



United States
Department of
Agriculture

Forest
Service

Pacific
Southwest
Region

Regional Office, R5
1323 Club Drive
Vallejo, CA 94592
(707) 562-8737 Voice
(707) 562-9240 Text (TDD)

File Code: 2350

Date: February 29, 2012

Mr. Ken Salazar
Secretary of the Interior
U. S. Department of the Interior
1849 C Street
[ATTN: John Bezdek - MS 3413]
Washington, DC 20240

Dear Secretary Salazar:

Enclosed please find the Preliminary Section 7 (a) Wild and Scenic Rivers Act Determinations, made under Section 7 (a) of the Wild and Scenic Rivers Act, for the California Klamath Wild and Scenic River (WSR) and the Oregon Klamath WSR. I am submitting these determinations on behalf of the Bureau of Land Management (BLM), USDA Forest Service (USFS) and the National Park Service (NPS). The BLM, USFS and the NPS, as the principal federal agencies managing the Oregon Klamath and California Klamath WSRs, are responsible for the determinations. Section 7(a) of the Wild and Scenic Rivers Act (WSRA) requires that federal agencies determine whether certain water resources projects are consistent with its river-resource protection requirements. The Preliminary Determination for the Oregon Klamath WSR was made by the BLM Oregon State Director. The Preliminary Determination for the California Klamath WSR was made jointly by the Forest Service Pacific Southwest Regional Forester, the National Park Service Pacific West Regional Director and the BLM Oregon State Director.

The determinations are responsive to the proposed action in the Klamath Facilities Removal Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR). Specifically, the Preliminary Determinations consider whether the effects of the Full Facilities Removal of Four Dams Alternative (the proposed action alternative) would invade or unreasonably diminish the scenic, recreational, fish, or wildlife values present within the California Klamath WSR and the Oregon Klamath WSR based on the date they were designated components of the National Wild and Scenic Rivers System.

In summary, the Preliminary Determinations found that dam removal and associated restoration actions would result in long-term benefits to the scenery, recreation, fish and wildlife values as compared to conditions present at the date of designation for both of California Klamath WSR and the Oregon Klamath WSR. Since there would be no "invasion" of either WSR or "unreasonable diminishment" of their values, the finding is that the proposed dam removal and associated restoration actions are fully consistent with protections afforded by the WSRA.

The federal agencies responsible for making a WSRA Section 7(a) Determination for this project will also review the Secretary's decision in the final environmental impact statement and environmental impact report (Final EIS/EIR) and amend the Preliminary Determination if the



effects disclosed in the preferred alternative are different than those analyzed for the proposed action alternative in the Draft EIS/EIR.

If you have any questions please contact Christina Boston, USFS, Region 5, Wild and Scenic Rivers Program Leader, (707) 562-8837 (cboston@fs.fed.us) or Jerry K. Bird, USFS, Regions 5 and 6, Klamath Basin Coordinator, (530) 841-4403 (jkbird@fs.fed.us).

Sincerely,

/s/ William C. Whitson (for)
RANDY MOORE
Regional Forester

Enclosure

cc: Ed Shepard
Chris Lehnertz

PRELIMINARY SECTION 7(a) WILD AND SCENIC RIVERS ACT DETERMINATION

Klamath Facilities Removal Project (DOI/CDFG), Klamath Wild and Scenic River (Oregon and California)

February 9, 2012

1. INTRODUCTION

Section 7(a) of the Wild and Scenic Rivers Act (WSRA) requires that federal agencies determine whether certain water resources projects are consistent with its river-resource protection requirements. This Preliminary WSRA Section 7(a) Determination (Preliminary Determination) addresses such consistency for the Klamath Facilities Removal Project, as described in the Klamath Facilities Removal Public Draft Environmental Impact Statement/Environmental Impact Report, DOI/CDFG September 2011 (Draft EIS/EIR). The Draft EIS/EIR includes actions and measures as described in the Klamath Hydroelectric Settlement Agreement (KHSAs) and the Klamath Basin Restoration Agreement (KBRA) collectively known as the Agreements. Specifically this Preliminary Determination considers whether the proposed action alternative in the Draft EIS/EIR would invade or unreasonably diminish the scenic, recreational, fish, or wildlife values present within two segments of the Klamath River based on the date they were designated components of the National Wild and Scenic Rivers System (National System). This analysis is focused on the proposed action.

