results in the creation of 4,600 jobs. Employment stemming from increased gross farm income during the modeled drought years is estimated to range from 70 to 695 average annual jobs.

Dam removal would affect property values in varying ways over the short and long-term. American Rivers encourages settlement parties to work with local residents and Siskiyou County to provide mechanisms for compensation for lost property values. The socioeconomic impacts to the landowners around Copco and Iron Gate Reservoir should be addressed and mitigated.

Comment 6 - Real Estate

Conclusion

American Rivers supports Alternative 2, Full Facilities removal of Four Dams, and Alternative 3, Partial Facilities Removal of Four Dams. The DEIS provides the necessary basis for the Secretary of the Interior to make an affirmative Secretarial Determination in March of 2012 and demonstrates that the proposed project will create a path to the restoring of Klamath River fisheries, improving habitat and water quality, and benefiting the many communities that depend on a healthy Klamath River.

Sincerely,

Steve Rothert
Director

Comment Author	Rothert, Steve
Agency/Assoc.	American Rivers
Submittal Date	December 29, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1229_054-1	Comment Noted. Master Response GEN-2 Some People Approve of Dam Removal, Others Oppose Dam Removal.	No
AO_LT_1229_054-2	The Secretary of the Interior will consider this comment along with all others in making his determination relative to the KHSA and KBRA.	No
AO_LT_1229_054-3	Master Response ALT-4 Elimination of Alternative 8 - Dam Removal Without KBRA from Detailed Study.	No
AO_LT_1229_054-4	Appendix A has been revised to include information from the independent reviews of Alternatives 10 and 11 that were completed after this document. The independent reviews support the finding that Alternatives 10 and 11 do not meet the NEPA Purpose and Need/CEQA Project Objectives. Master Response ALT-2 Elimination of Alternative 10 - Fish Bypass: Bogus Creek Bypass and Alternative 11 - Fish Bypass: Alternative Tunnel Routing from Detailed Study, summarizes why Alternative 10 and 11 was not brought forward for detailed analysis in the EIS/EIR. The comment author's points 1, 2, and 3 are also consistent with that analysis and are noted.	Yes
AO_LT_1229_054-5	Master Responses RE-6B and C Disposition of Parcel B Lands. Master Response REC-1 Regional Recreation Resources. Analysis of inland fees paid by the States of California and Oregon to local counties is provided in Draft EIS/EIR Section 3.15.4.2.	Yes
AO_LT_1229_054-6	Master Response RE-2A Changes in Property Values. Master Response RE-3A and C Landowner Compensation.	No

AO_MF_1025-013

Klamath Settlement
EIS/EIR PROCESS

Speaker Card

Please fill out this card and hand it to someone with a name tag if you would like to make a verbal comment of up to three minutes. Your verbal comments will be recorded by a court reporter. All recorded verbal comments, along with written comments, received by November 21, 2011, will become part of the official record. Verbal and written comments are weighted equally. To submit written comments, see reverse side of this card.

Name (please print) LYNN RYAN

Representing ANCIENT FOREST INTERNATIONAL REDWAY, CA.

Notes: WE SUPPORT FULL FACILITIES DAM REMOVAL, ALTERNATIVE 2 the preferred alternative. the KBRA NEEDS ~~WORK~~ improvement, is process + substance to insure there is WATER FOR FISH based on SCIENCE! As per Appendix E-1.

*Please read the speaker guidelines on the back side of this card

Comment 1 - Approves of Dam Removal

Comment 2 - KBRA

Comment Author	Ryan, Lynn
Agency/Assoc.	Ancient Forest International
Submittal Date	October 25, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_MF_1025_013-1	The Secretary of the Interior acknowledges that there are many people who support dam removal and there are many who maintain that the dams should stay in place. There are a range of reasonable alternatives presented in the Draft EIS/EIR; 18 alternatives are presented in the Draft EIS/EIR, five of which are examined in detail using the best available science. There are positive and negative aspects for each of these alternatives. The potential effect of each alternative is discussed in the EIS/EIR and will be fully considered by the Secretary, along with public input and peer reviewed science before making a final determination.	No
AO_MF_1025_013-2	KBRA was negotiated and signed by a diverse array of over 40 parties with an interest in resolving Klamath Basin issues. Appendix E-1 is incorporated into the agreement by reference (per KBRA Section 7.11). See Klamathrestoration.gov for a copy of the KBRA.	No

AO_MC_1026_020

KLAMATH DAM REMOVAL
DRAFT EIS/EIR HEARING
OCTOBER 26, 2011
PUBLIC TESTIMONY
ARCATA, CALIFORNIA

MS. RYAN: Just lower the lever.