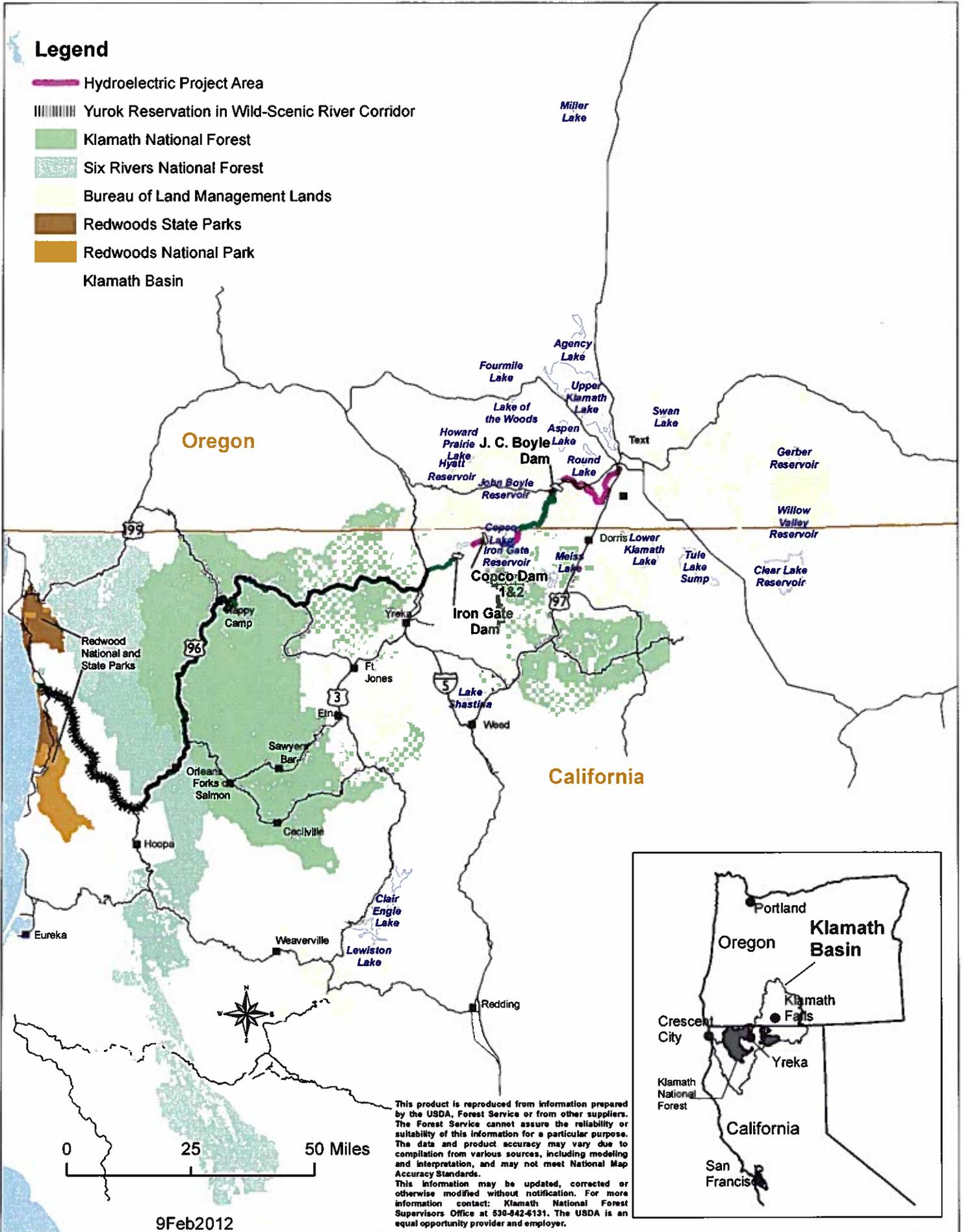
In February 2010, 45 organizations including federal agencies, the states of California and Oregon, PacifiCorp, Indian Tribes, counties, irrigators, and conservation and fishing groups signed the KHSAs. The KHSAs lay out the process for additional studies, environmental review, and a decision by the Secretary of the Interior (Secretary) regarding whether the removal of the four Klamath River dams owned by PacifiCorp on the Klamath River will: 1) advance restoration of the salmonid 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 four dams are J.C. Boyle in Oregon and Copco 1, Copco 2, and Iron Gate in California. The KHSAs are the outcome of an Agreement in Principle signed by PacifiCorp, the Department of Interior and the States of California and Oregon in 2008 after several years of The Federal Energy and Regulatory Commission (FERC) relicensing proceedings for PacifiCorp's Klamath Hydroelectric Project. It is intended to provide a path forward to river and salmon restoration efforts that would benefit fish, PacifiCorp customers, local communities and Tribes. The FERC license expired in 2006 and relicensing proceedings are pending action by the States of Oregon and California on PacifiCorp's application for Water Quality Certification, pursuant to section 401 of the Clean Water Act.

Concurrently stakeholders signed the KBRA, a comprehensive effort to resolve long-standing resource disputes in the Klamath Basin. Among other things the KBRA focuses on the recovery of anadromous salmonid fish species in the Klamath River through increased water flows for fish, basin-wide restoration activities intended to improve habitat and water quality, reintroduction of salmon to the Upper Klamath Basin, and increased certainty of water delivery for irrigators. The Draft EIS/EIR analyzes the KBRA as a connected action to the KHSAs.

This Preliminary Determination responds to the Secretary of Interior's proposed action alternative and the effects as described in the Draft EIS/EIR. The federal agencies responsible for making a WSRA Section 7(a) Determination for this project will also review the Secretary's decision in the final environmental impact statement and environmental impact report (Final EIS/EIR) and amend the Preliminary Determination if the effects disclosed in the preferred alternative are different than those analyzed for the proposed action alternative in the Draft EIS/EIR.

In accordance with Section 7.2 of the KHSA, if there is an Affirmative Determination and the States concur, a Definite Plan for Facilities Removal (Definite Plan) will be developed. The Definite Plan will contain all of the specific details of dam removal and will include applications for necessary permits. A WSRA Section 7(a) Determination will be completed on the analysis for the Definite Plan. In the case of a negative Secretarial Determination, a WSRA Section 7 (a) Determination will be completed as part of the ongoing FERC relicensing process.

Klamath Wild and Scenic Rivers Sec 7(a) Determination Klamath Basin Vicinity Map



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2. PROPOSED ACTION

This determination considers the effects of the Full Facilities Removal of Four Dams Alternative (the proposed action alternative) on the scenery, recreation, fish and wildlife values within both the Oregon Klamath Wild and Scenic River (WSR) and the California Klamath WSR. The proposed action includes the complete removal of J.C. Boyle, Copco 1, Copco 2 and Iron Gate dams including all power generation facilities, water intake structures, canals, pipelines, ancillary buildings, and dam foundations as well as the reservoirs behind the dams. Complete documentation of this alternative can be found at the following website:

<http://www.klamathrestoration.gov/Draft-EIS-EIR/download-draft-eis-eir>

3. BASIS FOR DETERMINATION

This Preliminary Determination analyzes the proposed action alternative presented in the Draft EIS/EIR. The Bureau of Land Management (BLM), USDA Forest Service (USFS) and the National Park Service (NPS), as the principal federal agencies managing the Oregon Klamath and California Klamath WSRs, are responsible for the Preliminary Determination. The effects analysis in the Draft EIS/EIR was used as the basis for this determination (Chapter 3 and particularly Section 3.2). Baseline river conditions were also informed by the Preliminary Section 7(a) Determinations and Reports completed in response to the Federal Energy Regulatory Commission's Draft Environmental Impact Statement on the Klamath Hydroelectric Project # 2082 (2006 and 2007 for the California Klamath and Oregon Klamath WSRs, respectively).

4. DESCRIPTION OF THE OREGON KLAMATH AND CALIFORNIA KLAMATH WILD SCENIC RIVERS:

4.1 Oregon Klamath WSR

An 11-mile segment of the Upper Klamath River was designated as a component of the National System on September 22, 1994. The designation was made by the Secretary of the Interior, at the request of the Governor of Oregon, under Section 2 (a) (ii) of the WSR. The 11-mile segment, extending from 0.25 miles below the J.C. Boyle powerhouse to the Oregon-California state line, is classified as scenic. The segment was designated as a WSR to protect and enhance the following outstandingly remarkable values (ORVs): recreation, wildlife, fish, scenic, prehistoric, and Native American traditional use. The Oregon Klamath WSR is located between dams and facilities proposed for removal under the Proposed Action.

4.2 California Klamath WSR

On January 19, 1981, at the request of the Governor of California, the Secretary of the Interior added a 189-mile segment of the Klamath River to the National System, through section 2(a)ii) of the WSR. Classified as recreational, the California Klamath WSR begins 3600 feet below Iron Gate Dam and ends at its confluence with the Pacific Ocean. It was designated primarily to protect and enhance its outstandingly remarkable anadromous fishery. Anadromous fisheries are the single ORV of the California Klamath WSR. All facilities associated with the four dams under study are located upstream from the California Klamath WSR.

5. WSR SECTION 7(a) REQUIREMENTS

Section 7(a) of the WSR provides that water resource projects upstream or downstream of a WSR may occur as long as the project "will not invade the area or unreasonably diminish the scenic, recreational, fish and wildlife values present in the area as of the date of designation."

The conditions that were present on the Klamath River when the Oregon Klamath and California Klamath WSRs were added to the National System constitute the basis for evaluating the proposed action as described in the Draft EIS/EIR. Therefore, the baseline conditions for the Oregon WSR are those present in 1994, and, for the California WSR those present in 1981.

The initial question to be addressed in this WSR Section 7(a) determination is whether the proposed action described in the Draft EIS/EIR invades the designated river. The term invade is defined by the Interagency Wild and Scenic Rivers Council (October 2004 Technical Report of the Interagency Wild and Scenic Rivers Coordinating Council) as encroachment or intrusion upon.

The next question to be answered, relative to the standard in Section 7(a), is whether the proposed action will "unreasonably diminish" the scenic, recreational, fish or wildlife values of the designated river. Given that the standard implies some diminution of values may be acceptable, there are two questions to consider:

1. Does the proposed action evaluated in the Draft EIS/EIR cause diminution of the scenic, recreational, fish or wildlife values of the designated river as present at the date of designation
2. If there is diminution, is it unreasonable? This would suggest an evaluation of the magnitude of the loss. Factors to be considered include: (1) whether the value contributed to the designation of the river (i.e., outstandingly remarkable); and, (2) the current condition and trends of the resource. (If diminution is determined unreasonable, measures may be recommended to reduce adverse effects to within acceptable levels.).

6. WILD AND SCENIC RIVERS ACT SECTION 7(a) EVALUATION

This section begins with an evaluation of the potential of the proposed action alternative to invade either the Oregon or California Klamath WSR. Next, it provides the criteria used to evaluate the effects of the proposed action to the scenery, recreation, fish and wildlife values and then summarizes the evaluation for each resource by WSR.

6.1 Does The Proposed Action Invade Either Designated WSR?

The proposed action alternative does not propose deconstruction or project removal activities in either the Oregon Klamath or California Klamath WSR corridor. Therefore the proposed action will not invade either designated WSR.

6.2 Does The Proposed Action Diminish WSR Values?

The following criteria were applied to evaluate potential for diminishment of the WSR of both the Oregon Klamath and California Klamath WSRs. Pursuant to Section 7(a) of the WSR; this Determination evaluates potential project effects upon four WSR values: scenery, recreation, fish, and wildlife. The following criteria were applied to evaluate effects upon these values within the Oregon Klamath and California Klamath WSRs. This Determination places additional emphasis on these four values if they were also listed as an ORV in section 4.