L-y-n-n R-y-a-n. I'm representing Ancient Forest International, a small grassroots group based in Redway, California, working to maintain and restore forests and connectivity in Northern California, Chile, and Ecuador, and helping to empower the local people to value their native ecosystems.

Comment Approves of Dam Removal

Ancient Forest International supports full facilities removal of the four dams. This is the proposed action in the document. In addition, PacifiCorp, owner and operator of the Klamath hydroelectric projects, supports the decommissioning and removal of the four dams.

Comment 2 - Hydrology

The Klamath Basin Restoration Agreement needs improvement in process and substance, to ensure there is water for fish based on science as per Appendix E-1. My understanding of Appendix E-1, the science of the document, says, "Water levels will be below fish survival levels under the terms of the Klamath Basin Restoration Agreement." This means the document science does not meet the Endangered Species Act requirements or Clean Water Act requirements. This is of grave concern to all the beings and all the worlds that value clean

water and to the inherent survival for all the species and all the worlds.

Thank you.

Comment Author	Ryan, Lynn
Agency/Assoc.	Ancient Forest International
Submittal Date	October 26, 2012

Comment Code	Comment Response	Change in EIS/EIR
AO_MC_1026_020-1	The Secretary of the Interior acknowledges that there are many people who support dam removal and there are many who maintain that the dams should stay in place. There are a range of reasonable alternatives presented in the Draft EIS/EIR; 18 alternatives are presented in the Draft EIS/EIR, five of which are examined in detail using the best available science. There are positive and negative aspects for each of these alternatives. The potential effect of each alternative is discussed in the EIS/EIR and will be fully considered by the Secretary, along with public input and peer reviewed science before making a final determination.	No
AO_MC_1026_020-2	Appendix E-1 sets the diversion limitations on water diverted to Klamath Reclamation Project water users including the Refuges from certain points of diversion. It does not state that “water levels will be below fish survival levels”. The KBRA does not exempt federal actions from compliance from any laws or regulations including compliance with ESA or CESA. Project level actions and decisions will continue to be made in compliance with existing laws and regulations.	No

AO_LT_1128_058

ANCIENT FOREST INTERNATIONAL
POB 1850
REDWAY, CA 95560

Elizabeth Vasquez
MP150
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA. 95825
Comments on the Klamath Facilities Removal Public Draft EIS/EIR
Nov. 28, 2011

Dear Ms. Vasquez,

Comment 1 - Alternatives

Comment 2 - KBRA

Remove the Klamath River Dams sooner than 2020!

These written comments on the Klamath Dam Removal DEIS/DEIR replace the oral comments made at the public hearing in Arcata CA on October 26, 2011.

Ancient Forest International, a non-profit organization, rescinds support of Alternative #2. We were unclear that support of Alternative #2 included support of the KBRA. We do not support the KBRA because we question if it provides enough water for natural fish, sufficient flow of water for general river ecosystem recovery, true Klamath basin restoration and we question if it negates or subordinates tribal water rights.

Duplicate of GP_LT_1128_939

We want to see at least 4 of the Klamath Dams removed in order to provide a healthy eco region for support of salmon and other fish stocks and runs.

We support funding for willing seller buyout to permanently reduce irrigation water demand, be it ground water or surface water, to a level that will bring water back into balance with what is sustainable for healthy ecosystems. We question if this DEIS/DEIR is in compliance with the ESA and the Clean Water Act.

The DEIS/DEIR skips analysis if the cumulative effects of the KBRA, which is illegal under NEPA and CEQA.

Sincerely,
Lynn Ryan

California Program Coordinator
Ancient Forest International

Comment Author	Ryan, Lynn
Agency/Assoc.	Ancient Forest International
Submittal Date	November 28, 2011

Portions of this letter are verbatim duplicates of comments submitted in the comment author's submittal coded - GP_LT_1128_939. Responses to those initial comments that were duplicated in this letter are presented in this EIS/EIR alongside GP_LT_1128_939. Responses to comments provided in this letter that were not also submitted as a part of GP_LT_1128_939 are listed below.

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1128_058-1	Master Response ALT-3 Elimination of Alternative 13 - Federal Takeover of the Klamath Hydroelectric Project from Detailed Study.	No
AO_LT_1128_058-2	Master Response GEN-2 Some People Approve of Dam Removal and Others Oppose Dam Removal. Master Response AQU-9 Minimum Flows for Fish. Master Response TTA-1 Federal Trust Responsibility and the KBRA.	No