6.2.1 Scenery Value Evaluation Criteria

Scenery was evaluated using the following criteria:

- Water flow character (river flows and accompanying river width, depth and channel inundation or exposure)
- Water appearance (clarity, turbidity, depth of view, color, prominence of algae)
- Fish and wildlife viewing
- Riparian vegetation
- Natural appearing landscape character (the visual effects of facilities and structures as viewed from within the designated WSR corridor)

6.2.2 Recreation Value Evaluation Criteria

Recreation was evaluated using the following criteria:

- Whitewater boating
- Recreational fishing
- Other recreational activities (water play, swimming, camping)
- Recreational setting (water quality related aesthetic odors, tastes, contacts, and public health and safety aspects)

6.2.3 Fisheries Value Evaluation Criteria

Fishery was evaluated using the following criteria:

- Stream flow regime
- Water temperature
- Water quality (physical, biological and chemical)
- Aquatic habitat (geomorphic condition, sediment transport regime and substrate quality)
- Fish species population conditions, specifically:
 - a. Anadromous salmonid fish species
 - b. Resident fish species
 - c. Species traditionally used and culturally important to Native Americans

6.2.4 Wildlife Value Evaluation Criteria

Wildlife was evaluated using the following criteria:

- Changes in habitat for affected species

6.3 Oregon Klamath WSR

6.3.1 Scenery Value Evaluation

Scenery was identified as an ORV because of the river's unique landform, diverse vegetation, water and lack of negative cultural modification

Water Flow Character: Removal of J.C. Boyle Dam would increase flows for the short-term period of reservoir drawdown, and permanently eliminate the daily flow fluctuations caused by generation of hydroelectric power at this facility. The result would be to restore a more historic and natural daily river flow appearance, support establishment of riverside riparian vegetation, and, thereby, improve scenic quality.

Water Appearance: Removal of J.C. Boyle Dam would result in short-term increases in turbidity and decreased water clarity due to release of high concentrations of suspended sediment during the reservoir drawdown. The timing of reservoir drawdown is in the winter months to correspond with the timing of historically larger flows to help flush sediment through the river system. Long-term beneficial effects would include improved water appearance due to reduced turbidity from decreases in organic matter particulates (reduced algal blooms), renewal of streambeds through more frequent, high-flow flushing events, and reversal of suspected nutrient increases within J.C. Boyle Reservoir. Dam removal would restore natural sediment movement in the streambed and reduce opportunities for algae attachment, to a degree not possible in 1994 due to the presence and operation of J.C. Boyle Dam.

Fish Viewing: Short-term impairment to fish viewing in the WSR would result from increases in turbidity and decreased water clarity during reservoir drawdown. However, in the long term, water quality would be improved, increasing viewing opportunities. Removal of the downstream dams that currently block fish passage would allow the return of anadromous salmonid fish including Chinook salmon, Coho salmon and steelhead trout into the Oregon Klamath WSR. This would increase both the number and species of fish to be viewed.

Wildlife Viewing: Improvements in riparian habitat would lead to corresponding increases in river-dependent wildlife. Increased numbers of fish would provide increased forage for riparian and riverine wildlife species that depend upon fish as a food source, including the diverse species of raptors that utilize the canyon. Therefore wildlife viewing opportunities would increase.

Riparian Vegetation: The removal of the J. C. Boyle Dam would result in the restoration of a more natural hydrologic flow regime and a more natural riparian

vegetative community typical of free flowing rivers. A more natural flow regime would facilitate the establishment, diversity and survival of riparian vegetation.

Natural Appearing Landscape Character: Removal of J.C. Boyle Dam and related facilities would result in a more natural setting and character in the areas immediately upstream and downstream of the Oregon Klamath WSR.

In conclusion, there would be short-term, negative impacts to scenery from removal of J.C. Boyle Dam and drawdown of its reservoir; specifically, increased turbidity and suspended sediments. However, the long-term effects of dam removal would enhance scenery.

6.3.2 Recreation Value Evaluation

Recreation was identified as an ORV because of the high-quality, whitewater boating opportunities enhanced by daily hydroelectric peaking flows, fishing for native red band trout, camping, wildlife viewing, and hunting.

Whitewater Boating: Removal of J.C. Boyle Dam would decrease the number of days with acceptable flows for whitewater boating, as identified in the PacifiCorp 2002 flow study. This would be the case particularly in July and August, the months of peak whitewater boating use. Computer modeling has indicated that the total number of boating days in the 1300-3000 cfs range will decrease by 57 percent, with a reduction of 50%, 88% and 76% in July, August and September, respectively. Currently this segment provides a unique opportunity in the region; specifically, a high-quality, sustained Class IV whitewater day trip available throughout the summer and fall months. Following dam removal daily hydroelectric peaking operations would cease and the artificially controlled flows which occur now would more closely match natural flows. Impacts on whitewater boating opportunities caused by the reduction of the number of days with acceptable flows as they are currently defined would be substantial.

Recreational Fishing: Dam removal would not markedly change the number of days with acceptable flows for fishing. The geographic extent of anadromous fish habitat would expand substantially, with salmonid species anticipated to reoccupy this segment. It is also expected that river flow and water quality conditions would improve, thereby increasing fish populations. Thus, recreational fishing would improve.

Other Recreational Activities: During the period dam removal and shortly afterwards, sediment release could decrease the quality of water-contact activities. However, initial reservoir drawdown will occur in the coldest high flow months of winter and early spring when recreation use is at its lowest. This impact would be short term. In the long term, removal of J.C. Boyle Dam would improve water quality and thus water-contact-based recreational activities.

Recreational Setting: There would be short-term, negative impacts on water quality due to the increased sediment load in the river during initial reservoir drawdown. Initial reservoir drawdown will occur in the colder high flow months of winter and early spring when recreation use is at its lowest. Following completion of reservoir drawdown, dam removal would improve long-term water quality conditions and reduce potential human health risks associated with water-contact-based activities.

In conclusion, removal of J.C. Boyle Dam would substantially reduce the number of days of whitewater boating opportunity, particularly in mid- June through September when flows are currently augmented due to the hydropower daily peaking flows. There would be some continued opportunity for whitewater boating in the range of historically preferred flows (1300-4000 cfs) primarily earlier in the year and as a function of a more natural flow regime. Presently few whitewater boaters have explored opportunities to boat lower flows on the Oregon Klamath WSR. With a more constant predictable lower flow some whitewater boaters may be drawn to those periods of lower flows. However, the type of opportunity and the number of whitewater boaters who would avail themselves of it are too speculative to predict. Boating and other recreational opportunities would benefit from improved water quality. Fishing opportunities would also improve due to increased fish species and abundance. Camping and hunting opportunities likely would not change.

6.3.3 Fishery Value Evaluation

Fish are an ORV. The Oregon Klamath WSR supports a genetically unique population of rainbow trout and several endangered species, including Lost River and short-nose suckers. Prior to installation of the Klamath River dams, the river above Iron Gate Dam provided habitat for numerous anadromous species including Chinook salmon, Coho salmon, steelhead trout and Pacific lamprey.

Stream Flow Regime: The proposed drawdown rate of J.C. Boyle Reservoir would be adjusted so as not to increase flows substantially above historic rates. Therefore, conditions during the drawdown period are expected to remain largely unchanged from historic rates. Following removal of the dams and related facilities, hydropower peaking flows would be eliminated resulting in a return to more natural river flow regimes which would essentially end fish stranding and loss of rainbow/red band trout fry habitat thus benefiting fish.

Water Temperature: Water temperature models indicate that removal of the J.C. Boyle Dam would result in slightly lower water temperatures and lower daily fluctuations during June through September due to the elimination of hydropower peaking operations and the associated large daily temperature swings. This would benefit fish.

Water Quality: Removal of the J.C. Boyle Dam and related restoration measures outlined in the KBRA would accelerate the pace of water quality improvements addressing concerns with nutrients, dissolved oxygen and organic matter thereby enhancing downstream water quality for salmonid fish. While short-term effects due to the release of sediment are expected, water quality characteristics would improve over the long term following removal of J.C. Boyle Dam.

Aquatic Habitat: During removal of the dams and related facilities, the released sediment stored in the reservoirs would have short-term, negative effects on aquatic habitat. However, following completion of dam removal, the increased spawning gravel released from upstream would enhance spawning habitat. Restoring natural sediment processes would improve aquatic habitat. Removal of the dams and associated restoration activities would restore anadromous fish access to at least 49 tributaries that could provide 420 miles of habitat for anadromous fish above Iron Gate Dam including within the Oregon Klamath WSR and areas upstream.

It is likely that trends of increasing coarseness of riverbed substrate, increasing habitat for attached algae, and reduced recruitment and maintenance of riparian vegetation were already underway at the time of WSR designation due to dam operations. The proposed action would reduce those trends in the long term, and restore natural sediment transport processes. Following the initial drawdown period and flushing of reservoir sediment downstream, aquatic habitat conditions benefitting fish would be expected to be improved in the long term.

Fish Species Population Conditions: Short-term negative effects on fish habitats associated with dam removal would adversely affect existing fish species as well as populations of anadromous salmonid species that are expected to reoccupy the Oregon Klamath WSR. In the long run, improvements to stream flow regime, water quality, and aquatic habitat conditions would support existing resident populations as well as anadromous fish populations. Removal of the four dams would eliminate barriers to anadromous fish passage, restore connectivity between the Lower and Upper Klamath River, and allow fish to spawn in a greater number of areas. Fish species population conditions for anadromous salmonid, resident species, and species important to Native Americans would improve and result in long-term beneficial effects.

In conclusion, there would be short-term, negative effects on fish habitat during dam deconstruction and reservoir drawdown. However, in the long term, removal of fish barriers and improvements in stream flow, water quality, and aquatic habitat contribute to increased fish species diversity and abundance.

6.3.4 Wildlife Value Evaluation

Wildlife is an ORV due the diversity of habitats in the river corridor that support a rich diversity of wildlife species, including birds of prey, game and other birds, ringtail cats, river otters, and other species. Numerous species including bald eagles (*Haliaeetus leucocephalus*), peregrine falcons (*Falco peregrinus*), western pond turtles (*Clemmys marmorata marmorata*), and Townsend's big-eared bats (*Corynorhinus townsendii*) are associated with the Klamath River.

Changes in Habitat for Affected Species: Removal of the J.C. Boyle Dam and a return of the Oregon Klamath WSR to free-flowing riverine character would result in beneficial establishment of riparian vegetation over time. Removal of downstream dams would allow reoccupation of anadromous fish into this segment and improvements in fish habitat quality and quantity in the river system. The net result would be an increased food source for wildlife species that depend upon fish, including bald eagle, river otter, osprey, and black bear.

In conclusion, short-term negative effects to wildlife habitat due to increased sediment into the river system are expected. However, over the long term, dam removal would improve riparian habitat and increase forage opportunities for wildlife species that depend on fish due to increased fish species and abundance.

6.4 California Klamath WSR

6.4.1 Scenery Value Evaluation

Water Flow Character: Short-term effects from removal of the dams and related facilities to water flow character would be limited to the area immediately below Iron Gate Dam. No substantial changes to river morphology would occur after dam removal. Neither would there be long-term impacts from sediment deposition in pools, eddies, slack water or beaches. Thus, removal of upstream dams would result in a more natural flow regime and landscape character, with a long-term, positive effect on scenic quality.

Water Appearance: Removal of the dams would result in short-term increases in turbidity and decreased water clarity due to high suspended sediment concentrations during and following the reservoir drawdown. Reservoir drawdown will occur in the winter months to correspond with the timing of larger seasonal flows to help flush sediment through the river system. Long-term impacts would result in improved water appearance due to reduced turbidity from decreases in organic matter particulates (reduced algal blooms), renewal of streambeds through more frequent and high-flow, flushing events, and elimination of suspended nutrients within Copco 1 and Iron Gate reservoirs. Removal of the dams would restore natural sediment movement in the streambed and would reduce opportunities for algae attachment, to a degree not possible in 1981 due to the presence of Iron Gate Dam.

Spawning gravels released downstream from within the retired reservoirs would restore some natural sediment processes and contribute to scour of attached downstream algae. The deposited sand and gravel on the downstream reaches would be a less favorable habitat for the algae because of greater particle mobility during high-flow events. This would result in positive, long-term impacts on water appearance (improved clarity and algae reduction) between Iron Gate Dam and the Shasta River confluence, and would likely have similar but reduced downstream benefits.

Thus, while there would be short-term, negative water clarity impacts on scenic quality due to turbidity and silt that could be exposed on river banks, long-term effects to scenic quality would be beneficial because algae would be reduced and water clarity would improve.

Fish Viewing: Removal of the dams and related facilities would increase the abundance of anadromous salmonid fish in the Klamath River as a result of increased habitat and improved water quality. The increased population of fish species would improve scenic fish viewing opportunities, particularly during fish migration, spawning, or holding periods, when the fish concentrate at particular reaches, pools, riffles, and falls.

Wildlife Viewing: Riparian habitat in the Iron Gate Dam to Shasta River segment would be improved upon removal of the dams. Populations of water-dependent and riverine wildlife species would be anticipated to increase and expand as a result of improved habitat and additional food sources provided by an increased abundance of anadromous fish in the river. Therefore opportunities to view river-dependent wildlife populations would increase.

Riparian Vegetation: Removal of the dams and related facilities would result in a more natural riparian vegetative community immediately downstream of Iron Gate Dam due to sediment deposition and scour and gravel transport. Improved riparian vegetation would increase the presence and scenic variety of the vegetation within the WSR.

Natural Appearing Landscape Character: Removal of the dam and associated facilities would occur upstream of the California Klamath WSR and, therefore, would result in only minor beneficial changes to the overall landscape character of the designated river. This would include scenery enhancements near Iron Gate Dam, such as increased riverside riparian vegetation and elimination of Iron Gate Dam's unnatural appearing form and surface characteristics.

In conclusion, there will be short-term, negative impacts to scenery from removal of Iron Gate dam and drawdown of its reservoir; specifically, increased turbidity and

high suspended sediments. However, the long-term effects of dam removal would enhance scenery.

6.4.2 Recreation Value Evaluation

Whitewater Boating: Following removal of the dams, the number of days available for whitewater boating would be very similar to the number of days available today and in 1981. Removal of the dams would result in long-term improvements to water quality conditions and the whitewater boating recreation experience.

Recreational Fishing: While there is not expected to be a change in the number of fishable days, removal of fish barriers would substantially expand habitat available for anadromous fish. Improved water quality would reduce fish disease and increased fish populations would likely result in fewer catch and keep fishing restrictions. Thus, recreational fishing would be improved.

Other Recreational Activities: During dam removal and shortly afterwards, sediment release could decrease the quality of water-contact activities. This impact would be short term. Dam removal would result in long-term improvements to water quality and water-contact recreational activities.

Recreational Setting: There would be short-term, negative impacts on water quality due to the increased sediment load during reservoir drawdown. Following reservoir retirement, water quality would improve with reduced potential human health risks associated with water-contact-based activities.

In conclusion, there will be short-term, negative effects to recreation during the deconstruction process from increased turbidity and sediment within river recreation settings. Over the long term, improvements in fish populations and water quality would result in beneficial effects to recreation.

6.4.3 Fishery Value Evaluation

The anadromous fishery is the only ORV identified for the California Klamath WSR.

Stream Flow Regime: The proposed drawdown rate of Iron Gate Reservoir would be adjusted so as not to increase flows substantially above historic rates. Therefore, conditions during the drawdown period are expected to remain largely unchanged. Following removal of the dams and related facilities, the long-term Klamath River flows would have a duration, timing and magnitude more similar to the unregulated conditions under which the native fish community evolved. These flows would be more favorable to all life stages of aquatic species including salmonid fish. Removal of fish passage barriers (dams) would reduce fish crowding, which in turn would result in reduced stress and disease and result in healthier aquatic habitat.

Water Temperature: Modeling results for removal of all four dams show that Klamath River temperatures from Iron Gate Dam to Clear Creek would more closely mimic natural temperature regimes. This would result in warmer water temperatures during spring and early summer and cooler water temperatures in later summer and fall, as compared to existing conditions with the dams in place. Temperatures currently remain greater than 20°C in dry years with little variability in July and August. Although summer temperatures would likely be more variable following dam removal, the median temperatures would be substantially lower than current conditions. Summer and fall temperatures would therefore be more conducive to salmonid rearing, migrating, and spawning. Current thermal delay caused by reservoir storage would be eliminated, and river water temperatures would express daily variations more consistent with historic conditions and spawning periods, warming earlier in the spring and cooling earlier in the fall. Changes to water temperature in the Klamath River resulting from dam removal are not anticipated to be discernible below the Salmon River confluence. Dam removal would result in restored salmonid fish access to areas of cool ground water sources that provide thermal refuge and would buffer the effects of climate change.

Water Quality: Removal of the dams and restoration measures identified in the KBRA would improve water quality over current conditions. Significant immediate and long term water quality improvements are expected, including beneficial changes in temperature, dissolved oxygen, and toxic algae, both within and downstream of the Klamath Hydroelectric Project reach. Over the long-term, dissolved oxygen levels would increase overall, along with its daily diurnal variability. Removal of the dams would also reduce conditions that foster fish disease outbreaks. The improved water quality conditions would result in reduced stress and disease and would benefit fish.

Aquatic Habitat: During the removal of the dams and related facilities, sediment stored in the reservoirs would be released downstream. The released sediment would have short-term, negative effects on aquatic habitat, but following completion of reservoir drawdown and dam removal, the increased availability of spawning gravel would enhance spawning habitat. Restoring natural sediment processes would also increase riverbed scour and reduce algae that contribute to fish disease.

Removal of the dams, which are presently fish passage barriers, and associated restoration activities would expand suitable anadromous fish habitat upstream of the CA Klamath WSR and also enhance aquatic habitats within the CA Klamath WSR. The existing 701 miles of Chinook salmon habitat would expand by 59% to add 420 miles of habitat above the CA Klamath WSR (Hardy and Addley, 2006, and DEIS Ch.3). Similarly, the existing 786 miles of Coho salmon habitat would expand by 68 miles (an 8% increase); and the existing 1121 miles of steelhead trout habitat would expand by 500 miles (a 45% increase). The expanded miles of fish habitat in 49 tributaries above Iron Gate Dam include areas containing cold ground water contributions that provide thermal refuge and would buffer the effects of climate

change. These expanded habitats would enhance the adaptability and viability of CA Klamath WSR fish populations. As stated above, improved stream flow, water quality and temperature regime conditions would also contribute to improved CA Klamath WSR aquatic habitats.

It is likely that trends of increasing coarseness of riverbed substrate, increasing habitat for attached algae, and reduced recruitment and maintenance of riparian vegetation were already underway at the time of WSR designation due to dam operations. The proposed action would restore natural sediment transport processes reducing those trends in the long term. Following the initial drawdown period and flushing of reservoir sediment downstream, aquatic habitat conditions are expected to improve in the long term.

Fish Species Population Conditions: Historically, Chinook salmon (both spring and fall runs), Coho salmon and steelhead trout were widely distributed throughout the lower and upper Klamath River basin. Reduction of their geographic distribution has coincided with large declines from historic population levels. Population declines are estimated to be 94% and 98% for Chinook salmon (fall and spring runs), 75% for Coho salmon and 67% for steelhead trout) Declining population trends are attributed to a combination of several factors including changing ocean currents, hydrologic modifications, dam construction, agricultural development, timber harvesting, overfishing, and fish hatchery practices that impair genetic viability of fish populations. Improvement of these trends depends on successful resolution of key factors affecting populations: habitat quality and quantity, and particularly water quality, disease, and in stream flows.

Negative short term effects persisting up to two years are expected due to the release of suspended sediments into the river system. These sediments would bury and smother fall-run Chinook salmon eggs in eight miles of the Klamath River immediately below Iron Gate Dam, causing mortality of about 8% of the Klamath River's fall-run Chinook salmon eggs (progeny) in the first year following the removal of the dams. The upper Klamath River's Coho salmon progeny would suffer a similar 26% mortality due to these short-term effects along with 8% of its juvenile population during migration to the ocean. Summer-run and winter-run steelhead trout adults are predicted to suffer 5% and 14% mortality respectively from short term suspended sediment effects. However, it is possible these highly mobile fish may avoid degraded habitats and suffer less mortality. Spring Chinook salmon populations would be largely unaffected because they are not in the project's area of influence at the time of peak sediment releases.

In addition to the Chinook salmon, Coho salmon, steelhead trout species, the Klamath River Basin contains other aquatic species important to Native American tradition and culture, such as freshwater mussels, Pacific lamprey and green sturgeon. These species would be affected in a manner very similar in magnitude and intensity

to the short term and long term effects described above for anadromous salmonid fish.

In the long term, stream flow regime, water temperature and water quality would be significantly improved. Aquatic habitats condition would be improved and significantly expanded, benefitting all fish populations. Removal of the dams would eliminate fish passage barriers thereby restoring connectivity between the Lower and Upper Klamath River, and allowing fish to spawn in a greater number of areas. The abundance, genetic diversity and population viability of Chinook salmon, Coho salmon, and steelhead trout are expected to increase. Fish population conditions for anadromous salmonid, resident species, and species important to Native Americans would improve and result in long-term beneficial effects.

In conclusion, there would be short-term, negative effects on fish habitat and populations during reservoir drawdown, deconstruction and associated sediment transport. However, in the long term improvements in stream flow, water quality, water temperature, aquatic habitat, and fish populations are expected. The proposed action would have beneficial, long-term effects to anadromous fish, the California Klamath WSR's only ORV.

6.4.4 Wildlife Value Evaluation

Changes in Habitat for Affected Species: Riparian vegetation downstream of Iron Gate Dam would also benefit from dam removal, especially in the reach between the Iron Gate Dam and the Shasta River confluence. Species that are dependent on riparian habitat, such as the willow flycatcher, northwestern pond turtle, and yellow breasted chat, would benefit greatly from successful riparian habitat recovery from Iron Gate Dam downstream to the Klamath River's confluence with the Shasta River. Downstream from that point, the riparian-dependent wildlife would still benefit from increased diversity and amounts of riparian vegetation, but these benefits might be offset by some potential short-term impacts as the released sediment moves downstream into areas that are currently in better condition. Dam removal would also result in improvements in fish habitat quality and quantity in the long term, thus providing increased forage for wildlife species that depend upon fish as a food source including bald eagle, river otter, osprey and black bear.

In conclusion, short-term, negative effects to wildlife habitat due to increased sediment into the river system are expected. However over the long-term, improved riparian habitat and increased wildlife forage opportunities resulting from the increased fish populations would have long-term beneficial effects.

7. DETERMINATION

The initial question addressed in this WSR Section 7(a) Determination is whether the proposed action described in the Draft EIS/EIR invades the designated river.

The next question, relative to the standard in Section 7(a), is whether the proposed action will “unreasonably diminish” the scenic, recreational, fish or wildlife values of the designated river. Given that the standard implies some diminution of values may be acceptable, there are two questions to consider.

1. Does the proposed action evaluated in the Draft EIS/EIR cause diminution of the scenic, recreational, fish, or wildlife values of the designated river as present at the date of designation?
2. If there is diminution, is it unreasonable? This would suggest an evaluation of the magnitude of the loss. Factors to be considered include: (1) whether the values contributed to the designation of the river (i.e. outstandingly remarkable); and, (2) the current conditions and trends of the resource, (If diminution is determined unreasonable, measure may be recommended to reduce adverse effects to within acceptable levels,)

Two determinations will be made in this document. The determination for the Oregon Klamath WSR will be made by the BLM Oregon State Director. The determination for the California Klamath WSR will be made jointly by the Forest Service Pacific Southwest Regional Forester, the National Park Service Pacific West Regional Director and the BLM Oregon State Director. The information provided in the DEIS/R and previous analyses conducted under Section 7(a) of the WSR in response to the Klamath Hydroelectric Project relicensing proposal has been fully considered in arriving at the following conclusions. A tabular summary of these conclusions follows below.

SUMMARY: “INVADE” AND “UNREASONABLY DIMINISH” CONCLUSIONS BY WSR

WSR River Segment	Invade the WSR?	Unreasonable Diminishment of WSR Values?			
		Scenery Value	Recreation Value	Fishery Value	Wildlife Value
Oregon Klamath WSR	No	Enhanced	Whitewater Boating Reduced Fishing & Other Recreation Enhanced	Enhanced	Enhanced
California Klamath WSR	No	Enhanced	Enhanced	Enhanced	Enhanced

7.1 Oregon Klamath WSR

The short-term effects of the deconstruction of the J.C. Boyle Dam, reservoir drawdown, and removal of related facilities will be mitigated to the greatest extent possible. The effects of sediment released downstream would be short term (lasting less than two years) as sediment is expected to be flushed through the river system relatively quickly. Protection measures for aquatic species, including trapping and relocating them prior to exposure of sediment will help reduce these effects.

In the long term, dam removal would improve water quality, sediment transport, river flows, and wildlife habitat. It would provide connectivity between the Lower and Upper Klamath River significantly improving conditions for anadromous and resident fish and other aquatic species within the WSR compared to conditions present in 1994. Therefore, dam removal would result in long-term benefits to the scenery, fish, and wildlife values in the Oregon Klamath WSR.

I have carefully considered the reduction in the number of days of whitewater boating opportunity following dam removal. This recreational opportunity would not be eliminated, and, during high flows in the winter and spring, the river will continue to offer high-quality boating experiences. Dam removal would not affect the outstanding fishing opportunity for native rainbow trout, and conditions would improve over time for other water-based recreational opportunities with improved water quality. Fishing opportunities would improve due to increased fish species and abundance as anadromous fish species reoccupy historic habitat that was inaccessible following dam construction. I find that the negative effects to whitewater boating do not unreasonably diminish the WSR's recreational opportunities.

Dam removal and associated restoration actions would primarily result in long-term benefits to the scenery, recreation, fish, and wildlife values present when the Oregon Klamath WSR was added to the National WSR System in 1994. Since there would be no "invasion" of the Oregon Klamath WSR or "unreasonable diminishment" of its values, I find the proposed dam removal and associated restoration actions to be fully consistent with protections afforded by the WSRA.



Edward W. Shepard
State Director, Oregon/Washington
Bureau of Land Management

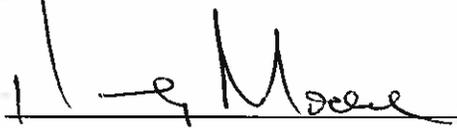


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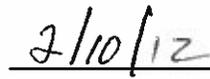
7.2 California Klamath WSR

The short-term effects of the deconstruction of the four dams, drawdown of the reservoirs and removal of related facilities will be mitigated to the greatest extent possible. The effects of sediment released downstream would be short term (lasting less than two years), as sediment is expected to be flushed through the river system relatively quickly. The effects will not jeopardize the viability of any of the Klamath Basin fish populations. Mitigation measures, including capture and relocation of aquatic species prior to exposure to sediment will help reduce these effects. The remaining short-term negative effects are minor in comparison with the long-term benefits to the scenery, recreation, fish and wildlife values.

In the long term, project removal would provide connectivity between the lower and upper Klamath River, and significantly improve conditions for anadromous and resident fish, and other aquatic species within the WSR. The improved stream flow and water quality also significantly improves wildlife habitat, scenic quality and recreation experience from the conditions that existed in 1981. In summary, dam removal and associated restoration actions would result in long-term benefits to the scenery, recreation, fish and wildlife values as compared to conditions present in 1981 when the California Klamath WSR was added to the National Wild and Scenic Rivers System. Since there would be no "invasion" of the Oregon Klamath WSR or "unreasonable diminishment" of its values, I find the proposed dam removal and associated restoration actions to be fully consistent with protections afforded by the WSRA.



Randy Moore
Regional Forester, Pacific Southwest Region
USDA Forest Service



Date

7.2 California Klamath WSR

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Christine S. Lehnertz
Regional Director, Pacific West Region
USDI National Park Service



Date

7.2 California Klamath WSR

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Edward W. Shepard
State Director, Oregon/Washington
Bureau of Land Management

2/16/2012

Date